Welcome to Estrella Mountain

“Our service strategy, ‘Your Success is Our Success,’ guides all our daily interactions on campus.

Whatever you come to Estrella Mountain to achieve, we know that the successful completion of your goals is the most important measure of success for our college.”

- Ernie Lara, Ph.D. Estrella Mountain President
ESTRELLA MOUNTAIN COMMUNITY COLLEGE HELPS YOU FIND YOUR OWN WAY TO SUCCESS

If you are just returning to school after a long absence or would just feel better if you had a little extra support – start this catalog with the Services and Resources section - page 11. You’ll get a clear picture of how many people and programs are available to help you define and achieve your goals.

If you know you’re headed for a four year degree – take a look at the Transfer Program offerings beginning on page 23. Then visit the Services and Resources section to access the student services specialist you’ll need to help you design a successful program of study.

If you need to get a GED or improve your English, math or reading skills…check out all the offerings on pages 179, 205, 220 and 233. These classes build a firm foundation of skills whether you choose to continue in college or enter the job market.

If you or your company are interested in Total Quality Management or customer service, or you know that more advanced computing or networking technology skills could give you that quality edge in your work environment…see the Training and Career Programs section on page 90, the computing offerings on page 194 and the Networking Technology offerings on page 190.

If you’ve recently retired and finally have the leisure time to pursue some lifelong interests - take a look at the computing offerings on page 194 or learn a new language, pages 235 or “get going” on keeping in shape, page 226-228.

If you’re about to graduate from high school and are unsure of what lies ahead…see page 12. Getting more education can make the difference in your earning power for the rest of your life!

Bienvenidos a su colegio de la comunidad de Estrella Mountain. Estrella Mountain Community College es una institucion educativa que le ofrece varios y distintos programas de instruccion al nivel colegial. Para obtener asistencia en español, llame (623) 935-8002.
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MISSION

The Maricopa Community Colleges provide access to higher education for diverse students and communities.

We focus on learning through:
- University Transfer Education
- General Education
- Developmental Education
- Workforce Development
- Student Development Services
- Continuing Education
- Community Education
- Civic Responsibility
- Global Engagement

STRATEGIC GOALS

In order to carry out our Mission and achieve our Vision, the following are the Goals of the Maricopa Community Colleges Governing Board.

I. Enhance the creation of a student-centered learning environment which:
   - fosters personal development
   - provides essential skills and relevant knowledge students need to achieve success
   - serves as an innovative model for cultural diversity in a changing global environment
   - ensures access to technology

II. Collaborate with our many communities to understand and satisfy their needs and expectations to provide quality educational services within available resources. Particular emphasis must be given to the growing at-risk and senior communities.

III. Proactively identify and resolve issues associated with the roles, responsibilities and authorities of federal, state and local governmental entities, as well as accrediting agencies.

IV. Increase our financial stability by seeking and obtaining new sources of revenue in order to remain a competitive provider of quality educational services.

V. Promote a work environment which fosters cooperation and collaboration among our faculty and staff and enables them to better serve our communities.

VISION

A Community of Colleges... Colleges for the Community
... working collectively and responsibly to meet the life-long learning needs of our diverse students and communities.
ESTRELLA MOUNTAIN COMMUNITY COLLEGE

MISSION

Estrella Mountain Community College provides opportunities for our students to achieve success in educational and personal goals.

We are an institution of higher education serving the West Valley communities through:

- General Education
- Transfer Education
- Developmental Education
- Workforce Development
- Student Support Services
- Community Education

MISSION GOALS

General Education
Provide the knowledge and abilities that enable students to achieve academic and personal goals.

Transfer Education
Provide quality transfer courses and programs that enable students to achieve success at four-year institutions.

Developmental Education
Provide quality developmental courses and programs that prepare students for educational and personal success.

Workforce Development
Provide specialized quality training, courses and services that meet the needs of businesses and individuals.

Student Support Services
Provide quality services and resources that meet the needs of students and support learning.

Community Education
Provide a wide variety of opportunities that meet the needs of life-long learners.

As the 10th and newest member of the Maricopa Community College District, Estrella Mountain is grounded in a tradition of educational excellence. Estrella Mountain accesses a wealth of experience and resources through its association with the larger District which currently is the largest community college district in the nation. Contributing to the District mission, Estrella Mountain Community College is committed to upholding the District’s quality tradition while continually developing new and relevant paths of success for all in the Estrella Mountain family.
CORE VALUES

Our Core Values represent important elements of life at Estrella Mountain. They serve as enduring guides for all employees in meeting the needs of many communities.

Collaboration and Teamwork
Work together toward common goals
Promote an ongoing exchange of ideas

Diversity
Recognize that perspectives are shaped by backgrounds and experiences
Promote positive attitudes toward each other

Integrity
Commit to the highest principles of academic and professional standards

Creative and Continuous Learning
Commit to the success of students and employees
Encourage innovation
Promote a caring and supportive environment

Respect and Fairness
Treat each other with respect
Act fairly and honestly with all

VISION

We will meet your needs and expand your aspirations through creative learning experiences.

Our environment emphasizes caring, teamwork, and flexibility.

In partnership with us, you will gain knowledge, abilities, and values essential to success in a highly complex and technological world.

◆

We are committed to building better communities… one life at a time.
Estrella Mountain Community College opened in Avondale in 1992. I’ve never seen another campus like it. Young, new, no peeling linoleum, nothing that looks like my parents would have gone here—this is my school.

The college has so much to offer—a great education, affordability, a location close to home, exceptional professors who actually care, and a variety of services to make me successful. I would be crazy to pass this up.

I want an experience.

At Estrella Mountain I can sit in the grass and tap into wireless internet, enjoy classes taught by dynamic professors in the cutting edge learning studios, or just hang out with my friends. College is an experience and Estrella Mountain gives me the options I want.

I don’t want to start life with a ton of debt.

Right now, I am saving loads of money since tuition here is a fraction of the cost of a public institution, not to mention those private schools.

I want to be ready for anything at the university.

Classes taught by nationally recognized professors are helping to prepare me for the university. Liberal arts classes motivate me to look at the world in a totally different way. The advisors help me choose the right classes so that when the time is right, I will be able to transfer to the university of my choice.

I don’t want to sit in a huge lecture hall and be forgotten.

Small classes at Estrella Mountain mean my professors know more than my name—they know me.

I want to show you how to be successful too.

On the right, you’ll learn where to find the services Estrella Mountain offers to help make every step of your college experience a success.
Finding the Things I Need to Succeed

Komatke Hall

Register for Classes since you must learn before you can earn your degree(s).

Advising lets you know about all the degrees and certificates the college offers. They can also help you stay on track.

Testing and Assessment Services help determine the classes you should take first.

Counseling shows you how to be successful in college, careers, and life.

Financial Aid, Veterans’ and Scholarship Services help you figure out the money part.

Cashier Services is where you pay the bills, like tuition and fees.

Admissions and Records is the place to go for transcripts and most official student paperwork.

Career Exploration is not only fun, but lets you know what jobs fit the talents you have and the skills you want to develop.

Bookstore, enough said.

Courtyard Grill and ATM has everyone’s favorites—food and money.

Disability Resources provides services for students with special needs.

Student Insurance/Accident and Health keeps you safe and healthy.

Transfer Information because you start here so you can go everywhere.

Student Life is where campus life begins. Find out about clubs, support services, activities or just meet people. They even have Free Popcorn Thursdays.

Information Commons / Library helps you do your research online, access the latest articles and documents, or pick up a book.

Learning Enhancement and Writing Support Center helps when you have writer’s block or need some general tutoring. They can help with all that college formatting too.

Enclosed Study Rooms allow you and your friends to concentrate in peace.

NASA Center for Success in Math and Science is a lifesaver when it comes to tutoring services for math and science classes. Whether you are taking algebra for the first time or you plan to become a Nobel Prize winning mathematician, the NASA Center is the place to start.
Academic Degrees
Associate in Arts (AA)
Associate in Arts in Elementary Education (AAEE)
Associate in Arts (AA), Fine Arts-Art
Associate in Arts (AA), Fine Arts-Dance
Associate in Arts (AA), Fine Arts-Theatre
Associate in Business (ABUS) (General)
Associate in Business (ABUS) (Special)
Associate in General Studies (AGS)
Associate in Science (AS)
Associate in Transfer Partnership (ATP)

Accountancy
Computer Information Systems
Elementary Education
Exercise and Wellness
Global Business
Kinesiology
Psychology
Social Work

Academic Certificates
Arizona General Education Curriculum (AGEC)
Advanced Interdisciplinary Storytelling
Interdisciplinary Storytelling

Occupational Programs
Associate in Applied Science (AAS) Degrees

Administration of Justice
Computer Applications Technology
Culinary Studies
Fire Science Technology
Hospitality/Hotel Management
Industrial Operations Technology
Information Security
Linux Associate
Linux Networking Administration
Linux Professional
Microsoft Desktop Support Technology
Microsoft Networking Technology
Microsoft Product Specialist
Microsoft System Administration
Microsoft Systems Engineer
Networking Administration: CISCO
Networking Technology: CISCO
Organizational Leadership
Programming and System Analysis
Receptionist
Retail Management
Small Business Management
Speech Language Pathology
Strength and Conditioning Personal Trainer
Web Developer

Occupational Certificates
Administration of Justice
Basic Culinary Studies
Basic Firefighter
Building Inspection
Computer Applications Technology
Computer Hardware and Desktop Support
Culinary Studies
Customer Service Management
Data Entry Clerk
Desktop Publishing
General Office Secretary
Hospitality/Hotel Management
Industrial Operations Technology
Information Security Forensics
Information Security Technology
Information Security Administration
Information Security Wireless Networks
Linux Associate
Linux Networking Administration
Linux Professional
Microsoft Desktop Support Technology
Microsoft Networking Technology
Microsoft Product Specialist
Microsoft System Administration
Microsoft Systems Engineer
Networking Administration: CISCO
Networking Technology: CISCO
Organizational Leadership
Programming and System Analysis
Receptionist
Retail Management
Small Business Management
Speech Language Pathology
Strength and Conditioning Personal Trainer
Web Developer

Southwest Skill Center Certificate Programs
Basic Culinary Skills
Business Technology
Office Assistant
General Office Secretary
Administrative Secretary
Office Applications Basics
Microsoft Office Suite
CPR
Emergency Medical Technician (Coming Soon)
Health Care Curriculum
Medical Assistant
Nursing Assistant
Phlebotomy
Practical Nursing

Degree and certificate offerings subject to change.
At Estrella Mountain, you immediately access a wide range of services and resources designed with your success in mind. Taking advantage of these services and resources will help you define and reach your highest goals, will contribute to your academic success, and will enhance your life for many years to come.
STUDENT SERVICES

ENROLLMENT SERVICES
Komatke Hall B
www.estellamountain.edu/studentservices/
Student Services at Estrella Mountain has always focused on a commitment to offer quality and convenience to the students and community. To further this commitment, an innovative way of providing service has been created called One-Stop Enrollment. As the name implies, the One-Stop Model gives students “one-stop” service by providing all services such as placement testing, advisement, financial aid, registration, quick stop services, and payment all in one area for student convenience.

Admissions and Records Services 623-935-8888
www.estellamountain.edu/enrollmentservices/
- Process Student Information Forms as well as special admission
- Determines residency for tuition purposes and processes changes in residency for tuition purposes
- Process class registrations and drop/adds in person, phone or web
- Monitor academic probations and suspensions
- Process refund appeals
- Maintain official college transcripts for all students and responds to requests for transcripts and letters of enrollment verification
- Evaluate transcripts
- Evaluate graduation applications for degree and certificate completion
- Web registration available at www.emc.maricopa.edu/onlineservices
- Issue picture Student ID’s
- Touch-Tone Phone Registration - 480-731-8255
- Detailed guidelines covering registration are included in this catalog beginning on page 258 in the MCCD Policies and Procedures section.

Cashier Services  623-935-8888
www.estellamountain.edu/enrollmentservices/
- Process tuition and fee payments
- Process refunds (when appropriate)
- Process and mail scholarship and financial aid checks
- Distribute payroll checks
- Provide check cashing services
- Provide student invoices
- Provide student tuition payment plans

Financial Aid, Veterans’ & Scholarship Services 623-935-8930
www.estellamountain.edu/financialaid/
- Assist students with obtaining funding for their education including grants, loans, federal work-study and scholarships
- Assistance with completion of financial aid forms
- Provide information and application assistance for those eligible for Veteran’s benefits
- Certify and monitor Veterans’ enrollment
- For more information on Financial Aid and Veterans benefits please see page 268 and 264.

UNDECIDED? NEED HELP?
CALL: (623) 935-8821
for free advisement
Advisement Services - 623-935-8597
www.estrellamountain.edu/advisement/
- Assist students with selecting classes appropriate to program of study
- Interpret placement testing scores
- Verification of graduation eligibility
- Unofficial evaluation of college transcripts
- Provide information on college and university transfer process
- Provide assistance with on-line resources such as Course Applicability System (CAS) - http://az.transfer.org/cas/
- Transfer Student Ombudsman (TSO)

Testing Services - 623-935-8860
www.estrellamountain.edu/testing/
- Administer placement testing - English, Reading, Mathematics, and English as a Second Language
- Administer GED Exam

SUPPORT SERVICES

Bookstore
Komatke Hall
623-935-8875
www.efollet.com
The Estrella Mountain Bookstore is managed by Follett College Stores and provides textbook and academic supplies required by students and staff at Estrella Mountain. Additional gift and Estrella Mountain specialty items are available. Students may purchase computer software through the Bookstore at a special discount. Textbooks and software are also available through: www.efollett.com. Call the Bookstore directly for current hours of operation.

Career Exploration
Komatke Hall
623-935-8909
Career services are available to assist both current and prospective students in exploring and evaluating career opportunities that are consistent with their interests and educational goals.
Available assistance includes:
- Career and educational life planning sessions
- Occupational Information System software and internet web searches
- Career assessments to explore job opportunities in the world of work
- Resume writing, interviewing, and job-seeking seminars
- Post secondary employment/training directory information

Students are encouraged to visit Estrella Mountain Online Career Center at http://www.maricopa.edu/counseling/ to access information related to career development. Appointments with qualified counselors are free of charge. Attendance at free workshops and seminars is encouraged.
Center for Teaching and Learning
Montezuma Hall
623-935-8070
The Estrella Mountain Center for Teaching and Learning was established to provide faculty a comprehensive set of support services focusing on good practices in teaching and learning. Programmatic support includes faculty orientations, forums on teaching and learning, faculty luncheon series, curriculum development projects and the teaching and learning resource center. The Center also offers faculty a new experimental learning space which is equipped with the latest in multimedia technology, along with space for developmental work. The Center for Teaching and Learning is located on the northwest corner of Montezuma Hall.

Counseling
Komatke Hall
623-935-8909
Counseling services are provided to promote student development by helping you to define and achieve your personal, educational and occupational goals. At Estrella Mountain there is always access to a helping hand in times of difficulty. The counseling staff encourages you to visit, to share successes and to talk out problems whenever you need some encouragement in your college experience.

College Public Safety & Security
Komatke Hall
Located on the north side of the building adjacent to the Ceremonial Plaza. Many dedicated staff members work behind the scenes to insure that your physical surroundings are safe so that you can be comfortable to pursue your education. You may contact Public Safety via Estrella Mountain’s web page: http://www.estrellamountain.edu/security/ or by calling:

Emergencies: 623-935-8911
Non-emergency: 623-935-8915

In the unlikely occurrence of an extreme safety emergency: Go to one of the emergency (blue lighted) telephones on campus ...press the call button and it will automatically connect you with the Safety & Security Office ...state the nature of your emergency.

DisABILITY Resources and Services
www.estrellamountain.edu/disability
Komatke Hall
623.935.8935 or 623.935.8928 VP
www.ramona.santiesteban@emcmail.maricopa.edu
Students with disabilities are encouraged to contact the DRS office at the beginning of the admissions process to discuss accommodation needs and to request for an alternative format of printed materials. Some accommodations may require 3-4 weeks notification (i.e., sign language interpreters). For concerns or grievances regarding ADA or Section 504, please contact the Vice President of Student Affairs at 623.935.8812 or 623.935.8928 VP.

Food Services
Komatke Hall
623-935-8948
The Courtyard Grill on-site restaurant offers students an inexpensive place to grab a bite to eat. Located at Komatke Hall, the food services management encourages students to use both the indoor and outdoor eating areas whether they are customers of the restaurant or are carrying a lunch from home. For added convenience, vending machines are located on both floors of Montezuma Hall and in front of Komatke Hall.
JOB PLACEMENT
Komatke Hall
623-935-8909
http://ntweb.dist.maricopa.edu/careers/
Listings of both part-time and full-time jobs are located in Komatke Hall in the Student Services area. On-campus interviews are held throughout the school year by employers around the valley who recruit and hire students. Students can also access the Maricopa Center Network at http://ntweb.dist.maricopa.edu/careers/ a job search engine that matches job candidates with employers based on measurable competencies. This is a free system, Internet accessible 24 hours a day.

Student Insurance/Accident and Health
Komatke Hall
623-935-8910
Enrolled students are automatically provided insurance coverage for college-related accidents. The plan provides secondary coverage when a student has individual insurance and will pay the remaining reasonable charges within the limits of the policy. Forms can be obtained through Student Life.

SPECIAL ASSISTANCE
Komatke Hall
If you are returning to school after a long absence, are challenged by a disability, or require some other form of special accommodation, Estrella Mountain stands ready to provide individualized support as needed. Contact one of the following areas to receive specialized support.

High School Outreach Services
623-935-8905
Offering: Assistance with admission forms
Registration assistance
Ombudsmen activities
Financial aid information
Bilingual assistance for Spanish speaking students

Re-Entry Services
623-935-8909
Offering: Skills building seminars
Registration assistance
Personal development seminars
College Transition

High School Dual Enrollment
623-935-8443
http://www.estrellamountain.edu/k12/Dualenroll.asp
The high school dual enrollment program is for students under 18 years of age who would like to get a head start on their college education. Admission to the program requires written permission of parents, the high school counselor/administrator, and Estrella Mountain. Students taking advantage of dual enrollment should be advised that, as college students, they will be subject to all of the requirements, policies, and regulations described in this catalog. The courses they take will become a part of their official college transcripts, which must be reported when attending future colleges and universities.
Transfer Information
Komatke Hall
623-935-8821
www.estrellamountain.edu/ advisement/
Transfer information and resources are available to assist in making the transition to another college or university. Meeting with an advisor will help chart progress toward completion of an Associate Degree and transfer requirements. In addition, the Course Applicability System (CAS) is available to help determine how courses transfer to the state universities, and can assist in matching course work with university degree requirements. At the point of transfer, Estrella Mountain’s Transfer Student Ombudsman (TSO) is available to assist students who encounter problems in transferring to Arizona’s public universities.

Student Life
Komatke Hall
623-935-8807
www.emc.maricopa.edu/studentlife/
Deciding to attend college can be the opportunity of a lifetime. It opens doors to new friendships, offers a different social life and can help build leadership and team skills that will impact students for the rest of their lives. In addition to the academic growth that students experience at Estrella Mountain, there is a myriad of student activities available to help build students’ confidence and abilities as they contribute to both the campus community and the community at large.
CLUBS

Asian Pacific Islander Club
Advisor: Carole Yoshida-Bacula 623-935-8833
The purpose of the APIAC is to reach out to those who want to learn and/or be a part of an organization which promotes racial, political, cultural, and self awareness of the Asian Pacific Islander minorities.

Black Student Union
Advisor: To Be Determined 623-935-8934
The purpose of the Black Student Union is to stimulate education by providing an awareness, recognition of and appreciation toward contributions by the Black American culture to the United States of America and to the world.

Christian Student Association
Advisor: Iris Love 623-935-8828
The Christian Student Association (CSA) is an organization that promotes and supports Christian values, leadership and awareness among Christian community college students. The CSA is not based on any particular religion or church affiliation, and is open to all community college students.

Future Teachers of America
Advisor: Dr. Deborah Raffin 623-935-8441
The purpose of the organization is to create a student network that will allow the students to bond, share knowledge and experiences. While participating in club activities we will develop excellent communications skills, voluntaryism, and leadership skills. This club will be designed to enhance and work along side preexisting organizations on campus such as America Reads and Inspire.Teach.

Gay Straight Alliance
Advisor: Dr. Kathleen Iudicello 623-935-8460
GSA works to create a safe space within the Estrella Mountain Community College community for GLRTQ students. It does so through an alliance of GLBTQ and straight students.

Linux Users Group
Advisor: Randol Larson 623-935-8077
The Linux Users Group includes all students who are interested in Linux education; higher level students will support lower level students, share learning experiences and knowledge, create and complete projects that support Linux education.

M.E.Ch.A.
Advisor: To Be Determined 623-935-8910
M.E.Ch.A. (Movimiento Estudiantil Chicano de Aztlán) is an organization that promotes and supports higher education for Chicano/Hispano students. M.E.Ch.A. also encourages student involvement in cultural and social issues, on and off campus, especially those affecting the Chicano/Hispano community.
Philosophy Club  
**Advisor:** To Be Determined  623-935-8380  
The purpose of this organization is to stimulate a strong interest in Philosophy, provide a campus community for philosophical reflection among Estrella Mountain Community College students, and promote a general climate of critical thinking and thoughtful questioning on campus.

Social Awareness Club  
**Advisor:** Herschel Jackson  623-935-8910  
The purpose of the Social Awareness Club focuses on bringing awareness of social issues to the campus community. The club focuses on activism, awareness, and tolerance. Some of the social issues include gun control, the environment, healthcare and cultural diversity.

Society of Physics Students  
**Advisor:** Dr. Dwain Desbien  623-935-8474  
The purpose of this chapter shall be the advancement and diffusion of knowledge of Physics, the encouragement of interest in physics throughout the academic and local communities, and the introduction of students to the professional community.

Writing Club  
**Advisor:** Malik Toms  623-935-8303  
The purpose of the organization is to stimulate a strong interest in writing to provide fellowship among the writing enthusiasts and to promote original fiction or non-fiction production among the members.

HONORARY GROUPS  
**Phi Theta Kappa**  
**Advisor:** Marylyn Bradley  
Phi Theta Kappa, the International Honorary Society for Community Colleges, is committed to promoting scholarship, leadership, service, and fellowship among talented community college students. Beta Alpha Xi, the Estrella Mountain Chapter of Phi Theta Kappa, achieved an outstanding Five Star Ranking in its five years of existence. Each semester, students who have completed twelve (12) credit hours with a 3.25 grade point average receive an invitation to join the organization.

**Honors Program**  
**Coordinator:** Clarissa Davis-Ragland  623-935-8594  
See page 180 of the catalog for a detailed description of the Honors Program.

SERVICE LEARNING  
**Komatke Hall**  
623-935-8802  
We encourage all students to consider the community through Estrella Mountain’s Service Learning Program. Check with your instructor to see if there is a Service Learning component in which you can participate to complete your class requirements.

Spend your energies where:  
♦ You feel rewarded  
♦ You gain satisfaction  
♦ You feel responsible  
♦ You feel growth
The focal point of the campus is Estrella Hall, a building which houses the Information Commons, that integrates computing, library and learning enhancement services. The Information Commons offers an information-rich environment, which supports the entire campus community – students, faculty, staff, and community users. Students at Estrella Mountain have full access to this remarkable facility and the support services it provides to facilitate and enrich their college experience.

The Information Commons offers personal computing support for the entire campus. The Commons presently houses over 125-networked workstations, with each workstation offering access to local, regional, national and international instructional and information resources through the campus network and the Internet.

**Services offered 623-935-8150:**

- One-on-one support in the use of academic and application software
- Access to computing resources including the Internet
- Self-Paced Program: orientation, administration, and instructional support
- Training sessions: software application-training sessions are provided in a variety of formats, individual, small group, workshop, and as scheduled by instructors.
- Support in accessing and using information resources
- Assistance in accessing online resources
- Access and training in use of Blackboard
- Remote access options

For more information regarding services or to schedule services for your students, please contact the Information Commons Desk at 623-935-8150.
LIBRARY RESOURCES
623-935.8191
http://www.estrellamountain.edu/library
The Estrella Mountain’s Library creates a connection between people and information that extends anywhere, anytime. The library seeks to meet the information needs of the digital information world as well as the traditional research needs of every student. Our Web site provides 24 hour access to thousands of electronic books and millions of magazine and journal articles. In addition to the materials available at Estrella Mountain’s Library, students may access and request materials from any of the other nine Maricopa Community College Libraries.

Library Hours

<table>
<thead>
<tr>
<th>Day</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Monday - Thursday</td>
<td>7AM - 10PM</td>
</tr>
<tr>
<td>Friday</td>
<td>7AM - 5PM</td>
</tr>
<tr>
<td>Saturday</td>
<td>8AM - 5PM</td>
</tr>
<tr>
<td>Sunday</td>
<td>Closed</td>
</tr>
</tbody>
</table>

Library Cards
Student ID cards serve as library cards and are required to make use of these services.

Library Instruction
Instruction is provided through classes, small groups, and one-to-one interaction
For more information regarding services or to schedule services for students please contact the Consultation Desk at 623-935-8191.

LEARNING ENHANCEMENT

Learning Enhancement & Writing Support Center
623-935-8189
http://www.estrellamountain.edu/ctl/learningsupport
The Learning Enhancement & Writing Support Center (LEWSC) at Estrella Mountain provides supportive, collaborative, and knowledgeable academic assistance to students, faculty and staff. The following services are provided by the Learning Enhancement & Writing Support (LEWSC) located in Estrella Hall, 1st floor, to the right of the Information Commons:

When is it open?

<table>
<thead>
<tr>
<th>Day</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Monday - Thursday</td>
<td>7:00am - 8:00pm</td>
</tr>
<tr>
<td>Friday</td>
<td>7:00am - 5:00pm</td>
</tr>
<tr>
<td>Closed Saturdays, Sundays and Holidays</td>
<td></td>
</tr>
</tbody>
</table>

What do we support?
Reading, English, ESL (English as a Second Language), all Liberal Arts, Social and Behavioral Sciences (i.e. Psychology) and Occupational (i.e. Accounting, General Business and Economics).

Do I need an appointment?
Drop-in and appointment based tutoring available for all writing assistance on most contents.

What are the services?
Writing assistance for all subjects, make-up testing, online paper critiquing strategies for college success, study rooms (some with computer access) study groups, individualized tutoring (via Disability Resources), textbooks and resources within center, online tutoring services based on request.
The NASA Center for Success in Math & Science serves as the cornerstone for student success in Math and Science. The mission is to create a continuous support structure for students to insure their persistence from middle school through high school and on to college and/or advanced degrees. The Center’s strategies are grounded in the best practices and are focused in three areas:

**Outreach**
- Middle/high school students
- K-12 partnering teachers
- Parents/families

**Retention**
- Instructional support programs
- Student Service support programs
- Faculty coordinated programs

**Transfer**
- University Programs
- Industry Internship and employment programs
- Alumni Programs

At the NASA Center the focus is on the retention. The following services are offered:

- Individualized tutoring in Mathematics, Biology, Chemistry, Geology and Physics.
- Drop in tutoring
- Graphing calculators - Lease Program
- Wireless laptop computers for use in the NASA Center
- Access to science equipment such as: anatomical models and microscopes
- Access to Chemistry molecular model sets and charts
- Math and Science textbooks available for use in the NASA Center
- Quiet study rooms
- Workshops and seminars for Student Success
- Phone tutoring for mathematics
- Connection to Internship opportunities and Scholarships

**Hours of operation (Fall and Spring):**
- Monday-Thursday 7:00AM-9:00PM
- Friday 8:00AM-5:00PM
- Saturday 8:00AM-3:00PM

**Summer Hours:**
- Monday - Thursday 7:00AM-7:00PM

For more information regarding services please call the NASA Center at 623-935-8221.
ASSESSMENT OF STUDENT LEARNING OUTCOMES

At Estrella Mountain, we are very concerned with learning. We use assessment as a way to promote continued excellence in teaching and learning by improving and enhancing student abilities and success, determining achievement of student abilities, measuring the effectiveness of student abilities, and using assessment as a tool for feedback and learning. Communication and Critical Thinking at Estrella Mountain are defined as follows:

**Communication**
A student who effectively communicates:
- responds to an audience
- demonstrates a clear sense of purpose
- organizes information
- presents information using appropriate language and delivery

**Critical Thinking**
A student who thinks critically processes, synthesizes and applies information to solve problems by:
- identifying the problem
- developing and implementing strategies
- evaluating information
- reaching conclusions
- responding to the problem

To benefit students, Communication and Critical Thinking are being integrated into a wide variety of Estrella Mountain courses. Students learn course content and develop these important abilities to enhance success in academic and professional pursuits.

Web address: http://www.estrellamountain.edu/academics/saac/
At Estrella Mountain, students experience a collaborative and stimulating environment which stresses a solid foundation of general education. Each facet of the Estrella Mountain experience is designed to provide students with the necessary information, knowledge, abilities, intellectual concepts, and the perspectives they need to achieve their academic and personal goals.

Our curricular patterns enhance critical thinking and communication skills. They reflect an emphasis on the study of composition, literacy and critical inquiry, numeracy, humanities, fine arts, the social and behavioral sciences, the natural sciences, as well as cultural diversity, global and/or historical awareness.

Recognizing the importance of breadth of knowledge, the ability to apply that knowledge, and a view of learning as a lifetime activity, faculty and staff are committed to providing all students with a teaching and learning environment in which everyone experiences growth.
## UNIVERSITY TRANSFER AND PATHWAYS

### AZ Transfer Pathways

Each public university major is matched with one of the following Maricopa Community Colleges Associate Degree Pathways. Some majors at the Arizona public universities are not matched with any of the Transfer Pathway Degrees below, due to sequencing or upper division requirements, and are designed as Transfer Guide-Exceptional Requirements (TG-XR). Students should consult with an advisor to determine the specific degree requirements for the selected major.

<table>
<thead>
<tr>
<th>Associate in Arts</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(AA) 60-64 Credits</strong></td>
<td></td>
</tr>
<tr>
<td><strong>AGEC - A</strong></td>
<td>35 Credits</td>
</tr>
<tr>
<td><strong>1. Core Areas</strong></td>
<td></td>
</tr>
<tr>
<td><strong>2. Awareness Areas</strong></td>
<td></td>
</tr>
<tr>
<td><strong>MCCD Requirements</strong></td>
<td>0-6 Credits</td>
</tr>
<tr>
<td><strong>(Communication, Reading)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>General Electives</strong></td>
<td>(Select courses to complete a minimum of 60 credits but no more than a total of 64 semester credits.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Associate in Arts</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Elementary Education</strong></td>
<td></td>
</tr>
<tr>
<td><strong>(AAEE) 60-63 Credits</strong></td>
<td></td>
</tr>
<tr>
<td><strong>AGEC - A</strong></td>
<td>35-38 Credits</td>
</tr>
<tr>
<td><strong>1. Core Areas</strong></td>
<td></td>
</tr>
<tr>
<td><strong>2. Awareness Areas</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Elementary Education Requirements</strong></td>
<td>25 Credits</td>
</tr>
<tr>
<td><strong>-Education Foundations</strong></td>
<td>(15 Credits)</td>
</tr>
<tr>
<td><strong>-Elective for AZ Professional Teacher Standards</strong></td>
<td>(10 Credits)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Associate in Arts</th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Fine Arts</strong></td>
<td></td>
</tr>
<tr>
<td><strong>(AAFA) 60-64 Credits</strong></td>
<td></td>
</tr>
<tr>
<td><strong>AGEC - A</strong></td>
<td>35-38 Credits</td>
</tr>
<tr>
<td><strong>1. Core Areas</strong></td>
<td></td>
</tr>
<tr>
<td><strong>2. Awareness Areas</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Fine Arts Requirement - Art</strong></td>
<td>(28 Credits)</td>
</tr>
<tr>
<td><strong>Fine Arts Requirement - Dance</strong></td>
<td>(29 Credits)</td>
</tr>
<tr>
<td><strong>Fine Arts Requirement - Theatre</strong></td>
<td>(25-29 Credits)</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Associate in Business</th>
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</thead>
<tbody>
<tr>
<td><strong>(ABus)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Associate in Business General Requirements</strong></td>
<td></td>
</tr>
<tr>
<td><strong>ABus-GR Pathway</strong></td>
<td></td>
</tr>
<tr>
<td><strong>62-63 credits</strong></td>
<td></td>
</tr>
<tr>
<td><strong>All Business Majors except ACC &amp; CIS</strong></td>
<td></td>
</tr>
<tr>
<td><strong>AGEC - B</strong></td>
<td>35 Credits</td>
</tr>
<tr>
<td><strong>1. Core Areas</strong></td>
<td></td>
</tr>
<tr>
<td><strong>2. Awareness Areas</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Common Lower Division Requirements</strong></td>
<td></td>
</tr>
<tr>
<td><strong>27-28 Credits</strong></td>
<td></td>
</tr>
<tr>
<td><strong>General Electives</strong></td>
<td>(Select courses to complete a minimum of 62 credits but no more than a total of 63 semester credits)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Associate in Business</th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Special Requirements</strong></td>
<td></td>
</tr>
<tr>
<td><strong>ABus-SR Pathway</strong></td>
<td></td>
</tr>
<tr>
<td><strong>62-63 credits</strong></td>
<td></td>
</tr>
<tr>
<td><strong>CIS Majors</strong></td>
<td></td>
</tr>
<tr>
<td><strong>(ACC TG-XR)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>AGEC - B</strong></td>
<td>35 Credits</td>
</tr>
<tr>
<td><strong>1. Core Areas</strong></td>
<td></td>
</tr>
<tr>
<td><strong>2. Awareness Areas</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Common Lower Division Requirements</strong></td>
<td></td>
</tr>
<tr>
<td><strong>27-28 Credits</strong></td>
<td></td>
</tr>
<tr>
<td><strong>General Electives</strong></td>
<td>(Select courses to complete a minimum of 62 credits but no more than a total of 63 semester credits)</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Associate in Science</th>
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<tbody>
<tr>
<td><strong>(AS)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Associate in Science</strong></td>
<td></td>
</tr>
<tr>
<td><strong>60-64 Credits</strong></td>
<td></td>
</tr>
<tr>
<td><strong>AGEC - S</strong></td>
<td>35 Credits</td>
</tr>
<tr>
<td><strong>1. Core Areas</strong></td>
<td></td>
</tr>
<tr>
<td><strong>2. Awareness Areas</strong></td>
<td></td>
</tr>
<tr>
<td><strong>MCCD Requirements</strong></td>
<td>(Communication, Reading)</td>
</tr>
<tr>
<td><strong>0-6 Credits</strong></td>
<td>(Select courses to complete a minimum of 60 credits but no more than a total of 64 semester credits)</td>
</tr>
<tr>
<td><strong>General Electives</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Additional Programs for University Transfer

<table>
<thead>
<tr>
<th>Associate in Transfer Partnership</th>
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</tr>
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<tbody>
<tr>
<td><strong>(ATP)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>60 Credits</strong></td>
<td></td>
</tr>
<tr>
<td><strong>MCCCD General Education Core</strong></td>
<td>(19 Credits)</td>
</tr>
<tr>
<td><strong>Approved Lower Division Transfer Courses</strong></td>
<td>(Credits Vary)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Associate in General Science</th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>(AGS)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>60 Credits</strong></td>
<td></td>
</tr>
<tr>
<td><strong>General Education Core Areas</strong></td>
<td>(16 Credits)</td>
</tr>
<tr>
<td><strong>General Education Distribution Areas</strong></td>
<td>(28-29 Credits)</td>
</tr>
<tr>
<td><strong>Elective Courses</strong></td>
<td>(15-16 Credits)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Associate in Applied Science</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(AAS)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>60-64 Credits</strong></td>
<td></td>
</tr>
<tr>
<td><strong>General Education Core Areas</strong></td>
<td>(15 Credits)</td>
</tr>
<tr>
<td><strong>General Education Distribution Areas</strong></td>
<td>(9-10 Credits)</td>
</tr>
<tr>
<td><strong>Required Courses</strong></td>
<td>(Credits Vary)</td>
</tr>
<tr>
<td><strong>Restricted Electives</strong></td>
<td>(Credits Vary)</td>
</tr>
</tbody>
</table>
ARIZONA GENERAL EDUCATION CURRICULUM (AGEC- A, B, S)

Description

The Maricopa County Community College District Arizona General Education Curriculum (MCCCD AGEC) is a 35-38 semester-credit general education certificate that fulfills lower-division general education requirements for students planning to transfer to any Arizona public community college or university. The MCCCD AGEC transfers as a block without loss of credit.

All credits used to satisfy the MCCCD AGEC will apply to graduation requirements of the university major for which the AGEC was designed, regardless of whether the credit was awarded for completion of course work or for prior learning. For additional information on credit awarded for prior learning assessment, see the policy on Credit for Prior Learning in the general catalog.

For students planning to pursue an associate degree or transfer to an Arizona public community college or university, the AGEC A is a component of the MCCCD Associate in Arts, the AGEC B is a component of the MCCCD Associate in Business, and the AGEC S is a component of the MCCCD Associate in Science.

Purpose of the AGECs

There are three types of MCCCD AGECs. They are the AGEC A, the AGEC B, and the AGEC S. Designed to articulate with different academic majors, their requirements vary accordingly. Additional information on academic majors at the Arizona public universities can be accessed via the following web address:

http://az.transfer.org/cas/atass/

Click on Student Information
Select Degrees and Pathways
Scroll down to the bottom of the page and select the letter of the major you’re interested in.

1. The AGEC A is designed to satisfy requirements in many liberal arts majors as well as other majors that articulate with the Associate in Arts (e.g., social sciences, fine arts, humanities). AGEC A requires a minimum of college mathematics or college algebra to satisfy the Mathematics [MA] requirement. AGEC A Mathematics requirement is less stringent than the AGEC B and AGEC S. AGEC A and AGEC B Natural Sciences requirements are less stringent than AGEC S.

2. The AGEC B is designed to satisfy requirements in business majors that articulate with the Associate in Business. AGEC B requires a minimum of brief calculus to satisfy the Mathematics [MA] requirement.

3. The AGEC S is designed to satisfy requirements in majors with more prescriptive mathematics and mathematics-based science requirements. AGEC S articulates with the Associate in Science. AGEC S requires a minimum of the first course in a calculus sequence to satisfy the Mathematics [MA] requirement, and a minimum of eight credits of either university chemistry, university physics or general biology to satisfy the Natural Sciences [SQ/SG] requirement. In addition, students must select six to eight additional credits of math and/or science appropriate to the major.
Academic Policies that Govern the AGEC A, AGEC B, and AGEC S:

- require 35-38 semester credits in courses numbered 100 and above to be completed with a grade of “C” or better; Credit units transferred from outside of the district need to be at a grade of “C” or better. A grade of “C” equals 2.0 on a 4.0 grading scale or equivalent;

- use the following policies to help students complete the required Core and Awareness Areas without exceeding the 35-38 semester credits;

  1. Courses can satisfy a Core area and one or two Awareness areas simultaneously.
  2. A course cannot be used to satisfy more than one Core area requirement.
  3. A course can be used to satisfy the L and SB or L and HU requirements simultaneously in the Core area for the AGEC S.

- follows the general education policy below;

General Education Designations (example: (FYC), [SB], [HU], etc.)

Effective Fall 2000 the course evaluation and/or the general education designation as listed in the Arizona CEG (Course Equivalency Guide) within the Arizona Course Applicability System (AZCAS) is valid for the term in which the student is awarded credit on the transcript. A course evaluation and/or general education designation may be subject to change. Given that curriculum is dynamic at both MCCCD and the institutions to which MCCCD students transfer, students have the option to petition for course evaluations and/or general education designations.

- require courses that transfer as equivalent courses, departmental elective credit (XXXXXDEC), or general elective credit (Elective) at all Arizona public universities according to the Arizona CEG. The course evaluation and/or general education designation as listed in AZCAS is valid for the term in which the student is awarded credit on the transcript;

- require that a minimum of 12 semester credits of course work be taken at any of the MCCCD colleges;

- include both courses and their modular equivalents, either the course or the modular equivalents will satisfy the AGEC;

- accept one of the courses that is cross-referenced with other courses;

- provide for exemption from Arizona university admission requirements for: Students who complete the AGEC A, AGEC B, or AGEC S with a minimum 2.0 on a 4.0=A scale, or students who complete an associate or higher degree from a regionally accredited post-secondary institution with a minimum 2.0 on a 4.0=A scale for Arizona residents and a minimum 2.5 on a 4.0=A scale for non-residents.

AGEC Requirements

The 35-38 semester credits required for each of the three AGECs follow. See the list entitled MCCCD Courses That Can Be Used to Satisfy MCCCD AGEC A, AGEC B and/or AGEC S for specific course information via the following website:

http://www.dist.maricopa.edu/academic/curric/

Click on the Resources tab
Scroll down to: Matrix of MCCCD Courses That Can Be Used to Satisfy AGEC A, AGEC B, and/or AGEC S
Click on the link
The list identifies the courses in alpha-order by prefix as well as the different Core Areas and Awareness Areas where the course will apply. When selecting Mathematical Studies and Natural Sciences options, select from the appropriate AGEC A, B, or S list.

A. **Core Areas:**

<table>
<thead>
<tr>
<th>Credits</th>
<th>A. Core Areas:</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>1. First-Year Composition (FYC)</td>
</tr>
<tr>
<td>0 - 3</td>
<td>2. Literacy and Critical Inquiry [L]</td>
</tr>
</tbody>
</table>

**AGEC A & AGEC B:** Select a course that satisfies the [L] requirement (3)

**AGEC S:** Select a course that satisfies both L and SB (Social and Behavioral Sciences) OR L and HU (Humanities and Fine Arts) requirements simultaneously (0 - 3)

3. **Mathematical Studies [MA/CS]** 4 - 6

The Mathematics [MA] requirement differs for AGEC A, AGEC B, and AGEC S.

To complete the Mathematical Studies requirement for AGEC A and AGEC B select one course to satisfy Mathematics [MA], and a second course from Computer/Statistics/Quantitative Applications [CS]. AGEC S does not require the [CS] area.

**AGEC A requires:**

a. Mathematics [MA] (3 credits) AND
   - Requires a course in college mathematics (MAT142) or college algebra (MAT150, MAT151, MAT152) or pre-calculus (MAT187) or any other mathematics course designated with the MA general Education value and for which college algebra is a pre-requisite.

b. Computer/Statistics/Quantitative Applications [CS] (3 credits)

**AGEC B requires:**

a. Mathematics [MA] B (3 credits) AND
   - Requires a course in brief calculus (MAT212) or a higher level mathematics course (MAT216, MAT220, or MAT221 or any course for which these courses are prerequisites).

b. Computer/Statistics/Quantitative Applications [CS] (3 credits)
   - CIS105 Survey of Computer Information Systems

**AGEC S requires:**

a. Mathematics [MA] S (4 credits) AND
   - Requires a calculus course (MAT220 or MAT221) or any course for which MAT220 or MAT221 are prerequisites OR if pursuing a degree at ASU in Life Sciences select MAT251 Calculus for Life Science.

4. **Humanities and Fine Arts [HU]**

   **AGEC A and AGEC B:** Students are encouraged to choose courses from more than one discipline for a total of six semester credits.
   - Select a course that satisfies both L and SB or L and HU requirements simultaneously.

   **AGEC S:** Select a course that satisfies both L and SB (Social and Behavioral Sciences) or L and HU (Humanities and Fine Arts) requirements simultaneously.

5. **Social and Behavioral Sciences [SB]**

   **AGEC A and AGEC B:** Students are encouraged to choose courses from more than one discipline for a total of six semester credits.
   - Select a course that satisfies both L and SB (Social and Behavioral Sciences) or L and HU (Humanities and Fine Arts) requirements simultaneously.

6. **Natural Sciences [SQ/SG]**

   **AGEC A and AGEC B** require four (4) semester credits of [SQ] and four (4) semester credits of [SG] for a total of eight (8) semester credits, OR eight (8) semester credits of [SQ]. Students **cannot** take eight (8) semester credits of [SG] to meet the Natural Sciences requirement.
The Natural Sciences requirement differs for AGEC S. AGEC S requires eight (8) semester credits of either university chemistry or eight (8) semester credits of university physics or eight (8) semester credits of general biology appropriate to the major.

The lecture course(s) selected for Natural Sciences must include or be accompanied by the corresponding laboratory course. The lecture and corresponding laboratory course(s) may carry separate credit. Students should consult with an advisor for appropriate course selection. Students should also access the AZ Course Equivalency Guide (CEG) within the AZ Course Applicability System (AZCAS) for information on equivalencies.

7. Subject Options (Subject based on major) (AGEC S) 6-8
Students completing AGEC S, through careful selection of courses that meet the other major or pre-requisite requirements for Science degrees, will meet this requirement. Using a transfer guide, select Mathematics courses above Calculus, and/or Science courses from: Astronomy, Biology, Botany, Chemistry, Environmental Science, Geology, Physical Geography, Physics, Zoology.

B. Awareness Areas:
Students must satisfy two Awareness areas: Cultural Diversity in United States [C] and either Global Awareness [G] or Historical Awareness [H]. However, it is not necessary for students to exceed thirty-five to thirty-eight semester credits to complete any of the three MCCCD AGECs because courses can satisfy a Core area and one or two Awareness areas simultaneously. Therefore, no additional semester credits are required to satisfy the two Awareness areas.

1. Cultural Diversity in the United States [C]
   AND
2. Global Awareness [G]
   OR
3. Historical Awareness [H]

AGEC Area Requirements Descriptions/Definitions

CORE AREAS

First-Year Composition (FYC) 6 credits
Courses must be completed with a grade of “C” or better in the First-Year Composition Core area. Courses must emphasize skills necessary for college-level learning and writing skills.

Literacy and Critical Inquiry [L] 3 credits
Courses must be completed with a grade of “C” or better in the Literacy and Critical Inquiry Core area. In the [L] course, typically at the sophomore level, students gather, interpret, and evaluate evidence and express their findings in writing or speech. This course includes a series of graded written or spoken formal assignments. For AGEC S, students will select a course that satisfies both Literacy and Social & Behavioral Sciences or Literacy and Humanities and Fine Arts requirements simultaneously.

Literacy is defined broadly as communicative competence in written and oral discourse; critical inquiry is defined as the gathering, interpreting, and evaluating of evidence. Building on the proficiency attained in traditional First-Year Composition courses, the Literacy and Critical Inquiry requirement helps students sustain and extend their ability to reason critically and communicate clearly through language.
Mathematical Studies  
6 credits
Courses must be completed with a grade of “C” or better in the Mathematical Studies Core Area. One course must be selected from Mathematics [MA]. In AGEC A and AGEC B, a second course must be selected from Computer/Statistics/Quantitative Applications [CS].

The Mathematical Studies requirement is intended to ensure that students have skill in basic mathematics, can use mathematical analysis in their chosen fields, and can understand how computers make mathematical analysis more powerful and efficient.

First, the acquisition of essential skill in basic mathematics requires the student to complete a course in college algebra or to demonstrate a higher level of skill by completing a course for which college algebra is a prerequisite.

Second, the real-world application of mathematical reasoning requires the student to take a course in statistics or the use of quantitative analysis to solve problems of substance.

Third, the use of the computer to assist in serious analytical work is required. Computers are widely used to study the implications of social decisions or to model physical systems.

Mathematics [MA] AGEC A
The AGEC A Mathematics Core area requires a course in college mathematics, college algebra, pre-calculus, or any other mathematics course for which college algebra is a prerequisite.

Mathematics [MA] AGEC B
The AGEC B Mathematics Core area requires a course in Brief Calculus or a higher level mathematics course.

Mathematics [MA] AGEC S
The AGEC S Mathematics Core area requires the first course in the calculus sequence or any mathematics course for which that course is a prerequisite. MAT251 is required if transferring to a Life Sciences degree at Arizona State University (ASU).

Computer/Statistics/Quantitative Applications [CS]
AGEC A, B, [CS] requires: courses that emphasize the use of statistics or other mathematical methods in the interpretation of data and in describing and understanding quantitative relationships, courses that involve the use of computer programming languages or software in the development of skills in analytical thinking. AGEC B specifies CIS105 as the course that meets the [CS] requirement.

Humanities and Fine Arts [HU]
Courses must be completed with a grade of “C” or better in the Humanities and Fine Arts Core area. Students are encouraged to choose coursework from more than one discipline. The Humanities and Fine Arts Core area enables students to broaden and deepen their consideration of basic human values and their interpretation of the experiences of human beings.

The humanities are concerned with questions of human existence and the universality of human life, questions of meaning and the nature of thinking and knowing, and questions of moral, aesthetic, and other human values. The humanities investigate these questions in both the present and the past and make use of philosophy, foreign languages, linguistics and communications studies, religious studies, literature, and fine arts.

The fine arts constitute the artist’s creative deliberation about reality, meaning, knowledge, and values.
Social and Behavioral Sciences [SB]
Courses must be completed with a grade of “C” or better in the Social and Behavioral Sciences Core area. Students are encouraged to choose coursework from more than one discipline.

The Social and Behavioral Sciences Core area provides scientific methods of inquiry and empirical knowledge about human behavior, both within society and within individuals. The forms of study may be cultural, economic, geographic, historical, linguistic, political, psychological, or social. The courses in this area address the challenge of understanding the diverse natures of individuals and cultural groups who live together in a world of diminishing economic, linguistic, military, political, and social distance.

Natural Sciences [SQ/SG]
Courses must be completed with a grade of “C” or better in the Natural Sciences Core area. Courses in the Natural Sciences Core area help the student to develop an appreciation of the scope and limitations of scientific capability to contribute to the quality of society. This Core area emphasizes knowledge of methods of scientific inquiry and mastery of basic scientific principles and concepts, in particular those that relate to matter and energy in living and non-living systems. Firsthand exposure to scientific phenomena in the laboratory is important in developing and understanding the concepts, principles, and vocabulary of science. At least one of the two laboratory courses required in the Natural Sciences Core area must include an introduction to the fundamental behavior of matter and energy in physical or biological systems.

Natural Sciences [SQ] A & B
The AGEC A and B Natural Sciences Core area requires one laboratory course in natural sciences that includes a substantial introduction to the fundamental behavior of matter and energy in physical or biological systems.

Natural Sciences [SG] A & B
The AGEC A and B Natural Sciences Core area requires a second laboratory course in the natural sciences, for example, from anthropology, astronomy, biology, chemistry, experimental psychology, geology, microbiology, physical anthropology, physical geography, physics, plant biology

Natural Sciences S
The AGEC S Natural Sciences Core area requires eight semester credits of either university chemistry or eight semester credits of university physics or eight semester credits of general biology appropriate to the major.

SQ = Natural Science-Quantitative
SG = Natural Science-General

Subject Options (for AGEC S) - Courses in the Subject Options area help the student to be prepared for specific majors in science. Students completing AGEC S, through careful selection of courses that meet the other major or pre-requisite requirements for Science degree, will meet this requirement. Using a transfer guide, courses would be selected from Mathematics courses above Calculus, and/or Science courses from: Astronomy, Biology, Botany, Chemistry, Environmental Science, Geology, Physical Geography, Physics, Zoology.

Awareness Areas
Students must satisfy two Awareness areas: Cultural Diversity in U.S. and either Global Awareness or Historical Awareness. Courses can satisfy a Core area and one or two Awareness areas simultaneously. Therefore, no additional semester credits are required to satisfy the two Awareness areas.
Cultural Diversity in the United States [C]
The contemporary “culture” of the United States involves the complex interplay of
many different cultures that exist side by side in various states of harmony and conflict.
U.S. history involves the experiences not only of different groups of European immigrants
and their descendants, but also of diverse groups of American Indians, Hispanic
Americans, African Americans and Asian Americans—all of whom played significant
roles in the development of contemporary culture and together shape the future of the
United States. At the same time, the recognition that gender, class, and religious
differences cut across all distinctions of race and ethnicity offers an even richer variety
of perspectives from which to view oneself. Awareness of cultural diversity and its
multiple sources can illuminate the collective past, present, and future and can help to
foster greater mutual understanding and respect.

The objective of the Cultural Diversity area requirement is to promote awareness of and
appreciation for cultural diversity within the contemporary United States. This is
accomplished through the study of the cultural, social, or scientific contributions of women
and minority groups, examination of their experiences in the United States, or exploration of
successful or unsuccessful interactions between and among cultural groups.

Global Awareness [G]
Human organizations and relationships have evolved from being family and village
centered to the modern global interdependence that is apparent in many disciplines—
for example, contemporary art, business, engineering, music, and the natural and social
sciences. Many serious local and national problems are world issues that require
solutions which exhibit mutuality and reciprocity. These problems occur in a wide
variety of activities, such as food supply, ecology, health care delivery, language planning,
information exchange, economic and social developments, law, technology transfer, and
even philosophy and the arts. The Global Awareness Area recognizes the need for an
understanding of the values, elements, and social processes of cultures other than the
culture of the United States. The Global Awareness Area includes courses that recognize
the nature of other contemporary cultures and the relationship of the American cultural
system to generic human goals and welfare.

Courses that satisfy the global awareness option in the requirements are of one or more
of the following types:
1. Area studies that are concerned with an examination of culture-specific elements of
   a region of the world;
2. The study of a non-English language;
3. Studies of international relationships, particularly those in which cultural change is
   facilitated by such factors as social and economic development, education, and the
   transfer of technology; and
4. Studies of cultural interrelationships of global scope such as the global
   interdependence produced by problems of world ecology.

Historical Awareness [H]
The Historical Awareness Area option in the requirements aims to develop a knowledge
of the past that can be useful in shaping the present and future. Because historical
forces and traditions have created modern life and lie just beneath its surface, historical
awareness is an aid in the analysis of present-day problems. Also, because the historical
past is a source of social and national identity, historical study can produce intercultural
understanding by tracing cultural differences to their origins. Even the remote past may
have instructive analogies for the present. The Historical Awareness Area consists of
courses that are historical in method and content. In this area, the term “history”
designates a sequence of past events or a narrative whose intent or effect is to represent
such a sequence.

The requirement presumes that these are human events and that history includes all that
has been felt, thought, imagined, said, and done by human beings. History is present in
the languages, art, music, literature, philosophy, religion, and the natural sciences, as
well as in the social science traditionally called history.
Description

The Maricopa County Community College District Associate in Arts degree requires 60-64 semester credits for the program of study. The degree includes the following components:

I. General Education:
   - Arizona General Education Curriculum for Arts (AGEC-A) MCCCD Additional Requirements

II. General Electives

Purpose of the Degree

The Associate in Arts degree is designed for students planning to transfer to four-year colleges and universities. In general, the components of the degree meet requirements for majors in the Liberal Arts or programs of study other than business or science. The degree will transfer as a block without loss of credit to Arizona's public universities and other institutions with district-wide articulation agreements.

The semester credits used to satisfy the MCCCD Associate in Arts will apply to university graduation requirements of the university major for which the Associate in Arts is designed. Information regarding the articulation of the Associate in Arts with majors at the Arizona public universities can be accessed via the following website: http://az.transfer.org/cas/atass/student/modpath.html

Academic Policies that Govern the Associate in Arts Degree

- Completion of the Associate in Arts or the AGEC-A provides for exemption from Arizona public university admission requirements for Arizona residents who have a minimum Grade Point Average of 2.0 on a 4.0=A scale and a minimum 2.5 on a 4.0=A scale for non-residents.

- The graduation policies within the general catalog must be satisfied for completion of the Associate in Arts degree.

- A minimum of 60 semester credits in courses numbered 100 and above to be completed with a grade of “C” or better;

- The General Education Requirements for AGEC-A may be completed in 35 semester credits with the following stipulations
  - Courses can satisfy a Core Area and one or two Awareness Areas simultaneously
  - A courses cannot be used to satisfy more than one Core Area

- General Education Courses can satisfy multiple areas within the degree simultaneously (AGEC-A Core Area, AGEC Awareness Area, MCCCD Additional Requirements, or lower-division courses applicable to the major).

- Effective Fall 2000, the course evaluation and/or general education designation as listed in the Arizona Course Equivalency Guide (CEG) within the Arizona Course Applicability System (AZCAS), is valid for the term in which the student is awarded credit on the transcript. A course evaluation and/or general education designation may be subject to change. Students do have the option to petition for general education evaluations and/or general education designations upon transfer.
- Courses completed at one of the Maricopa Community Colleges to meet AGEC-A requirements must be listed in the Course Equivalency Guide within the Arizona Course Applicability System as an equivalent course, departmental elective credit (XXXXDEC), or general elective credit (Elective) at all Arizona public universities. The course’s evaluation and/or general education designation is valid for the term in which the student is awarded credit on the transcript. See the list titled MCCCD Courses That Can Be used to Satisfy MCCCD AGEC-A, AGEC-B, and/or AGEC-S for specific course information via the following website: http://www.dist.maricopa.edu/academic/curric/

- Courses completed at one of the Maricopa Community Colleges to meet the General Electives requirement must be listed in the Course Equivalency Guide (CEG) within the Arizona Course Applicability System (AZCAS) as an equivalent course, departmental elective credit (XXXDEC), or general elective credit (Elective) at all Arizona public universities. For appropriate course selection, students should consult with an advisor.

- Courses transferred from another regionally accredited institution to one of the Maricopa Community Colleges will be evaluated by the college for inclusion in the AGEC-A or Associate in Arts Degree.

- Courses and their modular equivalents will satisfy AGEC-A and Associate in Arts requirements.

- If a course is cross-referenced with one or more other courses, then only one of the cross-referenced courses will be accepted to meet requirements.

Degree Requirements
The 60-64 semester credits required for the Associate in Arts follow. See the list titled MCCCD Courses That Can Be used to Satisfy MCCCD AGEC-A, AGEC-B, and/or AGEC-S for specific course information via the following website: http://www.dist.maricopa.edu/academic/curric/ This list identifies the courses in alphabetical order by prefix as well as the Core Areas and Awareness Areas where the course will apply. For purposes of clarifying requirements in the Mathematics and Natural Sciences areas on the list and the AGEC requirements, an A, B, and/or S character may follow the [MA], [SQ], [SG] general education designations and refers to the specific AGEC.

I. MCCCD General Education
The MCCCD General Education includes two areas: MCCCD AGEC-A and MCCCD Additional Requirements.

MCCCDAGEC-A
1. Core Areas: 35
   a. First-Year Composition (FYC) 6
   b. Literacy and Critical Inquiry [L] 3
   c. Mathematical Studies [MA/CS] 6

To complete the Mathematical Studies requirement, select one course to satisfy Mathematics [MA] A and a second course from Computer/Statistics/Quantitative Applications [CS].

1) Mathematics [MA] A (3 credits)
Note: requires a course in college mathematics (MAT142) or college algebra (MAT 150, MAT 151, MAT152) or pre calculus (MAT 187) or any other mathematics course designated with the MA general education value and for which college algebra is a pre-requisite.

AND
2) Computer/Statistics/Quantitative Applications [CS] (3 credits)
d. Humanities and Fine Arts [HU] 6
Students are encouraged to choose course work from more than one discipline for a total of six semester credits.

e. Social and Behavioral Sciences [SB] 6
Students are encouraged to choose course work from more than one discipline for a total of six semester credits.

f. Natural Sciences [SQ/SG] 8
To complete the Natural Sciences requirement: Select four (4) semester credits of [SQ] and four (4) semester credits of [SG] for a total of eight (8) semester credits, OR eight (8) semester credits of [SQ]. Students cannot take eight (8) semester credits of [SG] to meet the Natural Sciences requirement.

The lecture course(s) selected for Natural Sciences must include or be accompanied by the corresponding laboratory course. The lecture and corresponding laboratory course(s) may carry separate credit. Students should consult with an advisor for appropriate course selection. Students should also access the AZ Course Equivalency Guide (CEG) within the AZ Course Applicability System (AZCAS) for information on equivalencies.

2. Awareness Areas:
Students must satisfy two Awareness Areas: Cultural Diversity in the United States [C] and either Global Awareness [G] or Historical Awareness [H]. However, it is not necessary for students to exceed thirty-five semester credits to complete the Awareness Areas because courses can satisfy a Core Area and one or two Awareness Areas simultaneously. Therefore no additional semester credits are required to satisfy the two Awareness Areas.

   Cultural Diversity in the United States [C]
   AND
   Global Awareness [G] OR
   Historical Awareness [H]

3. MCCC Additional Requirements 0-6
Students must satisfy Oral Communication and Critical Reading areas. However, it is not necessary for students to exceed the thirty-five semester credits required in order to complete the MCCC Additional Requirements because courses can satisfy a Core Area and MCCC Additional Requirements simultaneously. Therefore no additional semester credits are required to satisfy Oral Communication and Critical Reading.

   a. Oral Communication
   A total of three (3) semester credits is required for Oral Communication. However, if students select a communication course that satisfies both the Oral Communication area and an area within the Core, then the Oral Communication requirement has been satisfied and additional electives may be taken.

   Select from the following options:
   COM100 [SB] (3 credits) OR
   COM100A & COM100B & COM100C [SB] (3 credits) OR
   COM110 [SB] (3 credits) OR
   COM110A & COM110B & COM110C [SB] (3 credits) OR
   COM225 [L] (3 credits) OR
   COM230 [L] [SB] (3 credits)
b. **Critical Reading**
   A total of three (3) semester credits is required for the Critical Reading area. However, if students complete CRE 101 and apply it to AGEC-A Core Requirements or if the students demonstrate proficiency through assessment, then the Critical Reading requirement has been satisfied and additional electives may be taken.

   \texttt{CRE101 [L] OR}
   equivalent as indicated by assessment

**II. General Electives**

Select courses to complete a minimum of 60 semester credits but no more than a total of 64 semester credits.

For students who have decided on a major that articulates with the AA, but who are undecided on the university to which they will transfer, courses satisfying the General Electives area should be selected from the list of Common Courses, Arizona Transfer Pathway Guides, and/or University Transfer Guides in order for the courses to apply in the major upon transfer.

The list of Common Courses for each major is included in the Arizona Transfer Pathway Guides. University Transfer Guides are also available for the Arizona public universities. These guides, both statewide and institutional, are accessible on the following web site: \url{http://az.transfer.org/cas/students/transfer_guides.htm}

Students must select MCCCD courses that are acceptable as an equivalent course, departmental elective credit (XXXXDEC), or general elective credit (Elective) at all Arizona public universities according to the Arizona CEG within the AZCAS. For appropriate course selection, students should consult with an advisor.

For some majors, students must demonstrate 4th semester proficiency at the 202 course level to satisfy the Non-English Language Requirements. Students should consult the Arizona Transfer Pathway Guides and/or the University Transfer Guides to determine this requirement for the major at the university to which they intend to transfer. If required, it is recommended that students choose Maricopa courses as electives to meet this requirement as part of the Associate in Arts degree.

Students who are undecided on a major or university should consult an advisor. Not all majors have common courses, so it is recommended that students consult with an advisor for a list of common courses or assistance with selecting appropriate electives.

**Associate in Arts Total Credits:** 60-64
ASSOCIATE IN ARTS (AA)
ELEMENTARY EDUCATION (EE)

Description
The MCCCD Associate in Arts in Elementary Education (AAEE) requires the student to complete a total of 60-63 semester credits in the program of study. The degree has two major components:

I. MCCCD General Education
   Arizona General Education Curriculum for Arts (AGEC-A)
   Additional MCCCD Requirements

II. Elementary Education Requirements
    Education Foundations
    Elective for Arizona Professional Teacher Standards

Purpose of the Degree
The AAEE is designed for the student who plans to transfer to an Elementary Education program at an Arizona’s public higher education institution and/or who plans to become a classroom instructional aide.

The degree transfers as a block without loss of credit to Arizona’s public universities. All semester credits applied to the MCCCD Associate in Arts in Elementary Education also apply to graduation requirements of the university major for which the AAEE was designed, regardless of whether the credit was awarded for completion of course work or for prior learning. (For additional information on credit awarded for prior learning assessment, see the policy on Credit for Prior Learning in the college catalog.)

Academic Policies that Govern the Associate in Arts Elementary Education Degree:

- Completion of the Associate in Arts or the AGEC-A provides for exemption from Arizona public university admission requirements for Arizona residents who have a minimum Grade Point Average of 2.0 on a 4.0=A scale and a minimum 2.5 on a 4.0=A scale for non-residents.

- The graduation policies within the general catalog must be satisfied for completion of the Associate in Arts degree.

- A minimum of 60-63 semester credits in courses numbered 100 and above to be completed with a grade of “C” or better;

- The General Education Requirements for AGEC-A may be completed in 35 semester credits with the following stipulations:
  
  - Courses can satisfy a Core Area Requirement and one or two Awareness Areas simultaneously.
  
  - A course cannot satisfy more than one Core Area.
  
  - Courses can satisfy an Elementary Education Requirement and one or more Awareness Areas simultaneously.
  
  - A course cannot satisfy both the Elementary Education Requirement and a Core Area Requirement simultaneously.
• Effective Fall 2000, the course evaluation and/or general education designation as listed in the Arizona Course Equivalency Guide (CEG) within the Arizona Course Applicability System (AZCAS), is valid for the term in which the student is awarded credit on the transcript. A course evaluation and/or general education designation may be subject to change. Students do have the option to petition for general education evaluations and/or general education designations upon transfer.

• Courses completed at one of the Maricopa Community Colleges to meet AGEC-A requirements must be listed in the Course Equivalency Guide within the Arizona Course Applicability System as an equivalent course, departmental elective credit (XXXXDEC), or general elective credit (Elective) at all Arizona public universities. The course’s evaluation and/or general education designation is valid for the term in which the student is awarded credit on the transcript. See the list titled MCCCD Courses That Can Be used to Satisfy MCCCD AGEC-A, AGEC-B, and/or AGEC-S for specific course information via the following website:  http://www.dist.maricopa.edu/academic/curric/

• Courses completed at one of the Maricopa Community Colleges to meet the General Electives requirement must be listed in the Course Equivalency Guide (CEG) within the Arizona Course Applicability System (AZCAS) as an equivalent course, departmental elective credit (XXXXDEC), or general elective credit (Elective) at all Arizona public universities. For appropriate course selection, student should consult with an advisor.

• Courses transferred from another regionally accredited institution to one of the Maricopa Community Colleges will be evaluated by the college for inclusion in the AGEC A or the Associate in Arts Elementary Education degree.

• Courses and their modular equivalents will satisfy AGEC-A and Associate in Arts in Elementary Education requirements.

• If a course is cross-referenced with one or more other courses, then only one of the cross-referenced courses will be accepted to meet requirements.

**Degree Requirements**

I. MCCCD General Educational Requirements

   A. MCCCD AGEC-A

      1. Core Areas  

         a. First-Year Composition [FYC]  
         ENG101/102 OR ENG107/108  

         b. Mathematics Studies [MA] and Computer/Statistics/Quantitative Applications [CS]  

                  1) MAT142 [MA] College Mathematics, or higher  
                     (NOTE: MAT150, MAT151, MAT152, MAT156 and MAT157 are excluded)  
                     AND  
                  2) CIS105 [CS] Survey of Computer Information Systems, OR  
                     BPC110 [CS] Computer Usage and Applications  

                  Credits: 35-38
AAEE Degree Requirements (continued)

c. Literacy and Critical Inquiry [L]  
Select 3 semester credits from the following courses:  
COM225 Public Speaking, or COM230 Small Group Communication

d. Humanities and Fine Arts [HU] 6  
1. Select (3) semester credits from the following courses:  
   ARH100 Introduction to Art  
   ARH101 Prehistoric through Gothic Art  
   ARH102 Renaissance through Contemporary Art  
   AND

2. Select (3) semester credits from the following courses:  
   ENH110 Introduction to Literature  
   ENH241 American Literature Before 1860  
   ENH242 American Literature After 1860  
   EDU/ENH291 Children's Literature  
   HUM250 or HUM251 Ideas and Values in the Humanities  
   THE111 Introduction to Theatre, DAH100 Introduction to Dance,  
   DAH201 World Dance Perspectives

e. Social and Behavioral Sciences [SB] 6  
1. Select 3 semester credits from the following courses:  
   HIS103 United States History to 1870  
   HIS104 United States History 1870 to Present  
   AND

2. Select 3 semester credits from the following courses:  
   PSY101 Introduction to Psychology  
   GCU121 World Geography I: Eastern Hemisphere  
   GCU122 World Geography II: Western Hemisphere  
   ECN211 Macroeconomic Principles  
   ECN212 Microeconomic Principles  
   POS110 American National Government  
   ECH/CFS176 Child Development

f. Natural Sciences—Science-Quantitative [SQ] and Science-General [SG] 8  
To complete the Natural Sciences requirement, select a total of 8  
semester credits from the following categories. At least 4 credits must  
be SQ courses. You can select 4 semester credits of SQ and 4 semester  
credits of SG for a total of 8 semester credits. Natural Sciences courses  
must include or be accompanied by the corresponding laboratory  
course. When the lecture and corresponding laboratory are awarded  
separate credit, both will be counted as equivalent to one course in  
that discipline.

Select SQ (Life Science) and SG (Physical Sciences, Earth/Space  
Sciences) courses from the following categories:  

1. Life Sciences  
   AND

2. Physical Sciences  
   OR  
   Earth/Space Sciences

g. Awareness Areas 0  
The MCCCD AAEE requires coursework in two Awareness Areas:  
Cultural Diversity in the U.S. [C]
AND
Historical Awareness [H]
OR
Global Awareness [G]

Courses can satisfy a Core Area Requirement and one or more Awareness Areas, or can satisfy an Elementary Education Requirement and one or more Awareness Areas simultaneously. Therefore, no additional semester credits are required to satisfy the two Awareness Areas.

3. MCCCD Additional Requirements 0-3
   a. Oral Communication
      Satisfied by COM225 or COM 230 taken for Literacy and Critical Inquiry Requirement
   b. Critical Reading
      CRE101 or exemption by testing

II. Elementary Education Requirements 25
A total of 25 semester credits are required to satisfy the Elementary Education Requirements.
A. Education Foundations 15
   Complete the following courses to satisfy the Education Foundations requirements:
   EDU221 Introduction to Education
   EDU222 Introduction to the Exceptional Learner
   EDU230 Cultural Diversity in Education
   MAT156 Mathematics for Elementary Teachers I
   MAT157 Mathematics for Elementary Teachers II

B. Electives for Arizona Professional Teacher Standards 10
A total of 10 semester credits are required to satisfy the Electives for Arizona Professional Teacher Standards: 3 credits in an additional Education course and 7 credits in Content Area Electives.

Courses must transfer to all public Arizona universities as Elective Credit, Departmental Elective, or Equivalent to a university course as indicated in the Arizona Course Equivalency Guide in effect when the course is taken. Courses identified as Non-transferable in the Arizona Course Equivalency Guide cannot be used to satisfy this requirement.

1) Additional Education Course Requirement
   Select any EDU course (except EDU221, EDU222, EDU230 and EDU250) to satisfy this requirement.

2) Content Area Electives
   Select 7 credits from the following:
   Any ARH, ART, CIS, BPC, ENG, ENH, GPH, HIS, MHL, MTC, POS, THE, THP prefixed course(s)
   Any EDU prefixed course(s) (except EDU250)
   Any MAT (courses numbered higher than 142 except MAT150, MAT151, MAT152, MAT156 and MAT157)
   Any Foreign Language course(s)
   Any Natural Science course(s)
   CFS/ECH176 Child Development

AAEE TOTAL CREDITS: 60-63
ASSOCIATE IN ARTS (AAFA)
FINE ARTS - DANCE

Description
The Maricopa County Community College District Associate in Arts, Fine Arts - Dance degree requires a minimum of 64 semester credits for the program of study. The degree includes the following components:

I. General Education:
   - Arizona General Education Curriculum for Arts (AGEC-A)
   - MCCCD Additional Requirements

II. Fine Arts Requirements – Dance

Purpose of the Degree
The Associate in Arts, Fine Arts - Dance degree is designed for students planning to transfer to four-year colleges and universities. In general, the components of the degree meet requirements for majors in the Fine Arts. The degree is designed to prepare students to meet selective admission criteria for programs such as the Bachelor of Fine Arts, which may require a portfolio or performance requirement.

The semester credits used to satisfy the MCCCD Associate in Arts, Fine Arts - Dance degree will apply to university graduation requirements of the university major for which the degree is designed. Information regarding the articulation of the degree with majors at the Arizona public universities can be accessed via the following website: http://az.transfer.org/cas/atass/student/modpath.html

Academic Policies that Govern the Associate in Arts, Fine Arts - Dance Degree

• Completion of the Associate in Arts, Fine Arts -Dance degree or the AGEC-A provides for exemption from Arizona public university admission requirements for Arizona residents who have a minimum Grade Point Average of 2.0 on a 4.0=A scale and a minimum 2.5 on a 4.0=A scale for non-residents.

• The graduation policies within the general catalog must be satisfied for completion of the Associate in Arts, Fine Arts - Dance degree.

• A minimum of 64 semester credits in courses numbered 100 and above to be completed with a grade of “C” or better.

• The General Education Requirements for AGEC-A may be completed in 35 semester credits with the following stipulations
  o Courses can satisfy a Core Area and one or two Awareness Areas simultaneously
  o A course cannot be used to satisfy more than one Core Area

• General Education Courses can satisfy multiple areas within the degree simultaneously (AGEC-A Core Area, AGEC Awareness Area, MCCCD Additional Requirements, or lower-division courses applicable to the major).

• Effective Fall 2000, the course evaluation and/or general education designation as listed in the Arizona Course Equivalency Guide (CEG) within the Arizona Course Applicability System (AZCAS), is valid for the term in which the student is awarded credit on the transcript. A course evaluation and/or general education designation may be subject to change. Students do have the option to petition for general education evaluations and/or general education designations upon transfer.
Courses completed at one of the Maricopa Community Colleges to meet AGEC-A requirements must be listed in the Course Equivalency Guide within the Arizona Course Applicability System as an equivalent course, departmental elective credit (XXXXDEC), or general elective credit (Elective) at all Arizona public universities. The course’s evaluation and/or general education designation is valid for the term in which the student is awarded credit on the transcript. See the list titled MCCCD Courses That Can Be used to Satisfy MCCCD AGEC-A, AGEC-B, and/or AGEC-S for specific course information via the following website: http://www.dist.maricopa.edu/academic/curric/

Courses completed at one of the Maricopa Community Colleges to meet the General Electives requirement must be listed in the Course Equivalency Guide (CEG) within the Arizona Course Applicability System (AZCAS) as an equivalent course, departmental elective credit (XXXDEC), or general elective credit (Elective) at all Arizona public universities. For appropriate course selection, students should consult with an advisor.

Courses transferred from another regionally accredited institution to one of the Maricopa Community Colleges will be evaluated by the college for inclusion in the AGEC-A or Associate in Arts, Fine Arts-Dance Degree.

Courses and their modular equivalents will satisfy AGEC-A and Associate in Arts, Fine Arts - Dance requirements.

If a course is cross-referenced with one or more other courses, then only one of the cross-referenced courses will be accepted to meet requirements.

Degree Requirements
The 64 semester credits required for the Associate in Arts, Fine Arts - Dance degree follow. See the list titled MCCCD Courses That Can Be used to Satisfy MCCCD AGEC-A, AGEC-B, and/or AGEC-S for specific course information via the following website: http://www.dist.maricopa.edu/academic/curric/ This list identifies the courses in alphabetical order by prefix as well as the Core Areas and Awareness Areas where the course will apply. For purposes of clarifying requirements in the Mathematics and Natural Sciences areas on the list and the AGEC requirements, an A, B, and/or S character may follow the [MA], [SQ], [SG] general education designations and refers to the specific AGEC.

MCCCD General Education
The MCCCD General Education includes two areas: MCCCD AGEC-A and MCCCD Additional Requirements.

MCCCDAGEC-A
1. Core Areas: Credits: 35
   a. First-Year Composition (FYC): Credits: 6
   b. Literacy and Critical Inquiry [L]: Credits: 3
   c. Mathematical Studies [MA/CS]: Credits: 6
   To complete the Mathematical Studies requirement, select one course to satisfy Mathematics [MA] A and a second course from Computer/Statistics/Quantitative Applications [CS].
      1) Mathematics [MA] A (3 credits)
      Select a course in college mathematics or college algebra or pre-calculus or any other mathematics course for which college algebra is a prerequisite.
Associate of Arts, Fine Arts - Dance continued:

AND

2) Computer/Statistics/Quantitative Applications [CS] (3 credits)

d. Humanities and Fine Arts [HU]: Credits: 6
   Students are encouraged to choose course work from more than one discipline for a total of six semester credits.
   Select from the following options to complete three credits:
   
<table>
<thead>
<tr>
<th>Credits</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DAH100 Introduction to Dance</td>
</tr>
<tr>
<td></td>
<td>DAH201 World Dance Perspectives</td>
</tr>
</tbody>
</table>

e. Social and Behavioral Sciences [SB]: Credits: 6
   Students are encouraged to choose course work from more than one discipline for a total of six semester credits.

f. Natural Sciences [SQ/SG]: Credits: 8
   To complete the Natural Sciences requirement: Select four (4) semester credits of [SQ] and four (4) semester credits of [SG] for a total of eight (8) semester credits, OR eight (8) semester credits of [SQ]. Students cannot take eight (8) semester credits of [SG] to meet the Natural Sciences requirement.

   The lecture course(s) selected for Natural Sciences must include or be accompanied by the corresponding laboratory course. The lecture and corresponding laboratory course(s) may carry separate credit. Students should consult with an advisor for appropriate course selection. Students should also access the AZ Course Equivalency Guide (CEG) within the AZ Course Applicability System (AZCAS) for information on equivalencies.

   Select from the following options to complete four credits:
   
<table>
<thead>
<tr>
<th>Credits</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BIO160 Introduction to Human Anatomy and Physiology</td>
</tr>
<tr>
<td></td>
<td>BIO201 Human Anatomy and Physiology I</td>
</tr>
</tbody>
</table>

2. Awareness Areas: Credits: 0
   Students must satisfy two Awareness Areas: Cultural Diversity in the United States [C] and either Global Awareness [G] or Historical Awareness [H]. However, it is not necessary for students to exceed thirty-five semester credits to complete the Awareness Areas because courses can satisfy a Core Area and one or two Awareness Areas simultaneously. Therefore no additional semester credits are required to satisfy the two Awareness Areas.
   Cultural Diversity in the United States [C] AND
   Global Awareness [G] OR
   Historical Awareness [H]

MCCCD Additional Requirements: Credits: 0-6

Students must satisfy Oral Communication and Critical Reading areas. However, it is not necessary for students to exceed the thirty-five semester credits required in order to complete the MCCCD Additional Requirements because courses can satisfy a Core Area and MCCCD Additional Requirements simultaneously. Therefore no additional semester credits are required to satisfy Oral Communication and Critical Reading.
a. Oral Communication: Credits: 3
A total of three (3) semester credits is required for Oral Communication. However, if students select a communication course that satisfies both the Oral Communication area and an area within the Core, then the Oral Communication requirement has been satisfied and additional electives may be taken.

Select from the following options:
COM100 [SB] (3 credits) OR
COM100AA & COM100AB & COM100AC [SB] (3 credits) OR
COM110 [SB] (3 credits) OR
COM110AA & COM110AB & COM110AC [SB] (3 credits) OR
COM225 [L] (3 credits) OR
COM230 [L] [SB] (3 credits)

b. Critical Reading: Credits: 3
A total of three (3) semester credits is required for the Critical Reading area. However, if students complete CRE 101 and apply it to AGEC-A Core Requirements or if the students demonstrate proficiency through assessment, then the Critical Reading requirement has been satisfied and additional electives may be taken.

Select from the following options to complete 3 credits:
CRE101 [L] (3 credits) OR equivalent as indicated by assessment

II. Fine Arts Requirements – Dance: Credits: 29
A minimum of 29 credits are required to satisfy the Fine Arts Requirements – Dance.

Part I: Credits 11
Select the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAN150 Dance Performance I</td>
<td>1</td>
</tr>
<tr>
<td>DAN210 Dance Production I</td>
<td>3</td>
</tr>
<tr>
<td>DAN221 Rhythmic Theory for Dance I</td>
<td>2</td>
</tr>
<tr>
<td>DAN264 Choreography I</td>
<td>3</td>
</tr>
<tr>
<td>DAN280 Dance Practicum</td>
<td>2</td>
</tr>
</tbody>
</table>

Part II: Credits: 9
Select from the following options to complete a minimum of nine-semester credits. Students must attain Level III competency in ballet and modern dance courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAN120++ World Dance (any module)</td>
<td>1</td>
</tr>
<tr>
<td>DAN129 Musical Theatre Dance I</td>
<td>1</td>
</tr>
<tr>
<td>DAN130 Musical Theatre Dance II</td>
<td>1</td>
</tr>
<tr>
<td>DAN131 Ballet I</td>
<td>1</td>
</tr>
<tr>
<td>DAN132 Modern Dance I</td>
<td>1</td>
</tr>
<tr>
<td>DAN133 Modern Jazz Dance I</td>
<td>1</td>
</tr>
<tr>
<td>DAN134 Ballet II</td>
<td>1</td>
</tr>
<tr>
<td>DAN135 Modern Dance II</td>
<td>1</td>
</tr>
<tr>
<td>DAN136 Modern Jazz Dance II</td>
<td>1</td>
</tr>
<tr>
<td>DAN229 Musical Theatre Dance III</td>
<td>1</td>
</tr>
<tr>
<td>DAN230 Musical Theatre Dance IV</td>
<td>1</td>
</tr>
<tr>
<td>DAN231 Ballet III</td>
<td>1</td>
</tr>
<tr>
<td>DAN231AA Ballet III: Intensive</td>
<td>2</td>
</tr>
<tr>
<td>DAN232 Modern Dance III</td>
<td>1</td>
</tr>
<tr>
<td>DAN233 Modern Jazz Dance III</td>
<td>1</td>
</tr>
<tr>
<td>DAN234 Ballet IV</td>
<td>1</td>
</tr>
</tbody>
</table>
### Part III: Restricted Electives: Credits: 9

The remaining credits from DAH and DAN prefixed courses should be selected as prescribed by the dance advisor. Only three of the remaining credits may be selected from the following DAN prefixed courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAN115++</td>
<td>Contemporary Dance Trends (any module)</td>
<td>1</td>
</tr>
<tr>
<td>DAN120++</td>
<td>World Dance (any module)</td>
<td>1</td>
</tr>
<tr>
<td>DAN125++</td>
<td>Social Dance (any module)</td>
<td>1</td>
</tr>
<tr>
<td>DAN129</td>
<td>Musical Theatre Dance I</td>
<td>1</td>
</tr>
<tr>
<td>DAN130</td>
<td>Musical Theatre Dance II</td>
<td>1</td>
</tr>
<tr>
<td>DAN133</td>
<td>Modern Jazz Dance I</td>
<td>1</td>
</tr>
<tr>
<td>DAN136</td>
<td>Modern Jazz Dance II</td>
<td>1</td>
</tr>
<tr>
<td>DAN140</td>
<td>Tap Dance I</td>
<td>1</td>
</tr>
<tr>
<td>DAN141</td>
<td>Dance Workshop</td>
<td>1</td>
</tr>
<tr>
<td>DAN150</td>
<td>Dance Performance I</td>
<td>1</td>
</tr>
<tr>
<td>DAN164</td>
<td>Improvisation</td>
<td>1</td>
</tr>
<tr>
<td>DAN230</td>
<td>Musical Theatre Dance IV</td>
<td>1</td>
</tr>
<tr>
<td>DAN231</td>
<td>Ballet III</td>
<td>1</td>
</tr>
<tr>
<td>DAN231AA</td>
<td>Ballet III: Intensive</td>
<td>2</td>
</tr>
<tr>
<td>DAN232</td>
<td>Modern Dance III</td>
<td>1</td>
</tr>
<tr>
<td>DAN233</td>
<td>Modern Jazz Dance III</td>
<td>1</td>
</tr>
<tr>
<td>DAN234</td>
<td>Ballet IV</td>
<td>1</td>
</tr>
<tr>
<td>DAN234AA</td>
<td>Ballet IV: Intensive</td>
<td>2</td>
</tr>
<tr>
<td>DAN235</td>
<td>Modern Dance IV</td>
<td>1</td>
</tr>
<tr>
<td>DAN236</td>
<td>Modern Jazz Dance IV</td>
<td>1</td>
</tr>
<tr>
<td>DAN237</td>
<td>Ballet Pointe I</td>
<td>1</td>
</tr>
<tr>
<td>DAN290++</td>
<td>Dance Conservatory I (any module)</td>
<td>1-3</td>
</tr>
<tr>
<td>DAN291++</td>
<td>Dance Conservatory II (any module)</td>
<td>1-3</td>
</tr>
<tr>
<td>DAN292++</td>
<td>Dance Conservatory III (any module)</td>
<td>1-3</td>
</tr>
<tr>
<td>DAN298++</td>
<td>Special Projects (any module)</td>
<td>1-3</td>
</tr>
</tbody>
</table>
ASSOCIATE IN ARTS (AAFA)
FINE ARTS - ART

Description
The Maricopa County Community College District Associate in Arts, Fine Arts - Art degree requires a minimum of 63 semester credits for the program of study. The degree includes the following components:
I. General Education:
   - Arizona General Education Curriculum for Arts (AGEC-A)
   - MCCCD Additional Requirements
II. Fine Arts Requirements – Art

Purpose of the Degree
The Associate in Arts, Fine Arts - Art degree is designed for students planning to transfer to four-year colleges and universities. In general, the components of the degree meet requirements for majors in the Fine Arts. The degree is designed to prepare students to meet selective admission criteria for programs such as the Bachelor of Fine Arts, which may require a portfolio or performance requirement.

The semester credits used to satisfy the MCCCD Associate in Arts, Fine Arts - Art degree will apply to university graduation requirements of the university major for which the degree is designed. Information regarding the articulation of the degree with majors at the Arizona public universities can be accessed via the following website: http://az.transfer.org/cas/atass/student/modpath.html

Academic Policies that Govern the Associate in Arts, Fine Arts - Art Degree
• Completion of the Associate in Arts, Fine Arts - Dance degree or the AGEC-A provides for exemption from Arizona public university admission requirements for Arizona residents who have a minimum Grade Point Average of 2.0 on a 4.0=A scale and a minimum 2.5 on a 4.0=A scale for non-residents.
• The graduation policies within the general catalog must be satisfied for completion of the Associate in Arts, Fine Arts - Art degree.
• A minimum of 63 semester credits in courses numbered 100 and above to be completed with a grade of “C” or better;
• The General Education Requirements for AGEC-A may be completed in 35 semester credits with the following stipulations
  o Courses can satisfy a Core Area and one or two Awareness Areas simultaneously
  o A courses cannot be used to satisfy more than one Core Area
• General Education Courses can satisfy multiple areas within the degree simultaneously (AGEC-A Core Area, AGEC Awareness Area, MCCCD Additional Requirements, or lower-division courses applicable to the major).
• Effective Fall 2000, the course evaluation and/or general education designation as listed in the Arizona Course Equivalency Guide (CEG) within the Arizona Course Applicability System (AZCAS), is valid for the term in which the student is awarded credit on the transcript. A course evaluation and/or general education designation may be subject to change. Students do have the option to petition for general education evaluations and/or general education designations upon transfer.
• Courses completed at one of the Maricopa Community Colleges to meet AGEC-A requirements must be listed in the Course Equivalency Guide within the Arizona Course Applicability System as an equivalent course, departmental elective credit (XXXXDEC), or general elective credit (Elective) at all Arizona public universities. The course’s evaluation and/or general education designation is valid for the term in which the student is awarded credit on the transcript. See the list titled MCCCD Courses That Can Be used to Satisfy MCCCD AGEC-A, AGEC-B, and/or AGEC-S for specific course information via the following website: http://www.dist.maricopa.edu/academic/curric/

• Courses completed at one of the Maricopa Community Colleges to meet the General Electives requirement must be listed in the Course Equivalency Guide (CEG) within the Arizona Course Applicability System (AZCAS) as an equivalent course, departmental elective credit (XXXDEC), or general elective credit (Elective) at all Arizona public universities. For appropriate course selection, students should consult with an advisor.

• Courses transferred from another regionally accredited institution to one of the Maricopa Community Colleges will be evaluated by the college for inclusion in the AGEC-A or Associate in Arts, Fine Arts-Art Degree.

• Courses and their modular equivalents will satisfy AGEC-A and Associate in Arts, Fine Arts - Art requirements.

• If a course is cross-referenced with one or more other courses, then only one of the cross-referenced courses will be accepted to meet requirements.

Degree Requirements
The 63 semester credits required for the Associate in Arts, Fine Arts - Art degree follow. See the list titled MCCCD Courses That Can Be used to Satisfy MCCCD AGEC-A, AGEC-B, and/or AGEC-S for specific course information via the following website: http://www.dist.maricopa.edu/academic/curric/ This list identifies the courses in alphabetical order by prefix as well as the Core Areas and Awareness Areas where the course will apply. For purposes of clarifying requirements in the Mathematics and Natural Sciences areas on the list and the AGEC requirements, an A, B, and/or S character may follow the [MA], [SQ], [SG] general education designations and refers to the specific AGEC.

I. MCCCD General Education
The MCCCD General Education includes two areas: MCCCD AGEC-A and MCCCD Additional Requirements.

MCCCDAGEC-A
1. Core Areas: Credits: 35
   a. First-Year Composition (FYC): Credits: 6
   b. Literacy and Critical Inquiry [L]: Credits: 3
   c. Mathematical Studies [MA/CS]: Credits: 6
      To complete the Mathematical Studies requirement, select one course to satisfy Mathematics [MA] A and a second course from Computer/Statistics/Quantitative Applications [CS].
      1) Mathematics [MA] A (3 credits)
Select a course in college mathematics or college algebra or pre-calculus or any other mathematics course for which college algebra is a prerequisite.
AND

2) Computer/Statistics/Quantitative Applications [CS] (3 credits)

d. Humanities and Fine Arts [HU]: Credits: 6
Students are encouraged to choose course work from more than one discipline for a total of six semester credits.

Select the following:

<table>
<thead>
<tr>
<th>Credits</th>
<th>ARH101 Prehistoric Through Gothic Art</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

e. Social and Behavioral Sciences [SB]: Credits: 6
Students are encouraged to choose course work from more than one discipline for a total of six semester credits.

f. Natural Sciences [SQ/SG]: Credits: 8
To complete the Natural Sciences requirement: Select four (4) semester credits of [SQ] and four (4) semester credits of [SG] for a total of eight (8) semester credits, OR eight (8) semester credits of [SQ]. Students cannot take eight (8) semester credits of [SG] to meet the Natural Sciences requirement.

The lecture course(s) selected for Natural Sciences must include or be accompanied by the corresponding laboratory course. The lecture and corresponding laboratory course(s) may carry separate credit. Students should consult with an advisor for appropriate course selection. Students should also access the AZ Course Equivalency Guide (CEG) within the AZ Course Applicability System (AZCAS) for information on equivalencies.

2. Awareness Areas: Credits: 0
Students must satisfy two Awareness Areas: Cultural Diversity in the United States [C] and either Global Awareness [G] or Historical Awareness [H]. However, it is not necessary for students to exceed thirty-five semester credits to complete the Awareness Areas because courses can satisfy a Core Area and one or two Awareness Areas simultaneously. Therefore no additional semester credits are required to satisfy the two Awareness Areas.

Cultural Diversity in the United States [C]
AND
Global Awareness [G] OR
Historical Awareness [H]

MCCCD Additional Requirements: Credits: 0-6
Students must satisfy Oral Communication and Critical Reading areas. However, it is not necessary for students to exceed the thirty-five semester credits required in order to complete the MCCCD Additional Requirements because courses can satisfy a Core Area and MCCCD Additional Requirements simultaneously. Therefore no additional semester credits are required to satisfy Oral Communication and Critical Reading.

a. Oral Communication: Credits: 3
A total of three (3) semester credits is required for Oral Communication. However, if students select a communication course that satisfies both the Oral Communication area and an area within the Core, then the Oral Communication requirement has been satisfied and additional electives may be taken.
Associate of Arts, Fine Arts - Art continued:

Select from the following options:
COM100 [SB] (3 credits) OR
COM100AA & COM100AB & COM100AC [SB] (3 credits) OR
COM110 [SB] (3 credits) OR
COM110AA & COM110AB & COM110AC [SB] (3 credits) OR
COM225 [L] (3 credits) OR
COM230 [L] [SB] (3 credits)

b. Critical Reading: Credits: 3
A total of three (3) semester credits is required for the Critical Reading area. However, if students complete CRE 101 and apply it to AGEC-A Core Requirements or if the students demonstrate proficiency through assessment, then the Critical Reading requirement has been satisfied.

Select from the following options to complete 3 credits:
CRE101 [L] (3 credits) OR equivalent as indicated by assessment

II. Fine Arts Requirements – Art Credits: 28
A minimum of 28 credits are required to satisfy the Fine Arts Requirements – Art.

Foundations: Credits: 16

Select the following:

<table>
<thead>
<tr>
<th>Credits</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ADA/ART112 Two-Dimensional Design 3</td>
<td></td>
</tr>
<tr>
<td>ADA/ART115 Three-Dimensional Design 3</td>
<td></td>
</tr>
<tr>
<td>ARH102 Renaissance Through Contemporary Art 3</td>
<td></td>
</tr>
<tr>
<td>ART111 Drawing I 3</td>
<td></td>
</tr>
<tr>
<td>ART113 Color 3</td>
<td></td>
</tr>
<tr>
<td>ART255AB The Portfolio 1</td>
<td></td>
</tr>
</tbody>
</table>

Restricted Electives: Credits: 12

Select from the following options to complete a minimum of twelve semester credits:

<table>
<thead>
<tr>
<th>Credits</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ART116 Life Drawing I 3</td>
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<tr>
<td>ART122 Drawing and Composition II 3</td>
<td></td>
</tr>
<tr>
<td>ART131 Photography I 3</td>
<td></td>
</tr>
<tr>
<td>ART132 Photography II 3</td>
<td></td>
</tr>
<tr>
<td>ART151 Sculpture I 3</td>
<td></td>
</tr>
<tr>
<td>ART161 Ceramics I 3</td>
<td></td>
</tr>
<tr>
<td>ART165 Watercolor Painting I 3</td>
<td></td>
</tr>
<tr>
<td>ART167 Painting I 3</td>
<td></td>
</tr>
</tbody>
</table>

Associate in Arts, Fine Arts – Art Total Credits: 63
ASSOCIATE IN ARTS (AAFA)
FINE ARTS - THEATRE

Description
The Maricopa County Community College District Associate in Arts, Fine Arts - Theatre degree requires a minimum of 60-64 semester credits for the program of study. The degree includes the following components:

I. General Education:
   - Arizona General Education Curriculum for Arts (AGEC-A)
   - MCCCD Additional Requirements

II. Fine Arts Requirements – Theatre

Purpose of the Degree
The Associate in Arts, Fine Arts - Theatre degree is designed for students planning to transfer to four-year colleges and universities. In general, the components of the degree meet requirements for majors in the Fine Arts. The degree is designed to prepare students to meet selective admission criteria for programs such as the Bachelor of Fine Arts, which may require a portfolio or performance requirement.

The semester credits used to satisfy the MCCCD Associate in Arts, Fine Arts - Theatre will apply to university graduation requirements of the university major for which the degree is designed. Information regarding the articulation of the degree with majors at the Arizona public universities can be accessed via the following website:
http://az.transfer.org/cas/atass/student/modpath.html

Academic Policies that Govern the Associate in Arts, Fine Arts - Theatre Degree

- Completion of the Associate in Arts, Fine Arts -Theatre or the AGEC-A provides for exemption from Arizona public university admission requirements for Arizona residents who have a minimum Grade Point Average of 2.0 on a 4.0=A scale and a minimum 2.5 on a 4.0=A scale for non-residents.

- The graduation policies within the general catalog must be satisfied for completion of the Associate in Arts, Fine Arts - Theatre degree.

- A minimum of 60 semester credits in courses numbered 100 and above to be completed with a grade of “C” or better;

- The General Education Requirements for AGEC-A may be completed in 35 semester credits with the following stipulations
  - Courses can satisfy a Core Area and one or two Awareness Areas simultaneously
  - A courses cannot be used to satisfy more than one Core Area

- General Education Courses can satisfy multiple areas within the degree simultaneously (AGEC-A Core Area, AGEC Awareness Area, MCCCD Additional Requirements, or lower-division courses applicable to the major).

- Effective Fall 2000, the course evaluation and/or general education designation as listed in the Arizona Course Equivalency Guide (CEG) within the Arizona Course Applicability System (AZCAS), is valid for the term in which the student is awarded credit on the transcript. A course evaluation and/or general education designation may be subject to change. Students do have the option to petition for general education evaluations and/or general education designations upon transfer.
• Courses completed at one of the Maricopa Community Colleges to meet AGEC-A requirements must be listed in the Course Equivalency Guide within the Arizona Course Applicability System as an equivalent course, departmental elective credit (XXXXXDEC), or general elective credit (Elective) at all Arizona public universities. The course’s evaluation and/or general education designation is valid for the term in which the student is awarded credit on the transcript. See the list titled MCCCD Courses That Can Be used to Satisfy MCCCD AGEC-A, AGEC-B, and/or AGEC-S for specific course information via the following website: http://www.dist.maricopa.edu/academic/curric/

• Courses completed at one of the Maricopa Community Colleges to meet the General Electives requirement must be listed in the Course Equivalency Guide (CEG) within the Arizona Course Applicability System (AZCAS) as an equivalent course, departmental elective credit (XXXDEC), or general elective credit (Elective) at all Arizona public universities. For appropriate course selection, students should consult with an advisor.

• Courses transferred from another regionally accredited institution to one of the Maricopa Community Colleges will be evaluated by the college for inclusion in the AGEC-A or Associate in Arts, Fine Arts-Theatre Degree.

• Courses and their modular equivalents will satisfy AGEC-A and Associate in Arts, Fine Arts - Theatre requirements.

• If a course is cross-referenced with one or more other courses, then only one of the cross-referenced courses will be accepted to meet requirements.

Degree Requirements
The 60-64 semester credits required for the Associate in Arts, Fine Arts - Theatre follow. See the list titled MCCCD Courses That Can Be used to Satisfy MCCCD AGEC-A, AGEC-B, and/or AGEC-S for specific course information via the following website: http://www.dist.maricopa.edu/academic/curric/ this list identifies the courses in alpha-order by prefix as well as the Core Areas and Awareness Areas where the course will apply. For purposes of clarifying requirements in the Mathematics and Natural Sciences areas on the list and the AGEC requirements, an A, B, and/or S character may follow the [MA], [SQ], [SG] general education designations and refers to the specific AGEC.

I. MCCCD General Education
The MCCCD General Education includes two areas: MCCCD AGEC-A and MCCCD Additional Requirements.

MCCCDAGEC-A
1. Core Areas: Credits: 35
   a. First-Year Composition (FYC): Credits: 6
   b. Literacy and Critical Inquiry [L]: Credits: 3
      Select the following:  
      THE220 Modern Drama  
      Credits: 3
   c. Mathematical Studies [MA/CS]: Credits: 6
      To complete the Mathematical Studies requirement, select one course to satisfy Mathematics [MA] A and a second course from Computer/Statistics/Quantitative Applications [CS].
1) Mathematics [MA] A (3 credits)
Select a course in college mathematics or college algebra or pre-calculus or any other mathematics course for which college algebra is a prerequisite.
AND
2) Computer/Statistics/Quantitative Applications [CS] (3 credits)

d. Humanities and Fine Arts [HU]: Credits: 6
Students are encouraged to choose course work from more than one discipline for a total of six semester credits.
Select the following:

THE205 Introduction to Cinema

Credits
3
e. Social and Behavioral Sciences [SB]: Credits: 6
Students are encouraged to choose course work from more than one discipline for a total of six semester credits.
f. Natural Sciences [SQ/SG]: Credits: 8
To complete the Natural Sciences requirement: Select four (4) semester credits of [SQ] and four (4) semester credits of [SG] for a total of eight (8) semester credits, OR eight (8) semester credits of [SQ]. Students cannot take eight (8) semester credits of [SG] to meet the Natural Sciences requirement.

The lecture course(s) selected for Natural Sciences must include or be accompanied by the corresponding laboratory course. The lecture and corresponding laboratory course(s) may carry separate credit. Students should consult with an advisor for appropriate course selection. Students should also access the AZ Course Equivalency Guide (CEG) within the AZ Course Applicability System (AZCAS) for information on equivalencies.

2. Awareness Areas: Credits: 0
Students must satisfy two Awareness Areas: Cultural Diversity in the United States [C] and either Global Awareness [G] or Historical Awareness [H]. However, it is not necessary for students to exceed thirty-five semester credits to complete the Awareness Areas because courses can satisfy a Core Area and one or two Awareness Areas simultaneously. Therefore no additional semester credits are required to satisfy the two Awareness Areas.

Cultural Diversity in the United States [C]
AND
Global Awareness [G] OR
Historical Awareness [H]

MCCCD Additional Requirements: Credits: 0-6

Students must satisfy Oral Communication and Critical Reading areas. However, it is not necessary for students to exceed the thirty-five semester credits required in order to complete the MCCCD Additional Requirements because courses can satisfy a Core Area and MCCCD Additional Requirements simultaneously. Therefore no additional semester credits are required to satisfy Oral Communication and Critical Reading.
Associate of Arts, Fine Arts - Theatre continued:

a. Oral Communication: Credits: 3
   A total of three (3) semester credits is required for Oral Communication. However, if students select a communication course that satisfies both the Oral Communication area and an area within the Core, then the Oral Communication requirement has been satisfied and additional electives may be taken.
   Select from the following options:
   - COM100 [SB] (3 credits) OR
   - COM100AA & COM100AB & COM100AC [SB] (3 credits) OR
   - COM110 [SB] (3 credits) OR
   - COM110AA & COM110AB & COM110AC [SB] (3 credits) OR
   - COM225 [L] (3 credits) OR COM230 [L] [SB] (3 credits)

b. Critical Reading: Credits: 3
   A total of three (3) semester credits is required for the Critical Reading area. However, if students complete CRE 101 and apply it to AGEC-A Core Requirements or if the students demonstrate proficiency through assessment, then the Critical Reading requirement has been satisfied.
   Select from the following options to complete 3 credits:
   - CRE101 [L] (3 credits) OR equivalent as indicated by assessment

II. Fine Arts Requirements – Theatre Credits: 25-29

A minimum of 25 credits are required to satisfy the Fine Arts Requirements – Theatre.

Foundations: Credits: 13 (Select the following:)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THE111</td>
<td>Introduction to Theatre</td>
<td>3</td>
</tr>
<tr>
<td>THP112</td>
<td>Acting I</td>
<td>3</td>
</tr>
<tr>
<td>THP115</td>
<td>Theatre Makeup</td>
<td>3</td>
</tr>
<tr>
<td>THP201AA</td>
<td>Theatre Production I OR</td>
<td></td>
</tr>
<tr>
<td>THP201AB</td>
<td>Theatre Production II</td>
<td>1</td>
</tr>
<tr>
<td>THP213</td>
<td>Introduction to Technical Theatre</td>
<td>3</td>
</tr>
</tbody>
</table>

Restricted Electives: Credits: 12-16

Students may choose from the following courses to specialize in Acting, Technical Theatre, Teacher Education, or Cinema. Students should consult with the theatre advisor for the restricted electives recommended for each specialization track.

Select from the following options to complete a minimum of 12 semester credits:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUM/THE206</td>
<td>Introduction to Television Arts</td>
<td>3</td>
</tr>
<tr>
<td>HUM/THE210</td>
<td>Contemporary Cinema</td>
<td>3</td>
</tr>
<tr>
<td>THP120AA</td>
<td>Audition Techniques: Monologue</td>
<td>1</td>
</tr>
<tr>
<td>THP120AB</td>
<td>Audition Techniques: Cold Readings</td>
<td>1</td>
</tr>
<tr>
<td>THP130</td>
<td>Stage Combat OR</td>
<td></td>
</tr>
<tr>
<td>THP131</td>
<td>Stage Movement</td>
<td>3</td>
</tr>
<tr>
<td>THP210</td>
<td>Acting: TV/Film</td>
<td>3</td>
</tr>
<tr>
<td>THP211</td>
<td>Creative Drama</td>
<td>3</td>
</tr>
<tr>
<td>THP212</td>
<td>Acting II</td>
<td>3</td>
</tr>
<tr>
<td>THP214</td>
<td>Directing Techniques</td>
<td>3</td>
</tr>
<tr>
<td>THP216</td>
<td>Beginning Stage Lighting</td>
<td>3</td>
</tr>
<tr>
<td>THP217</td>
<td>Introduction to Design Scenography</td>
<td>3</td>
</tr>
<tr>
<td>THP219</td>
<td>Introduction to Puppetry</td>
<td>3</td>
</tr>
<tr>
<td>THP267</td>
<td>Painting Techniques for Film, TV and Theatre</td>
<td>3</td>
</tr>
<tr>
<td>THP271</td>
<td>Voice and Diction</td>
<td>3</td>
</tr>
</tbody>
</table>

Associate in Arts, Fine Arts - Theatre Total Credits: 60-64
ASSOCIATE IN SCIENCE DEGREE (AS)

Description
The Maricopa County Community College District Associate in Science degree requires 60-64 semester credits for the program of study. The degree includes the following components:

I. General Education:
   - Arizona General Education Curriculum for Science (AGEC-S)
   - MCCCD Additional Requirements

II. General Electives

Purpose of the Degree
The Associate in Science degree is designed for students planning to transfer to four-year colleges and universities. In general, the components of the degree meet requirements for majors with more stringent mathematics and mathematics-based science requirements. The degree will transfer as a block without loss of credit to Arizona’s public universities and other institutions with district-wide articulation agreements.

The semester credits used to satisfy the MCCCD Associate in Science will apply to university graduation requirements of the university major for which the Associate in Science is designed. Information regarding the articulation of the Associate in Science with majors at the Arizona public universities can be accessed via the following website: http://az.transfer.org/cas/atass/student/modpath.html

Academic Policies that Govern the Associate in Science Degree
- Completion of the Associate in Science or the AGEC-S provides for exemption from Arizona public university admission requirements for Arizona residents who have a minimum Grade Point Average of 2.0 on a 4.0=A scale and a minimum 2.5 on a 4.0=A scale for non-residents.

- The graduation policies within the general catalog must be satisfied for completion of the Associate in Science degree.

- A minimum of 60 semester credits in courses numbered 100 and above to be completed with a grade of “C” or better;

- The General Education Requirements for AGEC-S may be completed in 36-38 semester credits with the following stipulations
  o Courses can satisfy a Core Area and one or two Awareness Areas simultaneously
  o A course cannot be used to satisfy more than one Core Area requirement in the AGEC A and B.
  o A course can be used to satisfy the L and SB or L and HU requirements simultaneously in the Core Area for the AGEC S.

- General Education Courses can satisfy multiple areas within the degree simultaneously (AGEC-S Core Area, AGEC Awareness Area, MCCCD Additional Requirements, or lower-division courses applicable to the major).

- Effective Fall 2000, the course evaluation and/or general education designation as listed in the Arizona Course Equivalency Guide (CEG) within the Arizona Course Applicability System (AZCAS), is valid for the term in which the student is awarded credit on the transcript. A course evaluation and/or general education designation may be subject to change. Students do have the option to petition for general education evaluations and/or general education designations upon transfer.
Academic Policies that Govern the Associate in Science Degree continued:

- Courses completed at one of the Maricopa Community Colleges to meet AGEC-S requirements must be listed in the Course Equivalency Guide within the Arizona Course Applicability System as an equivalent course, departmental elective credit (XXXXDEC), or general elective credit (Elective) at all Arizona public universities. The course’s evaluation and/or general education designation is valid for the term in which the student is awarded credit on the transcript. See the list titled MCCCD Courses That Can Be used to Satisfy MCCCD AGEC-A, AGEC-B, and/or AGEC S for specific course information via the following website: http://www.dist.maricopa.edu/academic/curric/

- Courses completed at one of the Maricopa Community Colleges to meet the General Electives requirement must be listed in the Course Equivalency Guide (CEG) within the Arizona Course Applicability System (AZCAS) as an equivalent course, departmental elective credit (XXXXDEC), or general elective credit (Elective) at all Arizona public universities. For appropriate course selection, students should consult with an advisor.

- Courses transferred from another regionally accredited institution to one of the Maricopa Community Colleges will be evaluated by the college for inclusion in the AGEC-S or Associate in Science Degree.

- Courses and their modular equivalents will satisfy AGEC-S and Associate in Science requirements.

- If a course is cross-referenced with one or more other courses, then only one of the cross-referenced courses will be accepted to meet requirements.

Degree Requirements

The 60-64 semester credits required for the Associate in Science follow. See the list titled MCCCD Courses That Can Be used to Satisfy MCCCD AGEC-A, AGEC-B, and/or AGEC S for specific course information via the following website: http://www.dist.maricopa.edu/academic/curric/ This list identifies the courses in alphabetical order by prefix as well as the Core Areas and Awareness Areas where the course will apply. For purposes of clarifying requirements in the Mathematics and Natural Sciences areas on the list and the AGEC requirements, an A, B, and/or S character may follow the [MA], [SQ], [SG] general education designations and refers to the specific AGEC.

I. MCCCD General Education

The MCCCD General Education includes two areas: MCCCD AGEC-S and MCCCD Additional Requirements.

MCCCDAGEC-S

1. Core Areas: 36-38
   a. First-Year Composition (FYC) 6
   b. Literacy and Critical Inquiry [L] 0-3
      Select a course that satisfies L (Literacy and Critical Inquiry) and SB (Social and Behavioral Sciences) OR L (Literacy and Critical Inquiry) and HU (Humanities and Fine Arts) requirements simultaneously.
   c. Mathematical Studies [MA] 4
      To complete the Mathematical Studies requirement, select one course to satisfy Mathematics [MA] S.
      1) Mathematics [MA] S (4 credits)
      Select a calculus course MAT220 or MAT221, OR any mathematics course for which MAT220 or MAT221 is a prerequisite, OR if pursuing a degree at ASU in Life Sciences select MAT251 Calculus for Life Science.
d. Humanities and Fine Arts [HU] 6
Students are encouraged to choose course work from more than one discipline for a total of six semester credits. Select a course that satisfies both L and HU requirements simultaneously.

e. Social and Behavioral Sciences [SB] 6
Students are encouraged to choose course work from more than one discipline for a total of six semester credits. Select a course that satisfies both L and HU requirements simultaneously.

f. Natural Sciences 8
To complete the Natural Sciences requirement:
Select eight (8) semester credits of either general chemistry (CHM151 & CHM151LL, and CHM152 & CHM152LL)
OR
Eight (8) semester credits of university physics (PHY115 & PHY116, or PHY121 & PHY131)
OR
Eight (8) semester credits of general biology, (BIO181 & BIO182) appropriate to the major.

g. Subject options (subject based on major) 6-8
Students completing AGEC S, through careful selection of courses that meet the other major pre-requisite requirements for Science degree, will meet this requirement. Using a transfer guide, select courses from Mathematics courses above Calculus, and/or Science courses from: Astronomy, Biology, Botany, Chemistry, Environmental Science, Geology, Physical Geography, Physics, Zoology.

2. Awareness Areas:
Students must satisfy two Awareness Areas: Cultural Diversity in the United States [C] and either Global Awareness [G] or Historical Awareness [H]. However, it is not necessary for students to exceed thirty-six to thirty-eight semester credits to complete the Awareness Areas because courses can satisfy a Core Area and one or two Awareness Areas simultaneously. Therefore no additional semester credits are required to satisfy the two Awareness Areas.

Cultural Diversity in the United States [C]
AND
Global Awareness [G] OR
Historical Awareness [H]

3. MCCCD Additional Requirements 0-6
Students must satisfy Oral Communication and Critical Reading areas. However, it is not necessary for students to exceed the thirty-six to thirty-eight semester credits required in order to complete the MCCCD Additional Requirements.

a. Oral Communication
A total of three (3) semester credits is required for Oral Communication. However, if students select a communication course that satisfies both the Oral Communication area and an area within the Core, then the Oral Communication requirement has been satisfied and additional electives may be taken. Select from the following options:
COM100 [SB] (3 credits) OR
COM100AA & COM100AB & COM100AC [SB] (3 credits) OR
COM110 [SB] (3 credits) OR
COM110AA & COM110AB & COM110AC [SB] (3 credits) OR
COM225 [L] (3 credits) OR
COM230 [L] [SB] (3 credits)
b. Critical Reading
A total of three (3) semester credits is required for the Critical Reading area. If students demonstrate proficiency through assessment, then the Critical Reading requirement has been satisfied and additional electives may be taken.

CRE101 [L] OR
equivalent as indicated by assessment

II. General Electives
Select courses to complete a minimum of 60 semester credits but no more than a total of 64 semester credits.

For students who have decided on a major that articulates with the AS, but who are undecided on the university to which they will transfer, courses satisfying the General Electives area should be selected from the list of Common Courses, Arizona Transfer Pathway Guides, and/or University Transfer Guides in order for the courses to apply in the major upon transfer.

The list of Common Courses for each major is included in the Arizona Transfer Pathway Guides. University Transfer Guides are also available for the Arizona public universities. These guides, both statewide and institutional, are accessible on the following web site: http://az.transfer.org/cas/students/transfer_guides.htm

Students must select MCCCD courses that are acceptable as an equivalent course, departmental elective credit (XXXXDEC), or general elective credit (Elective) at all Arizona public universities according to the Arizona CEG within the AZCAS. For appropriate course selection, students should consult with an advisor.

For some majors, students must demonstrate 4th semester proficiency at the 202 course level to satisfy the Non-English Language Requirements. Students should consult the Arizona Transfer Pathway Guides and/or the University Transfer Guides to determine this requirement for the major at the university to which they intend to transfer. If required, it is recommended that students choose Maricopa courses as electives to meet this requirement as part of the Associate in Science degree.

Students who are undecided on a major or university should consult an advisor. Not all majors have common courses, so it is recommended that students consult with an advisor for a list of common courses or assistance with selecting appropriate electives.

**Associate in Science Total Credits:**  
60-64
ASSOCIATE IN BUSINESS, GENERAL REQUIREMENTS DEGREE (ABUS GR)

Description
The Maricopa County Community College District Associate in Business General Requirements (ABus GR) degree requires a total of 62-63 semester credits for the program of study. The degree has three major components:

I. MCCCD General Education, which includes Arizona General Education Curriculum for Business (AGEC-B)

II. Common Lower Division Program Requirements

III. General Electives.

Purpose of Degree
The ABus GR degree is designed for students who plan to transfer to Arizona’s public universities into majors that articulate with the Associate in Business General Requirements pathway and for students who plan to complete lower division course work toward a baccalaureate program at other degree granting institutions. All business majors except Accountancy and Computer Information Systems should follow the ABus GR pathway. Accountancy majors should follow the Transfer Guide (TG-XR) pathway. Computer Information Systems majors should follow the Associate in Business Special Requirements pathway.

The degree transfers as a block without loss of credit to Arizona’s public universities and other institutions with district-wide articulation agreements. All semester credits used to satisfy the MCCCD Associate in Business General Requirements will apply to university graduation requirements of the university major for which the ABus GR was designed, regardless of whether the credit was awarded for completion of course work or for prior learning. For additional information on credit awarded for prior learning assessment, see the policy on Credit for Prior Learning in the general catalog.

Academic Policies that Govern the Associate in Business General Requirements Degree:

• Requires 62-63 semester credits in courses numbered 100 and above to be completed with a grade of “C” or better;

• Uses the following policies to help students complete the required Core and Awareness Areas in AGEC B without exceeding the 35 semester credits;
  ° Courses can satisfy a Core Area and one or two Awareness Areas simultaneously.
  ° A course cannot be used to satisfy more than one Core Area requirement.

• Uses the following policies to help students complete the program requirements at a minimum of 62 semester credits but not more than 63 semester credits

• Courses can satisfy multiple areas within the degree simultaneously (AGEC B Core Area, AGEC B Awareness Area, and/or Common Lower Division Program Requirements)
Associate in Business Degree, General Requirements continued:

- Follows the general education policy below;

  **General Education Designations (example: (FYC), [SB], [HU], etc.)**

  Effective Fall 2000 the course evaluation and/or general education designation as listed in the Arizona CEG (Course Equivalency Guide) within the Arizona Course Applicability System (AZCAS) is valid for the term in which the student is awarded credit on the transcript. A course evaluation and/or general education designation may be subject to change. Given that curriculum is dynamic at both MCCCD and the institutions to which MCCCD students transfer, students have the option to petition for general education evaluations and/or general education designations.

- Requires courses that transfer as an equivalent course, departmental elective credit (XXXXDEC), or general elective credit (Elective) at all Arizona public universities according to the Arizona Course Equivalency Guide (CEG) within the Arizona Course Applicability System (AZCAS). The course evaluation and/or general education designation as listed in AZCAS is valid for the term in which the student is awarded credit on the transcript;

- Follows the graduation policies within the general catalog;

- Includes both courses and their modular equivalents, either the course or the modular equivalents will satisfy the Associate in Business General Requirements;

- Accepts one of the courses that is cross-referenced with other courses

- Provides for exemption from Arizona university admission requirements for students who complete the ABus GR degree from a regionally accredited post-secondary institution with a minimum 2.0 on a 4.0=A scale for Arizona residents and a minimum 2.5 on a 4.0=A scale for non-residents.

**Degree Requirements**

The 62-63 semester credits required for the Associate in Business General Requirements follow. See the list entitled MCCCD Courses That Can Be Used to Satisfy MCCCD AGEC A, AGEC B and/or AGEC S for specific course information via the following website: [http://www.dist.maricopa.edu/academic/curric/](http://www.dist.maricopa.edu/academic/curric/)

- Select Tab labeled, Curriculum Procedures Handbook-Programs
- Select Academic Programs
- Select AGEC Course Matrix

The list identifies the courses in alpha-order by prefix as well as the different Core Areas and Awareness Areas where the course will apply. When selecting Mathematical Studies and Natural Sciences options, select from the appropriate AGEC A, B, or S list.

**I. MCCCD General Education**

**Credits**

A. MCCCD/AGEC B

  1. Core Areas: 35
     a. First-Year Composition (FYC) 6
     b. Literacy and Critical Inquiry [L] 3
     c. Mathematical Studies [MA/CS] 6

     To complete the Mathematical Studies requirement select one course to satisfy Mathematics [MA] B and a second course from Computer/Statistics/Quantitative Applications [CS].

     1) Mathematics [MA] B (3 credits) MAT212, Brief Calculus, or a higher level mathematics course
     AND
d. Humanities and Fine Arts [HU]  6
   Students are encouraged to choose course work from more than one
discipline for a total of six semester credits.

e. Social and Behavioral Sciences [SB]  6
   Students are encouraged to choose course work from
more than one discipline for a total of six semester credits.

f. Natural Sciences [SQ/SG]  8
   To complete the Natural Sciences requirement:
   Select four (4) semester credits of [SQ] and four (4) semester
credits of [SG] for a total of (8) semester credits, OR
   eight (8) semester credits of [SQ].
   Students **cannot** take eight (8) semester credits of [SG] to meet
the Natural Sciences requirement.

The lecture course(s) selected for Natural Sciences must include or be
accompanied by the corresponding laboratory course. The lecture and
corresponding laboratory course(s) may carry separate credit. Students
should consult with an advisor for appropriate course selection. Students
should also access the AZ Course Equivalency Guide (CEG) within the
AZ Course Applicability System (AZCAS) for information on
equivalencies.

2. Awareness Areas
   Students must satisfy two Awareness Areas: Cultural Diversity in the
   United States [C] and either Global Awareness [G] or Historical Awareness
   [H]. However, it is not necessary for students to exceed thirty-five semester
credits to complete the Awareness Areas because courses can satisfy a
Core Area and one or two Awareness Areas simultaneously. Therefore no
additional semester credits are required to satisfy the two Awareness Areas.

   Cultural Diversity in the United States [C]
   AND
   Global Awareness [G] OR
   Historical Awareness [H]

II. Common Lower Division Program Requirements:  27-28
   A total of 27-28 credits is required to satisfy the Common Lower Division
   Program Requirements. However, if students select courses that simultaneously
   satisfy multiple areas of the degree, then the number of semester credits required
   for Common Lower Division Program Requirements is reduced. Additional
   semester credits may be required in General Electives to complete the minimum
   62-63 total program semester credits.
   Complete the following:
   Accounting:
   *ACC111  Accounting Principles I AND
   ACC230  Uses of Accounting Information I AND
   ACC240  Uses of Accounting Information II
   OR
   **ACC211  Financial Accounting AND
   ACC212  Managerial Accounting  6-7

   *MCCCD ACC250 or ACC211 may be taken in lieu of ACC111.
   **MCCCD ACC111 and ACC112 together are equivalent to ACC211.
**Associate in Business Degree, General Requirements** continued:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ECN211 [SB]</td>
<td>Macroeconomic Principles</td>
<td>3</td>
</tr>
<tr>
<td>EC2112 [SB]</td>
<td>Microeconomic Principles</td>
<td>3</td>
</tr>
<tr>
<td>GBS205</td>
<td>Legal, Ethical, Regulatory Issues in Business</td>
<td>3</td>
</tr>
<tr>
<td>GBS221 [CS]</td>
<td>Business Statistics</td>
<td>3</td>
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Quantitative Methods

<table>
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<td>3</td>
</tr>
<tr>
<td>*MAT217</td>
<td>Mathematical Analysis for Business OR</td>
<td></td>
</tr>
<tr>
<td>*MAT218</td>
<td>Mathematical Analysis for Business</td>
<td></td>
</tr>
</tbody>
</table>

*Students planning to attend ASU W.P. Carey will required to take MAT217 or MAT218.

**Business Elective:**

Select from the following options:

- CIS114DE Excel Spreadsheet
- CIS133DA Internet/Web Development Level I
- CIS159 [CS] Visual Basic Programming I
- CIS162AD C#: Level I
- CIS163AA Java Programming: Level I
- **GBS 220 Quantitative Methods in Business**
- **MAT217 Mathematical Analysis for Business**
- **MAT218 Mathematical Analysis for Business**
- GBS151 Introduction to Business
- GBS233 [L] Business Communication
- GBS110OR Human Relations in Business and Industry
- MGT251 Human Relations in Business
- MGT253 Owning and Operating a Small Business
- REA179 Real Estate Principles I
- REA180 Real Estate Principles II

**If course used to satisfy Common Lower Division Program Requirements, it can not be used to satisfy Business Electives.**

## III. General Electives

Select courses to complete a minimum of 62 semester credits but no more than a total of 63 semester credits. General Electives semester credits may be necessary if courses selected for the degree satisfy multiple areas. For appropriate course selection, students should consult an advisor.

Students must select courses that are acceptable as an equivalent course, departmental elective credit (XXXXDEC), or general elective credit (Elective) at all Arizona public universities according to the Arizona Course Equivalency Guide (CEG) within the Arizona Course Applicability System (AZCAS). For appropriate course selection, students should consult with an advisor.

**ABus GR Degree Total Credits:** 62-63
ASSOCIATE IN BUSINESS, SPECIAL REQUIREMENTS DEGREE (ABUS SR)

Description
The Maricopa County Community College District Associate in Business, Special Requirements (ABus SR) degree requires a total of 62-63 semester credits for the program of study. The degree has three major components:
I. MCCCD General Education which includes the Arizona General Education Curriculum for Business (AGEC B)
II. Common Lower Division Program Requirements,
III. General Electives.

Purpose of the Degree
The ABus SR degree is designed for Computer Information Systems majors who plan to transfer to Arizona’s public universities and for students who plan to complete lower division course work toward a baccalaureate program at other degree granting institutions. Currently the pathway for accountancy majors is a Transfer Guide Pathway (TG-XR). The Associate in Business General Requirements is designed for all other business majors. Additional information on academic majors can be accessed via the following web site:
http://www.abor.asu.edu/4_special_programs/atass/index.html
• Click on Student Information
• Degrees and Pathways
• Scroll down to the bottom of the page
• Select the letter of the major you’re interested in.

The Associate in Business Special Requirements transfers as a block without loss of credit to Arizona’s public universities and other institutions with district-wide articulation agreements. All semester credits used to satisfy the MCCCD Associate in Business Special Requirements will apply to university graduation requirements of the university major for which the ABus SR was designed, regardless of whether the credit was awarded for completion of course work or for prior learning. For additional information on credit awarded for prior learning assessment, see the policy on Credit for Prior Learning in the general catalog.

Academic Policies that Govern the Associate in Business Special Requirements Degree:
• requires 62-63 semester credits in courses numbered 100 and above to be completed with a grade of “C” or better;
• uses the following policies to help students complete the required Core and Awareness Areas in AGEC B without exceeding the 35 semester credits;

  Courses can satisfy a Core Area and one or two Awareness Areas simultaneously.
  A course cannot be used to satisfy more than one Core Area requirement.

• uses the following policy to help students complete the program requirements at a minimum of 62 semester credits but not more than 63 semester credits

• Courses can satisfy multiple areas within the degree simultaneously (AGEC B Core Area, AGEC B Awareness Area, and/or Common Lower Division Program Requirements)
Academic Policies that Govern the Associate in Business Special Requirement Degree Continued:

- follows the general education policy below;

  **General Education Designations (example: (FYC), [SB], [HU], etc.)**

  Effective Fall 2000 the course evaluation and/or general education designation, as listed in the Arizona CEG (Course Equivalency Guide) within the Arizona Course Applicability System (AZCAS) is valid for the term in which the student is awarded credit on the transcript. A course evaluation and/or general education designation may be subject to change. Given that curriculum is dynamic at both MCCCD and the institutions to which MCCCD students transfer, students have the option to petition for course evaluations and/or general education designations.

- requires courses that transfer as an equivalent course, departmental elective credit (XXXXDEC), or general elective credit (Elective) at all Arizona public universities according to the Arizona Course Equivalency Guide (CEG). The course evaluation and/or general education designation as listed in AZCAS is valid for the term in which the student is awarded credit on the transcript;

- follows the graduation policies within the general catalog;

- includes both courses and their modular equivalents, either the course or the modular equivalents will satisfy the Associate in Business Special Requirements;

- accepts one of the courses that is cross-referenced with other courses;

- provides for exemption from Arizona university admission requirements for students who complete the ABus SR degree from a regionally accredited post-secondary institution with a minimum 2.0 on a 4.0=A scale for Arizona residents and a minimum 2.5 on a 4.0=A scale for non-residents.

**Degree Requirements**

The 62-63 semester credits required for the Associate in Business Special Requirements follow. See the list entitled MCCCD Courses That Can Be Used to Satisfy MCCCD AGEC A, AGEC B and/or AGEC S for specific course information via the following website: http://www.dist.maricopa.edu/academic/curric/

Select Tab labeled, Curriculum Procedures Handbook-Programs
Select Academic Programs
Select AGEC Course Matrix

The list identifies the courses in alpha-order by prefix as well as the different Core Areas and Awareness Areas where the course will apply. When selecting Mathematical Studies and Natural Sciences options, select from the appropriate AGEC A, B, or S list.

I. MCCCD General Education Credits

   A. MCCCDAGEC B

      1. Core Areas: 35
         a. First-Year Composition (FYC) 6
         b. Literacy and Critical Inquiry [L] 3
         c. Mathematical Studies [MA/CS] 6

         To complete the Mathematical Studies requirement select one course to satisfy Mathematics [MA] B and a second course from Computer/Statistics/Quantitative Applications [CS].
1) Mathematics [MA] B (3 credits)
   MAT212, Brief Calculus, or a higher level mathematics course
   AND
2) Computers/Statistics/Quantitative Applications) [CS]
   CIS105 [CS] Survey of Computer Information Systems

d. Humanities and Fine Arts [HU] 6
   Students are encouraged to choose course work from more than one
discipline for a total of six semester credits.

e. Social and Behavioral Sciences [SB] 6
   Students are encouraged to choose course work from
   more than one discipline for a total of six semester credits.

f. Natural Sciences [SQ/SG] 8
   To complete the Natural Sciences requirement:
   Select four (4) semester credits of [SQ] and four (4) semester credits of
   [SG] for a total of (8) semester credits, OR eight (8) semester credits of
   [SQ]. Students cannot take eight (8) semester credits of [SG] to meet
   the Natural Sciences requirement.

The lecture course(s) selected for Natural Sciences must include or be
accompanied by the corresponding laboratory course. The lecture and
corresponding laboratory course(s) may carry separate credit. Students
should consult with an advisor for appropriate course selection. Students
should also access the AZ Course Equivalency Guide (CEG) within the AZ
Course Applicability System (AZCAS) for information on equivalencies.

2. Awareness Areas
   Students must satisfy two Awareness Areas: Cultural Diversity in the
   United States [C] and either Global Awareness [G] or Historical Awareness
   [H]. However, it is not necessary for students to exceed thirty-five semester
   credits to complete the Awareness Areas because courses can satisfy a
   Core Area and one or two Awareness Areas simultaneously. Therefore no
   additional semester credits are required to satisfy the two Awareness Areas.

   Cultural Diversity in the United States [C]
   AND
   Global Awareness [G] OR
   Historical Awareness [H]

II. Common Lower Division Program Requirements: 27-28
A total of 27-28 credits is required for the Common Lower Division Program
Requirements. Common courses meeting general education areas are noted with
the
general education designations encased in brackets.

Complete the following:
   Accounting:
   *ACC111 Accounting Principles I AND
   ACC230 Uses of Accounting Information I AND
   ACC240 Uses of Accounting Information II
   OR
   **ACC211 Financial Accounting
   AND
   ACC212 Managerial Accounting 6-7
   * MCCCD ACC250 or ACC211 may be taken in lieu of ACC111.
   **MCCCD ACC111 and ACC112 together are equivalent to ACC211.
Associate in Business Special Requirement Degree Continued:

Programming I: 3
CIS162AD  C#: Level I

Programming II: 3
CIS250 Management Information Systems
GBS205 Legal, Ethical, and Regulatory Issues in Business 3
GBS221 [CS] Business Statistics 3
ECN211 [SB] Macroeconomic Principles 3
ECN212 [SB] Microeconomic Principles 3

Quantitative Methods 3
GBS220 Quantitative Methods in Business OR
*MAT217 Mathematical Analysis for Business OR
*MAT218 Mathematical Analysis for Business

*Students planning to attend ASU W.P. Carey will be required to take MAT217 or MAT218

III. General Electives 0-6

Select courses to complete a minimum of 62 semester credits but no more than a total of 63 semester credits for the program. General Electives semester credits may be necessary if courses selected for the degree satisfy multiple areas. For appropriate course selection, students should consult an advisor.

Students must select courses that are acceptable as an equivalent course, departmental elective credit (XXXXDEC), or general elective credit (Elective) at all Arizona public universities according to the Arizona Course Equivalency Guide (CEG) within the Arizona Course Applicability System (AZCAS). For appropriate course selection, students should consult with an advisor.

ABus SR Total Credits: 62-63
ASSOCIATE IN TRANSFER PARTNERSHIP DEGREE (ATP)

Purpose of the Degree

The Maricopa County Community College District Associate in Transfer Partnership (ATP) degree is designed to meet the needs of the Maricopa Community College students transferring to public and private colleges and universities. This degree is developed specifically for students who have an identified major and have selected the baccalaureate degree-granting institution to which they intend to transfer.

The Associate in Transfer Partnership degree is an articulated academic program of study established among the student, the accredited baccalaureate degree-granting institution selected by the student, and the primary Maricopa Community College the student attends. The program of study will “parallel” the student’s four-year degree as designated by the baccalaureate degree-granting institution. That is, the courses and number of credit hours in the degree will consist of the Freshman and Sophomore lower division course degree requirements of the major as jointly planned and agreed on with the community college and the accredited institution to which the student plans to transfer.

The ATP degree requires a core of general education credits in the following general education categories: First-Year Composition (6 credits); Mathematics (3 credits); Natural Sciences (4 credits); and Humanities and Fine Arts/Social and Behavioral Sciences or related area general education requirements (6 credits). Also included in the ATP degree are the general education and major requirements to meet the lower division requirements of the major at the baccalaureate degree-granting institution. The ATP degree must consist of at least a minimum of 60 credit hours. The ATP degrees are accessible on the following web site:

http://www.dist.maricopa.edu/academic/curric/

Click on Program Information to access ATPs.

Exemption From Arizona University Admission Requirements

The Associate in Transfer Partnership degree provides for exemption from Arizona university admission requirements for students who complete the degree from a regionally accredited post-secondary institution with a minimum 2.0 on a 4.0=A scale for Arizona residents and a minimum 2.5 on a 4.0=A scale for non-residents.

The ATP degree does not assure admission to the specific program at the baccalaureate degree-granting institution. Students participating in the ATP degree will be treated as “native” students by the upper division institution in terms of course evaluation and course changes.

Advising is a critical element of the transfer partnership degree, and students must work closely with a community college academic advisor prior to entering into a transfer partnership agreement. Once a transfer partnership agreement has been initiated by the student, approved and signed off by a community college academic advisor and university authorized official, the student is responsible for periodic meetings with the community college advisor and, if/when determined necessary, with the appropriate baccalaureate degree-granting institution academic advisor. Upon completion of 36 hours, the student must receive formal advising at a Maricopa Community College before the remainder of their classes can be scheduled.
## Elements of the Associate in Transfer Partnership (ATP) Degree

<table>
<thead>
<tr>
<th>Element</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCCCD General Education Core</td>
<td>19</td>
</tr>
<tr>
<td>Approved Lower Division Transfer Courses</td>
<td>Variable</td>
</tr>
<tr>
<td>(Major dependent with maximum to be determined by receiving baccalaureate degree granting institution)</td>
<td></td>
</tr>
<tr>
<td>Associate in Transfer Partnership Degree Total Hours</td>
<td>60 minimum</td>
</tr>
</tbody>
</table>

The Associate in Transfer Partnership (ATP) degrees may not be available at all MCCCD Colleges. Associate in Transfer Partnership degrees are available in the following areas. Other ATP degrees may be added later depending on curricular needs: ATP information may be accessed via the following website: [http://www.maricopa.edu/academic/curric/atp/php](http://www.maricopa.edu/academic/curric/atp/php)

- General Business
- Housing & Urban Development
- Accountancy
- Construction
- American Indian Studies
- K-12 Classroom Instructional Support
- Global Business
- Early Childhood Teacher Education
- Molecular Biosciences/Biotechnology
- Psychology
- Social Work
- Kinesiology
- Computer Information Systems
- Nutrition
- Nursing
- Exercise and Wellness
- Recreation
- Justice Studies
ASSOCIATE IN GENERAL STUDIES DEGREE (AGS)

Description

The Maricopa County Community College District Associate in General Studies (AGS) degree is recommended for students whose educational goals require flexibility. The AGS allows students to choose any elective courses numbered 100 or above to complete the degree. Therefore, this degree may be less appropriate for students who intend to transfer to a baccalaureate-granting institution.

Students who demonstrate skills comparable to those in Critical Reading and/or Mathematics and/or Computer Usage may substitute acceptable elective courses to satisfy the total credits required for the degree.

Academic Policies that Govern the Associate in General Studies Degree:

- requires a minimum of 60 semester credits in courses numbered 100 and above.

- AGS degree requirements follow with the use of a diagonal character (/) between course numbers to signify options. An asterisk (*) following the course number defines requirements with an effective begin term of spring;

- requires grades as listed for specific areas such as the General Education Core where a minimum grade of “C” is required. Courses applied to other areas may be completed with a minimum grade of “D”;

- uses the following policies for course (s) satisfying multiple program areas;

  1. A course can simultaneously satisfy one Core area and one Distribution area. Courses that meet this criterion are **bold** print and underscored in the Core areas and Distribution areas.

  2. A course cannot satisfy more than one Core area, even if it is approved for more than one Core area.

  3. A course cannot satisfy more than one Distribution area, even if it is approved for more than one Distribution area.

- follows the graduation policies within the general catalog;

- includes both courses and their modular equivalents; either the course or the modular equivalents will satisfy the Associate in General Studies;

- accepts one of the courses that is cross-referenced with other courses;

- provides for exemption from Arizona university admission requirements for students who complete the Associate in General Studies degree from a regionally accredited post-secondary institution with a minimum 2.0 on a 4.0=A scale for Arizona residents and a minimum 2.5 on a 4.0=A scale for non-residents.
Associate in General Studies Degree continued:

Degree Requirements:

GENERAL EDUCATION CORE
(16 credits - grade of “C” or better)

First-Year Composition (6 credits)
ENG English [101/107] & [102/108]

Oral Communication (3 credits)
COM Communication 100/100AA & 100AB & 100AC/110/110AA & 110AB & 110AC/225/230

Critical Reading (3 credits)
CRE Critical Reading 101/Equivalent as indicated by assessment

Mathematics (3 credits)

Computer Usage (1 credit)
Computer-related course or demonstration of comparable computer skills. Additional courses may be approved by individual colleges. Students should contact their advisor for college-specific courses satisfying the requirement.

ACC Accounting 115/115AA/115AB/115BB
AGB Agribusiness 139
AJS Administration of Justice Studies 117/119/205
ARC Architecture 243/244/245
ART Art 100/100AA/100AB/100AC/100AD/140BC 101/102
BIO Biology 119/219
BPC Business-Personal Computers Any BPC Course(s)
CFS Child/Family Studies 180
CIS Computer Information Systems Any CIS Course(s) (except 163AA, 169, 259)
CSC Computer Science Any CSC Course(s) (except 183)
CTR Court Reporting 101/102
DFT Drafting Technology 103/105/any 105 module/150/251/any 251 module/253/any 253 module/any 254 module/any 256 module
ECE Engineering Science 102/102AA/103/103AB/139
ECH Early Childhood Education 238
EEE Electrical Engineering 120
ELE Electronic 115/131/150/181/241/243/245/281
ENG English 100AE
FON Food & Nutrition 100/100AA/100AC/100AD/140BC
GPH Physical Geography 219/220
HRM Hotel Restaurant Management 126
JAS Justice & Government Agencies Admin 225
JRN  Journalism 133
LAS  Paralegal Studies 229
LBT  Library Technology 106
MAT  Mathematics 206
MET  Manufacturing Technology 105AA/140/264
MTC  Music Theory/Composition 191
NET  Networking Technology 181/181AA/181AB/247
OAS  Office Automation Systems 111AA/111AB/113/113AA&113AB/119/130/any 130
module/any 135 module/any 235 module
PSY  Psychology 230
QCT  Quality Control Technology 274
SBS  Small Business 211
SMT  Semiconductor Manufacturing Technology 131/131AA/131AB/150
SWC  Social Work 225
TCM  Telecommunications 106
TVL  Travel Agent Technology 203/205
VPT  Video Production Technology 106

GENERAL EDUCATION DISTRIBUTION AREAS (28-29 credits)

Humanities and Fine Arts (9 credits)
Students are encouraged to choose courses from more than one discipline.
Select nine (9) credits from the following:

AIS  American Indian Studies 213
AJS  Administration of Justice Studies 123
ARH  Art Humanities Any ARH Course(s)
ASB  Anthropology 211/220/222/223
COM  Communication 241
DAH  Dance Humanities 100/201
EDU  Education 291/292/294
ENG  English 200
ENH  English Humanities Any ENH Course(s)
FRE  French 265/266
HCR  Health Care Related 210
HIS  History 101/102/103/109/111/243/253
HUM  Humanities Any HUM course(s) (EXCEPT 203,207)
INT  Interior Design 115/120/225
LAT  Latin 201/202
MHL  Music: History/Literature 140/143/145/146/153/155
PHI  Philosophy Any PHI Course(s) (EXCEPT 113)
REL  Religious Studies Any REL Course(s)
SPA  Spanish 241/242/265/266
SPH  Spanish Humanities 245
STO  Storytelling 292/294
TCM  Telecommunication 145
THE  Theater 111/205/206/210/260
THP  Theater/Performance/Production 241
WST  Women’s Studies 209/284/285/290

Social and Behavioral Sciences (9 credits)
Students are encouraged to choose courses from more than one discipline

AIS  American Indian Studies 101/105/140/141/160/170
AFR  African American Studies 110/202/203/204
AJS  Administration of Justice Studies 101/119/200/225/258/259/270
ASB  Anthropology 100/102/202/211/214//222/223/230/235/238/245
ASM  Anthropology 104
CFS  Child/Family Studies 157/159/176/205/259
### Associate in General Studies Degree continued:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM</td>
<td>Communication</td>
</tr>
<tr>
<td>ECH</td>
<td>Early Childhood Education</td>
</tr>
<tr>
<td>ECN</td>
<td>Economics Any ECN Course(s)</td>
</tr>
<tr>
<td>EDU</td>
<td>Education</td>
</tr>
<tr>
<td>EMT</td>
<td>Emergency Medical Technology</td>
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<tr>
<td>FSC</td>
<td>Fire Science Technology</td>
</tr>
<tr>
<td>FUS</td>
<td>Future Studies</td>
</tr>
<tr>
<td>GBS</td>
<td>General Business</td>
</tr>
<tr>
<td>GCU</td>
<td>Cultural Geography</td>
</tr>
<tr>
<td>HES</td>
<td>Health Science</td>
</tr>
<tr>
<td>HIS</td>
<td>History any HIS Course(s)</td>
</tr>
<tr>
<td>IBS</td>
<td>International Business</td>
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<tr>
<td>MCO</td>
<td>Mass Communications</td>
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<td>PHI</td>
<td>Philosophy</td>
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<tr>
<td>POS</td>
<td>Political Science Any POS course(s)</td>
</tr>
<tr>
<td>PSY</td>
<td>Psychology</td>
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<tr>
<td>REC</td>
<td>Recreation</td>
</tr>
<tr>
<td>SBU</td>
<td>Society and Business</td>
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<tr>
<td>SOC</td>
<td>Sociology Any SOC course(s) (EXCEPT 242)</td>
</tr>
<tr>
<td>SWU</td>
<td>Social Work</td>
</tr>
<tr>
<td>TEC</td>
<td>Textiles and Clothing</td>
</tr>
<tr>
<td>WED</td>
<td>Wellness Education</td>
</tr>
<tr>
<td>WST</td>
<td>Women’s Studies</td>
</tr>
<tr>
<td>YAC</td>
<td>Yaqui Indian History &amp; Culture</td>
</tr>
</tbody>
</table>

**Natural Sciences (7-8 credits)**

Two lecture courses and one corresponding laboratory courses are to be selected. The lecture and corresponding laboratory course(s) may carry separate credit. For appropriate course selection students should consult with an advisor.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>AGS</td>
<td>Agricultural Science</td>
</tr>
<tr>
<td>ASB</td>
<td>Anthropology</td>
</tr>
<tr>
<td>ASM</td>
<td>Anthropology</td>
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<td>AST</td>
<td>Astronomy</td>
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<tr>
<td>BIO</td>
<td>Biology</td>
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<td>CHM</td>
<td>Chemistry</td>
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<tr>
<td>FOR</td>
<td>Forensic Science</td>
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<tr>
<td>GLG</td>
<td>Geology Any GLG course(s)</td>
</tr>
<tr>
<td>GPH</td>
<td>Physical Geography</td>
</tr>
<tr>
<td>ISS</td>
<td>Interdisciplinary Science Studies</td>
</tr>
<tr>
<td>PHS</td>
<td>Physical Science</td>
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<tr>
<td>PHY</td>
<td>Physics</td>
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<tr>
<td>PSY</td>
<td>Psychology</td>
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</tbody>
</table>

**Literacy & Critical Inquiry (3 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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</thead>
<tbody>
<tr>
<td>AIS</td>
<td>American Indian Studies</td>
</tr>
<tr>
<td>COM</td>
<td>Communication</td>
</tr>
<tr>
<td>CRE</td>
<td>Critical Reading</td>
</tr>
<tr>
<td>DAH</td>
<td>Dance Humanities</td>
</tr>
<tr>
<td>ENG</td>
<td>English</td>
</tr>
</tbody>
</table>
ENH  English Humanities 254/255
FON  Food & Nutrition 206
GBS  General Business 233
GPH  Physical Geography 211
HCR  Health Care Related 220
HUM  Humanities 250/251
IFS  Information Studies 101
IGS  Integrated Studies 290AA&290AB/291/293
JRN  Journalism 201/212/234
MCO  Mass Communications 220
MHL  Music: History/Literature 140
PHI  Philosophy 103/106/225
POS  Political Science 115
PSY  Psychology 290AB/290AC
REL  Religious Studies 101/203/205/225
THE  Theater 220
THP  Theater Performance/Production 241

**Elective Courses (15-16 credits)**

May select courses from prefixes already chosen for General Education Distribution requirements in order to develop depth in one or more subject areas.
ASSOCIATE IN APPLIED SCIENCE DEGREE (AAS)

Purpose of Degree
The Maricopa County Community College District Associate in Applied Science (AAS) degree is recommended for students who wish to gain a depth of technical expertise by completing an occupational program presented in the college catalog. Students should consult this catalog to determine specific program requirements.

Academic Policies that Govern the AAS Degree

- requires 60 or more credits numbered 100 or above and includes credits or the equivalent in the General Education Core areas and credits in the Distribution areas. AAS degree requirements follow with the use of a diagonal character (/) between course numbers to signify options. An asterisk (*) following the course number defines requirements with an effective begin term of spring;

- requires grades as listed for specific areas such as the General Education Core where a minimum grade of “C” is required. See specific AAS occupational degree for specific program grade requirements;

- follows the graduation policies within the general catalog;

- includes both courses and their modular equivalents, either the course or the modular equivalents will satisfy the Associate in Applied Science requirements.

- requires at least 12 semester credit hours earned at the college awarding the AAS degree. The 12 hours in the AAS degree curricula may be in the Required Courses area and/or Restricted Electives courses. Courses from the General Education Core and Distribution area are excluded.

- Shared Programs are programs offered at multiple colleges but not available at all college. The requirements are identical at all the colleges offering the program.

- A Shared program requires a minimum of six credit hours from the total program requirements to be completed with a grade of “C” or better at the college awarding the certificate or degree. The exception is the Nursing program. For those shared programs with less than six credit hours, the total hours for the program must be completed at the college awarding the certificate. The minimum of six credit hours in the certificate or degree curricula may be in the Required Courses area and/or the Restricted Electives. Courses from the General Education Core and Distribution area are excluded;

- Student must apply for graduation from the college where they have successfully completed Block 4 of the Associate in Applied Science in Nursing.

- requires completion of General Education courses as indicated in the General Education Requirements for the Associate in Applied Science degree from the Maricopa County Community College District, or completion of a curriculum as stated in the catalog;

- accepts one of the courses that is cross-referenced with other courses;

- provides for exemption from Arizona university admission requirements for students who complete the Associate in Applied Science (AAS) degree from a regionally accredited post-secondary institution with a minimum 2.0 on a 4.0=A scale for Arizona residents and a minimum 2.5 on a 4.0=A scale for non-residents.
GENERAL EDUCATION CORE
(15 credits - grade of “C” or better.)
Demonstrate college-level skills in the following areas:

First-Year Composition (6 credits)
ENG English [101/107] & [102/108/111]

Oral Communication (3 credits)
COM Communication 100/100AA & 100AB & 100AC/110/110AA & 110AB & 110AC/225/230

Critical Reading (3 credits)
CRE Critical Reading 101/111/Equivalent as indicated by assessment

Mathematics (3 credits)

GENERAL EDUCATION DISTRIBUTION AREAS (9-10 credits)

Humanities and Fine Arts (2-3 credits)
Students are encouraged to choose courses from more than one discipline.

AIS American Indian Studies 213
AJS Administration of Justice Studies 123
ARH Art Humanities Any ARH Course(s)
ASB Anthropology 211/220/222/223
COM Communication 241
DAH Dance Humanities 100/201
EDU Education 291/292/294
ENG English 200
ENH English Humanities Any ENH Course(s)
FRE French 265/266
HCR Health Care Related 210
HIS History 101/102/103/111/243/253
HUM Humanities Any HUM course(s)/(EXCEPT 203, 207)
INT Interior Design 115/120/225
LAT Latin 201/202
MHL Music: History/Literature 140/143/145/146/153/155
PHI Philosophy Any PHI Course(s) (EXCEPT 113)
REL Religious Studies Any REL Course(s)
SPA Spanish 241/242/265/266
SPH Spanish Humanities 245
STO Storytelling 292/294
TCM Telecommunication 145
THE Theater 111/205/206/210/260
THP Theater/Performance/Production 241
WST Women’s Studies 209/284/285/290
Associate in Applied Studies Degree continued:  
**Social and Behavioral Sciences (3 credits)**

Students are encouraged to choose courses from more than one discipline.

- **AIS** American Indian Studies 101/105/140/141/160/170  
- **AFR** African American Studies 110/202/203/204  
- **AJS** Administration of Justice Studies 101/200/258/259/270  
- **ASB** Anthropology 100/102/202/211/214/222/223/230/235/238/245  
- **ASM** Anthropology 104  
- **CFS** Child/Family Studies 157/159/176/205/259  
- **COM** Communications 100/100AA & 100/100AB & 100AC/110/110AA & 110AB & 100AC/230/250/263  
- **ECH** Early Childhood Education 176  
- **ECN** Economics Any ECN course(s)  
- **EDU** Education 221/222  
- **EMT** Emergency Medical Technology 258  
- **FSC** Fire Science Technology 258  
- **FUS** Future Studies 101  
- **GBS** General Business 280  
- **GCU** Cultural Geography 102/121/122/141/221/223/253  
- **HES** Health Science 100  
- **HIS** History Any HIS course(s)  
- **IBS** International Business 109  
- **MCO** Mass Communications 120  
- **PHI** Philosophy 243  
- **POS** Political Science Any POS course(s)  
- **REC** Recreation 120/160  
- **SBU** Society and Business 200  
- **SOC** Sociology Any SOC course(s) (EXCEPT 242)  
- **SWU** Social Work 102/171/258/292  
- **TEC** Textiles and Clothing 106  
- **WED** Wellness Education 100/110  
- **WST** Women’s Studies 100/105/110/120/160/161  
- **YAQ** Yaqui Indian History and Culture 100

**Natural Sciences (4 credits)**

The lecture course(s) selected for Natural Sciences must include or be accompanied by the corresponding laboratory course. The lecture and corresponding laboratory course(s) may carry separate credit. Students should consult with an advisor for appropriate course selection.

- **AGS** Agricultural Science 164  
- **ASB** Anthropology 231  
- **ASM** Anthropology 104/265  
- **AST** Astronomy 101/102/111/112/113/114  
- **CHM** Chemistry 107/107LL/130/130LL/151/151LL/152/152LL/154/154LL/230/230LL  
- **FON** Food and Nutrition 241 & 241LL  
- **FOR** Forensic Science 105/106  
- **GLG** Geology Any GLG course(s) (EXCEPT 140/251MC/275)  
- **GPH** Physical Geography 111/112/113/212/213/214/215  
- **ISS** Interdisciplinary Science Studies 111/112  
- **PHS** Physical Science 110/120  
- **PHY** Physics 101/111/112/115/116/121/131/252  
- **PSY** Psychology 290/AB/290
Purpose of the Academic Certificate
The Maricopa Community College District Academic Certificate (area of emphasis) is a defined and coherent program of study that is recommended for students who wish to gain additional expertise in an academic area. While this program of study can result in proficiency in specified skills and competencies, as well as mastery of knowledge, it is not designed to prepare someone for employment in a specific occupation. The content for an Academic Certificate (area of emphasis) may be derived from a variety of disciplines or it can be discipline specific. The Academic Certificate does not require a general studies component even though requirements of the certificate may include courses that currently meet specific general studies designations such as Humanities and Fine Arts, Social and Behavioral Sciences, etc.

Academic Policies that Govern the Academic Certificate (area of emphasis):

- generally ranges from 12-39 credit hours in courses numbered 100 or above, although there is no minimum number of credit hours required for an Academic Certificate;
- requires a cumulative GPA of 2.0 or better for completion;
- follows the graduation policies within the general catalog;
- accepts one of the courses that is cross-referenced with other courses;
- includes both courses and their modular equivalents, either the course or the modular equivalents will satisfy the Academic Certificate requirements;
- does not presume block transfer value. Consequently, in most cases the Academic Certificate should not be a subset of an existing transfer degree;
- may have admission criteria established by the college if and when appropriate;
- is for the most part college specific
INTERDISCIPLINARY STORYTELLING  
ACADEMIC CERTIFICATES

Division Chair - Liberal Arts - Dr. Kathleen Iudicello (623) 935-8460  
Certificate:    Interdisciplinary Storytelling  
                Advance Interdisciplinary Storytelling  

Interdisciplinary Storytelling Certificate Requirements  

Program Description: This academic certificate emphasizes the presentation of  
interdisciplinary and multi-cultural stories through live performance or through  
multimedia. Opportunities are provided to explore a variety of art forms and cultural  
perspectives to enhance creative content development.  

Program Prerequisites: (3 Credits)  
+ENG101 First-Year Composition (3) OR  
+ENG107 First-Year Composition for ESL (3) OR  
Equivalent as indicated by assessment 3  

Required Courses: (7 Credits)  
+STO282AA Voluntaryism for Education: A Service Learning Experience 1  
EDU/HUM/STO292 The Art of Storytelling 3  
EDU/ENH/STO294 Multicultural Folktales 3  
AND  

Select one of the following tracks:  

Track 1: Performance Emphasis: 9 Credits  
+STO297 Creating and Telling Personal Stories 3  
Note: Student should select 2 courses from the following courses for total of 6  
credits in consultation with a department/division advisor:  
+COM/THP241 Performance of Literature 3  
COM263 Elements of Intercultural Communication 3  
+DAH201 World Dance Perspectives 3  
+HUM250 Ideas & Values in the Humanities 3  
HUM120 Cultural Viewpoints in the Arts 3  
STO286 Using Storytelling in a Variety of Settings 3  
STO288 Telling Sacred Stories from Around the World 3  

OR  

Track 2: Digital Emphasis: Credit 9  
+ART/ADA173 Computer Art 3  
Note: Students should select 2 courses from the following courses for a total of 6  
credits in consultation with the department/division advisor:  
ART131 Photography I 3  
+ADA/ART177 Computer-Photographic Imaging 3  
+ART298AC Special Projects 3  
HUM120 Cultural Viewpoints in the Arts 3  
+HUM250 Ideas & Values in the Humanities 3  
STO286 Using Storytelling in a Variety of Settings 3  
STO288 Telling Sacred Stories from Around the World 3  
+STO297 Creating and Telling Personal Stories 3  
(Note: + indicates course has prerequisites and/or corequisites)
Advanced Interdisciplinary Storytelling Certificate Requirements

Program Description: The academic certificate program emphasizes the presentation of interdisciplinary and multi-cultural stories through live performance or through multimedia. This Advanced Interdisciplinary Storytelling Certificate provides students the opportunity to develop deeper understanding of points of view and to advance their artistic skills to achieve their fine arts goals. Opportunities are provided to explore a variety of art forms and cultural perspectives to enhance creative content development. Students can choose to concentrate study within a specific culture and/or to refine artistic ability to create compelling original stories.

Program Prerequisites: (19 Credits)
Certificate of Completion in Interdisciplinary Storytelling and
+ENG102 First Year Composition (3) OR
   Equivalent as indicated by assessment 3

Required Courses: (3 Credits) Credits
+STO293 The Art of Storytelling II 3

Note: Student should select a total of 12 credits in consultation with a department/division advisor:

Track 1: Performance Emphasis: 12 Credits
ARH145 History of American Indian Art 3
ARH201 Art of Asia 3
ARH217 Mexican Art History 3
ART111 Drawing I 3
+CCS/ENH212 The Mexican American Novel 3
COM/THP243 Interpreters Theatre 3
+ENG210 Creative Writing 3
+ENG217 Personal and Exploratory Writing 3
ENH117 Rap Literature: The Oral Tradition 3
+ENH205 Asian American Literature 3
ENH259 American Indian Literature 3
HUM/WST209 Women and Films 3
MHL143 Music in World Cultures 3
MHL147 Music of African American Cultures 3
MUP225 Class Guitar I 2
STO289AA Using Storytelling in Educational Settings 1
STO289AB Using Storytelling in Business Settings 1
STO289AC Using Storytelling in Healing Settings 1
THP112 Acting I 3

Track 2: Digital Emphasis: 12 Credits
+ENG217 Personal and Exploratory Writing (3) or
HUM107 Humanities Through the Arts (3) 3

Choose 6 credits of the following:
Note: Student should select a total of 6 credits in consultation with a department/division advisor:
ADA/ART112 Two-dimensional Design 3
ARH120AA Understanding Art: Black Art 2
ARH145 History of American Indian Art 3
ARH201 Art of Asia 3
ARH217 Mexican Art History 3
HUM/WST209 Women and Films 3
MHL143 Music in World Culture 3
MHL147 Music of African American Culture 3
STO289AA Using Storytelling in Business Settings 1
STO289AB Using Storytelling in Educational Settings 1
STO289AC Using Storytelling in Healing Settings 1

Choose 3 credits of the following:
Note: Student should select a total of 3 credits in consultation with a department/division advisor
ART111 Drawing I 3
+ENG210 Creative Writing 3
MHL156 Music in Latin America and the Caribbean 3
MHL140 Survey of Music History 3
MHL145 American Jazz & Popular Music 3
MHL155 Survey of American Music 3
MUP225 Class Guitar I 3
GENERAL GRADUATION REQUIREMENTS (AR 2.3.9.)

All students are required to complete the degree and/or certificate requirements as approved by the MCCCD Governing Board. The college reserves the right to make necessary course and program changes in order to meet current educational standards. In addition, students must:

1. be credited in the Office of Admissions and Records with not fewer than:
   60 semester credit units in courses numbered 100 or above for the Associate in Arts degree, Associate in Science degree, Associate in Transfer Partnership degree, and Associate in General Studies degree; 60 semester credit units for the Associate in Applied Science degree; 62 semester credits for the Associate in Business degrees. For specific certificate programs, be credited with not fewer than the minimum total of credit units required for the certificate program.

   Students not continuously enrolled as outlined in the Catalog Under Which a Student Graduates policy, must satisfy current graduation requirements.

2. have earned a minimum of 12 semester credit units toward the degree or certificate at the district college granting the degree or certificate. In cases where the certificate requires fewer than 12 credit units, a minimum of six credit units, must be completed at the college awarding the certificate.

3. have filed an application for the degree or certificate with the Office of Admissions and Records on the date determined by the college/center.

   Students must apply for graduation from the college where they have successfully completed Block 4 of the Associate in Applied Science in Nursing.

4. have a minimum cumulative grade point average of 2.000 at the college granting the degree.

5. have a minimum cumulative grade point average of 2.000 in all courses used to fulfill degree requirements

   Some specific programs have higher grade requirements. It is the student’s responsibility to be aware of these program requirements.

6. have removed, thirty (30) days after the anticipated graduation date, all deficiencies on the record to use those courses toward program completion.

7. have removed any indebtedness to any MCCCD college/center.

8. have paid required degree or certificate application fee.

See fee schedule for charges.

See Graduation with Honors for information on honors designation.
CERTIFICATES/DEGREES

The Maricopa Community Colleges offer Certificates of Completion as well as Associate Degrees, one of which is conferred on each student who has completed a program of study. These certificates and degrees are as follows: (1) Certificate of Completion (Career Program Specified); (2) Academic Certificate; (3) General Education Certificate; (4) Associate in Arts; (5) Associate in Science; (6) Associate in Business; (7) Associate in General Studies; (8) Associate in Transfer Partnership; (9) Associate in Applied Science (Career Program Specified).

All candidates for a degree and/or certificate must complete the General Graduation Requirements as approved by the MCCCD Governing Board.

All students are urged to meet with a faculty advisor, program advisor or counselor as soon as possible to determine which program meets their needs and to plan their course of study.

GRADUATE GUARANTEE POLICY

The Governing Board believes so strongly in the quality of its colleges’ occupational training programs that it guarantees graduate competence.

1. Graduation from an Associate of Applied Science (AAS) is designed to prepare a person for entry-level employment in a specific career field. A graduate’s ability to perform approved program competencies will be judged by employers. Should the employer of a graduate who has earned an AAS Degree find the employee lacking in the technical skills normally expected of an entry-level employee in the specific career field for which that graduate prepared, the District will provide the graduate with up to the equivalent of twelve (12) credit hours of retraining for no additional tuition.

2. Because technical occupations change rapidly, initial employment in an AAS Degree-related field must occur within one year of graduation from the AAS Degree program in question.

Retraining needs to occur as cost effectively as possible. The graduate’s employer must present a list of the graduate’s skill deficiencies to the appropriate dean at the graduate’s alma mater. All retraining will be completed in a reasonable time as agreed to by the employer, the student, and the college.

LICENSURE DISCLAIMER

Maricopa Community Colleges courses and programs prepare students for entry into a variety of professions. Many of these professions require that a person hold an occupational license or certificate in order to work in a particular field. Typically, a person must meet certain legal requirements before obtaining such a license or certificate. These requirements are established by county, state or federal agencies, and often are based on a person’s character, or whether the person has been convicted of a criminal offense. It is possible for a student who has obtained a degree or certificate from a community college to be denied the right to work in a particular profession after completing the degree or certificate because of concerns over the student’s character or criminal background. Any student preparing to enter a field for which a professional license or certificate is required is strongly advised to consult with the appropriate government agency that issues such credentials. That agency can provide the student complete information about any requirements the law imposes for working in a particular occupation.
MCCCD General Education Statement

The general education core of the program of study for an associate degree or a certificate helps students develop a greater understanding of themselves, of their relationship with others, and of the richly diverse world in which they live. The general education experience provides students with opportunities to explore broad areas of commonly held knowledge and prepares them to contribute to society through personal, social, and professional interactions with others. General education fosters students’ personal development by opening them to new directions, perspectives, and processes.

Through its general education requirements, the Maricopa County Community College District is committed to helping students develop qualities and skills that will serve them throughout their lives. General education opportunities encourage students to:

- Build self-awareness, self-respect, and self-confidence
- Recognize and respect the beliefs, traditions, abilities, and customs of all people and all cultures
- Consider the local, global, and environmental impacts of personal, professional, and social decisions and actions
- Access, evaluate, analyze, synthesize, and use information wisely
- Communicate effectively personally, socially, and professionally
- Think critically, make informed decisions, solve problems, and implement decisions
- Consider the ethical implications of their choices
- Value the learning process throughout their lives
- Integrate and connect ideas and events in a historical perspective, and see relationships among the past, the present, and the future
- Develop a personal sense of aesthetics
- Use technological resources appropriately and productively
- Work cooperatively and respectfully with others to serve their communities

The general education experience at MCCCD is composed of specific elements across the curriculum designed to provide the learner with essential knowledge and skills:

- Communication
- Arts and Humanities
- Numeracy
- Scientific Inquiry in the Natural and Social Sciences
- Information Literacy
- Problem-Solving and Critical Thinking
- Cultural Diversity

General Education Designations (example: (FYC), [SB], [HU], etc.)

Effective Fall 2000 the course evaluation and/or general education designation as listed in the Arizona CEG (Course Equivalency Guide) within the Arizona Course Applicability System (AZCAS) is valid for the term in which the student is awarded credit on the transcript. A course evaluation and/or general education designation may be subject to change. Given that curriculum is dynamic at both MCCCD and the institutions to which MCCCD students transfer, students have the option to petition for general education evaluations and/or general education designations.

The college reserves the right to make necessary course and program changes in order to meet current educational standards.
Students maintaining continuous enrollment at any public Arizona community college or university may graduate according to the requirements of the catalog in effect at the time of initial enrollment or according to the requirements of any single catalog in effect during subsequent terms of continuous enrollment. Students may maintain continuous enrollment whether attending a single public community college or university in Arizona or transferring among public institutions in Arizona while pursuing their degrees.

1. A semester in which a student earns course credit will be counted toward continuous enrollment. Non-credit courses, audited courses, failed courses, or courses from which the student withdraws do not count toward the determination of continuous enrollment for catalog purposes.

**EXAMPLE A:**

<table>
<thead>
<tr>
<th>Admitted &amp; Earned Course Credit at a Public Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>College or University</td>
</tr>
<tr>
<td>Fall ’93 (Active)</td>
</tr>
<tr>
<td>Continued at a Public Community College</td>
</tr>
<tr>
<td>Spring ’94, Fall ’94 (Active)</td>
</tr>
<tr>
<td>Transferred to a University</td>
</tr>
<tr>
<td>Spring ’95 (1993 or Any Subsequent Catalog)</td>
</tr>
</tbody>
</table>

**EXAMPLE B:**

<table>
<thead>
<tr>
<th>Admitted &amp; Earned Course Credit at a Public Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>College or University</td>
</tr>
<tr>
<td>Fall ’92 (Active)</td>
</tr>
<tr>
<td>Enrolled But Earned All Ws, Zs, or Fs</td>
</tr>
<tr>
<td>Spring ’93 (Inactive)</td>
</tr>
<tr>
<td>Enrolled in Audit Courses Only</td>
</tr>
<tr>
<td>Fall ’93 (Inactive)</td>
</tr>
<tr>
<td>Nonattendance</td>
</tr>
<tr>
<td>Spring ’94 (Inactive)</td>
</tr>
<tr>
<td>Transferred to a University</td>
</tr>
<tr>
<td>Fall ’94 (1994 or Any Subsequent Catalog)</td>
</tr>
</tbody>
</table>

2. Students who do not meet the minimum enrollment standard stipulated in No. 1 during three consecutive semesters (fall/spring) and the intervening summer term* at any public Arizona community college or university are no longer considered continuously enrolled, and must meet requirements of the public Arizona community college or university catalog in effect at the time they are readmitted or of any single catalog in effect during subsequent terms of continuous enrollment after readmission.

**EXAMPLE A:**

<table>
<thead>
<tr>
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<tr>
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<tr>
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</tr>
<tr>
<td>Nonattendance</td>
</tr>
<tr>
<td>Spring ’93, Fall ’93, Spring ’94 (Inactive)</td>
</tr>
<tr>
<td>Readmitted &amp; Earned Course Credit at a Public Community</td>
</tr>
<tr>
<td>College</td>
</tr>
<tr>
<td>Fall ’94 (Active)</td>
</tr>
<tr>
<td>Transferred to a University</td>
</tr>
<tr>
<td>Spring ’95 (1994 or Any Subsequent Catalog)</td>
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**EXAMPLE B:**

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<td>Nonattendance</td>
</tr>
<tr>
<td>Spring ’93 (Inactive)</td>
</tr>
<tr>
<td>Readmitted &amp; Earned Course Credit at a Public Community</td>
</tr>
<tr>
<td>College</td>
</tr>
<tr>
<td>Summer ’93 (Active)</td>
</tr>
<tr>
<td>Nonattendance</td>
</tr>
<tr>
<td>Fall ’93, Spring ’94 (Inactive)</td>
</tr>
<tr>
<td>Transferred to a University</td>
</tr>
<tr>
<td>Fall ’94 (1992 or Any Subsequent Catalog)</td>
</tr>
</tbody>
</table>
Students are not obligated to enroll and earn course credit during summer terms, but summer enrollment may be used to maintain continuous enrollment status.

3. Students admitted or readmitted to a public Arizona community college or university during a summer term must follow the requirements of the catalog in effect the following fall semester or of any single catalog in effect during subsequent terms of continuous enrollment.

**EXAMPLE:**

Admitted & Earned Course Credit at a Public Community College or University

- Summer '94 (Active)
- Fall '94, Spring '95 (Active)
- Fall '95 (Inactive)
- Spring '96 (Active)

Transferred to a University

- Summer '96 (1994 or Any Subsequent Catalog)

4. Students transferring among Arizona public higher education institutions must meet the admission requirements, residency requirements, and all curricular and academic requirements of the degree-granting institution.

**University Department Time Limit for Coursework**

In areas of study in which the subject matter changes rapidly, material in courses taken long before graduation may become obsolete or irrelevant. Coursework that is more than eight years old is applicable to completion of degree requirements at the discretion of the student’s major department. Departments may accept such coursework, reject it, or request that the student revalidate its substance. The eight-year limit on coursework applies except when program accreditation agencies limit the life of coursework to less than eight years. Departments may also require students to satisfy current major requirements rather than major requirements in earlier catalogs, when completing earlier requirements is no longer possible or educationally sound.

The college reserves the right to make necessary course and program changes in order to meet current educational standards.
In direct response to the ever growing need for highly qualified P-12 teachers and in support of the many communities it serves, the Maricopa Community College District has made a strong commitment to contributing to the recruitment and training of early childhood, elementary, secondary, and special education school teachers. With quality curriculum and excellent instruction as the primary focus of its faculty, the Maricopa colleges are well positioned to provide state and national leadership in the quality and nature of instruction thus helping students to become excellent teachers through the offering of current and responsive teacher education course work.

The District also supports professional development for certified teachers through the offering of course work, seminars, workshops and specialized training. This includes Bilingual Education, Computer Science, English as a Second Language (ESL), Math Specialist, Middle School, Reading Specialist, and Structured English Immersion (SEI).

In support of this commitment, the Maricopa Community College District offers teacher education course work, degrees, and/or programs at all 10 Maricopa Colleges.

### Teacher Education Options Available To Students

#### Instructional Aide/Associate/Paraprofessional Preparation

- **Associate in Arts in Elementary Education (AAEE):** designed for the student who plans to transfer to an Elementary Education program (also Special Education) at any partner institution and/or who plans to become a classroom instructional aide. The degree transfers as a block without loss of credit to Arizona’s public universities. (Offered at all 10 Maricopa Community Colleges)

- **Associate in Applied Science (AAS) in Teacher Assisting:** prepares students for employment as an assistant to the classroom teacher in grades K-12. It provides foundation work, which will allow the aide to pursue a higher degree in the field of education. (Offered at EMCC & GWCC)

- **Associate of Applied Science (AAS) in Instructional Assistance:** prepares students to work as instructional assistants. The program emphasizes the philosophical, cultural, and linguistic processes involved in teaching children. Students develop knowledge and skills required of the instructional assistant through a combination of courses in methodology and practicum experience. (Offered at MCC & PC)

- **Associate in Transfer Partnership (ATP) in K-12 Classroom Instructional Support:** designed for students planning on becoming an Instructional Associate/Paraprofessional in K-12. Transfers as a block without loss of credit to Charter Oak State College. (Offered at EMCC, MCC, and RSC)

- **Certificate of Completion (CCL) in Instructional Assistance:** provides coursework which focuses on meeting the educational needs of learners. All Certificate Program requirements can be used toward completion of the Instructional assistance AAS Program. (Offered at MCC & PC)
Elementary Education Teacher Preparation

- **Associate in Arts in Elementary Education (AAEE):** designed for the student who plans to transfer to an Elementary Education program (also Special Education) at any partner institution and/or who plans to become a classroom instructional aide. The degree transfers as a block without loss of credit to Arizona’s public universities. (Offered at all 10 Maricopa Community Colleges)

- **Associate in Transfer Partnership (ATP) in Elementary Education:** designed for students planning to transfer into Elementary Education at Arizona State University West Campus. Transfers as a block without loss of credit. (Offered at all 10 Maricopa Community Colleges)

- **Baccalaureate Partnership Program with Charter Oak State College:** designed for students in elementary education who will transfer to Charter Oak State College after completing 90 credits at the community college. (Offered at RSC)

Elementary and Special Education Teacher Preparation

- **Associate in Arts in Elementary Education (AAEE):** designed for the student who plans to transfer to an Elementary Education program and Special Education at any partner institution and/or who plans to become a classroom instructional aide. The degree transfers as a block without loss of credit to Arizona’s public universities. (Offered at all 10 Maricopa Community Colleges)

Elementary, Secondary & Special Education Teacher Preparation

- **Aztec/Education:** housed in the Office of Program Articulation, this program assists and supports students throughout the first two years of their bachelor’s degree in elementary, secondary, or special education. (Offered at GCC)

- **Dynamic Learning Teacher Education Program:** a four-semester cohort model designed to prepare future teachers to transform inner city schools. It is based on current research on teaching and learning and utilizes a team-taught interdisciplinary curriculum with strong partnerships with community schools and Arizona State University. (Offered at SMCC)

- **inspire.teach:** a program that supports and encourages the choice of teaching as a profession. It reflects a commitment among secondary, community college, and university partners to inspire students from under-represented groups to explore, pursue and excel in teaching careers. (Offered at EMCC)

- **The Teacher Connection:** designed to identify, connect, and support individuals as they work toward careers in teaching. It reflects a commitment among Cave Creek Unified School District, Paradise Valley Unified School District, Paradise Valley Community College, and ASU West’s College of Education to inspire a diverse population of students to explore, pursue, and excel in teaching careers. (Offered at PVCC)

- **Teaching and Learning Communities (TLC) Education Program:** a student support program structured in a 4-semester plan with courses selected to enhance students’ knowledge of teaching as a career and to prepare for certification. (Offered at MCC)

- **Teachers Today and Tomorrow (T3):** this two-semester interdisciplinary learning community combines English, Education, and Technology. After two semesters, education courses along with technology courses designed for teacher education majors compliment the general education courses required for university transfer. (Offered at CGCC)
• **General Studies and Subject Matter Courses:** designed to fulfill lower division general education requirements for students planning to transfer to public or private community colleges or universities. (Offered at all Maricopa Community Colleges)

• **Post Baccalaureate Teacher Prep Programs:** prepares students with a baccalaureate degree to become a certified Elementary (K-8), Secondary (7-12), or Special Education (K-12) teacher. The programs are approved by the Arizona Department of Education. (All programs offered online at RSC; elementary (K-8) offered on campus at SCC).

• **Urban Teacher Corps:** a teacher development program that supports urban classified school district employees in Phoenix to successfully complete a bachelor’s degree in Education and return to their school districts as teachers. After completion of lower division courses, UTC participants transfer to the initial Teacher Certification program at Arizona State University, Tempe. (Offered at PC)

**Master’s Degree Partnerships for Students who complete the Rio Salado College and Scottsdale Community College Teacher Prep Programs:**

• **Master’s Degree Partnership with North Central University:** 18 credits of the post baccalaureate teacher prep program can be applied toward the 36 credits required for an online MS in Education Degree. (Offered at RSC)

• **Master’s Degree Partnership with Plymouth State University:** 18 credits of the post baccalaureate teacher prep program can apply toward the 33 credits required for an online MS in Education Degree. (Offered at RSC, SCC)

• **Master’s Degree Partnership with Walden University:** Up to 12 credits of the post baccalaureate teacher prep program can apply toward the 30 credits required for an online MS in Education Degree. (Offered at RSC, SCC)

**Professional Development for Certified Teachers**

• **Certificate of Completion (CCL) in Bilingual Endorsement:** designed for certified teachers pursuing bilingual endorsement. Includes all coursework required for state issued Bilingual Endorsement as specified by the Arizona Department of Education. Valid Arizona teaching certificate is required for state endorsement. (Offered at MCC, PC)

• **Certificate of Completion (CCL) in English as a Second Language (ESL) Endorsement:** designed for certified teachers pursuing ESL endorsement. Includes all coursework required for state issued English as a Second Language Endorsement as specified by the Arizona Department of Education. Valid teaching certificate is required for state endorsement (Offered at MCC, PC)

• **Certificate of Completion (CCL) in Reading Specialist Endorsement:** qualifies certified teachers for the Reading Specialist Endorsement as specified by the Arizona Department of Education. Includes all coursework required for those with valid Arizona teaching certificates to qualify for the Reading Specialist Endorsement in Arizona. (Offered at MCC)

• **Professional Development Endorsement Courses for K-12 Teachers:** courses have been designed and are accepted by the Arizona Department of Education and lead to endorsements in Computer Science, Structured English Immersion (SEI), English as a Second Language (ESL), Math Specialist, Reading Specialist, and Middle School. (All courses offered online at RSC; MCC offers Reading, ESL, SEI and Middle Grade on campus; SCC offers Reading, ESL, and SEI on campus.)

* **Note:**
  1. Refer to specific college catalog for degree, program and course information.
  2. Students are strongly encouraged to seek academic advisement prior to enrolling.
Early Childhood Education & Family Studies Options
Available To Students

It is important to note that there is a wide range of difference in educational requirements for early childhood education teachers both locally and nationally. Given this, it is important that you check with the contact person at the college you are planning to attend prior to enrolling in course work.

Associate Degrees

- **Associate of Applied Science (AAS) in Early Childhood Education:** prepares individuals to work with children in early childhood programs, with a specialization in either center-based, family childcare, or administration of early childhood programs. Courses are scheduled to accommodate those who are already working in the field. (Offered at GCC)

- **Associate in Applied Science (AAS) in Early Childhood Education:** designed to prepare students for employment as early childhood teachers in a variety of educational programs. Students learn effective teaching skills as they apply developmentally appropriate early childhood educational theory in the classroom setting. Courses have been selected with a focus on developing an educational career ladder. (Offered at PVCC)

- **Associate in Applied Science (AAS) in Early Childhood Development:** designed to meet the needs of individuals who are interested in working in early childhood. The program emphasizes working with multi-linguistic and multi-cultural children. Upon completion students will be equipped to work effectively with children and families in both school and home environments and also initiate upward career movement or improve existing skills. (Offered at SMCC)

- **Associate in Applied Science (AAS) in Early Childhood Development:** prepares individuals to assume entry-level positions within nursery schools, pre-schools, and day care centers. (Offered at SCC)

- **Associate in Applied Science (AAS) in Early Care and Education:** The Early Care and Education Program is based upon an inclusive vision of high-quality services for all children. Provided area a sequence of lively, interactive classes and a variety of field experiences, which greatly expand the student’s understanding of children. Unique student teaching opportunities are offered in the Evelyn H. Warren Child Lab, a multi-age preschool that is accredited by the National Association for the Education of Young Children. (Offered at MCC)

- **Associate in Applied Science (AAS) in Family Life Education:** prepares individuals to enter the family life education, human development, or child and family organizations field at the paraprofessional level. (Offered at GCC, MCC, SCC)

- **Associate in Applied Science (AAS) in Family Resources:** prepares students to work with families, identify needs, and acquire resources that strengthen family functioning. Includes skills in assessing and controlling needed resources, decision making, problem solving, communication, parenting, and child development education. (Offered at PC)

- **Associate in Transfer Partnership (ATP) in Early Childhood Education:** designed for students planning on becoming a certified teacher in Early Childhood Education (Birth through 3rd grade). Transfers as a block without loss of credit to Northern Arizona University. (Offered at GCC, MCC, RSC, and SCC)
Post Baccalaureate Programs

- **Post Baccalaureate Early Childhood Teacher Education Program**: designed for individuals with a baccalaureate degree who want to become an early childhood teacher. The program enables students to obtain an Arizona Department of Education (ADE) early childhood teaching certificate that meets Arizona requirements to teach in a public school program, including children from birth through third grade.

- **Early Childhood Endorsement**: designed for individuals who have a current elementary or special education teaching certificate, or are about to receive one. This program enables students to obtain an early childhood Endorsement that meets Arizona requirements to teach in a public school program, including children from birth through third grade.

Certificates of Completion

- **Certificate of Completion (CCL) in Early Childhood Education**: designed for those who are interested in studying and working with young children. It prepares individuals to work with children in early child programs, with a specialization in either center-based or family child care. Courses are scheduled to accommodate those who are already working in the field. (Offered at GCC)

- **Certificate of Completion (CCL) in Early Childhood Education**: designed to prepare students for employment as early childhood teachers in a variety of educational programs. Students learn effective teaching skills as they apply developmentally appropriate early childhood educational theory in the classroom setting. Courses have been selected with a focus on developing an educational career ladder. (Offered at PVCC)

- **Certificate of Completion (CCL) in Early Childhood Development**: prepares individuals to assume entry-level positions within nursery schools, pre-schools, and day care centers. (Offered at SCC)

- **Certificate of Completion (CCL) in Early Childhood Development**: designed to meet the needs of individuals who are interested in working in early childhood. Emphasis on working with multi-linguistic and multi-cultural children. Upon completion students will be equipped to work effectively with children and families in both school and home environments and also initiate upward career movement or improve existing skills. (Offered at SMCC)

- **Certificate of Completion (CCL) in Early Care Specialist**: The Early Care curriculum prepares students for entry level position in early childhood programs. The sequence of coursework is designed to increase understanding of education and care of young children. (Offered at MCC)

- **Certificate of Completion (CCL) in Classroom Management for Infants, Toddlers, and Preschool Children**: designed for understanding infants, toddlers & preschool children and managing their early childhood classroom settings. Focuses on key areas related to early childhood. (Offered at PC)

- **Certificate of Completion (CCL) in Family Support**: designed to enhance the education and career of individuals interested in working with families or in agencies that provide services to families, or in agencies that provide services to families, or those who are presently involved with families or their supporting agencies. (Offered at PC)

- **Certificate of Completion (CCL) in Infant Toddler Development**: prepares individuals to serve children from birth through age three years and their families. (Offered at SCC)
- **Certificate of Completion (CCL) in Parent Education**: prepares individuals to enter the family life education with a focus on parent education. (Offered at GCC, MCC, SCC)

- **Certificate of Completion (CCL) in Adolescent Studies**: designed to prepare individuals preparing to work or those who are employed in professions that require interaction with adolescents and/or adolescent-related issues such as school personnel, parents, health educators, etc. (Offered at PC)

* Note: (1) Refer to specific college catalog for degree, program and course information. (2) Students are strongly encouraged to seek academic advisement prior to enrolling.

**College Contact Information**

**Chandler Gilbert Community College (CGCC)**
— Teacher Education: 480-732-7124
Sharon Fagan (Pecos Campus) sharon.fagan@cgcmail.maricopa.edu
— Early Childhood Education: 480-988-8804
Jennifer Peterson (CGCC) jennifer.peterson@cgcmail.maricopa.edu

**Estrella Mountain Community College (EMCC)**
— Teacher Education: Marsha Carlen marsha.carlen@emcmail.maricopa.edu 623-935-8479

**Glendale Community College (GCC)**
— Teacher Education: 623-845-3265
Nancy Oreshack nancy.oreshack@gcmail.maricopa.edu
— Early Childhood Education: Dr. Carlos Nunez 623-845-3178

**Mesa Community College (MCC)**
— Teacher Education: Transfer Services 480-461-7452, or 480-654-7600
Dr. Richard Malena (Red Mountain Campus) richard.malena@mcmail.maricopa.edu 480-461-7890
And Nora Reyes (MCC Campus) nora.reyes@mcmail.maricopa.edu 480-461-7781
— Early Childhood Education: Dr. Christine Osgood osgood@mail.mc.maricopa.edu 480-461-7938

**Paradise Valley Community College (PVCC)**
— Teacher Education: 602-787-6659
Debbie Voll debbie.voll@pvmail.maricopa.edu
— Early Childhood Education: Christie Colunga christie.colunga@pvmail.maricopa.edu 602-787-7731

**Phoenix College (PC)**
— Teacher Education: Ofelia Canez 602-285-7657
— Early Childhood Education: Alverta McKenzie 602-285-7292

**Rio Salado College (RSC)**
— Teacher Education & Early Childhood Education: academic.advisement@email.rio.maricopa.edu 480-517-8580
Professional Development Institute: Dr. Diana Abel diana.abel@riomail.maricopa.edu 480-517-8122

**Scottsdale Community College (SCC)**
— Teacher Education: Dr. Bobbie Sferra 480-423-6217
— Early Childhood Education: Dr. Rosanne Dlugosz 480-423-6204

**South Mountain Community College (SMCC)**
— Teacher Education: Dr. Eufemia Amabisca eufemia.amabisca@smcmail.maricopa.edu 602-243-8019
Dr. Yvonne Montiel yvonne.montiel@smcmail.maricopa.edu 602-243-8023
— Early Childhood Education: Joy Mills 480-305-5783
College of Attendance
Completion of teacher education course work for the various degrees, certificates, and programs available can be met through the completion of teacher education course work taken at any Maricopa Community College. Refer to specific college catalogs and course schedules for available offerings.

Common College Requirements for Students Enrolled in Teacher Education Course Work
Students taking Teacher Education Courses are expected to:

- Receive a grade of “C” or better in all course work.
- Participate in site-based practicums, field experiences or service learning. This may include observation, tutoring, and some basic teaching. Work with the person identified by the college to coordinate the site-based school placements.
- Be fingerprinted, if required. Some school districts require this before students are allowed to participate in a site based school experience. The cost of fingerprinting is the sole responsibility of the student. Contact each individual college for specific information.
- Pay course fees. Refer to specific college course schedules and catalogs.

University Transfer Students
Students planning to transfer to a college/university other than Arizona State University (ASU), University of Arizona (UOA), or Northern Arizona University (NAU) to obtain a teacher education degree may also take their prerequisite course work at any Maricopa College. For information on transferability of course work that meets the universities’ requirements for admission into their teacher preparation baccalaureate programs, students must contact an adviser at that college/university.

Teacher Education Scholarship Availability

The National Center for Teacher Education (NCTE) has created scholarships for teacher education students attending the Maricopa Community Colleges. Currently there are four (4) $500 scholarship awards available for each of the 10 Maricopa colleges. Visit http://www.dist.maricopa.edu/academic/teachered/scholarship.html for additional information.

The National Association of Community College Teacher Education Programs (NACCTEP) has a national scholarship program. The purpose of the NACCTEP National Scholarship Program is to provide financial assistance to community college students who are studying to become teachers. This scholarship is promoted through the National Association of Community College Teacher Education Programs and is facilitated by the National Center for Teacher Education. Awards are $1000 over the course of two semesters and will be made available through college financial aid institutions. Visit http://www.nacctep.org/Scholarship/05-06scholarship.php for additional information.

The Professional Career Pathway Project (PCPP) is sponsored by the Arizona Department of Economic Security Child Care Administration. This program offers Family Child Care and Center-based caregivers the opportunity to apply for funding to cover the cost of the tuition/fees for college coursework. The PCPP offers students a seamless pathway to meet the requirements for the Child Development Associate (CDA) Credential, the National Association for Family Child Care (NAFCC) Accreditation, and the Certificate of Completion. (EMCC, GCC, MCC, PVCC, SCC, SMCC)

Early Childhood Education Scholarship Opportunities information is available at each college. Make contact with the designated college Early Childhood contact person directly. Scholarship opportunities vary with each program.
# TRAINING AND CAREER PROGRAMS

## CERTIFICATE AND DEGREE PROGRAMS

### ADMINISTRATION OF JUSTICE STUDIES

**Division Chair – Occupational Programs:** Fredrick Maihofer  (623) 935-8468

**Degree:** Associate in Applied Science (AAS), Administration of Justice  
(NOTE: See page 72 for AAS degree requirements)

**Certificate:** Administration of Justice

### Administration of Justice AAS Degree Requirements

**Program Description:** The Administration of Justice curriculum is designed to prepare men and women for careers within the criminal justice system, including, but not limited to: law enforcement, the courts, probation and parole, corrections, and the various social service agencies that support the criminal justice system. It is interdisciplinary in nature and provides the student with a broad knowledge of the conceptual occupational issues and concerns existent within the criminal justice system. The program also provides criminal justice practitioners with the opportunity for continued education and academic growth and development.

**Note:** Students who have completed an Arizona POST certified Academy may be waived from the following courses: AJS101, AJS109, AJS260, AJS270 and AJS275, AJS107 and AJS205 through the “credit by evaluation” process. Students without prior experiences in the field of law enforcement should consult with the program director. Students should consult with an advisor in planning their academic schedule in order to complete degree or certificate requirements in an expedient manner.  
(Note: +indicates course has prerequisites and/or corequisites.)  
(Note: Students must earn a grade of “C” or better for all courses within the Required Courses Area.)

### Required Courses: (33 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AJS101</td>
<td>Introduction to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>AJS109</td>
<td>Substantive Criminal Law</td>
<td>3</td>
</tr>
<tr>
<td>AJS123</td>
<td>Ethics and the Administration of Justice (3) OR</td>
<td>3</td>
</tr>
<tr>
<td>PAD101</td>
<td>Survey of Public Administration (3)</td>
<td>3</td>
</tr>
<tr>
<td>AJS131</td>
<td>Police Management Techniques I</td>
<td>3</td>
</tr>
<tr>
<td>+AJS132</td>
<td>Police Management Techniques II</td>
<td>3</td>
</tr>
<tr>
<td>AJS211</td>
<td>Police Planning</td>
<td>3</td>
</tr>
<tr>
<td>AJS225</td>
<td>Criminology</td>
<td>3</td>
</tr>
<tr>
<td>AJS249</td>
<td>Community Policing</td>
<td>3</td>
</tr>
<tr>
<td>AJS260</td>
<td>Procedural Criminal Law</td>
<td>3</td>
</tr>
<tr>
<td>AJS270</td>
<td>Community Relations</td>
<td>3</td>
</tr>
<tr>
<td>AJS275</td>
<td>Criminal Investigations I</td>
<td>3</td>
</tr>
</tbody>
</table>

### Restricted Electives: (6 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AJS110</td>
<td>Law and Legal Review I</td>
<td>3</td>
</tr>
<tr>
<td>AJS124</td>
<td>Correctional Institutions</td>
<td>3</td>
</tr>
<tr>
<td>AJS133</td>
<td>Correctional Supervision I</td>
<td>3</td>
</tr>
<tr>
<td>AJS200</td>
<td>Current Issues in Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>AJS201</td>
<td>Rules of Evidence</td>
<td>3</td>
</tr>
</tbody>
</table>
AJS205    Criminal Justice Reporting Writing  3
AJS210    Constitutional Law  3
AJS212    Juvenile Justice Procedures  3
AJS220    Organized Crime  3
AJS230    The Police Function  3
AJS107    Patrol Procedures  3

**General Studies Requirements:** (25 Credits)

**Core:** (15 Credits)

**First-Year Composition**
Any approved general studies courses in the First-Year Composition area. 6

**Oral Communication**
Any approved general studies course in the Oral Communication area. 3

**Critical Reading**
Any approved general studies course in the Critical Reading area. 3

**Mathematics**
Any approved general studies course in the Mathematics area. 3

**Distribution:** (10 Credits)

**Humanities & Fine Arts**
Any approved general education course in the Humanities and Fine Arts area. 3

**Social and Behavioral Sciences**
Any approved general education course in the Social and Behavioral Sciences area. 3

**Natural Science**
Any approved general education course in the Natural Science area. 4

**Administration of Justice Studies Certificate Requirements**

**Program Description:** The Administration of Justice curriculum is designed to prepare men and women for careers within the criminal justice system, including, but not limited to: law enforcement, the courts, probation and parole, corrections, and the various social service agencies that support the criminal justice system. It is interdisciplinary in nature and provides the student with a broad knowledge of the conceptual occupational issues and concerns existent within the criminal justice system. The program also provides criminal justice practitioners with the opportunity for continued education and academic growth and development.

**Note:** Students who have completed an Arizona POST certified Academy may be waived from the following courses: AJS101, AJS109, AJS260, AJS270 and AJS275, AJS107 and AJS205 through the “credit by evaluation” process. Students without prior experiences in the field of law enforcement should consult with the program director. Students should consult with an advisor in planning their academic schedule in order to complete degree or certificate requirements in an expedient manner.

(Note: + indicates course has prerequisites and/or corequisites.)

(Note: Students must earn a grade of “C” or better for all courses within the Required Courses Area.)

**Required Courses:** (33 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AJS101</td>
<td>Introduction to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>AJS109</td>
<td>Substantive Criminal Law</td>
<td>3</td>
</tr>
<tr>
<td>AJS123</td>
<td>Ethics and the Administration of Justice (3) OR</td>
<td></td>
</tr>
<tr>
<td>PAD101</td>
<td>Survey of Public Administration (3)</td>
<td></td>
</tr>
<tr>
<td>AJS131</td>
<td>Police Management Techniques I</td>
<td>3</td>
</tr>
<tr>
<td>+ AJS132</td>
<td>Police Management Techniques II</td>
<td>3</td>
</tr>
<tr>
<td>AJS211</td>
<td>Police Planning</td>
<td>3</td>
</tr>
</tbody>
</table>


BANKING AND FINANCE

Description: To meet the changing image and many challenges of the world of finance, the role of the modern banker today demands specialized knowledge and flexible job performances. The Associate in Applied Science (AAS) in Banking and Finance career program has been developed in cooperation with the Central Arizona Chapter of the American Institute of Banking and the Institute of Financial Education to prepare qualified men and women for entry or advancement in the banking profession.

Program Notes:
+ indicates course has prerequisite and/or corequisite
Students must earn a grade of “C” or better in each course in the Required Courses and Restricted Electives areas.

Program Prerequisites: Credits: 3
+ CRE101 Critical and Evaluative Reading I (3) OR
   Equivalent as indicated by assessment. 3

Required Courses: (36 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC111</td>
<td>Accounting Principles I</td>
<td>3</td>
</tr>
<tr>
<td>+ ACC230</td>
<td>Uses of Accounting Information I</td>
<td>3</td>
</tr>
<tr>
<td>+ ACC240</td>
<td>Uses of Accounting Information II</td>
<td>3</td>
</tr>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>GBS103</td>
<td>Principles of Banking</td>
<td>3</td>
</tr>
<tr>
<td>GBS131</td>
<td>Business Calculations</td>
<td>3</td>
</tr>
<tr>
<td>GBS151</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>GBS205</td>
<td>Legal, Ethical, and Regulatory Issues in Business</td>
<td>3</td>
</tr>
<tr>
<td>GBS206</td>
<td>Business Law (UCC)</td>
<td>3</td>
</tr>
<tr>
<td>+ GBS233</td>
<td>Business Communication</td>
<td>3</td>
</tr>
<tr>
<td>GBS261</td>
<td>Investments I</td>
<td>3</td>
</tr>
<tr>
<td>GBS294</td>
<td>Consumer Credit</td>
<td>3</td>
</tr>
</tbody>
</table>

Restricted Electives: (6 Credits)

Students should select from the following courses in consultation with a department advisor.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ ACC270AC</td>
<td>Accounting Internship (3) OR</td>
<td>3</td>
</tr>
<tr>
<td>+ GBS270AC</td>
<td>Business Internship (3)</td>
<td>3</td>
</tr>
<tr>
<td>CIS114DE</td>
<td>Excel Spreadsheet</td>
<td>3</td>
</tr>
<tr>
<td>CIS117DM</td>
<td>Microsoft Access: Database Management</td>
<td>3</td>
</tr>
<tr>
<td>GBS114</td>
<td>Principles of Quality Service</td>
<td>3</td>
</tr>
<tr>
<td>MKT267</td>
<td>Principles of Salesmanship (3) OR</td>
<td>3</td>
</tr>
<tr>
<td>MKT271</td>
<td>Principles of Marketing (3)</td>
<td>3</td>
</tr>
</tbody>
</table>
Banking and Finance AAS Degree Requirements (Cont.)

General Education Requirements: Credits: 23-24

CORE: Credits: 13-14
First-Year Composition
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
COM100 Introduction to Human Communication (3) OR
+ COM230 Small Group Communication (3) 3

Critical Reading
Met by CRE101 OR
Equivalent as indicated by assessment in Program Prerequisites area. 0

Mathematics
+ MAT150 College Algebra / Functions (5) OR
+ MAT151 College Algebra / Functions (4) OR
satisfactory completion of a higher level mathematics course. 4-5

DISTRIBUTION: Credits: 10

Humanities and Fine Arts
Any approved General Education course in the Humanities and Fine Arts area. 3

Social and Behavioral Sciences
ECN211 Macroeconomic Principles (3) OR
ECN212 Microeconomic Principles (3) OR
SBU200 Society and Business (3) 3

Natural Sciences
Any approved General Education course in the Natural Sciences area. 4
Building Inspection Certificate Requirements

Description: The Certificate of Completion (CCL) in Building Inspection prepares the student for a career in public/governmental agencies as an inspector in various areas of the building inspection field. The student gains the knowledge and develops skills necessary to perform as a building inspector in general building code compliance inspection or in specific areas of code compliance, such as mechanical, electrical, plumbing, etc.

Program Notes:
Students must earn a grade of “C” or better for all courses within the program.
+ indicates course has prerequisite and/or corequisite

Program Prerequisites: None

Required Courses: (21 Credits)  

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLT121</td>
<td>Electrical Codes</td>
<td>3</td>
</tr>
<tr>
<td>BLT127</td>
<td>Plumbing Codes</td>
<td>3</td>
</tr>
<tr>
<td>BLT128</td>
<td>Mechanical Codes</td>
<td>3</td>
</tr>
<tr>
<td>BLT262</td>
<td>Introduction International Residential Code (IRC)</td>
<td>3</td>
</tr>
<tr>
<td>BLT263</td>
<td>Building Codes</td>
<td>3</td>
</tr>
<tr>
<td>CNS175</td>
<td>Working Drawing Analysis: Blueprint Reading</td>
<td>3</td>
</tr>
<tr>
<td>+CNS290AC</td>
<td>Construction Internship</td>
<td>3</td>
</tr>
</tbody>
</table>
COMPUTER APPLICATIONS TECHNOLOGY

Division Chair - Instructional Computing: Dr. Valerie Akuna  (623) 935-8079

Degree:  Associate in Applied Science (AAS), Computer Applications Technology
(Certificate:  Computer Applications Technology

Computer Applications Technology AAS Degree Requirements

Program Description: This program consists of 64 credits and includes courses in the following microcomputer areas: general usage and applications, operating systems, word processing, database, spreadsheets, and desktop publishing. Other skills which are integrated with the microcomputer training are accounting, English and Math.

Many of the courses are offered in an online format to enable students to enter and complete the program in a timely and flexible manner. Students take the courses for personal development of microcomputer skills and to prepare for or enhance employment. The degree program is designed to prepare students for entry level occupations in the rapidly expanding field of computer information systems. Upon completion of the program, students should be able to operate a microcomputer and use a variety of software in a professional manner.

Note: Students should consult with an advisor in planning their academic schedule in order to complete degree or certificate requirements in an expedient manner. Required courses may not be available every semester or year. Due to limited course offerings, students may find it necessary to extend completion time lines and attend day, evening and summer classes. Due to the changing nature of technology training, always check with an academic advisor for the most current requirements for your program of study.

NOTE: Students must earn a grade of “C” or better for each course in the Required Courses area. BPC/CIS120++ courses cannot be used to satisfy both “Required Courses” and “Restricted Electives” areas.

Required Courses: (30 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPC/CIS114*  Electronic Spreadsheet (any module)</td>
<td>3</td>
</tr>
<tr>
<td>BPC/CIS117*  Database Management (any module)</td>
<td>3</td>
</tr>
<tr>
<td>BPC/CIS118*  Desktop Presentation Software (any module)</td>
<td>3</td>
</tr>
<tr>
<td>BPC/CIS120*  Microcomputer Graphics (any module)</td>
<td>3</td>
</tr>
<tr>
<td>BPC/CIS121AE  Windows Operating System: Level I</td>
<td>1</td>
</tr>
<tr>
<td>BPC/CIS133AA  The Internet/World Wide Web: Level I (1) AND +BPC/CIS133BA  The Internet/World Wide Web: Level II (1) AND +BPC/CIS133CA  The Internet/World Wide Web:Level III (1) OR BPC/CIS133DA  The Internet/World Wide Web (3)</td>
<td>3</td>
</tr>
<tr>
<td>+BPC/OAS135*  Word Processing Software (any module)</td>
<td>2</td>
</tr>
<tr>
<td>+BPC138*  Desktop Publishing (any module)</td>
<td>3</td>
</tr>
<tr>
<td>CIS105  Survey of Computer Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>+CIS190  Introduction to Local Area Networks</td>
<td>3</td>
</tr>
<tr>
<td>OAS120  Financial Record Keeping</td>
<td>3</td>
</tr>
</tbody>
</table>
Computer Applications Technology AAS Degree Requirements (Cont.)

**Restricted Electives: (9 Credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPC/CIS120DB</td>
<td>Computer Graphics: Adobe Illustrator</td>
<td>3</td>
</tr>
<tr>
<td>BPC/CIS120DC</td>
<td>Fireworks: Web Graphics</td>
<td>3</td>
</tr>
<tr>
<td>BPC/CIS120DF</td>
<td>Computer Graphics: Adobe Photoshop</td>
<td>3</td>
</tr>
<tr>
<td>+BPC170</td>
<td>Computer Maintenance I: A+ Prep</td>
<td>3</td>
</tr>
<tr>
<td>+CIS/MMT140</td>
<td>Survey of Multimedia Technology</td>
<td>2</td>
</tr>
<tr>
<td>+CIS150</td>
<td>Programming Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>+CIS159</td>
<td>Visual Basic Programming I</td>
<td>3</td>
</tr>
<tr>
<td>+CIS233DA</td>
<td>Web Design and Publishing</td>
<td>3</td>
</tr>
<tr>
<td>OAS101AA</td>
<td>Computer Typing I: Keyboard Mastery (1) OR</td>
<td>1-3</td>
</tr>
<tr>
<td>OAS102</td>
<td>Computer Typing II: Document Production (3)</td>
<td></td>
</tr>
<tr>
<td>TQM/CSM101</td>
<td>Quality Customer Service</td>
<td>3</td>
</tr>
</tbody>
</table>

**General Studies Requirements: (25 Credits)**

**Core: (15 Credits)**

**First Year Composition:**
- +ENG101 First Year Composition (3) AND
- +ENG111 Technical Writing (3)
  (ENG102 First Year Composition is acceptable if ENG111 is not available) 6

**Oral Communication:**
- COM100 Introduction to Human Communication (3) OR
- COM110 Interpersonal Communication (3) OR
- +COM225 Public Speaking (3) OR
- +COM230 Small Group Communication (3) 3

**Critical Reading:**
- Any approved general education course in the Critical Reading area or
  (Note: equivalent as indicated by assessment) 3

**Mathematics:**
- +MAT 102 Mathematical Concepts/Applications 3

**Distribution: (10 Credits)**

**Humanities & Fine Arts:**
- Any approved general education course in the Humanities and Fine Arts area. 3

**Natural Science:**
- Any approved general education course from the Natural Science area 4

**Social & Behavioral Sciences:**
- ECN 212 Microeconomic Principles 3

(Note: + indicates course has prerequisites and/or corequisites.)
* indicates courses cannot be used to satisfy both “Required Courses” and “Restricted Electives” area.
Computer Applications Technology Certificate Requirements

Program Description: This program consists of 26 credits and includes courses in the following microcomputer areas: general usage and applications, operating systems, word processing, database, spreadsheets, and desktop publishing. With proper choices, a student who completes the Certificate may apply all those courses toward the AAS Degree program. Many of the courses are offered in a self-paced format to enable students to enter and complete the program in a timely and flexible manner. Students take the courses for personal development of microcomputer skills and to prepare for or enhance employment. Upon completion of the program, students should be able to operate a microcomputer and use a variety of software in a professional manner.

Required Courses: (20 Credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPC/CIS114*</td>
<td>Electronic Spreadsheet (any module)</td>
<td>3</td>
</tr>
<tr>
<td>BPC/CIS117*</td>
<td>Database Management (any module)</td>
<td>3</td>
</tr>
<tr>
<td>BPC/CIS133AA</td>
<td>Internet/Web Development:Level I-A (1) AND</td>
<td></td>
</tr>
<tr>
<td>+BPC/CIS133BA</td>
<td>Internet/Web Development:Level I-B (1) AND</td>
<td></td>
</tr>
<tr>
<td>+BPC/CIS133CA</td>
<td>Internet/Web Development:Level I-C(1) OR</td>
<td></td>
</tr>
<tr>
<td>BPC/CIS133DA</td>
<td>Internet/Web Development Level I (3)</td>
<td>3</td>
</tr>
<tr>
<td>+BPC/OAS135*</td>
<td>Word Processing Software (any module)</td>
<td>2</td>
</tr>
<tr>
<td>+BPC138*</td>
<td>Desktop Publishing (any module)</td>
<td>3</td>
</tr>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>OAS120</td>
<td>Financial Record Keeping</td>
<td>3</td>
</tr>
</tbody>
</table>

NOTE: Students must earn a grade of “C” or better for each course in the Required Courses area.

Restricted Electives: (6 Credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPC/CIS118*</td>
<td>Desktop Presentation Software (any module)</td>
<td>3</td>
</tr>
<tr>
<td>BPC/CIS120DB</td>
<td>Computer Graphics: Adobe Illustrator</td>
<td>3</td>
</tr>
<tr>
<td>BPC/CIS120DC</td>
<td>Fireworks: Web Graphics</td>
<td>3</td>
</tr>
<tr>
<td>BPC/CIS120DF</td>
<td>Computer Graphics: Adobe Photoshop</td>
<td>3</td>
</tr>
<tr>
<td>+BPC170</td>
<td>Computer Maintenance I: A+ Prep</td>
<td>3</td>
</tr>
<tr>
<td>+CIS/MMT140</td>
<td>Survey of Multimedia Technology</td>
<td>2</td>
</tr>
<tr>
<td>+CIS150</td>
<td>Programming Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>+CIS190</td>
<td>Introduction to Local Area Networks</td>
<td>3</td>
</tr>
<tr>
<td>+CIS233DA</td>
<td>Internet/Web Development Level II</td>
<td>3</td>
</tr>
<tr>
<td>OAS101AA</td>
<td>Computer Typing I: Keyboard Mastery (1) OR</td>
<td></td>
</tr>
<tr>
<td>OAS102</td>
<td>Computer Typing II: Document Production (3)</td>
<td>1-3</td>
</tr>
<tr>
<td>CSM/TQM101</td>
<td>Quality Customer Service</td>
<td>3</td>
</tr>
</tbody>
</table>

(Note: + indicates course has prerequisites and/or corequisites.)

* indicates courses cannot be used to satisfy both “Required Courses” and “Restricted Electives” area.

COMPUTER HARDWARE AND DESKTOP SUPPORT

Division Chair - Instructional Computing: Dr. Valerie Akuna (623) 935-8079

Certificate: Computer Hardware and Desktop Support

Computer Hardware and Desktop Support Certificate Requirements

Program Description: The Certificate of Completion in Computer Hardware and Desktop Support is designed to provide training to work in an entry-level computer maintenance and help-desk position. Students will be provided the opportunity to apply technical concepts, fundamentals, and interpersonal skills in a help-desk environment through an internship.
Computer Hardware and Desktop Support...

**Required Courses:** (16-20 Credits)  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPC110</td>
<td>Computer Usage and Applications (3) OR</td>
<td></td>
</tr>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems (3)</td>
<td>3</td>
</tr>
<tr>
<td>BPC/CIS121AB</td>
<td>Microsoft Command Line Operations</td>
<td></td>
</tr>
<tr>
<td>+BPC170</td>
<td>Computer Maintenance I: A+ Prep</td>
<td>3</td>
</tr>
<tr>
<td>+BPC171</td>
<td>Recycling Used Computer Technology</td>
<td>1</td>
</tr>
<tr>
<td>+BPC270</td>
<td>Microcomputer Maintenance II</td>
<td>3</td>
</tr>
<tr>
<td>CIS102</td>
<td>Interpersonal and Customer Service Skills for IT Professionals</td>
<td>1</td>
</tr>
<tr>
<td>+CIS190</td>
<td>Introduction to Local Area Networks (3) OR</td>
<td></td>
</tr>
<tr>
<td>CTN140AA</td>
<td>Cisco Networking Fundamentals (4) OR</td>
<td></td>
</tr>
<tr>
<td>MST140</td>
<td>Microsoft Networking Essentials (3)</td>
<td>3</td>
</tr>
<tr>
<td>+CIS290AA</td>
<td>Computer Information Systems Internship (1) OR</td>
<td></td>
</tr>
<tr>
<td>+CIS290AB</td>
<td>Computer Information Systems Internship (2) OR</td>
<td></td>
</tr>
<tr>
<td>+CIS290AC</td>
<td>Computer Information Systems Internship (3) OR</td>
<td></td>
</tr>
<tr>
<td>+CIS296WA-WD</td>
<td>Cooperative Education (any module) (1-4)</td>
<td>1-4</td>
</tr>
</tbody>
</table>

(Note: + indicates course has prerequisites and/or corequisites)  

NOTE: Students must earn a grade of “C” or better in all courses within the program.

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**CULINARY STUDIES**

**Division Chair - Occupational Education:** Fredrick Maihofer  
(623) 935-8468

**Degree:** Associate in Applied Science (AAS) Culinary Studies  
(Note: See page 72 for AAS degree Requirements)

**Certificate:** Basic Culinary Studies

**Culinary Studies**

**Program Description:** The Culinary Studies Associate in Applied Science is designed to train students who wish to become professional chefs and cooks. A formal dining room is operated by the program and provides practical work experience for students. Instruction includes principles of professional cooking and baking, volume food production, food sanitation and safety, purchasing, customer service, and basic nutrition concepts and menu planning.

**Admissions Criteria:** Entrance into the program is by application and acceptance only. Students must have ENG101 or ENG107 and MAT090 or MAT091 or MAT102 or equivalent. Prior to being considered for and acceptance into the program, students must complete the program prerequisites area.

**Note:** Students must obtain Maricopa County Food Handlers Card at the conclusion of the first semester.

**Program Prerequisites:** (6-8 Credits)  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ENG101</td>
<td>First-Year Composition (3) OR</td>
<td>3</td>
</tr>
<tr>
<td>+ENG107</td>
<td>First-Year Composition for ESL (3)</td>
<td></td>
</tr>
<tr>
<td>+MAT090</td>
<td>Developmental Algebra (5) OR</td>
<td></td>
</tr>
<tr>
<td>+MAT091</td>
<td>Introductory Algebra (4) OR</td>
<td></td>
</tr>
<tr>
<td>+MAT092</td>
<td>Introductory Algebra (3) OR</td>
<td></td>
</tr>
<tr>
<td>+MAT102</td>
<td>Mathematical Concepts/Applications (3)</td>
<td>3-5</td>
</tr>
</tbody>
</table>
### Required Courses: (36 Credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FON100</td>
<td>Introductory Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>HRM126</td>
<td>Food Service Cost Systems</td>
<td>2</td>
</tr>
<tr>
<td>HRM140</td>
<td>Food Production Concepts</td>
<td>3</td>
</tr>
<tr>
<td>FON118</td>
<td>Commercial Baking Techniques</td>
<td>3</td>
</tr>
<tr>
<td>+FON144</td>
<td>Gourmet Foods</td>
<td>3</td>
</tr>
<tr>
<td>FON179</td>
<td>Garde Manger</td>
<td>3</td>
</tr>
<tr>
<td>FON182</td>
<td>American Regional Cuisine</td>
<td>3</td>
</tr>
<tr>
<td>FON183</td>
<td>International Cuisines</td>
<td>3</td>
</tr>
<tr>
<td>+FON119</td>
<td>Catering - Planning and Production</td>
<td>1</td>
</tr>
<tr>
<td>FON180</td>
<td>Principles and Skills for Professional Cooking</td>
<td>3</td>
</tr>
<tr>
<td>FON218</td>
<td>Commercial Baking: Classical Desserts</td>
<td>3</td>
</tr>
<tr>
<td>HRM244</td>
<td>Quality Sanitation Management</td>
<td>3</td>
</tr>
<tr>
<td>HRM275</td>
<td>Restaurant Management</td>
<td>3</td>
</tr>
</tbody>
</table>

### Restricted Electives: (3 Credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRM110</td>
<td>Introduction of Hospitality and Tourism Management</td>
<td>3</td>
</tr>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>MGT101</td>
<td>Techniques of Supervision</td>
<td>3</td>
</tr>
<tr>
<td>TQM/CSM101</td>
<td>Quality Customer Service</td>
<td>3</td>
</tr>
<tr>
<td>FON102</td>
<td>Menu Planning</td>
<td>2</td>
</tr>
</tbody>
</table>

### General Studies Requirements: (25-27 Credits)

#### Core: (15-17 Credits)

**First Year Composition:**

+ ENG101 First Year Composition (3) OR
+ ENG107 First Year Composition for ESL (3) AND
+ ENG102 First Year Composition (3) OR
+ ENG108 First Year Composition for ESL (3) 6

**Oral Communication:**

Any approved general education course in the Oral Communication area. 3

**Critical Reading:**

Any approved general education course in the Critical Reading area. 3

**Mathematics:**

Any approved general education course in the Mathematics (MAT) area. 3-5

**Distribution: (10 Credits)**

**Humanities & Fine Arts:**

Any approved general education course in the Humanities and Fine Arts area. 2-3

**Social & Behavioral Sciences:**

+ ECN211 Macroeconomic Principles (3) OR
+ PSY101 Introduction to Psychology (3) OR
+ SOC101 Introduction to Sociology (3) 3

**Natural Science:**

Any approved general education course from the Natural Science area 4

(Note: + indicates course has prerequisites and/or corequisites)

NOTE: Students must earn a grade of “C” or better in all courses within the program.
Culinary Studies Certificate Requirements

Program Description: The Culinary Studies Certificate of Completion is designed to train students who wish to become professional chefs and cooks. A formal dining room is operated by the program and provides practical work experience for students. Instruction includes principles of professional cooking and baking, volume food production, food sanitation and safety, purchasing, customer service, and basic nutrition concepts and menu planning.

Admissions Criteria: Entrance into the program is by application and acceptance only. Students must have ENG101 or ENG107 and MAT090 or MAT091 or MAT102 or equivalent. Prior to being considered for and acceptance into the program, students must complete the program prerequisites area.

Note: Students must obtain Maricopa County Food Handlers Card at the conclusion of the first semester.

Program Prerequisites: (6-8 Credits)  
<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG101</td>
<td>3</td>
</tr>
<tr>
<td>ENG107</td>
<td>3</td>
</tr>
<tr>
<td>MAT090</td>
<td>5</td>
</tr>
<tr>
<td>MAT091</td>
<td>4</td>
</tr>
<tr>
<td>MAT092</td>
<td>3</td>
</tr>
<tr>
<td>MAT102</td>
<td>3-5</td>
</tr>
</tbody>
</table>

Required Courses: (30 Credits)  
<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FON100</td>
<td>3</td>
</tr>
<tr>
<td>HRM126</td>
<td>2</td>
</tr>
<tr>
<td>HRM140</td>
<td>3</td>
</tr>
<tr>
<td>FON118</td>
<td>3</td>
</tr>
<tr>
<td>+FON144</td>
<td>3</td>
</tr>
<tr>
<td>FON179</td>
<td>3</td>
</tr>
<tr>
<td>FON182</td>
<td>3</td>
</tr>
<tr>
<td>+FON119</td>
<td>1</td>
</tr>
<tr>
<td>FON180</td>
<td>3</td>
</tr>
<tr>
<td>FON218</td>
<td>3</td>
</tr>
<tr>
<td>HRM244</td>
<td>3</td>
</tr>
</tbody>
</table>

Restricted Electives: (3 Credits) 
<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRM110</td>
<td>3</td>
</tr>
<tr>
<td>CIS105</td>
<td>3</td>
</tr>
<tr>
<td>MGT101</td>
<td>3</td>
</tr>
<tr>
<td>TQM/CSM101</td>
<td>3</td>
</tr>
</tbody>
</table>

Basic Culinary Studies Certificate Requirements

Program Description: The Basic Culinary Studies Certificate of Completion is designed to introduce students who wish to become professional chefs and cooks to the fundamentals of culinary studies. A formal dining room is operated by the program and provides practical work experience for students. Instruction includes commercial food production concepts including catering, baking and sanitation. Courses in this certificate are in alignment with the Associate in Applied Science (AAS) degree in Culinary Studies (Major Code 3151).

Admissions Criteria: Entrance into the program is by application and acceptance only. Students must have ENG101 or ENG107 and MAT090 or MAT091 or MAT102 or equivalent. Prior to being considered for and acceptance into the program, students must complete the program prerequisites area.

Note: Students must obtain Maricopa County Food Handlers Card at the conclusion of the first semester.
Basic Culinary Studies Certificate Requirements (Cont.)

Program Prerequisites: (6-8 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ENG101</td>
<td>First-Year Composition (3) OR</td>
</tr>
<tr>
<td>+ENG107</td>
<td>First-Year Composition for ESL (3)</td>
</tr>
<tr>
<td>+MAT090</td>
<td>Developmental Algebra (5) OR</td>
</tr>
<tr>
<td>+MAT091</td>
<td>Introductory Algebra (4) OR</td>
</tr>
<tr>
<td>+MAT092</td>
<td>Introductory Algebra (3) OR</td>
</tr>
<tr>
<td>+MAT102</td>
<td>Mathematical Concepts/Applications (3)</td>
</tr>
</tbody>
</table>

Required Courses: (16 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRM140</td>
<td>Food Production Concepts</td>
</tr>
<tr>
<td>FON179</td>
<td>Garde Manger</td>
</tr>
<tr>
<td>+FON119</td>
<td>Catering - Planning and Production</td>
</tr>
<tr>
<td>FON180</td>
<td>Principles and Skills for Professional Cooking</td>
</tr>
<tr>
<td>FON118</td>
<td>Commercial Baking Techniques</td>
</tr>
<tr>
<td>HRM244</td>
<td>Quality Sanitation Management</td>
</tr>
</tbody>
</table>

(Note: + indicates course has prerequisites and/or corequisities)

NOTE: Students must earn a grade of “C” or better in all courses within the program.

CUSTOMER SERVICE MANAGEMENT

Division Chair - Occupational Education: Fredrick Maihofer (623) 935-8468

Certificate: Customer Service Management

Customer Service Management Certificate Requirements

Program Description: This program prepares students to be competitive in today’s domestic and global economies. It provides the student quality management theories and skills to better serve both internal and external customers. Emphasis is on practical application of skills and knowledge.

Required Courses: (9 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TQM/CSM101</td>
<td>Quality Customer Service</td>
</tr>
<tr>
<td>CSM202</td>
<td>Principles of Process Improvement</td>
</tr>
<tr>
<td>CSM203</td>
<td>Teamwork Dynamics</td>
</tr>
</tbody>
</table>

NOTE: Students must earn a grade of “C” or better for each course listed in the “Required Courses” area.

DESKTOP PUBLISHING

Division Chair - Instructional Computing: Dr. Valerie Akuna (623) 935-8079

Certificate: Desktop Publishing

Desktop Publishing Certificate Requirements

Program Description: The Desktop Publishing certificate is designed to prepare students to work with and design professional publications. Courses focus on training the student in project management, internet navigation, desktop design, web page design, and graphics design.

Required Courses: (24 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems (3) OR</td>
</tr>
<tr>
<td>BPC110</td>
<td>Computer Usage and Applications (3)</td>
</tr>
<tr>
<td>BPC/CIS120DB</td>
<td>Computer Graphics: Adobe Illustrator</td>
</tr>
<tr>
<td>BPC/CIS120DF</td>
<td>Computer Graphics: Adobe Photoshop</td>
</tr>
<tr>
<td>BPC/CIS133AA</td>
<td>Internet/Web Development: Level I-A (1) AND</td>
</tr>
<tr>
<td>+BPC/CIS133BA</td>
<td>Internet/Web Development: Level I-B (1) AND</td>
</tr>
</tbody>
</table>
Desktop Publishing Certificate Requirements (Cont.)

+ BPC/CIS133CA  Internet/Web Development : Level I - C (1) OR
+ BPC/CIS133DA  Internet/Web Development: Level I (3)  3
+ BPC138BA     Windows Desktop Design/Pub. Using Quark Express  3
+ BPC138CA     Windows Desktop Design/Pub. Using Pagemaker  3
+ CIS233AA     Internet/Web Development Level II - A (1) AND
+ CIS233BA     Internet/Web Development Level II - B (1) AND
+ CIS233CA     Internet/Web Development Level II - C (1) OR
+ CIS233DA     Internet/Web Development Level II (3)  3
+ BPC238BA     Windows Adv. Desktop Design/Pub. Using Quark Express OR

(Note: + indicates course has prerequisites and/or corequisites)

NOTE: Students must earn a grade of “C” or better in all courses within the program.

---

FIRE SCIENCE TECHNOLOGY

Division Chair - Occupational Education: Fredrick Maihofer (623) 935-8468

Degree: Associate in Applied Science (AAS), Fire Science Technology
(NOTE: See page 72 for AAS degree requirements.)
Certificate: Basic Firefighter

Fire Science Technology AAS Degree Requirements

Program Description: The Fire Science Technology Certificate of Completion and Associate in Applied Science (AAS) are designed for students who need (1) advanced training as professional firefighters, (2) basic preparation courses for a career in fire services, and/or (3) more comprehensive information about fire hazard and prevention. The Degree and Certificate can be used by professional firefighters for promotions and salary advancement within the Fire Services. The unique feature of the Degree and Certificate is that the instructors will be professional firefighters and/or licensed Emergency Medical Training Personnel.

Program Notes: + indicates course has prerequisite and/or corequisite
Students must earn a grade of “C” or better in all courses within the program.

Required Courses: (40 Credits) Credits
FSC102 Fire Department Operations I 11
FSC105 Hazardous Materials First Responder 3
FSC118 Fire Hydraulics 3
FSC108 Fundamentals of Fire Prevention 3
FSC111 Emergency Vehicle Driver Operator 2
FSC202 Supervisory Training for Firefighters 3
FSC117 Fire Apparatus 3
FSC204 Firefighting Tactics and Strategy 3
FSC205 Command Strategies for Major Emergencies 3
FSC208 Firefighter Safety and Building Construction 3
FSC214 Human Resource Management for Fire Service 3

Restricted Electives: (4 Credits)
FSC+++++ Fire Science Technology (Any approved FSC course.) 4
Fire Science Technology AAS Requirement Continues . . .

General Studies Requirements: (25-27 Credits)

Core: (15-17 Credits)

First-Year Composition:
- ENG101 First-Year Composition (3) OR
- ENG107 First-Year Composition for ESL (3) AND
- ENG102 First-Year Composition (3) OR
- ENG111 Technical Writing (3)

Oral Communication:
- COM100 Introduction to Human Communication (3) OR
- COM110 Interpersonal Communication (3) OR
- COM225 Public Speaking (3) OR
- COM230 Small Group Communication (3)

Critical Reading:
- +CRE101 Critical and Evaluative Reading I OR
- +CRE111 Reading for Business, and Industry (3) OR

Mathematics:
- MAT102 Mathematical Concepts/Applications (3) OR
- MAT120 Intermediate Algebra (5) OR
- MAT122 Intermediate Algebra (3) OR

Equivalent as indicated by assessment OR
approved math courses which are required in a specific AAS
program OR
satisfactory completion of a higher mathematics course.

Distribution: (10 Credits)

Humanities and Fine Arts:
- Any approved general education course from the Humanities and Fine Arts area

Social and Behavioral Sciences:
- Any approved general education course from the Humanities and Fine Arts area
- SOC101 Introduction to Sociology (3) recommended

Natural Sciences:
- Any approved general education course from the Natural Sciences area

The following courses are recommended.
- BIO100 Biology Concepts (4) OR
- CHM130 Fundamental Chemistry (3) AND
- CHM130LL Fundamental Chemistry Lab (1) OR
- PHY101 Introduction to Physics (4)

(Note: + indicates course has prerequisites and/or corequisites)

NOTE: Students must earn a grade of “C” or better in all courses within the program.
Basic Firefighter Certificate Requirements

Program Description: The Certificate of Completion (CCL) Basic Firefighter is designed for students who need (1) advanced training as professional firefighters, (2) basic preparation courses for a career in fire services and/or (3) more comprehensive information about the fire hazard and prevention. Certificate can be used by professional firefighters for promotions and salary advancement within the Fire Services. The program will provide courses for plant safety for fire protection personnel and basic emergency services for laypersons who need intensive first aid training. The unique feature of the program is that the instructors are professional firefighters and/or licensed Emergency Medical Training Personnel.

Program Notes:
+ indicates course has prerequisite and/or corequisite
Students must earn a grade of “C” or better in all courses within the program.

Required Courses: (30 Credits) Credits
+EMT104 Basic Emergency Medical Technology 8
+EMT238 Vehicular Extrication and Patient Stabilization 2
+FSC102 Fire Department Operations 11
FSC105 Hazardous Materials First Responder 3
FSC108 Fundamentals of Fire Prevention 3
+FSC208 Firefighter Safety/Building Construction 3

HOSPITALITY/HOTEL MANAGEMENT

Division Chair - Occupational Education: Fredrick Maihofer (623) 935-8468

Degree: Associate in Applied Science (AAS), Hospitality/Hotel Management
(NOTE: See page 72 for AAS degree requirements.)
Certificate: Hospitality/Hotel Management

Hospitality/Hotel Management AAS Degree Requirements

Program Description: The Hospitality/Hotel Management program is designed to train graduates for management careers in the hotel industry. The hospitality industry is among the fastest growing in the United States, offering numerous career opportunities. This program also transfers to four –year colleges and universities.

Required Courses: (32 Credits) Credits
CIS105 Survey of Computer Information Systems 3
HRM110 Introduction to Hospitality and Tourism Management 3
HRM120 Hotel Facility Management 3
HRM126 Food Service Cost Systems 2
HRM130 Guest Services Management 3
HRM140 Food Production Concepts 3
HRM244 Quality Sanitation Management 3
HRM270 Hospitality Marketing 3
HRM275 Restaurant Management 3
+HRM280 Hospitality and Tourism Law 3
MGT101 Techniques of Supervision 3
Restricted Electives: (minimum of 7 credits)  
<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC111</td>
<td>Accounting Principles I</td>
<td>3</td>
</tr>
<tr>
<td>+HRM260</td>
<td>Hospitality Human Resources Management</td>
<td>3</td>
</tr>
<tr>
<td>+HRM296WA</td>
<td>Cooperative Education</td>
<td>1</td>
</tr>
<tr>
<td>+HRM298AA</td>
<td>Special Projects</td>
<td>1</td>
</tr>
<tr>
<td>TQM/CSM101</td>
<td>Quality Customer Service</td>
<td>3</td>
</tr>
</tbody>
</table>

General Studies Requirements: (25-27 Credits)

Core: (15-17 Credits)

First-Year Composition:
+ ENG101  
+ ENG102  
OR
First-Year Composition (3 AND 3) 6

Oral Communication:
COM100  
COM100AA  
COM100AB  
COM100AC  
COM110  
+COM225  
+COM230  
Introduction to Human Communication (3) OR 3
Intro to Human Communication Part I (1) AND 1
Intro to Human Communication Part II (1) AND 1
Intro to Human Communication Part III (1) OR 1
Interpersonal Communication (3) OR 3
Public Speaking (3) OR 3
Small Group Communication (3) 3

Critical Reading:
+CRE101  
Critical and Evaluative Reading I OR 3
equivalent by assessment

Mathematics:
+ Any approved general education course from the Mathematics area 3-5

Distribution: (10 Credits)
Humanities and Fine Arts:
Any approved general education course from the Humanities and Fine Arts area 3

Social and Behavioral Sciences:
ECN211  
PSY101  
SOC101  
Macroeconomic Principles (3) OR 3
Introduction to Psychology (3) OR 3
Introduction to Sociology (3) 3

Natural Sciences:
Any approved general education course from the Natural Sciences area 4

(Note: + indicates course has prerequisites and/or corequisites)
NOTE: Students must earn a grade of “C” or better in all courses within the program.
Hospitality/Hotel Management Certificate Requirements

Program Description: The Hospitality/Hotel Management program is designed to train graduates for management careers in the hotel industry. The hospitality industry is among the fastest growing in the United States, offering numerous career opportunities. This program also transfers to four-year colleges and universities.

Required Courses: (32 Credits) 

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>HRM110</td>
<td>Introduction to Hospitality and Tourism Management</td>
<td>3</td>
</tr>
<tr>
<td>HRM120</td>
<td>Hotel Facility Management</td>
<td>3</td>
</tr>
<tr>
<td>HRM126</td>
<td>Food Service Cost Systems</td>
<td>2</td>
</tr>
<tr>
<td>HRM130</td>
<td>Guest Services Management</td>
<td>3</td>
</tr>
<tr>
<td>HRM140</td>
<td>Food Production Concepts</td>
<td>3</td>
</tr>
<tr>
<td>HRM244</td>
<td>Quality Sanitation Management</td>
<td>3</td>
</tr>
<tr>
<td>HRM270</td>
<td>Hospitality Marketing</td>
<td>3</td>
</tr>
<tr>
<td>HRM275</td>
<td>Restaurant Management</td>
<td>3</td>
</tr>
<tr>
<td>+HRM280</td>
<td>Hotel and Tourism Law</td>
<td>3</td>
</tr>
<tr>
<td>MGT101</td>
<td>Techniques of Supervision</td>
<td>3</td>
</tr>
</tbody>
</table>

Restricted Electives: (6 credits) 

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC111</td>
<td>Accounting Principles I</td>
<td>3</td>
</tr>
<tr>
<td>+HRM260</td>
<td>Hospitality Human Resources Management</td>
<td>3</td>
</tr>
<tr>
<td>TQM/CSM101</td>
<td>Quality Customer Service</td>
<td>3</td>
</tr>
</tbody>
</table>

(Note: + indicates course has prerequisites and/or corequisites)

NOTE: Students must earn a grade of “C” or better for each course listed in the “Required Course” area.

INDUSTRIAL OPERATIONS TECHNOLOGY

Division Chair - Occupational Education: Fredrick Maihofer  (623) 935-8468

Degree: Associate in Applied Science (AAS), Industrial Operations Technology

(Certificate of Completion in Industrial Operations Technology (5000))

Program Description: The Industrial Operations Technology Associate in Applied Science prepares students for employment in industrial plants where they will maintain production line equipment. The program is designed to provide an in-depth study of industrial electricity, motors, and controls, transformers and wiring for industrial applications, programmable logic controls, controls and instrumentation, electro/mechanical devices, industrial air conditioning, and fluid power.

Admissions Criteria: Completion of math ASSET test with a minimum score of 43 and departmental approval.

Required Courses: (37 Credits)

Certificate of Completion in Industrial Operations Technology (5000)

Restricted Electives: (12 Credits) 

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MET100AA</td>
<td>Tool Room I: Introduction to Machine Processes</td>
<td>2</td>
</tr>
<tr>
<td>+MET100AB</td>
<td>Tool Room II: Machine, Processes, and Employment</td>
<td>2</td>
</tr>
<tr>
<td>MET140</td>
<td>Computer-Aided Drafting for Manufacturing</td>
<td>3</td>
</tr>
<tr>
<td>+MET103AA</td>
<td>Lathe I: Basic Manual Lathe Operations</td>
<td>1</td>
</tr>
<tr>
<td>+MET103AB</td>
<td>Lathe II: Secondary Manual Lathe Operations</td>
<td>1</td>
</tr>
<tr>
<td>+MET104AA</td>
<td>Mill I: Basic Machine Operations</td>
<td>1</td>
</tr>
</tbody>
</table>
Restricted Electives Continues...

+MET104AB Mill II: Vertical Mill Attachments 1
OSH101 Introduction to Environmental Hazardous Materials Technology 3
OSH102 Introduction to Industrial Hygiene 3
OSH106 Industrial Safety 2
WLD106 Arc Welding 5
+WLD206 Advanced Welding - Heliarc and Wire Feed 5

General Studies Requirements: (22 Credits)
Core: (12 Credits)
First-Year Composition
+ENG101 First-Year Composition (3) AND
+ENG111 Technical Writing (3) 6
(Note: ENG102 First-Year Compostion is acceptable only if ENG111 is not available.)

Oral Communication
COM110 Interpersonal Communication 3

Critical Reading
+CRE101 Critical and Evaluative Reading I (3) OR
Equivalent by assessment

Mathematics
Waived. Waiver submitted and on file at District Curriculum Office for MAT103AA and MAT103AB addressing the embedded competencies within occupational program.

Distribution: (10 Credits)

Humanities & Fine Arts
Any approved general education course in the Humanities and Fine Arts area. 3

Social Behavioral Sciences
SOC101 Introduction to Sociology 3

Natural Sciences
Any approved general education course in the Natural Sciences area. 4

Industrial Operations Technology Certificate Requirements

Program Description: The Industrial Operations Certificate of Completion prepares students for employment in industrial plants where they will maintain production line equipment. The program is designed to provide an in-depth study of industrial electricity, motors, and controls, transformers and wiring for industrial applications, programmable logic controls, controls and instrumentation, electro/mechanical devices, industrial air conditioning, and fluid power.

Admissions Criteria: Completion of math ASSET test with a minimum score of 43 and departmental approval.

Required Courses: (25 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ELC105</td>
<td>Electricity for Industry</td>
<td>3</td>
</tr>
<tr>
<td>+ELC105LL</td>
<td>Electricity for Industry Lab</td>
<td>1</td>
</tr>
<tr>
<td>+ELC115</td>
<td>Motors, Controls and Wiring Diagrams</td>
<td>3</td>
</tr>
<tr>
<td>+ELC115LL</td>
<td>Motors, Controls and Wiring Diagrams</td>
<td>1</td>
</tr>
<tr>
<td>+ELC219</td>
<td>Programmable Controllers</td>
<td>4</td>
</tr>
<tr>
<td>+FAC186</td>
<td>Electro-Mechanical Devices</td>
<td>3</td>
</tr>
<tr>
<td>+FAC220</td>
<td>Controls and Instrumentation</td>
<td>3</td>
</tr>
<tr>
<td>+FAC220LL</td>
<td>Controls and Instrumentation Lab</td>
<td>1</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>MAT103AA</td>
<td>Mathematics for Industrial Applications I</td>
<td>2</td>
</tr>
<tr>
<td>MAT103AB</td>
<td>Mathematics for Industrial Applications II</td>
<td>2</td>
</tr>
<tr>
<td>OSH106</td>
<td>Industrial Safety</td>
<td>2</td>
</tr>
</tbody>
</table>

**Restricted Courses: (12 Credits)**

Select 12 credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS/CCT175EA</td>
<td>Introduction to Structured Query Language</td>
<td>1</td>
</tr>
<tr>
<td>+CIS190</td>
<td>Introduction to Local Area Networks</td>
<td>3</td>
</tr>
<tr>
<td>CNT140AAAA</td>
<td>Cisco Networking Fundamentals</td>
<td>4</td>
</tr>
<tr>
<td>ELC119</td>
<td>Concepts of Electricity and Electronics</td>
<td>3</td>
</tr>
<tr>
<td>ELC210</td>
<td>Solid State Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>+FAC210</td>
<td>Facilities Air Conditioning Systems</td>
<td>3</td>
</tr>
<tr>
<td>+FAC210LL</td>
<td>Facilities Air Conditioning Systems Lab</td>
<td>1</td>
</tr>
<tr>
<td>FAC213</td>
<td>Controls</td>
<td>3</td>
</tr>
<tr>
<td>FAC214</td>
<td>Instrumentation</td>
<td>3</td>
</tr>
<tr>
<td>+GTC181</td>
<td>Introduction to Fluid Power</td>
<td>3</td>
</tr>
<tr>
<td>HVA240</td>
<td>Psychometrics</td>
<td>2</td>
</tr>
</tbody>
</table>

(Note: + indicates course has prerequisites and/or corequisites.)
(Note: Students must earn a grade of "C" or better in all courses within the program.)
INFORMATION SECURITY

Division Chair - Instructional Computing: Dr. Valerie Akuna  (623) 935-8079

Degree: Associate in Applied Science (AAS), Information Security
(NOTE: See page 72 for AAS degree requirements.)

Certificates: Information Security Forensics
             Information Security Technology
             Information Security Administration
             Information Security Wireless Networks

Program Description: The Associate of Applied Science (AAS) Degree in Information Security is designed to provide students with the knowledge and tools to understand how networks, operating systems and programs function. Emphasis is placed on developing the theoretical and practical skills needed to maintain security on mission-critical data and systems. The program is designed to meet the training needs of government and industry employees. The program covers a variety of information security disciplines which include both vendor-neutral and vendor-specific information technology (IT) security training. The Information Security program prepares students for internationally recognized IT certifications and high demands in business, industry and government.

Admissions Criteria: None

Required Courses: (27 Credits)

Certificate of Completion: Information Security Technology (5347)

Restricted Electives: (12 Credits) Credits
Students should select 12 credits from the list below of which 6 credits must be ITS prefix courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+CIS162AB</td>
<td>C++: Level I (3) OR</td>
</tr>
<tr>
<td>+CIS162AD</td>
<td>C#: Level I (3) OR</td>
</tr>
<tr>
<td>+CIS163AA</td>
<td>Java Programming: Level I (3) 3</td>
</tr>
<tr>
<td>+CIS238US</td>
<td>UNIX Security 3</td>
</tr>
<tr>
<td>+CIS271DL</td>
<td>Linux Security 3</td>
</tr>
<tr>
<td>+CNT160</td>
<td>Cisco Switching Basics and Intermediate Routing 3</td>
</tr>
<tr>
<td>+CNT170</td>
<td>Cisco Wide Area Networks (WAN Technologies) 3</td>
</tr>
<tr>
<td>+CNT182</td>
<td>Cisco Secure Pix Firewall Configuration 3</td>
</tr>
<tr>
<td>+CNT185</td>
<td>Cisco Network Security 4</td>
</tr>
<tr>
<td>+CNT186</td>
<td>Fundamentals of Wireless LANs 4</td>
</tr>
<tr>
<td>ITS100</td>
<td>Information Security Awareness 1</td>
</tr>
<tr>
<td>+ITS150</td>
<td>Building Trusted Networks in the Enterprise 3</td>
</tr>
<tr>
<td>+ITS160</td>
<td>Managing Trusted Networks in the Enterprise 3</td>
</tr>
<tr>
<td>+ITS170</td>
<td>Information Security Policy Development 1</td>
</tr>
<tr>
<td>+ITS171</td>
<td>Information Security Risk Management 1</td>
</tr>
<tr>
<td>ITS172</td>
<td>Viruses and Other Malicious Software 1</td>
</tr>
<tr>
<td>+ITS230</td>
<td>Deploying Snort Intrusion Detection System (IDS) 3</td>
</tr>
<tr>
<td>+ITS231</td>
<td>Router Hardening 1</td>
</tr>
<tr>
<td>+ITS232</td>
<td>Layer 2 Attacks and Defenses 3</td>
</tr>
<tr>
<td>+ITS233</td>
<td>Wireless Network Security 3</td>
</tr>
<tr>
<td>+ITS290</td>
<td>Computer Security Incident Response 3</td>
</tr>
<tr>
<td>+ITS291</td>
<td>Computer Forensics Foundations 4</td>
</tr>
<tr>
<td>+ITS292</td>
<td>Advanced Computer Forensics 4</td>
</tr>
<tr>
<td>+ITS295AA</td>
<td>Special Topics in Information Security 1</td>
</tr>
<tr>
<td>+ITS295AB</td>
<td>Special Topics in Information Security 2</td>
</tr>
<tr>
<td>+ITS295AC</td>
<td>Special Topics in Information Security 3</td>
</tr>
<tr>
<td>+ITS298AA</td>
<td>Special Projects 1</td>
</tr>
</tbody>
</table>
Restrictive Credits Continues . . .

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITS298AB</td>
<td>Special Projects</td>
<td>2</td>
</tr>
<tr>
<td>ITS298AC</td>
<td>Special Projects</td>
<td>3</td>
</tr>
<tr>
<td>+MST152</td>
<td>Microsoft Windows Server</td>
<td>4</td>
</tr>
<tr>
<td>+MST259</td>
<td>Designing Windows Network Security</td>
<td>3</td>
</tr>
</tbody>
</table>

**Free Electives:** None

**General Education: Credits: 25-27**

**Core: (15-17 Credits)**

**First-Year Composition:**

- ENG101 First-Year Composition (3) AND
- ENG102 First-Year Composition (3) OR
- ENG107 First-Year Composition for ESL (3) AND
- ENG108 First-Year Composition for ESL (3) 6

**Oral Communication:**

- COM100 Introduction to Human Communication (3) OR
- COM225 Public Speaking (3) OR
- COM230 Small Group Communication (3) 3

**Critical Reading:**

- CRE101 Critical and Evaluative Reading I OR equivalent by assessment 3

**Mathematics:**

- MAT150 College Algebra/Functions (5) OR
- MAT151 College Algebra/Functions (4) OR
- MAT152 College Algebra/Functions (3) 3-5

**Distribution: (10 Credits)**

**Humanities and Fine Arts:**

Any approved general education course from the Humanities and Fine Arts area 3

**Social and Behavioral Sciences:**

Any approved general education course from the Social and Behavioral Sciences area. 3

**Natural Sciences:**

Any approved general education course from the Natural Sciences area 4

(Note: + indicates course has prerequisites and/or corequisites)

NOTE: Students must earn a grade of “C” or better in all courses within the program.
Information Security Forensics Certificate Requirements

Program Description: The Certificate of Completion (CCL) in Information Security Forensics is designed to provide students with the knowledge and tools to gather evidence, often as part of a criminal investigation, from computers and computer networks. The discipline requires a technical knowledge of the relationship between a computer’s operating system and the supporting hardware (e.g. hard disks), and between the operating system and system/application programs and the network. Evidence gathering must precede in a manner that ensures that the evidence is admissible in a court of law, and can be documented and presented in an intelligible manner. The Information Security Forensics Certificate of Completion is part of a comprehensive Information Security program, which prepares students for internationally recognized industry certifications.

Note: Students should consult with an advisor in planning their academic schedule in order to complete degree or certificate requirements in an expedient manner. Required courses may not be available every semester or year. Due to limited course offerings, students may find it necessary to extend completion timelines and attend day, evening and summer classes.

Program Notes:

Students must earn a grade of “C” or better in all courses within the program. + indicates course has prerequisites and/or corequisites.

Admission Criteria: None

Program Prerequisites: Credits: 6

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPC170</td>
<td>Computer Maintenance I: A+ Prep</td>
<td>3</td>
</tr>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

Required Courses: Credits: 24

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS126DA</td>
<td>UNIX Operating System (3)</td>
<td></td>
</tr>
<tr>
<td>CIS126DL</td>
<td>Linux Operating System (3)</td>
<td></td>
</tr>
<tr>
<td>+ ITS110</td>
<td>Information Security Fundamentals</td>
<td>4</td>
</tr>
<tr>
<td>+ ITS120</td>
<td>Legal, Ethical and Regulatory Issues</td>
<td>3</td>
</tr>
<tr>
<td>+ ITS290</td>
<td>Computer Security Incident Response</td>
<td>3</td>
</tr>
<tr>
<td>+ ITS291</td>
<td>Computer Forensics Foundations</td>
<td>4</td>
</tr>
<tr>
<td>+ ITS292</td>
<td>Advanced Computer Forensics</td>
<td>4</td>
</tr>
<tr>
<td>MST150</td>
<td>Microsoft Windows Professional (3) OR</td>
<td></td>
</tr>
<tr>
<td>MST150DA</td>
<td>Microsoft Windows 2000 Professional (3) OR</td>
<td></td>
</tr>
<tr>
<td>MST150XP</td>
<td>Microsoft Windows XP Professional (3) OR</td>
<td></td>
</tr>
</tbody>
</table>

Restricted Elective: None

Free Electives: None
# Information Security Technology Certificate Requirements

**Program Description:** The Certificate of Completion (CCL) in Information Security Technology is designed to provide students with the knowledge and tools to understand how networks, operating systems and programs function, as well as, how to protect them. Emphasis is placed on developing the knowledge and skills to maintain security on mission-critical data and computer systems. The program is designed to meet the training needs of employees in both public and private sectors. The program covers a variety of information security disciplines that include both vendor-neutral and vendor-specific security training. The Information Security Technology program prepares students for internationally recognized industry certifications.

**Note:** Students should consult with an advisor in planning their academic schedule in order to complete degree or certificate requirements in an expedient manner. Required courses may not be available every semester or year. Due to limited course offerings, students may find it necessary to extend completion time lines and attend day, evening and summer classes.

**Program Notes:**
- Students must earn a grade of “C” or better in all courses within the program.
- + indicates course has prerequisites and/or corequisites.

**Admission Criteria:** None

**Program Prerequisites: Credits: 6**
- BPC170 Computer Maintenance I: A+ Prep 3
- CIS105 Survey of Computer Information Systems 3

**Required Courses: Credits: 27**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS126DA</td>
<td>UNIX Operating System (3) OR</td>
<td>3</td>
</tr>
<tr>
<td>CIS126DL</td>
<td>Linux Operating System (3)</td>
<td>3</td>
</tr>
<tr>
<td>CNT140AA</td>
<td>Cisco Networking Fundamentals</td>
<td>4</td>
</tr>
<tr>
<td>+CNT150AA</td>
<td>Cisco Routing Protocols and Concepts</td>
<td>4</td>
</tr>
<tr>
<td>+ITS110</td>
<td>Information Security Fundamentals</td>
<td>4</td>
</tr>
<tr>
<td>+ITS120</td>
<td>Legal, Ethical and Regulatory Issues</td>
<td>3</td>
</tr>
<tr>
<td>+ITS130</td>
<td>Operating System Security</td>
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<tr>
<td>+ITS140</td>
<td>Network Security</td>
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<tr>
<td>MST150</td>
<td>Microsoft Windows Professional (3) OR</td>
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</tr>
<tr>
<td>MST150DA</td>
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</tr>
<tr>
<td>MST150XP</td>
<td>Microsoft Windows XP Professional (3)</td>
<td>3</td>
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</tbody>
</table>

**Restricted Elective:** None

**Free Electives:** None
Information Security Administration Certificate
Requirements

Program Description: The Certificate of Completion (CCL) in Information Security Administration is designed to provide students with the knowledge and tools to understand how networks, operating systems and programs function, as well as, how to protect them. Emphasis is placed on developing the knowledge and skills to maintain security on mission-critical data and computer systems. The program is designed to meet the training needs of employees in both public and private sectors. The program covers a variety of information security disciplines that include both vendor-neutral and vendor-specific security training. The Information Security Technology program prepares students for internationally recognized industry certifications.

Note: Students should consult with an advisor in planning their academic schedule in order to complete degree or certificate requirements in an expedient manner. Required courses may not be available every semester or year. Due to limited course offerings, students may find it necessary to extend completion time lines and attend day, evening and summer classes.

Program Notes:
- Students must earn a grade of “C” or better in all courses within the program.
- + indicates course has prerequisites and/or corequisites.

Admission Criteria: None

Program Prerequisites: (Credits 27)
Certificate of Completion: Information Security Technology (5347) 27

Required Courses: (Credits 23)
+ CIS162AB C++: Level I (3) OR
+ CIS162AD C#: Level I (3) OR
+ CIS163AA Java Programming: Level I (3) 3
+ CNT160 Cisco Switching Basics and Intermediate Routing 3
+ CNT170 Cisco Wide Area Networks (WAN) Technologies 3
+ CNT186 Fundamentals of Wireless LANs 4
+ ITS150 Building Trusted Networks in the Enterprise 3
+ ITS160 Managing Trusted Networks in the Enterprise 3
+ MST152 Microsoft Windows Server 4

Restricted Elective: (6 Credits)
+ CIS238US UNIX Security 3
+ CNT182 Cisco Secure PIX Firewall Configuration 3
+ CNT185 Cisco Network Security 4
+ ITS100 Information Security Awareness 1
+ ITS170 Information Security Policy Development 1
+ ITS171 Information Security Risk Management 1
+ ITS172 Viruses and Other Malicious Software 1
+ ITS230 Deploying Snort Intrusion Detection System (IDS) 3
+ ITS231 Router Hardening 1
+ ITS232 Layer 2 Attacks and Defenses 3
+ ITS233 Wireless Network Security 3
+ MST259 Designing Windows Network Security 3

Free Electives: None
Information Security Wireless Networks Certificate
Requirements

Program Description: The Certificate of Completion (CCL) in Information Security Wireless Networks is designed to provide students with the knowledge and tools to design secure wireless local area networks (LANs) and defend wireless LANs against the latest hacking techniques, implement the latest wireless LAN security solutions and understand the impact of new wireless solutions. The Wireless Network Security Certificate of Completion is part of a comprehensive Information Security program which prepares students for internationally recognized industry certifications.

Note: Students should consult with an advisor in planning their academic schedule in order to complete degree or certificate requirements in an expedient manner. Required courses may not be available every semester or year. Due to limited course offerings, students may find it necessary to extend completion time lines and attend day, evening and summer classes.

Program Notes:
Students must earn a grade of “C” or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.

Admission Criteria: None

Program Prerequisites: (6 Credits)
+BPC170 Computer Maintenance I: A+Prep 3
CIS105 Survey of Computer Information Systems 3

Required Courses: (23 Credits)
+CNT160 Cisco Switching Basics and Intermediate Routing 3
+CNT170 Cisco Wide Area Networks (WAN) Technologies 3
+CNT186 Fundamentals of Wireless LANs 4
+ITS110 Information Security Fundamentals 4
+ITS130 Operating System Security 3
+ITS140 Network Security 3
ITS233 Wireless Network Security 3
+ITS230 Deploying Snort Intrusion Detection System (IDS) 3
+ITS231 Router Hardening 1
+ITS232 Layer 2 Attacks and Defenses 3
+ITS233 Wireless Network Security 3
+MST259 Designing Windows Network Security 3

Restricted Elective: None

Free Electives: None
# Linux Networking Administration

**Division Chair - Instructional Computing:** Dr. Valerie Akuna (623) 935-8079

**Degree:** Associate in Applied Science (AAS), Linux Networking Administration  
*(NOTE: See page 72 for AAS degree requirements.)*

**Certificates:**  
- Linux Associate  
- Linux Networking Administration  
- Linux Professional

## Linux Networking Administration AAS Degree Requirements

**Program Description:** The Associate in Applied Science in Linux Networking Administration will help to prepare students for a variety of industry recognized Linux certification exams as well as provide practical hands-on skills for the work place. The program includes a core of Linux classes including Linux Operating System Basics, System Administration, Network Administration and Network Security. These classes will ensure a student’s knowledge and skill level in preparation for employment or for improving current professional skills. Objectives for a variety of industry certifications are encompassed within course and program objectives.

**Note:** Students should consult with an advisor in planning their academic schedule in order to complete degree or certificate requirements in an expedient manner. Required courses may not be available every semester or year. Due to limited course offerings, students may find it necessary to extend completion time lines and attend day, evening and summer classes. Due to the changing nature of technology training, always check with an academic advisor for the most current requirements for your program of study.

**Admissions Criteria:** None  
*(Note: + indicates course has prerequisites and/or corequisites.)*  
*(Note: Students must earn a grade of "C" or better in all courses within the program.)*

**Required Courses:** (24-25 Credits)  

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>+BPC170</td>
<td>Computer Maintenance I: A+ Prep (3) OR</td>
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<td>+BPC273</td>
<td>Advanced Server Computer Maintenance: (3)</td>
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<tr>
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<td>Server+ Prep</td>
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<td>CIS126DL</td>
<td>Linux Operating System (3) OR</td>
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<tr>
<td>CIS126AL</td>
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<td>+CIS126CL</td>
<td>Linux Operating System III (1)</td>
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<td>+CIS238DL</td>
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<td>+CIS239DL</td>
<td>Linux Shell Scripting</td>
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<td>+CIS271DL</td>
<td>Linux Security</td>
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<tr>
<td>+CIS190</td>
<td>Introduction to Local Area Networks (3)</td>
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<tr>
<td>CNT140AA</td>
<td>Cisco Networking Fundamentals (4) OR</td>
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<tr>
<td>MST140</td>
<td>Microsoft Networking Essentials (3) OR</td>
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<tr>
<td>MST150++</td>
<td>Microsoft Windows Professional (any module)</td>
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**Restricted Electives:** (12 Credits)  

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<td>Survey of Computer Information Systems (3)</td>
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<tr>
<td>BPC/CIS120DF</td>
<td>Computer Graphics: Adobe Photoshop</td>
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<td>Microsoft Command Line Operations</td>
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<td>Internet/Web Development Level I</td>
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<td>+BPC170</td>
<td>Computer Maintenance I: A+ Prep</td>
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<tr>
<td>BPC/CIS224</td>
<td>Project Management Microsoft Project for Windows</td>
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## Linux Networking Administration AAS Degree Requirements (Cont.)

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<td>+BPC273</td>
<td>Advanced Server Computer Maintenance: Server+Prep</td>
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<tr>
<td>BPC/CIS120DC</td>
<td>Fireworks: Web Graphics</td>
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<td>+CIS190</td>
<td>Introduction to Local Area Networks (3)</td>
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<tr>
<td>CNT140AA</td>
<td>Cisco Networking Fundamentals (4) OR</td>
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<tr>
<td>MST140</td>
<td>Microsoft Networking Essentials (3) OR</td>
<td>3-4</td>
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<tr>
<td>+CIS233DA</td>
<td>Internet/Web Development Level II</td>
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<tr>
<td>+CIS270</td>
<td>Essentials of Network and Information Security</td>
<td>3</td>
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<tr>
<td>+CIS296WC</td>
<td>Cooperative Education</td>
<td>3</td>
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<tr>
<td>CIS298AC</td>
<td>Special Projects</td>
<td>3</td>
</tr>
<tr>
<td>+CNT120</td>
<td>Adobe Web Design</td>
<td>3</td>
</tr>
<tr>
<td>+CNT150AA</td>
<td>Cisco Routing Protocols and Concepts</td>
<td>4</td>
</tr>
<tr>
<td>+CNT160</td>
<td>Cisco Switching Basics and Intermediate Routing</td>
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<tr>
<td>+CNT170</td>
<td>Cisco Wide Area Networks (WAN)</td>
<td>3</td>
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<tr>
<td>MST150++</td>
<td>Microsoft Windows Professional (Any module)</td>
<td>3</td>
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<tr>
<td>+MST152++</td>
<td>Microsoft Windows Server (Any module)</td>
<td>4</td>
</tr>
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<td>+MST155</td>
<td>Implementing Windows Network Infrastructure</td>
<td>3</td>
</tr>
<tr>
<td>+MST157</td>
<td>Implementing Windows Directory Services</td>
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<td>+MST232</td>
<td>Managing a Windows Network Environment</td>
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<td>CIS250</td>
<td>Management of Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>CIS280</td>
<td>Current Topics in Computing</td>
<td>3</td>
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</table>

## General Studies Requirements: (25 Credits)

### Core: (15 Credits)

#### First-Year Composition:
- +ENG101 First-Year Composition (3) AND
- +ENG102 First-Year Composition (3) 6

#### Oral Communication:
- Any approved course in the Oral Communication area 3

#### Critical Reading:
- +CRE101 Critical and Evaluative Reading I or (Note: Equivalent as indicated by assessment) 3

#### Mathematics:
- +MAT102 Mathematical Concepts/Applications or Higher 3

### Distributions: (10 Credits)

#### Humanities and Fine Arts
- Any approved general education course in the Humanities and Fine Arts area. 3

#### Social Behavioral Sciences:
- Any approved general education course in Social and Behavioral Sciences area. 3

#### Natural Sciences:
- Any approved general education course in the Natural Science area. 4
Linux Associate Certificate Requirements

The Certificate of Completion (CCL) Linux Associate program will help to prepare students for a variety of industry-recognized Linux certification exams as well as provide practical hands-on skills for the work place. The program includes a core of Linux classes including Linux Operating System Basics, System Administration, Network Administration and Network Security. These classes will ensure a student’s knowledge and skill level in preparation for employment or for improving current professional skills. Objectives for a variety of industry certifications are encompassed within course and program objectives.

(Note: Students must earn a grade of “C” or better for all courses required within the program.)

(Note: +indicates course has prerequisites and/or corequisites)

Admission Criteria: None

<table>
<thead>
<tr>
<th>Required Courses: (12 Credits)</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CIS126DL Linux Operating System (3) OR</td>
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<tr>
<td>CIS126AL Linux Operating System I (1) AND</td>
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</tr>
<tr>
<td>+CIS126BL Linux Operating System II (1) AND</td>
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<tr>
<td>+CIS126CL Linux Operating System III (1)</td>
<td>3</td>
</tr>
<tr>
<td>+CIS238DL Linux System Administration</td>
<td>3</td>
</tr>
<tr>
<td>+CIS240DL Linux Network Administration</td>
<td>3</td>
</tr>
<tr>
<td>+CIS271DL Linux Security</td>
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</table>

<table>
<thead>
<tr>
<th>Restricted Electives: (12 Credits)</th>
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<tbody>
<tr>
<td>BPC/CIS121AB Microsoft Command Line Operations</td>
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</tr>
<tr>
<td>BPC/CIS133DA Internet/Web Development Level I (3) OR</td>
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</tr>
<tr>
<td>+CNT120 Adobe Web Design (3)</td>
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<tr>
<td>+BPC170 Computer Maintenance I: A+ Prep</td>
<td>3</td>
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<tr>
<td>BPC/CIS224 Project Management Microsoft Project for Windows</td>
<td>3</td>
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<tr>
<td>+BPC273 Advanced Server Computer Maintenance: Server+Prep</td>
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<tr>
<td>CIS105 Survey of Computer Information Systems</td>
<td>3</td>
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<tr>
<td>+CIS190 Introduction to Local Area Networks (3) OR</td>
<td></td>
</tr>
<tr>
<td>CNT140AA Cisco Networking Fundamentals (4) OR</td>
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<td>MST140 Microsoft Networking Essentials (3)</td>
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<tr>
<td>+CIS233DA Internet/Web Development Level II</td>
<td>3</td>
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<tr>
<td>+CIS239DL Linux Shell Scripting</td>
<td>3</td>
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<tr>
<td>+CIS270 Essentials of Network and Information Security</td>
<td>3</td>
</tr>
<tr>
<td>+CNT150AA Cisco Routing Protocols and Concepts</td>
<td>4</td>
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<tr>
<td>MST150 Microsoft Windows Professional</td>
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<tr>
<td>CIS280 Current Topics in Computing</td>
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</table>

Linux Networking Administration Certificate Requirements

Program Description: The Certificate of Completion (CCL) Linux Networking Administration program will help to prepare students for a variety of industry recognized Linux certification exams as well as provide practical hands-on skills for the work place. The program includes a core of Linux classes including Linux Operating System Basics, System Administration, Network Administration and Network Security. These classes will ensure a student’s knowledge and skill level in preparation for employment or for improving current professional skills. Objectives for a variety of industry certifications are encompassed within course and program objectives.

(Note: Students must earn a grade of “C” or better for all courses required within the program.)

(Note: +indicates course has prerequisites and/or corequisites)
**Required Courses: (24-25 Credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BPC170</td>
<td>Computer Maintenance I: A+ Prep</td>
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<td>BPC273</td>
<td>Advanced Server Computer Maintenance</td>
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</tr>
<tr>
<td>CIS126DL</td>
<td>Linux Operating System (3) OR</td>
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</tr>
<tr>
<td>CIS126AL</td>
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<tr>
<td>CIS126BL</td>
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</tr>
<tr>
<td>CIS126CL</td>
<td>Linux Operating System III (1)</td>
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</tr>
<tr>
<td>CIS238DL</td>
<td>Linux System Administration</td>
<td>3</td>
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<tr>
<td>CIS239DL</td>
<td>Linux Shell Scripting</td>
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<tr>
<td>CIS240DL</td>
<td>Linux Network Administration</td>
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<tr>
<td>CIS271DL</td>
<td>Linux Security</td>
<td>3</td>
</tr>
<tr>
<td>CIS190</td>
<td>Introduction to Local Area Networks (3) OR</td>
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</tr>
<tr>
<td>CNT140AA</td>
<td>Cisco Networking Fundamentals (4) OR</td>
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<td>MST140</td>
<td>Microsoft Networking Essentials (3)</td>
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</tr>
<tr>
<td>MST150++</td>
<td>Microsoft Windows Professional (Any module.)</td>
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</table>

**Restricted Electives: (12 Credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BPC110</td>
<td>Computer Usage and Applications (3) OR</td>
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<td>CIS105</td>
<td>Survey of Computer Information Systems (3)</td>
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<td>BPC/CIS120DF</td>
<td>Computer Graphics: Adobe Photoshop</td>
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<td>BPC/CIS121AB</td>
<td>Microsoft Command Line Operations</td>
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<td>Internet/Web Development Level I</td>
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<tr>
<td>+BPC170</td>
<td>Computer Maintenance I: A+ Prep</td>
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<td>+BPC270</td>
<td>Project Management Microsoft Project for Windows</td>
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<td>+BPC273</td>
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<td>Cisco Networking Fundamentals (4) OR</td>
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<td>MST140</td>
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<tr>
<td>+CIS233DA</td>
<td>Internet/Web Development Level II</td>
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</tr>
<tr>
<td>+CIS270</td>
<td>Essentials of Network and Information Security</td>
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<tr>
<td>+CIS296WC</td>
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<td>3</td>
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<td>Special Projects</td>
<td>3</td>
</tr>
<tr>
<td>+CNT120</td>
<td>Adobe Web Design</td>
<td>3</td>
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<td>+CNT150AA</td>
<td>Cisco Routing Protocols and Concepts</td>
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<td>+CNT160</td>
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<td>+CNT170</td>
<td>Cisco Wide Area Networks (WAN) Technologies</td>
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<td>MST150++</td>
<td>Microsoft Windows Professional (Any module)</td>
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<td>+MST152++</td>
<td>Microsoft Windows Server (any module)</td>
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<td>+MST155</td>
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<td>CIS280</td>
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</table>

**Linux Professional Certificate Requirements**

**Program Description:** The Linux Professional certificate will help to prepare students for a variety of industry-recognized Linux certification exams as well as provide practical hands-on skills for the work place. The program includes a core of Linux classes including Linux Operating System Basics, System Administration, Network Administration and Network Security. These classes will ensure a student’s knowledge and skill level in preparation for employment or for improving current professional skills. Objectives for a variety of industry certifications are encompassed within course and program objectives.

(Note: Students must earn a grade of “C” or better for all courses required within the program.)

(Note: +indicates course has prerequisites and/or corequisites)
### Required Courses: (6 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
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<td>CIS126DL</td>
<td>Linux Operating System (3) OR</td>
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<tr>
<td>CIS126AL</td>
<td>Linux Operating System I (1) AND</td>
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<tr>
<td>+CIS126BL</td>
<td>Linux Operating System II (1) AND</td>
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<td>+CIS126CL</td>
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<tr>
<td>+CIS238DL</td>
<td>Linux System Administration</td>
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### Restricted Electives: (6 Credits)

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<th>Course</th>
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<tbody>
<tr>
<td>BPC/CIS121AB</td>
<td>Microsoft Command Line Operations</td>
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<tr>
<td>+BPC170</td>
<td>Computer Maintenance I: A+ Prep</td>
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</tr>
<tr>
<td>+BPC273</td>
<td>Advanced Server Computer Maintenance: Server+ Prep</td>
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<td>CIS105</td>
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<tr>
<td>+CIS190</td>
<td>Introduction to Local Area Networks</td>
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<tr>
<td>+CIS240DL</td>
<td>Linux Network Administration</td>
<td>3</td>
</tr>
<tr>
<td>+CIS270</td>
<td>Essentials of Network and Information Security</td>
<td>3</td>
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<td>CNT140AA</td>
<td>Cisco Networking Fundamentals (4) OR</td>
<td></td>
</tr>
<tr>
<td>MST140</td>
<td>Microsoft Networking Essentials (3)</td>
<td>3-4</td>
</tr>
<tr>
<td>+CNT150AA</td>
<td>Cisco Routing Protocols and Concepts</td>
<td>4</td>
</tr>
<tr>
<td>MST150++</td>
<td>Microsoft Windows Professional (Any module.)</td>
<td>3</td>
</tr>
<tr>
<td>CIS280</td>
<td>Current Topics in Computing</td>
<td>3</td>
</tr>
</tbody>
</table>

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**MICROSOFT NETWORKING TECHNOLOGY**

**Division Chair - Instructional Computing:** Dr. Valerie Akuna (623) 935-8079

**Degree:** Associate in Applied Science (AAS), Microsoft Networking Technology  
(NOTE: See page 72 for AAS degree requirements.)

**Certificates:**  
- Microsoft Desktop Support Technology  
- Microsoft Product Specialist  
- Microsoft Systems Administration  
- Microsoft Systems Engineer

### Microsoft Networking Technology AAS Degree Requirements

**Program Description:** The Associate in Applied Science (AAS) in Microsoft Networking Technology program develops skills to implement a network infrastructure and install, configure, monitor, optimize, and troubleshoot Windows server and Windows client workstations. Courses in the program also help to prepare for Microsoft Certified Product Specialist (MCP), Microsoft Certified Systems Administrator (MCSA), and Microsoft Certified Systems Engineer (MCSE) examinations. The curriculum is taught by Microsoft Certified Professionals.

**Note:** Students should consult with an advisor in planning their academic schedule in order to complete degree or certificate requirements in an expedient manner. Required courses may not be available every semester or year. Due to limited course offerings, students may find it necessary to extend completion time lines and attend day, evening and summer classes. Due to the changing nature of technology training, always check with an academic advisor for the most current requirements for your program of study.

**Program Notes:**  
+ indicates course has prerequisites and/or corequisites  
++ indicates any module.)  
Students must earn a grade of “C” or better for all courses required within the program.

**Program Prerequisites:**  
CIS105  
Survey of Computer Information Systems (3) OR  
Permission of Department or Division
**Required Courses: (24-25 Credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPC/CIS121AB</td>
<td>Microsoft Command Line Operations</td>
<td>1</td>
</tr>
<tr>
<td>+ BPC170</td>
<td>Computer Maintenance I: A+ Prep</td>
<td>3</td>
</tr>
<tr>
<td>CIS102</td>
<td>Interpersonal and Customer Service Skills for IT</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td><strong>Professionals</strong></td>
<td></td>
</tr>
<tr>
<td>CIS126DA</td>
<td>UNIX Operating System (3) OR</td>
<td></td>
</tr>
<tr>
<td>CIS126AA</td>
<td>UNIX Operating System: Level I (1) AND</td>
<td></td>
</tr>
<tr>
<td>+ CIS126BA</td>
<td>UNIX Operating System: Level II (1) AND</td>
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<tr>
<td>+ CIS126CA</td>
<td>UNIX Operating System: Level III (1) OR</td>
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</tr>
<tr>
<td>CIS126DL</td>
<td>Linux Operating System (3) OR</td>
<td></td>
</tr>
<tr>
<td>CIS126AL</td>
<td>Linux Operating System II (1) AND</td>
<td></td>
</tr>
<tr>
<td>+ CIS126BL</td>
<td>Linux Operating System II (1) AND</td>
<td></td>
</tr>
<tr>
<td>+ CIS126CL</td>
<td>Linux Operating System III (1)</td>
<td>3</td>
</tr>
<tr>
<td>+ CIS190</td>
<td>Introduction to Local Area Networks OR (3)</td>
<td></td>
</tr>
<tr>
<td>CNT140AA</td>
<td>Cisco Networking Fundamentals (4) OR</td>
<td></td>
</tr>
<tr>
<td>MST140</td>
<td>Microsoft Networking Essentials (3)</td>
<td>3-4</td>
</tr>
<tr>
<td>MST150++</td>
<td>Microsoft Windows Professional (any course)</td>
<td>3</td>
</tr>
<tr>
<td>+MST152+</td>
<td>Microsoft Windows Server (and course)</td>
<td>4</td>
</tr>
<tr>
<td>+ MST155</td>
<td>Implementing Windows Network Infrastructure</td>
<td>3</td>
</tr>
<tr>
<td>+MST157</td>
<td>Implementing Windows Directory Services</td>
<td>3</td>
</tr>
</tbody>
</table>

**Restricted Electives: (13 Credits)**

Students should select thirteen (13) credits from the following courses in consultation with a program advisor:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPC110</td>
<td>Computer Usage and Applications (3) OR</td>
<td></td>
</tr>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems (3)</td>
<td>3</td>
</tr>
<tr>
<td>+ BPC171</td>
<td>Recycling Used Computer Technology</td>
<td>1-3</td>
</tr>
<tr>
<td>+ BPC270</td>
<td>Microcomputer Maintenance II</td>
<td>3</td>
</tr>
<tr>
<td>+ CIS150</td>
<td>Programming Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>+ CIS159</td>
<td>Visual Basic Programming I</td>
<td>3</td>
</tr>
<tr>
<td>+ CIS162AB</td>
<td>C++: Level I (3) OR</td>
<td></td>
</tr>
<tr>
<td>+CIS162AC</td>
<td>Visual C++: Level I (3)</td>
<td>3</td>
</tr>
<tr>
<td>+CIS280+</td>
<td>Any CIS280 Current Topics in Computing course</td>
<td>1-3</td>
</tr>
</tbody>
</table>

Students may select no more than four (4) credits combined from CIS282AA-AC, CIS290AA-AC and CIS296WA-WD courses.
Microsoft Networking Technology AAS Degree Requirements

+CIS282++ Volunteering for Computer Information Systems: A Service Learning Experience (Any module) (1-3) OR
+CIS290++ Computer Information Systems Internship (Any module) (1-3) OR
+CIS296++ Computer Information Systems Internship (Any Module) (1-3) OR
+CNT150AA Cisco Routing Protocols and Concepts 4
+MST141 Supporting Microsoft Windows Desktop Operating Systems 3
+MST142 Supporting Applications on Microsoft Windows Desktop Operating Systems 3
MST150++ Microsoft Windows Professional (any course) 3

Selected course will not apply in both required courses and restricted electives.
+MST152++ Microsoft Windows Server (any course) 3-4

Selected course will not apply in both required courses and restricted electives.
+MST157 Implementing Windows Directory Services 3
+MST232 Managing a Windows Network Environment 3
+MST242 Microsoft Exchange Server 4
+MST244 Microsoft SQL Server Administration 3
+MST252 Microsoft Windows Network Upgrade 3
+MST253 Designing a Microsoft Windows 2000 Directory Services Infrastructure 3
+MST254 Microsoft SQL Server Design & Implementation 3
+MST255 Designing Windows Network Infrastructure 3
+MST259 Designing Windows Network Security 3
MST298A++ Special Projects (Any module) 1-3

General Education Requirements: (25 Credits)
Core: (15 Credits)

First-Year Composition:
+ENG101 First-Year Composition (3) AND
+ENG102 First-Year Composition (3) OR
+ENG107 First-Year Composition for ESL (3) AND
+ENG108 First-Year Composition for ESL (3) 6

Oral Communication:
Any approved general education course in the Oral Communication area 3

Critical Reading:
+CRE101 Critical and Evaluative Reading I (3) OR
equivalent as indicated by assessment 3

Mathematics:
+Any approved general education course in the Mathematics area 3

DISTRIBUTION: (10 Credits)

Humanities and Fine Arts:
Any approved general education course in the Humanities and Fine Arts area 3

Social and Behavioral Sciences:
Any approved general education course in the Social and Behavioral Sciences area 3

Natural Sciences:
Any approved general education course in the Natural Sciences area 4
Microsoft Desktop Support Technology Certificate

Requirements

Program Description: The Certificate of Completion in Microsoft Desktop Support Technology is designed to provide training to work in an entry-level computer maintenance and help-desk position. Students will develop the skills to successfully troubleshoot desktop environments running on the Microsoft Windows operating system. Courses in the program also help to prepare for the Microsoft Certified Desktop Support Technician (MCDST) examinations.

Note: Students should consult with an advisor in planning their academic schedule in order to complete degree or certificate requirements in an expedient manner. Required courses may not be available every semester or year. Due to limited course offerings, students may find it necessary to extend completion time lines and attend day, evening and summer classes. Due to the changing nature of technology training, always check with an academic advisor for the most current requirements for your program of study.

Program Notes:
+ indicates course has prerequisites and/or corequisites
Students must earn a grade of “C” or better for all courses required within the program.

Program Prerequisites:
In lieu of the courses listed below, students with experience in the information technology field may meet these program prerequisite requirements with the permission of the instructor.

BPC/CIS121AB Microsoft Command Line Operations 1
CIS102 Interpersonal and Customer Service Skills for IT Professionals 1

Required Courses: (18-19 Credits) Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPC110</td>
<td>Computer Usabe and Applications (3) OR</td>
<td>3</td>
</tr>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems (3)</td>
<td>3</td>
</tr>
<tr>
<td>+BPC170</td>
<td>Computer Maintenance I: A+ Prep</td>
<td>3</td>
</tr>
<tr>
<td>+CIS190</td>
<td>Introduction to Local Area Networks OR (3)</td>
<td></td>
</tr>
<tr>
<td>CNT140AA</td>
<td>Cisco Networking Fundamentals (4) OR</td>
<td></td>
</tr>
<tr>
<td>MST140</td>
<td>Microsoft Networking Essentials (3)</td>
<td>3-4</td>
</tr>
<tr>
<td>+MST141</td>
<td>Supporting Microsoft Windows Client Operating Systems</td>
<td>3</td>
</tr>
<tr>
<td>+MST142</td>
<td>Supporting Applications on Microsoft Windows Client Operating Systems</td>
<td>3</td>
</tr>
<tr>
<td>+MST150XP</td>
<td>Microsoft Windows XP Professional</td>
<td>3</td>
</tr>
</tbody>
</table>
Microsoft Product Specialist Certificate Requirements

Program Description: The Certificate of Completion in Microsoft Product Specialist provides training for an entry-level position working with Windows networks. Knowledge and skills are developed to install, configure, customize, optimize, and troubleshoot Windows servers and Windows client workstations. Courses in the program also help to prepare for Microsoft Certified Product Specialist (MCP), Microsoft Certified Systems Administrator (MCSA), and Microsoft Certified Systems Engineer (MCSE) examinations. The curriculum is taught by Microsoft Certified Professionals.

Program Notes:
Students must earn a grade of “C” or better for all courses required within the program. Overall program minimum G.P.A. = 2.00.
+ indicates course has prerequisites and/or corequisites.
++ indicates any module.

Program Prerequisites: (3 Credits) Credits
CIS105 Survey of Computer Information Systems (3) OR Permission of Department or Division 3

Required Courses: (13-15 Credits) Credits
BPC/CIS121AB Microsoft Command Line Operations 1
+BPC170 Computer Maintenance I: A+ Prep 3
+CIS190 Introduction to Local Area Networks (3) OR
CNT140AA Cisco Networking Fundamentals (4) OR
MST140 Microsoft Networking Essentials (3) 3-4
MST150++ Any MST150 course 3
+MST152++ Any MST152 course 4

Microsoft Systems Administration Certificate Requirements

Program Description: The Certificate of Completion in the Microsoft Systems Administration provides training for professionals who implement, manage, and troubleshoot existing network and system environments based on current Microsoft Server operating systems. The courses in the program also prepare for Microsoft Certified Product Specialist (MCP), Microsoft Certified Systems Administrator (MCSA), and Microsoft Certified Systems Engineer (MCSE) examinations.

Program Notes:
Students must earn a grade of “C” or better for all courses required within the program. Overall program minimum G.P.A. = 2.00.
+ indicates course has prerequisites and/or corequisites.
++ indicates any module.

Program Prerequisites: (3 credits)
CIS105 Survey of Computer Information Systems (3) OR Permission of Department or Division 3

Required Courses: (20-21 Credits) Credits
BPC/CIS121AB Microsoft Command Line Operations 1
+BPC170 Computer Maintenance I: A+ Prep 3
+CIS190 Introduction to Local Area Networks (3) OR
CNT140AA Cisco Networking Fundamentals (4) OR
MST140 Microsoft Networking Essentials (3) 3-4
MST150++ Any MST150 course 3
+MST152++ Any MST152 course 4
+MST155 Implementing Windows Network Infrastructure 3
+MST232 Managing Window Network Environment 3
# Microsoft Systems Engineer Certificate Requirements

**Program Description:** The Certificate of Completion in Microsoft Systems Engineer provides training for an intermediate-to-supervisory-level position working with Windows networks. The program develops skills to install, configure, customize, optimize, and troubleshoot Windows servers, Windows client workstations, Microsoft Backoffice products. Courses in the program also help to prepare for Microsoft Certified Product Specialist (MCP), Microsoft Certified Systems Administrator (MCSA), and Microsoft Certified Systems Engineer (MCSE) examinations. The curriculum is taught by Microsoft Certified Professionals.

**Program Notes:**
Students must earn a grade of “C” or better for all courses required within the program.
Overall program minimum GPA = 2.00.
+ indicates course has prerequisites and/or corequisites.
++ indicates any module.

**Program Prerequisites:** (3 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
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<td>CIS105</td>
<td>Survey of Computer Information Systems (3) OR Permission of Department or Division</td>
<td>3</td>
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</table>

**Required Courses:** (32-33 Credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>BPC/CIS121AB</td>
<td>Microsoft Command Line Operations</td>
<td>1</td>
</tr>
<tr>
<td>+BPC170</td>
<td>Computer Maintenance I: A+ Prep</td>
<td>3</td>
</tr>
<tr>
<td>+CIS190</td>
<td>Introduction to Local Area Networks (3) OR</td>
<td></td>
</tr>
<tr>
<td>CNT140AA</td>
<td>Cisco Networking Fundamentals (4) OR</td>
<td>3-4</td>
</tr>
<tr>
<td>MST140</td>
<td>Microsoft Networking Essentials (3)</td>
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</tr>
<tr>
<td>MST150++</td>
<td>Any MST150 course</td>
<td>3</td>
</tr>
<tr>
<td>+MST152++</td>
<td>Any MST152 course</td>
<td>4</td>
</tr>
<tr>
<td>+MST155</td>
<td>Implementing Windows Network Infrastructure</td>
<td>3</td>
</tr>
<tr>
<td>+MST157</td>
<td>Implementing Windows Directory Services</td>
<td>3</td>
</tr>
<tr>
<td>+MST232</td>
<td>Managing a Windows Network Environment</td>
<td>3</td>
</tr>
<tr>
<td>+MST244</td>
<td>Microsoft SQL Server Administration</td>
<td>3</td>
</tr>
<tr>
<td>+MST253</td>
<td>Designing a Microsoft Windows 2000 Directory Services Infrastructure (3) OR</td>
<td></td>
</tr>
<tr>
<td>+MST255</td>
<td>Designing Windows Network Infrastructure</td>
<td>3</td>
</tr>
<tr>
<td>+MST259</td>
<td>Designing Windows Network Security (3)</td>
<td>3</td>
</tr>
</tbody>
</table>
Division Chair - Instructional Computing: Dr. Valerie Akuna (623) 935-8079

Degree: Associate in Applied Science (AAS), Networking Technology: Cisco
(NOTE: See page 72 for AAS degree requirements.)

Certificates: Networking Administration: Cisco
Networking Technology: Cisco

Networking Technology: Cisco AAS Degree Requirements

Program Description: Estrella Mountain Community College, a Cisco Systems recognized Regional Academy, prepares students for industry-recognized certification. The curriculum is taught by Cisco Systems Certified Professionals.

The Associate of Applied Science in Networking Technology: Cisco provides training for a supervisory position working with Cisco Systems networking and Internet hardware. Knowledge and skills are developed to install, configure, maintain, and troubleshoot Cisco routers and components, advanced routing protocols, Local Area Networks (LANs), and Wide Area Networks (WANs); use the MS-DOS operating systems; troubleshoot problems with various common hardware and software configurations; perform administrative tasks in a network; develop methods for customer service; and describe the basic components of electronic systems. Courses in the program also prepare students for the Cisco Certified Networking Associate examination.

Note: Students should consult with an advisor in planning their academic schedule in order to complete degree or certificate requirements in an expedient manner. Required courses may not be available every semester or year.

Required Courses: (25 Credits) Credits
(Note: A course cannot be used to satisfy the Required Course and Restricted Electives Area.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPC/CIS121AB</td>
<td>Microsoft Command Line Operations</td>
<td>1</td>
</tr>
<tr>
<td>+ BPC170</td>
<td>Computer Maintenance I: A+ Prep</td>
<td>3</td>
</tr>
<tr>
<td>CIS102</td>
<td>Interpersonal and Customer Service Skills for IT Professionals</td>
<td>1</td>
</tr>
<tr>
<td>CIS126DA</td>
<td>UNIX Operating System (3) OR</td>
<td></td>
</tr>
<tr>
<td>CIS126AA</td>
<td>UNIX Operating System: Level I (1) AND</td>
<td></td>
</tr>
<tr>
<td>+ CIS126BA</td>
<td>UNIX Operating System: Level II (1) AND</td>
<td></td>
</tr>
<tr>
<td>+ CIS126CA</td>
<td>UNIX Operating System: Level III (1) OR</td>
<td></td>
</tr>
<tr>
<td>+ CIS191</td>
<td>Novell NetWare System Administration (3) OR</td>
<td></td>
</tr>
<tr>
<td>MST150</td>
<td>Microsoft Windows Professional (3)</td>
<td>3</td>
</tr>
<tr>
<td>CNT140AA</td>
<td>Cisco Networking Fundamentals</td>
<td>4</td>
</tr>
<tr>
<td>+ CNT150AA</td>
<td>Cisco Routing Protocols and Concepts</td>
<td>4</td>
</tr>
<tr>
<td>+ CNT160</td>
<td>Cisco Switching Basics and Intermediate Routing</td>
<td>3</td>
</tr>
<tr>
<td>+ CNT170</td>
<td>Cisco Wide Area Networks (WAN) Technologies</td>
<td>3</td>
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<tr>
<td>ELT100</td>
<td>Survey of Electronics</td>
<td>3</td>
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</table>

Restricted Electives: (15 Credits) Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BPC110</td>
<td>Computer Usage and Application (3) OR</td>
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<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems (3)</td>
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<tr>
<td>CIS126DA</td>
<td>UNIX Operating System (3) OR</td>
<td></td>
</tr>
<tr>
<td>CIS126AA</td>
<td>UNIX Operating System: Level I (1) AND</td>
<td></td>
</tr>
<tr>
<td>+ CIS126BA</td>
<td>UNIX Operating System: Level II (1) AND</td>
<td></td>
</tr>
<tr>
<td>+ CIS126CA</td>
<td>UNIX Operating System: Level III (1) OR</td>
<td></td>
</tr>
<tr>
<td>+ CIS191</td>
<td>Novell NetWare System Administration (3) OR</td>
<td></td>
</tr>
<tr>
<td>MST150</td>
<td>Microsoft Windows Professional (3)</td>
<td>3</td>
</tr>
<tr>
<td>+ CIS190</td>
<td>Introduction to Local Area Networks OR</td>
<td></td>
</tr>
</tbody>
</table>
MST140 Microsoft Networking Essentials 3
+CIS270 Essentials of Network and Information Security 3
+CIS296WA-WD Cooperative Education 1-4
CIS298AA-AC Special Projects 1-3
+MST145 Microsoft Client System Administration 3
+MST240 Microsoft Transmission Control Protocol/Internet Protocol (TCP/IP) 3

(Note: + indicates course has prerequisites and/or corequisites)
(Note: Students must earn a grade of “C” or better for each course listed in the “Required Course” area.)
(Note: A course cannot be used to satisfy both Required Courses and Restricted Electives areas.)

General Education Requirements: (25 Credits)
Core: (15 Credits)

First-Year Composition:
+ ENG101 First Year Composition AND 3
+ ENG102 First Year Composition 3

Oral Communication:
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+COM230 Small Group Communication (3) 3

Critical Reading:
+CRE101 Critical and Evaluative Reading I (3) OR 3
Equivalent as indicated by assessment.

Mathematics:
+MAT102 Mathematical Concepts/Applications 3

Distribution: (10 Credits)
Humanities and Fine Arts:
Any approved general education course in the Humanities and Fine Arts area 3

Social and Behavioral Sciences:
Any approved general education course in the Social and Behavioral Sciences area

Natural Sciences:
Any approved general education course in the Natural Sciences area 4
Networking Administration: Cisco Certificate Requirements

*Program Description:* Estrella Mountain Community College, a Cisco Systems recognized Regional or Local Academy, prepares students for industry-recognized certification. The curriculum is taught by Cisco Systems Certified Professionals. The Certificate of Completion in Networking Administration: Cisco provides training for a position working with Cisco Systems networking and Internet hardware. Knowledge and skills are developed to install, configure, maintain, and troubleshoot Cisco routers and components, advanced routing protocols, Local Area Networks (LANs), and Wide Area Networks (WANs). Courses in the program also prepare students for the Cisco Certified Networking Associate examination.

*Note:* Students should consult with an advisor in planning their academic schedule in order to complete degree or certificate requirements in an expedient manner. Required courses may not be available every semester or year.

(Note: + indicates course has prerequisites and/or corequisities)

NOTE: Students must earn a grade of “C” or better for each course listed in the “Required Courses” area.

<table>
<thead>
<tr>
<th>Required Courses: (14 Credits)</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>CNT140AA Cisco Networking Fundamentals</td>
<td>4</td>
</tr>
<tr>
<td>+CNT150AA Cisco Routing Protocols and Concepts</td>
<td>4</td>
</tr>
<tr>
<td>+CNT160  Cisco Switching Basics and Intermediate Routing</td>
<td>3</td>
</tr>
<tr>
<td>+CNT170  Cisco Wide Area Networks (WAN) Technologies</td>
<td>3</td>
</tr>
</tbody>
</table>

Networking Technology: Cisco Certificate Requirements

*Program Description:* Estrella Mountain Community College, a Cisco Systems recognized Regional or Local Academy, prepares students for industry-recognized certification. The curriculum is taught by Cisco Systems Certified Professionals. The Certificate of Completion in Networking Technology: Cisco provides training for a supervisory position working with Cisco Systems networking and Internet hardware. Knowledge and skills are developed to install, configure, maintain, and troubleshoot Cisco routers and components, advanced routing protocols, Local Area Networks (LANs), and Wide Area Networks (WANs), use the MS-DOS operating systems; troubleshoot problems with various common hardware and software configurations; and perform administrative tasks in a network; Courses in the program also prepare students for the Cisco Certified Networking Associate examination.

(Note: + indicates course has prerequisites and/or corequisities)

NOTE: Students must earn a grade of “C” or better for each course listed in the “Required Courses” area.

<table>
<thead>
<tr>
<th>Required Courses: (21 Credits)</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>BPC/CIS121AB Microsoft Command Line Operations</td>
<td>1</td>
</tr>
<tr>
<td>+BPC170  Computer Maintenance I: A+ Prep</td>
<td>3</td>
</tr>
<tr>
<td>CIS126DA UNIX Operating System (3) OR</td>
<td></td>
</tr>
<tr>
<td>CIS126AA UNIX Operating System: Level I (1) AND</td>
<td></td>
</tr>
<tr>
<td>+CIS126BA UNIX Operating System: Level II (1) AND</td>
<td></td>
</tr>
<tr>
<td>+CIS126CA UNIX Operating System: Level III (1) OR</td>
<td></td>
</tr>
<tr>
<td>+CIS191  Novell NetWare System Administration (3) OR</td>
<td></td>
</tr>
<tr>
<td>MST150  Microsoft Windows Professional (3)</td>
<td>3</td>
</tr>
<tr>
<td>CNT140AA Cisco Networking Fundamentals</td>
<td>4</td>
</tr>
<tr>
<td>+CNT150AA Cisco Routing Protocols and Concepts</td>
<td>4</td>
</tr>
<tr>
<td>+CNT160  Cisco Switching Basics and Intermediate Routing</td>
<td>3</td>
</tr>
<tr>
<td>+CNT170  Cisco Wide Area Networks (WAN) Technologies</td>
<td>3</td>
</tr>
</tbody>
</table>
NURSING

Department Chair - Nursing: Judi Crume (623) 935-8933

Degree: Associate in Applied Science (AAS), Nursing

(NOTE: See page 72 for AAS degree requirements.)

Nursing : AAS Degree Requirements

Program Description: The Nursing Program is available at nine of the Maricopa Community Colleges. Clinical experiences are provided in a variety of healthcare settings. The Nursing Program provides eligibility for students to apply for the national exam for the practical and the registered nurse license. Licensing requirements are the exclusive responsibility of the State Board of Nursing.

The Nursing Program is approved by the Arizona State Board of Nursing and accredited by the National League for Nursing Accrediting Commission (NLNAC), 61 Broadway 33rd Floor, New York, New York 10006, 212.363.5555, ext 153.

Program offerings:
This program is offered at the following sites:
Chandler Gilbert Community College
Estrella Mountain Community College
GateWay Community College
Glendale Community College
Mesa Community College
Mesa Community College/Boswell
Paradise Valley Community College
Phoenix College
Rio Salado College
Scottsdale Community College

Waiver of Licensure/Certification Guarantee:
Admission or graduation from the Nursing Program does not guarantee obtaining a license to practice nursing. Licensure and requirements and the subsequent procedures are the exclusive right and responsibility of the Arizona State Board of Nursing. Students must satisfy the requirements of the Nurse Practice Act: Statutes, Rules and Regulations, independently of any college or school requirements for graduation.

Pursuant to A.R.S. § 32-1606(B)(17), an applicant for professional or practical nurse license by examination is not eligible for licensure if the applicant has any felony convictions and has not received an absolute discharge from the sentences for all felony convictions. The absolute discharge must be received five or more years before submitting this application. If you cannot prove that the absolute discharge date is five or more years, the Board cannot process your application.

All nurse and nursing assistant applicants for certification and licensure will be fingerprinted to permit the Department of Public Safety to obtain state and federal criminal history information. If there is any question about eligibility for licensure or certification, contact the nursing education consultant at the Arizona State Board of Nursing (602-889-5150).

Health Declaration:
It is essential that Nursing students be able to perform a number of physical activities in the clinical portion of the program. At a minimum, students will be required to lift patients, stand for several hours at a time and perform bending activities. The clinical nursing experience also places students under considerable mental and emotional stress as they undertake responsibilities and duties impacting patients’ lives. Students must be able to demonstrate rational and appropriate behavior under stressful conditions. Individuals should give careful consideration to the mental and physical demands of the program prior to making application.
Nursing Degree Requirements continues...

Health & Safety Requirements for the Nursing Program:
1. Students must submit a Health and Safety Documentation verifying completion of all requirements and maintain current status throughout the program.
2. Students must submit the Health Declaration Form signed by a licensed health care provider.
3. Students must test negative on a timed urine drug screen.

Grade Requirements:
Student must obtain a “C” grade or better or pass in “P/Z” graded courses in all courses in program.

Course Fee Information:
Please see class schedule for information regarding course fees.

University Transfer Students:
For students planning a University Program
Students who are planning to earn the Bachelor of Science in Nursing may obtain their prerequisite courses at the Maricopa Community Colleges. For information on courses that meet requirements for admission into a baccalaureate program, please contact a program advisor.

REGISTERED NURSE PATHWAY
Associate in Applied Science Degree in Nursing Program
The Associate Applied Science (AAS) degree in Nursing graduate is eligible to apply for licensure as a Registered Nurse (RN). The RN is educated as a generalist who delivers health care to clients and family groups and has competencies related to the art and science of nursing. The RN may be employed in a variety of acute, chronic and community based health care settings. The AAS degree in Nursing provides the graduate with an educational foundation for articulation into the university setting.

Program Notes:
Students must earn a grade of “C” or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites

Admission Criteria:
High School diploma or GED, application and acceptance into the nursing program. A passing score on a nursing program admission test is required to complete an application. Applicants for Advanced Placement must receive a passing score on a practical nursing content exam for the placement into Block 3. The final decision rests with the Nursing Program Chair at the College to which the student is accepted. The Nursing Program Chair reserved the right to deny acceptance of an admission application if the applicant was dismissed for issues relating to academic integrity, unsafe patient care, and/or two (2) or more failures from any nursing program.

All applicants holding or receiving a certificate as a Nursing Assisting and/or license as a Practical Nurse must remain in good standing with the Board of Nursing. Once enrolled, students receiving any disciplinary actions against their certificate or license must notify the Nursing Program Chair within five (5) school days. The Nursing Program Chair reserves the right to restrict the student’s participation in clinical experiences and involvement in patient care until the certificate and/or license is valid and unrestricted.

All students must submit a copy of a fingerprint clearance card with their application for the Nursing Program.
**Program Prerequisites (18-31 Credits)**

*Area Note: The credit hour range is subject to change depending on the student’s educational experience.*

- BIO156 Introductory Biology for Allied Health (4) OR
- BIO181 General Biology (Majors) I (4) OR
- One year of high school biology 0-4
- + BIO201 Human Anatomy and Physiology I 4
- + BIO202 Human Anatomy and Physiology II 4
- + BIO205 Microbiology 4
- + CHM130 Fundamental Chemistry (3) AND
- + CHM130LL Fundamental Chemistry Laboratory (1) OR
- One year of high school chemistry 0-4
- + CRE101 Critical and Evaluative Reading I (3) OR
- Equivalent by assessment 0-3
- + ENG101 First-Year Composition OR
- + ENG107 First-Year Composition for ESL 3
- + MAT120 Intermediate Algebra (5) OR
- + MAT121 Intermediate Algebra (4) OR
- + MAT122 Intermediate Algebra (3) OR
- Higher Level Math Course 3-5

**Required Courses (46 Credits)**

- + NUR111 Nursing Process/ and Critical Thinking I 4
- + NUR117 Pharmacology and Medication Administration I 2
- + NUR118 Nursing Science I 4
- + NUR121 Nursing Process/ and Critical Thinking II 4
- + NUR127 Pharmacology & and Medication Administration II 2
- + NUR128 Nursing Science II 4
- + NUR231 Nursing Process/ and Critical Thinking III 4
- + NUR237 Pharmacology and Medication Administration III 1
- + NUR238 Nursing Science III 4
- + NUR241 Nursing Process/ and Critical Thinking IV 4
- + NUR248 Nursing Science IV 5
- PSY101 Introduction to Psychology (3) OR
- + PSY240 Developmental Psychology 3

**General Education Requirements: (5 Credits)**

**CORE:** (3 Credits)

- **First-Year Composition**
  - Met by ENG101 OR ENG107 in Program Prerequisites area.
  - + ENG102 First-Year Composition (3) OR
  - ENG108 First-Year Composition for ESL (3) 3

- **Oral Communication**
  - Waived.

- **Critical Reading**
  - Met by CRE101 in Program Prerequisites area.
  - 0

- **Mathematics**
  - Met by MAT120, or MAT121, or MAT122 OR
  - Higher Level Math Course in Program Prerequisites area.
  - 0

- **Distribution: Credits: 2**

- **Humanities/Fine Arts**
  - Any approved course in the Humanities and Fine Arts area.
  - 2

- **Natural Science**
  - Met by BIO201 and BIO202 in Program Prerequisites areas.
  - 0

- **Social and Behavioral Sciences**
  - Met by PSY101 in Required Courses area.
  - 0
Oracle Database Administration Certificate Requirements

Division Chair - Instructional Computing: Dr. Valerie Akuna (623) 935-8079

Program Description: This program provides students with the latest Oracle Database Administration skills necessary to perform the duties of an Oracle DBA as well as the requisite knowledge needed for the Oracle Certified Professional (OCP) Program examinations.

Note: Students should consult with an advisor in planning their academic schedule in order to complete degree or certificate requirements in an expedient manner. Required courses may not be available every semester or year.

Program Prerequisites: (7 Credits)  
CIS105 Survey of Computer Information Systems 3  
CIS122AC UNIX Operating System: Multi-User 1  
+ ENG101 First Year Composition (3) OR  
OAS108 Business English (3) 3

Required Courses: (16 Credits)  
+ CIS119DO Introduction to Oracle: SQL 3  
+ CIS119DP Oracle: Database Administration 3  
+ CIS119DQ Oracle: Backup and Recovery 2  
+ CIS119DR Oracle: Performance: Tuning 3  
+ CIS164AG Oracle: Data Modeling and Relational Database Design 2  
MGT101 Techniques of Supervision (3) OR  
MGT175 Business Organization and Management (3) 3

(Note: + indicates course has prerequisites and/or corequisites)  
NOTE: Students must earn a grade of “C” or better in all courses within the program.

ORGANIZATIONAL MANAGEMENT

Division Chair - Occupational Education: Fredrick Maihofer (623) 935-8468

Degree: Associate in Applied Science (AAS), Organizational Management  
(Certificate: Organizational Leadership)

Organizational Management AAS Degree Requirements

Program Description: The Associate in Applied Science (AAS) in Organizational Management provides students with a customized curriculum specific to the student’s individual needs in addition to the knowledge and skills needed in today’s changing workplace. The program develops leadership and communication skills and techniques for planning, directing, and evaluating business situations, with an emphasis on effective allocation of time, money, materials, space, and personnel. The curriculum combines coursework in leadership with a general education component.

Program Notes:  
+indicates course has prerequisites and/or corequisites

Admission Criteria: None

Program Prerequisites: None

Required Courses: Credits: 17-18  
Certificate of Completion in Organizational Leadership (5731) 17-18

Restricted Electives: Credits: 19-22
Students must choose 19-22 industry/job specific course credits from any MCCCD occupational program and have them approved by a department chair. These industry/job specific course credits must include a minimum of 9 credits with a common subject.
General Education Requirements: (25-27 Credits)
Core: (15-17 Credits)

First-Year Composition:
+ Any approved general education course in the First-Year Composition area. 6

Oral Communication:
Any approved general education course in the Oral Communications area. 3

Critical Reading:
+ Any approved general education course in the Critical Reading area. 3

Mathematics:
+ Any approved general education course in the Critical Reading area. 3-5

Distribution: (10 Credits)

Humanities and Fine Arts:
Any approved general education course in the Humanities and Fine Arts area 3

Social and Behavioral Sciences:
Any approved general studies course in the Social and Behavioral Sciences area 3

Natural Sciences:
Any approved general education course in the Natural Sciences area 4

(Note: + indicates course has prerequisites and/or corequisites)
NOTE: Students must earn a grade of “C” or better for each course in the “Required Courses” area.

Organizational Leadership Certificate Requirements

Program Description: The Certificate of Completion (CCL) in Organizational Leadership provides students with knowledge and skills needed in today’s changing workplace. The program develops leadership and communication skills and techniques for planning, directing, and evaluating business situations. This program also emphasizes procedures for effective allocation of time, money, materials, space, and personnel.

Program Notes:
+indicates course has prerequisites and/or corequisites
Students must earn a grade of “C” or better for each course in the “Required Courses” area.

Required Courses: (17-18 Credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPC110</td>
<td>Computer Usage and Applications (3) OR</td>
<td></td>
</tr>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems (3)</td>
<td>3</td>
</tr>
<tr>
<td>GBS110</td>
<td>Human Relations in Business and Industry (3) OR</td>
<td></td>
</tr>
<tr>
<td>MGT251</td>
<td>Human Relations in Business (3)</td>
<td>3</td>
</tr>
<tr>
<td>+ GBS233</td>
<td>Business Communications (3) OR</td>
<td></td>
</tr>
<tr>
<td>+ TQM105</td>
<td>Writing for Quality Results (2)</td>
<td>2-3</td>
</tr>
<tr>
<td>MGT175</td>
<td>Business Organization and Management</td>
<td>3</td>
</tr>
<tr>
<td>GBS151</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>MGT101</td>
<td>Techniques of Supervision (3) OR</td>
<td></td>
</tr>
<tr>
<td>MGT229</td>
<td>Management and Leadership I (3)</td>
<td>3</td>
</tr>
</tbody>
</table>
POWER PLANT TECHNOLOGY

Division Chair - Occupational Education: Fredrick Maihofer  (623) 935-8468

Power Plant Technology AAS Degree Requirements

Program Description: The Associate of Applied Science in Power Plant Technology is designed to provide power plant staff/apprentices with trade-related classroom training as required by the US Department of Labor, Bureau of Apprenticeship and Training, and the State of Arizona, Apprenticeship Division. This program consists of a core curriculum that is common to all power plant apprenticeships. The apprentice selects a track of study - mechanical, electrical, instrumentation, heating ventilation and air conditioning, welding or machining – to complete specialized, craft-related training.

Admission Criteria:
Acceptance to Power Plant Technology program.

Required Courses: (21 Credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPC101AA</td>
<td>Introduction to Microcomputers I: IBM</td>
<td>1</td>
</tr>
<tr>
<td>GTC/FAC/MIT/OSH106</td>
<td>Industrial Safety</td>
<td>2</td>
</tr>
<tr>
<td>GTC/MET107</td>
<td>Technical Mathematics I</td>
<td>3</td>
</tr>
<tr>
<td>+GTC/MET108</td>
<td>Technical Mathematics II</td>
<td>3</td>
</tr>
<tr>
<td>GTC216</td>
<td>Properties of Materials</td>
<td>3</td>
</tr>
<tr>
<td>PPT101</td>
<td>Hand and Power Tools</td>
<td>1</td>
</tr>
<tr>
<td>PPT103</td>
<td>Print Reading and Plant Drawings</td>
<td>1</td>
</tr>
<tr>
<td>PPT118</td>
<td>Conduct of Maintenance</td>
<td>1</td>
</tr>
<tr>
<td>PPT200</td>
<td>Industry Events</td>
<td>1</td>
</tr>
<tr>
<td>PPT202</td>
<td>Plant Systems and Components I</td>
<td>2</td>
</tr>
<tr>
<td>+PPT203</td>
<td>Plant Systems and Components II</td>
<td>2</td>
</tr>
<tr>
<td>PPT204</td>
<td>Measuring and Test Equipment</td>
<td>1</td>
</tr>
</tbody>
</table>

Restricted Elective: (17 Credits)

Students will select one of the following tracks and complete 17 craft-related credits from the list of restricted elective courses indicated in each specialty track below.

Track I: Power Plant Technology: Mechanical

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPT102</td>
<td>Introduction to Electricity</td>
<td>3</td>
</tr>
<tr>
<td>PPT104</td>
<td>Properties of Materials</td>
<td>1</td>
</tr>
<tr>
<td>PPT105</td>
<td>Air Compressor Principles</td>
<td>1</td>
</tr>
<tr>
<td>PPT106</td>
<td>Diesel Engine Systems</td>
<td>1</td>
</tr>
<tr>
<td>PPT107</td>
<td>Lubrication</td>
<td>1</td>
</tr>
<tr>
<td>PPT108</td>
<td>Turbines</td>
<td>1</td>
</tr>
<tr>
<td>PPT109</td>
<td>Pipefitting Auxiliaries I</td>
<td>2</td>
</tr>
<tr>
<td>PPT110</td>
<td>Valves Maintenance I</td>
<td>2</td>
</tr>
<tr>
<td>PPT112</td>
<td>Principles of Machining</td>
<td>3</td>
</tr>
<tr>
<td>PPT113</td>
<td>Pumps I</td>
<td>2</td>
</tr>
<tr>
<td>PPT114</td>
<td>Drive and Gear Components</td>
<td>1</td>
</tr>
<tr>
<td>PPT115</td>
<td>Hydraulics and Pneumatics</td>
<td>2</td>
</tr>
<tr>
<td>PPT116</td>
<td>Introduction to Welding and Metal Fabrication</td>
<td>3</td>
</tr>
<tr>
<td>PPT117</td>
<td>Forklift Operations</td>
<td>1</td>
</tr>
<tr>
<td>PPT119</td>
<td>Instrument Air Compressor Maintenance</td>
<td>2</td>
</tr>
<tr>
<td>PPT205</td>
<td>Rigging</td>
<td>2</td>
</tr>
<tr>
<td>PPT206</td>
<td>Bearings</td>
<td>1</td>
</tr>
<tr>
<td>PPT207</td>
<td>Heat Exchangers</td>
<td>1</td>
</tr>
<tr>
<td>PPT208</td>
<td>Thermal Insulation</td>
<td>0.5</td>
</tr>
<tr>
<td>+PPT209</td>
<td>Pipefitting Auxiliaries II</td>
<td>2</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>PPT210</td>
<td>Valve Maintenance II</td>
<td>3</td>
</tr>
<tr>
<td>PPT211</td>
<td>Couplings</td>
<td>0.5</td>
</tr>
<tr>
<td>PPT212</td>
<td>Control Valves and Actuators</td>
<td>1</td>
</tr>
<tr>
<td>PPT213</td>
<td>Pumps II</td>
<td>3</td>
</tr>
<tr>
<td>PPT214</td>
<td>Machine Alignment</td>
<td>3</td>
</tr>
<tr>
<td>PPT215</td>
<td>Relief and Safety Valves</td>
<td>1</td>
</tr>
<tr>
<td>PPT217</td>
<td>Refueling Overview</td>
<td>1</td>
</tr>
<tr>
<td>PPT218</td>
<td>Lathe Operations</td>
<td>2</td>
</tr>
<tr>
<td>PPT219</td>
<td>Milling Machine Operations</td>
<td>2</td>
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</tbody>
</table>

**Track II: Power Plant Technology: Electrical**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELC119</td>
<td>Concepts of Electricity and Electronics</td>
<td>3</td>
</tr>
<tr>
<td>ELC120</td>
<td>Solid State Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>ELC210</td>
<td>AC Machinery and DC Machinery</td>
<td>3</td>
</tr>
<tr>
<td>ELC217</td>
<td>Motor Controls</td>
<td>3</td>
</tr>
<tr>
<td>+ELC218</td>
<td>Variable Frequency Drives</td>
<td>3</td>
</tr>
<tr>
<td>ELC217</td>
<td>Mathematics for Electronics I</td>
<td>3</td>
</tr>
<tr>
<td>+ELT102</td>
<td>Mathematics for Electronics II</td>
<td>3</td>
</tr>
<tr>
<td>+ELT113</td>
<td>Basic Electronics</td>
<td>4</td>
</tr>
</tbody>
</table>

**Track III: Power Plant Technology: Instrumentation**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELT101</td>
<td>Mathematics for Electronics I</td>
<td>3</td>
</tr>
<tr>
<td>+ELT102</td>
<td>Mathematics for Electronics II</td>
<td>3</td>
</tr>
<tr>
<td>ELT113</td>
<td>Basic Electronics</td>
<td>4</td>
</tr>
<tr>
<td>+ELT131</td>
<td>Digital and Logic Circuits</td>
<td>4</td>
</tr>
<tr>
<td>+ELT195</td>
<td>Solid State Electronics</td>
<td>4</td>
</tr>
<tr>
<td>+ELT251</td>
<td>Electronic Instrumentation</td>
<td>3</td>
</tr>
<tr>
<td>+NET183AA</td>
<td>Operating Systems/PC</td>
<td>2</td>
</tr>
<tr>
<td>PPT102</td>
<td>Introduction to Electricity</td>
<td>3</td>
</tr>
<tr>
<td>PPT115</td>
<td>Hydraulics and Pneumatics</td>
<td>2</td>
</tr>
</tbody>
</table>

**Track IV: Power Plant Technology: Heating, Ventilation and Air Conditioning**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAC101</td>
<td>Refrigeration Components and Applications I</td>
<td>2</td>
</tr>
<tr>
<td>+FAC101LL</td>
<td>Refrigeration Components and Applications I Lab</td>
<td>1</td>
</tr>
<tr>
<td>FAC105</td>
<td>Electricity for Industry</td>
<td>3</td>
</tr>
<tr>
<td>+FAC105LL</td>
<td>Electricity for Industry Lab</td>
<td>1</td>
</tr>
<tr>
<td>FAC115</td>
<td>Motors, Controls and Wiring Diagrams</td>
<td>3</td>
</tr>
<tr>
<td>+FAC115LL</td>
<td>Motors, Controls and Wiring Diagrams Lab</td>
<td>1</td>
</tr>
<tr>
<td>FAC210</td>
<td>Facilities Air Conditioning Systems</td>
<td>3</td>
</tr>
<tr>
<td>+FAC210LL</td>
<td>Facilities Air Conditioning Systems Lab</td>
<td>1</td>
</tr>
<tr>
<td>HVA112</td>
<td>Heating and Air Conditioning</td>
<td>3</td>
</tr>
<tr>
<td>+HVA112LL</td>
<td>Heating and Air Conditioning Lab</td>
<td>1</td>
</tr>
<tr>
<td>HVA143</td>
<td>Load Calculation and Duct Design</td>
<td>3</td>
</tr>
<tr>
<td>+HVA234</td>
<td>HVAC and Refrigeration Installation</td>
<td>3</td>
</tr>
<tr>
<td>+HVA234LL</td>
<td>HVAC and Refrigeration Installation Lab</td>
<td>1</td>
</tr>
</tbody>
</table>

**Track V: Power Plant Technology: Welding**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>WLD101</td>
<td>Welding I</td>
<td>3</td>
</tr>
<tr>
<td>WLD106</td>
<td>Arc Welding</td>
<td>5</td>
</tr>
<tr>
<td>+WLD201</td>
<td>Welding II</td>
<td>3</td>
</tr>
<tr>
<td>+WLD206</td>
<td>Advanced Welding – Heliarc and Wire Feed</td>
<td>5</td>
</tr>
<tr>
<td>+WLD208</td>
<td>Advanced Arc Welding – Certification</td>
<td>5</td>
</tr>
</tbody>
</table>

**Track VI: Power Plant Technology: Machining**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MET102</td>
<td>Machine Processes, Theory and Application</td>
<td>5</td>
</tr>
<tr>
<td>MET110</td>
<td>Survey of Manufacturing Materials</td>
<td>1</td>
</tr>
<tr>
<td>+MET112</td>
<td>Inspection Techniques</td>
<td>3</td>
</tr>
</tbody>
</table>
Power Plant Technology AAS Degree Requirements (Cont.)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MET114</td>
<td>Machine Trades Print Reading</td>
<td>3</td>
</tr>
<tr>
<td>+MET115</td>
<td>Teamwork Dynamics in Manufacturing</td>
<td>2</td>
</tr>
<tr>
<td>MET140</td>
<td>Computer-Aided Drafting for Manufacturing</td>
<td>3</td>
</tr>
<tr>
<td>+MET203</td>
<td>Machine Tools</td>
<td>5</td>
</tr>
<tr>
<td>+MET206</td>
<td>CNC Programming</td>
<td>3</td>
</tr>
<tr>
<td>+MET236</td>
<td>CAD/CAM Computer Numerical Control (CNC) Programming</td>
<td>3</td>
</tr>
<tr>
<td>+MET260</td>
<td>Tooling and Fixturing</td>
<td>3</td>
</tr>
<tr>
<td>+MET264</td>
<td>Manufacturing Process Planning</td>
<td>3</td>
</tr>
</tbody>
</table>

General Studies Requirements: (22 Credits)
Core: (12 Credits)

First-Year Composition:
+ ENGI01  First-Year Composition (3) AND  
+ ENGI02  First-Year Composition (3) OR  
+ ENGI11  Technical Writing (3)  

Oral Communication:
COM100  Introduction to Human Communication (3) OR  
COM110  Interpersonal Communication (3)  

Critical Reading:
+ CRE101  Critical and Evaluative Reading I (3) OR  
+ CRE111  Critical Reading for Business and Industry (3) OR  Equivalent by Assessment  

Mathematics:
Waived.  

Note: Waiver submitted and on file at the District Curriculum Office for GTC/MET108 addressing the embedded competencies within the occupational program.

Distribution: (10 Credits)

Humanities and Fine Arts:
Any approved general education course in the Humanities and Fine Arts area  

Social and Behavioral Sciences:
Any approved general education course in the Social and Behavioral Sciences area  

Natural Sciences:
+PHY110  Fundamentals of Physical Science  
(Note: + indicates course has prerequisites and/or corequisites)

NOTE: Students must earn a grade of “C” or better for all courses required within the program.
# PROGRAMMING AND SYSTEM ANALYSIS

**Division Chair - Instructional Computing:** Dr. Valerie Akuna  (623) 935-8079

**Degree:**  Associate in Applied Science (AAS), Programming and System Analysis  
(NOTE: See page 72 for AAS degree requirements.)

**Certificate:**  Programming and System Analysis

## Programming and System Analysis AAS Degree Requirements

### Program Description:
The Associate in Applied Science (AAS) program provides an in-depth exploration of different computer language and technical skills. The program includes, but is not limited to the following: operating systems, local area networks, business communication, team roles, and dynamics.

**Note:** Students should consult with an advisor in planning their academic schedule in order to complete degree or certificate requirements in an expedient manner. Required courses may not be available every semester or year.

### Program Prerequisites: (3 credits)
- CRE101 Critical and Evaluative Reading I (3) OR  
  Equivalent by assessment  
  
### Required Courses: (25-26 Credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPC/CIS117DM</td>
<td>Microsoft Access: Database Management (3) OR</td>
<td></td>
</tr>
<tr>
<td>BPC/CIS117AM</td>
<td>Database Management: Microsoft Access - Level I (1) AND</td>
<td></td>
</tr>
<tr>
<td>+ BPC/CIS117BM</td>
<td>Database Management: Microsoft Access - Level II (1) AND</td>
<td></td>
</tr>
<tr>
<td>+ BPC/CIS117CM</td>
<td>Database Management: Microsoft Access - Level III (1)</td>
<td>3</td>
</tr>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>BPC/CIS121AB</td>
<td>MS-DOS (1) OR</td>
<td></td>
</tr>
<tr>
<td>CIS121AE</td>
<td>Windows Operating System: Level I (1) OR</td>
<td></td>
</tr>
<tr>
<td>CIS126AA</td>
<td>UNIX Operating System: Level I (1) OR</td>
<td></td>
</tr>
<tr>
<td>CIS126AL</td>
<td>Linux Operating System I (1)</td>
<td>1</td>
</tr>
<tr>
<td>+ CIS150</td>
<td>Programming Fundamentals (3) OR</td>
<td>3</td>
</tr>
<tr>
<td>+ CIS150AB</td>
<td>Object-Oriented Programming Fundamentals (3)</td>
<td>3</td>
</tr>
<tr>
<td>+ CIS159</td>
<td>Visual Basic Programming I</td>
<td>3</td>
</tr>
<tr>
<td>CIS162</td>
<td>C Programming I (3) OR</td>
<td></td>
</tr>
<tr>
<td>+ CIS162AA</td>
<td>C: Level I (3) OR</td>
<td></td>
</tr>
<tr>
<td>+ CIS162AB</td>
<td>C++: Level I (3) OR</td>
<td></td>
</tr>
<tr>
<td>+ CIS162AC</td>
<td>Visual C++: Level I (3) OR</td>
<td></td>
</tr>
<tr>
<td>+ CIS162AD</td>
<td>C#: Level I (3)</td>
<td>3</td>
</tr>
<tr>
<td>+ CIS190</td>
<td>Introduction to Local Area Networks (3) OR</td>
<td></td>
</tr>
<tr>
<td>+ CNT140AA</td>
<td>Cisco Networking Fundamentals (4) OR</td>
<td></td>
</tr>
<tr>
<td>+ MST140</td>
<td>Microsoft Networking Essentials (3)</td>
<td>3-4</td>
</tr>
<tr>
<td>+ CIS225</td>
<td>Business Systems Analysis and Design (3) OR</td>
<td>3</td>
</tr>
<tr>
<td>+ CIS225AB</td>
<td>Object-Oriented Analysis and Design (3)</td>
<td>3</td>
</tr>
<tr>
<td>+ GBS233</td>
<td>Business Communication</td>
<td>3</td>
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</table>

### Restricted Electives: (15 Credits)

<table>
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<tr>
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<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CIS126DA</td>
<td>UNIX Operating System</td>
<td>3</td>
</tr>
<tr>
<td>+CIS166</td>
<td>Web Scripting/Programming (3) OR</td>
<td></td>
</tr>
<tr>
<td>+CIS166AA</td>
<td>Introduction to JavaScripting (3) OR</td>
<td></td>
</tr>
<tr>
<td>+CIS166AB</td>
<td>Web Scripting with Perl/CGI (3)</td>
<td>3</td>
</tr>
<tr>
<td>+CIS169</td>
<td>Introduction to Visual Basic for Applications</td>
<td>3</td>
</tr>
<tr>
<td>+CIS224</td>
<td>Project Management Microsoft Project for Windows</td>
<td>3</td>
</tr>
<tr>
<td>+CIS250</td>
<td>Management Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>+ CIS259</td>
<td>Visual Basic Programming II</td>
<td>3</td>
</tr>
<tr>
<td>+ CIS262++</td>
<td>C Programming: Level II (any module)</td>
<td>3</td>
</tr>
<tr>
<td>+ CIS263AA</td>
<td>Java Programming: Level II</td>
<td>3</td>
</tr>
<tr>
<td>+ CIS290AC</td>
<td>Computer Information Systems Internship</td>
<td>3</td>
</tr>
</tbody>
</table>
Programming and System Analysis AAS Degree Requirements - Continues...

General Studies Requirements: (22 Credits)
Core: (12 Credits)
First-Year Composition:
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3)

Oral Communication:
Any approved general education course in the Oral Communication area 3

Critical Reading:
+ Met by CRE101 in Program Prerequisites area 0

Mathematics:
+ MAT212 Brief Calculus 3

Distribution: (10 Credits)
Humanities and Fine Arts:
Any approved general education course in the Humanities and Fine Arts area 3

Social and Behavioral Sciences:
ECN211 Macroeconomic Principles (3) OR
ECN212 Microeconomic Principles (3) OR
SBU200 Society and Business (3) 3

Natural Sciences:
Any approved general education course in the Natural Sciences area 4

(Note: + indicates course has prerequisites and/or corequisites)
NOTE: Students must earn a grade of “C” or better for all courses required within the program.

Programming and System Analysis Certificate Requirements
Program Description: The Certificate of Completion (CCL) program provides an in-depth exploration of different computer language and technical skills. Includes, but is not limited to the following: operating systems, local area networks, business communication, team roles, and dynamics.

Program Prerequisites: (3 credits)
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) OR
Equivalent 3

Required Courses: (25-26 Credits)
BPC/CIS117DM Microsoft Access: Database Management (3) OR
BPC/CIS117AM Database Management: Microsoft Access - Level I (1) AND
+ BPC/CIS117BM Database Management: Microsoft Access - Level II (1) AND
+ BPC/CIS117CM Database Management: Microsoft Access - Level III (1) 3
CIS105 Survey of Computer Information Systems 3
CIS121AB MS-DOS (1) OR
CIS121AE Windows Operating System: Level I (1) OR
CIS126AA UNIX Operating System: Level I (1) OR
CIS126AL Linux Operating System I (1)
+ CIS150 Programming Fundamentals (3) OR
+ CIS150AB Object-Oriented Programming Fundamentals (3) 3
Select 2 courses for a total of 6 credits:

+ CIS159 Visual Basic Programming I (3) OR
+ CIS162 C Programming I (3) OR
+ CIS162AA C: Level I (3) OR
+ CIS162AB C++: Level I (3) OR
+ CIS162AC Visual C ++: Level I (3) OR
+ CIS162AD C#: Level I (3) OR
+ CIS163AA Java Programming: Level I (3) 6
+ CIS190 Introduction to Local Area Networks (3) OR
+ CNT140AA Cisco Networking Fundamentals (4) OR
+ MST140 Microsoft Networking Essentials (3) 3-4
+ CIS225 Business Systems Analysis and Design (3) OR
+ CIS225AB Object-Oriented Analysis and Design (3) 3
+ GBS233 Business Communication 3

(Note: + indicates course has prerequisites and/or corequisites)

NOTE: Students must earn a grade of “C” or better for all courses required within the program.

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RETAIL MANAGEMENT

Division Chair - Occupational Education: Fredrick Maihofer (623) 935-8468

Degree: Associate in Applied Science (AAS), Retail Management
(NOTE: See page 72 for AAS degree requirements.)

Certificate: Retail Management

Retail Management AAS Degree Requirements

Program Description: The Retail Management degree is designed to prepare individuals working in the retail management, food industry, and related fields, for the mid-level management position challenges of the future. The curriculum encompasses business essentials and also emphasizes the skill sets needed for effective management and communication in the work environment. Instruction will provide the background and knowledge necessary for students to develop the judgment skills they must exercise as business managers.

Program Notes:
Students must earn a grade of “C” or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.

Program Prerequisites: None

Required Courses: (39 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC111</td>
<td>Accounting Principles I</td>
<td>3</td>
</tr>
<tr>
<td>+ ACC230</td>
<td>Uses of Accounting Information I</td>
<td>3</td>
</tr>
<tr>
<td>+ ACC240</td>
<td>Uses of Accounting Information II</td>
<td>3</td>
</tr>
<tr>
<td>BPC110</td>
<td>Computer Usage and Applications (3) OR</td>
<td></td>
</tr>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems (3)</td>
<td>3</td>
</tr>
<tr>
<td>COM110</td>
<td>Interpersonal Communication (3) OR</td>
<td></td>
</tr>
<tr>
<td>IND133</td>
<td>Speaking in Business (3)</td>
<td>3</td>
</tr>
<tr>
<td>GBS110</td>
<td>Human Relations in Business and Industry (3)OR</td>
<td></td>
</tr>
<tr>
<td>MGT251</td>
<td>Human Relations in Business (3)</td>
<td>3</td>
</tr>
<tr>
<td>GBS131</td>
<td>Business Calculations (3) OR</td>
<td></td>
</tr>
<tr>
<td>+ GBS161</td>
<td>Mathematics of Business (3)</td>
<td>3</td>
</tr>
<tr>
<td>GBS205</td>
<td>Legal, Ethical, and Regulatory Issues in Business</td>
<td></td>
</tr>
<tr>
<td>+ GBS233</td>
<td>Business Communication</td>
<td>3</td>
</tr>
<tr>
<td>MGT101</td>
<td>Techniques of Supervision (3) OR</td>
<td></td>
</tr>
<tr>
<td>MGT229</td>
<td>Management and Leadership I (3)</td>
<td>3</td>
</tr>
</tbody>
</table>
Retail Management AAS Degree Requirements Continues...

MGT179 Utilizing the Human Resources Department (3) OR
MGT276 Personnel/Human Resources Management (3) 3
MKT268 Merchandising 3
MKT271 Principles of Marketing 3

General Education: (25 Credits)
CORE: (15 Credits)

First-Year Composition
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) OR
+ ENG111 Technical Writing (3) 6

ENG102 or ENG108 recommended for students pursuing a BAS degree at an Arizona university.

Oral Communication
+COM230 Small Group Communication 3

Critical Reading
+CRE101 Critical and Evaluative Reading I (3) OR
Equivalent by assessment 3

Mathematics
+MAT102 Mathematical Concepts/Applications (3) OR
Satisfactory completion of a higher level mathematics course 3

Distribution Credits: 10

Humanities and Fine Arts
Any approved general education course from the Humanities and Fine Arts area. 3

Social and Behavioral Sciences
SBU200 Society and Business 3

Natural Sciences
Any approved general education course from the Natural Sciences area. 4
Retail Management Certificate Requirements

Division Chair - Occupational Education: Fredrick Maihofer (623) 935-8461
Certificate: Retail Management

Program Description: The Retail Management Certificate is designed to prepare individuals working in the food industry, and related fields, for the management challenges of the future. The curriculum encompasses several business essentials and also emphasizes the skill sets needed for effective management and communication in the work environment.

Required Courses: (30 Credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC111</td>
<td>Accounting Principles I</td>
<td>3</td>
</tr>
<tr>
<td>BPC110</td>
<td>Computer Usage &amp; Application (3) OR</td>
<td></td>
</tr>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>+ENG101</td>
<td>First-Year Composition (3) OR</td>
<td></td>
</tr>
<tr>
<td>+ENG107</td>
<td>First-Year Composition for ESL</td>
<td>3</td>
</tr>
<tr>
<td>GBS131</td>
<td>Business Calculations (3) OR</td>
<td></td>
</tr>
<tr>
<td>+MAT102</td>
<td>Mathematical Concepts &amp; Applications (3)</td>
<td>3</td>
</tr>
<tr>
<td>+GBS233</td>
<td>Business Communication</td>
<td>3</td>
</tr>
<tr>
<td>COM110</td>
<td>Interpersonal Communication (3) OR</td>
<td></td>
</tr>
<tr>
<td>IND113</td>
<td>Speaking in Business</td>
<td>3</td>
</tr>
<tr>
<td>MGT101</td>
<td>Techniques of Supervision (3) OR</td>
<td></td>
</tr>
<tr>
<td>MGT229</td>
<td>Management and Leadership I</td>
<td>3</td>
</tr>
<tr>
<td>MGT179</td>
<td>Utilizing the Human Resource Department (3) OR</td>
<td></td>
</tr>
<tr>
<td>MGT276</td>
<td>Personnel/Human Resources Management</td>
<td>3</td>
</tr>
<tr>
<td>+MKT268</td>
<td>Mechandising</td>
<td>3</td>
</tr>
<tr>
<td>MKT271</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
</tbody>
</table>

(Note: + indicates course has prerequisites and/or corequisites)

NOTE: Students must earn a grade of “C” or better in all courses within the program.

Small Business Management Certificate Requirements

Division Chair - Occupational Education: Fredrick Maihofer (623) 935-8468
Certificate: Small Business Management

Program Description: This program is designed to meet the needs of individuals who wish to own and/or manage a small business. It is a flexible program composed of one and two-credit courses, which can be offered on non-traditional schedules and can be completed rapidly. These factors increase the opportunity for more members of the small business community to take advantage of these courses. This program offers a planned content core. Students earn a certificate upon program completion.

Note: Students should consult with an advisor in planning their academic schedule in order to complete degree or certificate requirements in an expedient manner.

Required Courses: (9 Credits)

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
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<tr>
<td>SBS200</td>
<td>Small Business Operations</td>
<td>2</td>
</tr>
<tr>
<td>SBS202</td>
<td>Small Business Bookkeeping and Tax Preparation</td>
<td>1</td>
</tr>
<tr>
<td>SBS203</td>
<td>Financing and Cash Management for a Small Business</td>
<td>1</td>
</tr>
<tr>
<td>SBS204</td>
<td>Small Business Marketing and Advertising</td>
<td>2</td>
</tr>
<tr>
<td>SBS214</td>
<td>Small Business Customer Relations</td>
<td>1</td>
</tr>
<tr>
<td>SBS220</td>
<td>Internet Marketing for Small Business</td>
<td>2</td>
</tr>
</tbody>
</table>

(Note: + indicates course has prerequisites and/or corequisites)

NOTE: Students must earn a grade of “C” or better in all courses within the program.
SPEECH LANGUAGE PATHOLOGY ASSISTANT

Division Chair - Occupational Education: Fredrick Maihofer (623) 935-8468
Certificate: Speech Language Pathology Assistant

Degree: Associate in Applied Speech Language Pathology Assistant
(NOTE: See page 72 for AAS degree requirements.)

Speech Language Pathology Assistant AAS Degree Requirements

Program Description: The Associate in Applied Science (AAS) in Speech-Language Pathology Assistant is designed to provide comprehensive academic and practical education and training for Speech-Language Pathology Assistants. The program provides training in working with speech and language disordered adults and children, including bilingual populations. The program content is based upon the recommendations of the American Speech-Language Hearing Association (ASHA) and the Arizona State Licensure Statue for Speech Language Pathology Assistants. In addition to work in the classroom, the program provides students with the opportunity to gain practical experience in working with clients/patients in a variety of settings under the direction and supervision of an ASHA certified speech-language pathologist. A CCL in Speech-Language Pathology Assistant is also available.

Program Notes:
Students must earn a grade of “C” or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates any module.

Required Courses: (32 Credits)

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>SLP104</td>
<td>Speech, Language, Hearing Development</td>
<td>3</td>
</tr>
<tr>
<td>+SLP205</td>
<td>Introduction to Communication Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SLP210</td>
<td>Speech and Hearing Anatomy and Physiology</td>
<td>3</td>
</tr>
<tr>
<td>SLP212</td>
<td>Language Disorders and Rehabilitation</td>
<td>3</td>
</tr>
<tr>
<td>+SLP214</td>
<td>Speech Disorders and Rehabilitation</td>
<td>3</td>
</tr>
<tr>
<td>+SLP215</td>
<td>Speech and Hearing Disorders and Rehabilitation</td>
<td>3</td>
</tr>
<tr>
<td>+SLP217</td>
<td>Clinical Ethics and Documentation</td>
<td>3</td>
</tr>
<tr>
<td>+SLP218</td>
<td>Behavior Management</td>
<td>2</td>
</tr>
<tr>
<td>+SLP235AA</td>
<td>Speech-Language Pathology Practicum (1) AND</td>
<td></td>
</tr>
<tr>
<td>+SLP235AB</td>
<td>Speech-Language Pathology Practicum (2) OR</td>
<td></td>
</tr>
<tr>
<td>+SLP235AC</td>
<td>Speech-Language Pathology Practicum (3)</td>
<td>3</td>
</tr>
<tr>
<td>+SLP240</td>
<td>Assistive Technology and Augmentative Communication</td>
<td>3</td>
</tr>
<tr>
<td>+SLP242</td>
<td>Low Incidence Disabilities</td>
<td>3</td>
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Restricted Electives: (6-8 Credits)

<table>
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<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>COM263</td>
<td>Elements of Intercultural Communication</td>
<td>3</td>
</tr>
<tr>
<td>+ENG213</td>
<td>Introduction to the Study of Language</td>
<td>3</td>
</tr>
<tr>
<td>+PSY230</td>
<td>Introduction to Statistics</td>
<td>3</td>
</tr>
<tr>
<td>+PSY240</td>
<td>Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>+SLP298++</td>
<td>Special Projects (Any Suffixed Course)</td>
<td>1-3</td>
</tr>
<tr>
<td>SOC101</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>+SOC210</td>
<td>The Child in Society</td>
<td>3</td>
</tr>
</tbody>
</table>
Foreign Language Sequence
Any foreign language - i.e. SPA101 AND SPA102 OR SPA101AA AND SPA102AA

Choose 6-8 credits from the following Foreign Language sequence courses:

- **ARB+++** any ARB/Arabic sequence courses
- **CHI+++** any CHI/Chinese sequence courses
- **FRE+++** any FRE/French sequence courses
- **GER+++** any GER/German sequence courses
- **GRK+++** any GRK/Greek sequence courses
- **HEB+++** any HEB/Hebrew sequence courses
- **ITA+++** any ITA/Italian sequence courses
- **JPN+++** any JPN/Japanese sequence courses
- **POR+++** any POR/Portuguese sequence courses
- **LAT+++** any LAT/Latin sequence courses
- **NAV+++** any NAV/Navajo sequence courses
- **PIM+++** any PIM/Pima sequence courses
- **RUS+++** any RUS/Russian sequence courses
- **SPA+++** any SPA/Spanish sequence courses

General Education: (22-27 Credits)
CORE: (12-17 Credits)

**First-Year Composition**
- +ENG101 First-Year Composition (3) AND 3
- +ENG102 First-Year Composition (3) 3

**Oral Communication**
- COM110 Interpersonal Communication 3

**Critical Reading**
- +CRE101 Critical and Evaluative Reading I (3) OR 0-3
  - Equivalent by assessment

**Mathematics**
- Any approved general education course from the Mathematic area 3-5

**Distribution Credits: 10**
**Humanities and Fine Arts**
- Any approved general education course from the Humanities and Fine Arts area. 3

**Social and Behavioral Sciences**
- PSY101 Introduction to Psychology 3

**Natural Sciences**
- BIO100 Biology Concepts (4) OR 4
- BIO156 Introductory Biology for Allied Health (4)
Speech Language Pathology Assistant Certificate Requirements

Division Chair - Occupational Education: Fredrick Maihofer  (623) 935-8461
Certificate: Speech Language Pathology Assistant

Program Description: The Certificate of Completion (CCL) in Speech-Language Pathology Assistant is designed to provide comprehensive academic and practical education and training for Speech-Language Pathology Assistants. The program provides training in working with speech and language disordered adults and children, including bilingual populations. The program content is based upon the recommendations of the American Speech-Language-Hearing Association (ASHA) and the Arizona State Licensure Statue for Speech Language Pathology Assistants. In addition to work in the classroom, the program provides students with the opportunity to gain practical experience in working with clients/patients in a variety of settings under the direction and supervision of an ASHA certified speech-language pathologist. An AAS in Speech-Language Pathology Assistant is also available.

Program Notes:
Students must earn a grade of “C” or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates any module.

Required Courses: (35 Credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ENG101</td>
<td>First-Year Composition</td>
<td>3</td>
</tr>
<tr>
<td>SLP104</td>
<td>Speech, Language, Hearing Development</td>
<td>3</td>
</tr>
<tr>
<td>+SLP205</td>
<td>Introduction to Communication Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SLP210</td>
<td>Speech and Hearing Anatomy and Physiology</td>
<td>3</td>
</tr>
<tr>
<td>SLP212</td>
<td>Language Disorders and Rehabilitation</td>
<td>3</td>
</tr>
<tr>
<td>+SLP214</td>
<td>Speech Disorders and Rehabilitation</td>
<td>3</td>
</tr>
<tr>
<td>+SLP215</td>
<td>Speech and Hearing Disorders and Rehabilitation</td>
<td>3</td>
</tr>
<tr>
<td>+SLP217</td>
<td>Clinical Ethics and Documentation</td>
<td>3</td>
</tr>
<tr>
<td>+SLP218</td>
<td>Behavior Management</td>
<td>2</td>
</tr>
<tr>
<td>+SLP235AA</td>
<td>Speech-Language Pathology Practicum (1) AND</td>
<td></td>
</tr>
<tr>
<td>+SLP235AB</td>
<td>Speech-Language Pathology Practicum (2) OR</td>
<td></td>
</tr>
<tr>
<td>+SLP235AC</td>
<td>Speech-Language Pathology Practicum (3)</td>
<td>3</td>
</tr>
<tr>
<td>+SLP240</td>
<td>Assistive Technology and Augmentative Communication</td>
<td>3</td>
</tr>
<tr>
<td>+SLP242</td>
<td>Low Incidence Disabilities</td>
<td>3</td>
</tr>
</tbody>
</table>
## STRENGTH, NUTRITION, AND PERSONAL TRAINING

**Fitness Manager - Lyle Bartelt - (623) 935-8405**  
**Certificate:** Retail Management

**Degree:** Associate in Applied Science Strength, Nutrition and Personal Training  
*(NOTE: See page 72 for AAS degree requirements.)*

### Strength, Nutrition, and Personal Training AAS Degree Requirements

**Program Description:** The Strength, Nutrition, and Personal Training Associate in Applied Science (AAS) prepares students with the knowledge and experience required to be eligible for the American College of Sports Medicine (ACSM) Health and Fitness Instructor Certification, ACSM personal trainer certification, the National Strength and Conditioning Association (NSCA) personal trainer certification, and the American Council on Exercise (ACE) personal trainer certification. This degree will provide students with a stronger educational background making them more marketable in the field of fitness and nutrition. This degree will also meet the needs of individuals with existing degrees in such fields as Exercise Physiology, Nutrition, Athletic Training and other health related disciplines. Registered dietitians, clinical exercise physiologists, personal trainers, exercise specialists, strength and conditioning specialists, coaches, athletes and others interested in acquiring knowledge in exercise, nutrition and health are also eligible for this program.

### Program Notes:
- Students must earn a grade of “C” or better in all courses within the program.
- + indicates course has prerequisites and/or corequisites.

**Required Courses: (41-42 Credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FON100</td>
<td>Introductory Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>+ FON210</td>
<td>Sports Nutrition and Supplements for Physical Activities</td>
<td>2</td>
</tr>
<tr>
<td>+ FON230</td>
<td>Nutrition for Special Populations</td>
<td>3</td>
</tr>
<tr>
<td>+ FON247</td>
<td>Weight Management Theory</td>
<td>3</td>
</tr>
<tr>
<td>MGT253</td>
<td>Owning and Operating a Small Business</td>
<td>3</td>
</tr>
<tr>
<td>HES154</td>
<td>First Aid/Cardiopulmonary Resuscitation (3) OR BLS Health Care Provider and First Aid Certification</td>
<td>3</td>
</tr>
<tr>
<td>PED112</td>
<td>Professional Applications of Fitness Principles</td>
<td>3</td>
</tr>
<tr>
<td>PED125</td>
<td>Exercise Science</td>
<td>3</td>
</tr>
<tr>
<td>+ PED139++</td>
<td>Practical Applications of Personal Training Skills and Techniques Internship (3) (any module) OR</td>
<td>3</td>
</tr>
<tr>
<td>+ PED285</td>
<td>Exercise Program Design and Instruction (3)</td>
<td>3</td>
</tr>
<tr>
<td>PED145</td>
<td>Guidelines for Exercise Testing and Prescription</td>
<td>3</td>
</tr>
<tr>
<td>PSY101</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>+ PSY215</td>
<td>Introduction to Sport Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

**AND**

Choose one of the following series for 5-6 credits:

**Series 1:** (6 Credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PED212SC</td>
<td>Instructional Competency Lab: Muscular Strength and Conditioning</td>
<td>2</td>
</tr>
<tr>
<td>PED212CR</td>
<td>Instructional Competency Laboratory: Cardiorespiratory Exercises and Activities</td>
<td>2</td>
</tr>
<tr>
<td>PED212FL</td>
<td>Instructional Competency Laboratory: Flexibility and Mind-Body Exercises</td>
<td>2</td>
</tr>
</tbody>
</table>
Strength, Nutrition and Personal Training Required Courses Continues...

OR
Series 2: (5 Credits)
PED130 Strength Fitness-Physiological Principles and Training Techniques 3
PED132 Cardiovascular Fitness: Physiological Principles and Training Techniques (2) OR
PED212CR Instructional Competency Laboratory: Cardiorespiratory Exercise and Activities (2) 2

OR
Series 3: (5 Credits)
+PED275 Methods of Enhancing Physical Performance 3
PED132 Cardiovascular Fitness: Physiological Principles and Training Techniques (2) OR
PED212CR Instructional Competency Laboratory: Cardiorespiratory Exercise and Activities (2) 2

General Education Requirements: (25-27 Credits)
Core: (15-17 Credits)
First-Year Composition:
+ENG101 First-Year Composition (3) AND
+ENG102 First-Year Composition (3) OR
+ENG107 First-Year Composition for ESL (3) AND
+ENG108 First-Year Composition for ESL (3) 6

Oral Communication:
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) 3

Critical Reading:
+CRE101 Critical and Evaluative Reading I 3

Mathematics:
+MAT120 Intermediate Algebra (5) OR
+MAT121 Intermediate Algebra (4) OR
+MAT122 Intermediate Algebra (3) 3-5

Distribution: (10 Credits)

Humanities and Fine Arts:
Any approved general education course in the Humanities and Fine Arts area 3

Social and Behavioral Sciences:
CFS205 Human Development (3) OR
HES100 Healthful Living (3) 3

Natural Sciences:
BIO160 Introduction to Human Anatomy and Physiology 4
# STRENGTH AND CONDITIONING PERSONAL TRAINER

**Certificate:** Strength and Conditioning Personal Trainer

**Strength and Conditioning Personal Trainer Certificate Requirements**

**Program Description:** The Strength and Conditioning Personal Trainer certificate prepares students for employment in the fitness industry as Strength and Conditioning Personal Trainers/Coaches. This curriculum provides students with a fundamental knowledge of human physiology and anatomy, prevention and treatment of exercise related injuries, emergency response readiness, health appraisals and assessments; application of exercise fitness principles and strength training techniques; a fundamental knowledge of nutrition, weight control, stress management and exercise physiology, and biomechanics; skills in exercise testing and fitness measures as well as writing exercise prescriptions and program designs for diverse populations.

**Note:** Students should consult with an advisor in planning their academic schedule in order to complete degree or certificate requirements in an expedient manner.

**Program Notes:**

+ indicates course has prerequisites and/or corequisites.

**Required Courses: (31 Credits)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO160</td>
<td>Introduction to Human Anatomy and Physiology</td>
<td>4</td>
</tr>
<tr>
<td>HES154</td>
<td>First Aid/Cardiopulmonary Resuscitation</td>
<td>3</td>
</tr>
<tr>
<td>HES271</td>
<td>Prevention and Treatment of Athletic Injuries</td>
<td>3</td>
</tr>
<tr>
<td>PED112</td>
<td>Professional Applications of Fitness Principles</td>
<td>3</td>
</tr>
<tr>
<td>PED125</td>
<td>Exercise Science</td>
<td>3</td>
</tr>
<tr>
<td>PED130</td>
<td>Strength Fitness-Physiological Principles and Training Techniques</td>
<td>3</td>
</tr>
<tr>
<td>PED145</td>
<td>Guidelines for Exercise Testing and Prescription</td>
<td>3</td>
</tr>
<tr>
<td>HES100</td>
<td>Healthful Living</td>
<td>3</td>
</tr>
<tr>
<td>+PED275</td>
<td>Methods of Enhancing Physical Performance</td>
<td>3</td>
</tr>
<tr>
<td>+PED285</td>
<td>Exercise Program Design and Instruction</td>
<td>3</td>
</tr>
</tbody>
</table>
Teacher Assisting AAS Degree Requirements

Program Description: This program is designed to prepare for employment as an assistant to the classroom teacher in grades k-12. The curriculum includes experiences as a teacher assistant in an educational setting under the leadership and supervision of a professional teacher. The program provides foundation work, which will allow the aide to pursue a higher degree in the field of education.

Note: Students should consult with an advisor in planning their academic schedule in order to complete degree or certificate requirements in an expedient manner. Required courses may not be available every semester or year. Due to limited course offerings, students may find it necessary to extend completion time lines and attend day, evening and summer classes.

Program Notes:
+ indicates course has prerequisites and/or corequisites.

Required Courses: (6 Credits) Credits
EDU205    Self Assessment for Teaching    3
EDU2221   Introduction to Education     3

Restricted Electives: (9 Credits) Credits
EDU222    Introduction to the Exceptional Learner 3
EDU230    Cultural Diversity in Education 3
EDU291    Children’s Literature (3) OR
ENH291    Children’s Literature 3
EDU282AA  Volunteerism for Education: A Service Learning Experience (1) OR
EDU282AB  Volunteerism for Education: A Service Learning Experience (2) OR
EDU282AC  Volunteerism for Education: A Service Learning Experience (3) OR
EDU296WA  Cooperative Education (1) OR
EDU296WB  Cooperative Education (2) OR
EDU296WC  Cooperative Education (3) 1-3
+ENG213   Introduction to the Study of Language 3
POS220    U.S. and Arizona Constitution 3

General Studies Requirements: (24-27 Credits)
Core: (15-17 Credits)

First-Year Composition:
+ENG101    First-Year Composition (3) AND
+ENG102    First-Year Composition (3) OR
+ENG107    First-Year Composition for ESL (3) AND
+ENG108    First-Year Composition for ESL (3) 6

Oral Communication:
COM100    Introduction to Human Communication (3) OR
COM110    Interpersonal Communication (3)
+COM225   Public Speaking (3) OR
+COM230   Small Group Communication (3) 3
Teaching Assisting AAS Degree Requirements Continues...

Critical Reading:
+ CRE101 Critical and Evaluative Reading I 3

Mathematics:
+ MAT102 Mathematical Concepts/Applications (3) OR
+ MAT120 Intermediate Algebra (5) OR
+ MAT122 Intermediate Algebra (3) OR
(Note: equivalent as indicated by assessment OR approved mathematics courses which are required in a specific AAS program or satisfactory completion of a higher level mathematics course) 3-5

Distribution: (9-10 Credits)
Humanities and Fine Arts:
Any approved general education course in the Humanities and Fine Arts area 2-3

Social and Behavioral Sciences:
Any approved general education course in the Social and Behavioral Science area 3

Natural Sciences:
Any approved general education course in the Natural Sciences area 4
WEB DEVELOPMENT

Division Chair - Instructional Computing: Dr. Valerie Akuna (623) 935-8079
Certificate: Web Developer

Web Developer Certificate Requirements

Program Description: This certificate prepares a software developer to properly create and maintain web applications. In addition to web page development, this certificate prepares software developers to fully manage and develop corporate web systems using interactive applications. Developers will be able to write programs to manage corporate database via the web.

Program Notes:
+ indicates course has prerequisites and/or corequisites
++ indicates any module
Students must earn a grade of “C” or better for each course listed within the program.

Required Courses: (30 Credits) Credits
CIS105 Survey Computer Information Systems 3
BPC/CIS117DM Microsoft Access: Database Management 3
BPC/CIS120DC Fireworks: Web Graphics 3
BPC/CIS120DF Computer Graphics: Adobe Photoshop (3) OR
BPC/CIS120AF Computer Graphics: Adobe Photoshop: Level I (1) AND
BPC/CIS120BF Computer Graphics: Adobe Photoshop: Level II (1) AND
BPC/CIS120CF Computer Graphics: Adobe Photoshop: Level III (1) 3
CIS126AA UNIX Operating System: Level I 1
CIS/BPC133DA Internet/Web Development Level I 3
+CIS166++ Web Scripting/Programming (any module) 3
+CIS233DA Internet/Web Development Level II 3
+CIS234 XML Application Development 3
+CIS235 e-Commerce 3
+CIS298AB Special Projects (2) OR
+CIS290AB Computer Information Systems Internship (2) OR
+CIS296WB Cooperative Education (2) 2
The SouthWest Skill Center opened summer of 1999 at Estrella Mountain Community College. It serves the fast growing community in the West Valley with training that prepares students for entry level job opportunities. The age requirement: 16 years of age, 18 years of age for Nursing Assistant Program and Practical Nurse Program. I

Programs include: Business Technology Program which include certificates in Administrative Secretary, General Office Secretary and Office Assistant. Additionally, the SouthWest Skill Center offers students a variety of Allied Health Field programs such as: Health Core Curriculum, Medical Assistant Program, Nursing Assistant Program, Phlebotomy Program, and Practical Nursing Program.

Classes begin Every Monday, with the daytime program running Monday through Friday from 8:00am-4:00pm, and the evening program running Monday through Thursday from 5:00pm-9:00pm, with the exception of the Nursing Program which runs from 3:00 pm to 9:30pm, Monday through Thursday.

Tuition is $4.60 per clock hour, $5.60 per clock hour for the Nursing Program, lab fees are applied accordingly per program, and there is a $15.00 registration fee. Registration fees are nonrefundable. Tuition and fees apply from July 1, 2007 through June 30, 2008, and are subject to change per Governing Board approval.
Business Technology Program
If you wish to explore before deciding on a focus or if you wish to create a program of study more customized to your immediate career goals, the SouthWest Skill Center offers a course-by-course opportunity to tailor a career and technical training program to your needs. The following open-entry, open-exit, self-paced courses center on business and computer technology with new classes beginning every Monday.

Certificates of Completion:
- Office Application Basics 355 clock hours
- Microsoft Office Suite 460 clock hours
- Office Assistant 670 clock hours
- Office Assistant with Microsoft Office Suite 880 clock hours
- General Office Secretary 1230 clock hours
- Administrative Secretary 1545 clock hours

ACC109 - Accounting Concepts
Introduction to accounting with emphasis on analysis and applications of financial information. Prerequisites: None. GBS151 and reading ability equivalent to RDG091 suggested but not required.

BPC005 - Brief Introduction to Computers
Introductory course in fundamentals of computers, including hardware components, operation system characteristics, and basic software applications. Prerequisites: None.

BPC102AD - Using Windows: Level I
Basic commands and methods associated with the Windows operating systems. Prerequisites: None.

BPC103AK - Using Word: Level I
Use of Word to create, manipulate and print documents on a microcomputer. Prerequisites: None.

BPC103BK - Using Word: Level II
Advanced concepts and skill development using Word to format, layout and design quality documents. Prerequisites: BPC102AD and BPC103AK, or permission of department.

BPC104AD - Using Excel: Level I
Use of Excel to create, edit, save and print worksheets. Prerequisites: None.

BPC104BD - Using Excel: Level II
Use of Excel to enhance worksheets to include graphing and formatting data, using complex formula and function expressions to build and analyze data, and special print options to output worksheets and graphs. Prerequisites: BPC104AD or permission of instructor.

BPC106AH - MS Outlook: Level I
Messaging and word processing functions of a Microsoft Outlook electronic work state. Prerequisites: None.

BPC106BH - MS Outlook: Level II
Microsoft Outlook features including sort, filter and group items; templates and forms; information sharing by public folders and Net Folders; share and fax contacts; and record activities in the Journal. Outlook environment customization also covered. Prerequisites: BPC106AH or permission of instructor.

BPC107AH - Using Access: Level I
Use of Access to create, edit and selectively report data. Prerequisites: None.

BPC107AH - Using Word: Level I
Use of Word to create, manipulate and print documents on a microcomputer. Prerequisites: None.
BPC107BH - Using Access: Level II
Use of Access commands to manipulate data files, generate data entry screens, generate complex reports with multiple level totals, transport data between a computer database program and other programs. Creation and use of command files. Prerequisites: BPC107AH or permission of instructor.

BPC111AA - Computer Keyboarding I
Mastery of essential microcomputer keyboarding skills. Emphasis on touch typing of alphabetic and numeric keys and symbols. Prerequisites: None.

BPC113AA - Basic Micro-Alphabetic Filing
Microcomputer filing skills of individual and business names. Prerequisites: None.

BPC118AB - PowerPoint: Level I
Use of PowerPoint software to produce professional-quality presentation visuals. Prerequisites: None.

BPC118BB - PowerPoint: Level II
Use of PowerPoint software add movement and sound to desktop presentations to enhance audience attention. Prerequisites: BPC/CIS118AB.

BPC118CB - PowerPoint: Level III
Use of PowerPoint software for advanced desktop presentation techniques, including advanced animation and sound sequences. Prerequisites: BPC/CIS118BB.

BPC128AF - Intro to Desktop Publishing: MS Publisher
Presents basic concepts of commercially prepared software used to do desktop publishing. Incorporates a combination of narrative and pictorial/graphic creation and presentation, including set-up, text entry, graphic generation, text and graphic merging, and other computer-based functions. Prerequisites: None.

BPC133AA - Internet/Web Development: Level IA
Overview of the Internet and its resources. Hands-on experience with various Internet communication tools. Prerequisites: None.

BTP222 - Telephone Training Work Exp.
This two week work exposure period is designed to familiarize the student with the many options related to a multi-line business phone system. Message taking, pleasant phone voice, using the transfer and hold features. Students are in an actual working environment on campus or in the field with working professionals to guide and motivate. Students utilize the experience as a volunteer and networking opportunity which may result in receiving a reference from a professional in the clerical field.

OAS116 - Speedwriting for Note Taking
Basic principles of speedwriting. Mastery of note taking and practice in techniques, vocabulary, legibility of writing, and speed building. Emphasis on note taking in various business situations. Prerequisites: None.

OAS118 - 10-Key by Touch
Touch system of numeric keys on ten-key pads. Prerequisites: None.

OAS120 - Financial Record Keeping
Computerized application of concepts and procedures of office record keeping; includes finance and personnel records, inventory systems, banking procedures and cash control; decision-making process for solving financial problems. Prerequisites: None.

OAS121 - Techniques of Proofreading
Recognition of errors in mechanics, format, and content in any written communication. Prerequisites: ENG101, or OAS108, or permission of instructor.
OCS100 - Basic Office Skills
Develop techniques and workplace skills to achieve professional office etiquette. Broad, basic knowledge and skills necessary for the workplace. Includes knowledge of basic business equipment, office documents and procedures, and telephone etiquette. Develop rapid writing techniques for note taking of messages and minutes. Use appropriate software and computers for office communications. Develop skills to enable efficient workflow management in a business setting. Investigate functionality and protocol of electronic mail systems. Prerequisite: None.

Health Care Core Curriculum
The following courses make up the pathway that can lead a student into the Medical Assistant Program, the Medical Terminology & Transcription Program and/or the Nurse Assistant Program. Individual program requirements follow this listing. Students are exempt from HCC’s (except CPR) if they have current credential license or degree in health care discipline, or two years of work experience in a related health sciences field.

HCC109 - CPR for Health Care Provider Current American Heart Association standards for one and two rescuer cardiopulmonary resuscitation (CPR) and obstructed airway procedures on the adult, infant, and pediatric victim. Use of automated, external defibrillation and resuscitation equipment. Prerequisites: None. Cross-References: RES109

HCC130AA - Health Care Today Overview of current health care professions including career and labor market information. Health care delivery systems, third-party payers, and facility ownership. Health organization structure, patient rights and quality care. Prerequisites: None.

HCC130AB - Workplace Behaviors in Health Care Health care and life values. Definition and importance of values, ethics, and essential behaviors in the workplace. Worker rights and responsibilities. Prerequisites: None.

HCC130AC - Personal Wellness and Safety Introduces healthful living practices to include nutrition, stress management, and exercise. Includes Occupational Safety and Health Administration (OSHA) standard precautions and facility safety. Use of principles of body mechanics in daily living activities. Prerequisites: None.

HCC130AD - Communication and Teamwork in Health Care Organizations Emphasis on basic communication skills which facilitate teamwork in the health care setting. Focus on development of personal communication skills and an understanding of how effective communication skills promote teamwork. Focus on intercultural communication strategies. Prerequisites: None.

HCC130AE - Legal and Ethical Issues in Health Care Basic, legal terminology used in the health care setting. Basic legal concepts related to health care employment. Identification of ethical guidelines including client privacy and rights and ethical decision making. Prerequisites: None.

HCC130AF - Decision Making in the Health Care Setting Principles and application of the decision making. Description and application of process improvement and the relationships to the decision making model. Prerequisites: None.

HCC145AA - Medical Terminology for Health Care Workers I Introduction to medical terms used in health care. Body systems approach to selected terms related to structures, functions, diseases procedures, and diagnostic tests. Building and analyzing terms using basic word parts. Selected medical abbreviations and symbols and term spelling. Prerequisites: None.

HCC145AB - Medical Terminology for Health Care Workers II Additional medical terms used in health care. Body systems approach to more detailed terms related to structures, functions, diseases, procedures, and diagnostic tests. Building and analyzing...
terms using standard word parts. Common abbreviations and symbols and term spelling. Prerequisites: HCC145AA.

HCC145AC - Medical Terminology for Health Care Workers III Medical terminology used with special care populations and in special services. Includes obstetric, pediatric mental health, diagnostic imaging, oncology, and surgery terms. Use of word parts and term spelling. Prerequisites: HCC145AA and HCC145AB, or HCC146.

Medical Assistant Program
Students learn clinical and administrative skills needed to work in a doctor’s office. Medical Assistants are skilled professionals who can run a busy office and handle the medical tests performed in a doctor’s office. As part of MCCD’s Health Care Integrated Education System, the SouthWest Skill Center Medical Assistant courses cover the same content material as the MCCD college credit courses and are included in an articulation agreement, which make them transferable within the MCCD college district. For more information, call at (623) 535-2808.

Certificates of Completion:
- Front and Back Office 960 clock hours
- Front Office 553 clock hours
- Back Office 688 clock hours

Health Care Core Curriculum
- HCC109 - CPR for Health Care Provider
- HCC130AA - Health Care Today
- HCC130AB - Workplace Behaviors in Health Care
- HCC130AC - Personal Wellness and Safety
- HCC130AD - Communication and Teamwork in Health Care Organizations
- HCC130AE - Legal and Ethical Issues in Health Care
- HCC130AF - Decision Making in the Health Care Setting
- HCC145AA - Medical Terminology for Health Care Workers I
- HCC145AB - Medical Terminology for Health Care Workers II
- HCC145AC - Medical Terminology for Health Care Workers III

Medical Assistant Curriculum
Course Descriptions
HCE102 - Orientation to the Physiological and Psychological Body Systems Application of basic physiology and psychology of body systems as they relate to an entry-level health care professional's role. Prerequisites: HCC130, HCC145 or (HCC145AA, HCC145AB, and HCC145AC), or permission of instructor.

HCE109 - Phlebotomy & Specimen Processing Basic Skills Theory and practice of basic phlebotomy and specimen processing including laboratory test codes, equipment, and procedures. Prerequisites: None. Corequisites: HCC130, HCC145AA or permission of coordinator.

HCE110 - Fundamental Phlebotomy Skills Application of fundamental phlebotomy techniques in a clinical laboratory setting or health care environment. Prerequisites: HCE109 or permission of coordinator.

HCE167 - Laboratory Testing in Patient Care Service Centers Basic point of care testing in a clinical setting. Includes procedures for urinalysis, whole blood hematology, glucose monitoring cholesterol and coagulation testing. Specimen collection and handling. Compliance with Occupational Health and Safety Administration (OSHA) and the Clinical Laboratory Improvement Amendments (CLIA) regulations. Prerequisites: None. Corequisites: HCC130, HCC145, or permission of coordinator.
HCE221 - Administration of Medication Principles and procedures for administering medications. Includes classifications, uses, effects, legal regulations, calculating dosages, and correct terminology. Emphasis on oral and parental drug administration. Prerequisites: None. Corequisites: HCC130, HCC145, or permission of coordinator.

HCE222 - Clinical Procedures Principles and procedures for the medical assistant. Methods of assisting clinicians with physical examinations, procedures, treatments, and minor surgical procedures in the medical office. Includes vital signs, height, and weight, collection of patient data and documentation. Prerequisites: None. Corequisites: HCC130, HCC145, or permission of coordinator.

HCE226 - Administrative Procedures Principles and procedures for front office administrative skills. Methods of telephone management, correspondence and mail processing, appointment scheduling, medical records management and data collection. Includes medical assistant as office manager. Prerequisites: None. Corequisites: HCC130, HCC145, or permission of coordinator.

HCE227 - Insurance, Billing & Coding Application of insurance, coding and billing. Includes legal and ethical issues, federal, state, and private insurance claims. Procedural and diagnostic coding, and banking and accounting principles. Prerequisites: None. Corequisites: HCC130, HCC145, or permission of coordinator.

HCE229 - Automated Computer System for Medical Office Management Principles and procedures in using an office automated computerized system for entering patient information and tracking patient billing. Includes use of accounting cycle from originating data to closing ledger entries. Prerequisites: None. Corequisites: HCC130, HCC145, or equivalent or permission of coordinator.

HCE251 - Emergencies in the Medical Office Prerequisites: None. Corequisites: HCC130, HCC145, or permission of coordinator.

HCE261 - Applied EKG Entry-Level training to professionally perform, process, and explain the electrocardiogram. Overview of cardiac anatomy, physiology, and conduction systems. Overview of commonly encountered drugs in cardiac medicine. Data collection, selection, processing, and presentation of the appropriate medical/c clinical professional to review. Selected specific non-invasive cardiac testing procedures. Prerequisites: None. Corequisites: HCC130, HCC145, or permission of coordinator.

HCE274 - Administrative Medical Assisting Externship Practicum in administrative medical assisting. Application of administrative duties procedures, and knowledge derived from medical assisting courses. Prerequisites: HCC130, HCC145, HCE226, HCE227, HCE/BPC229, and permission of coordinator.

HCE275 - Clinical Medical Assisting Externship Practicum in clinical medical assisting. Application of clinical skills, procedures, and knowledge derived from medical assisting courses. Prerequisites: HCC130, HCC145, HCE104, HCE109, HCE110, HCE167, HCE221, HCE222, HCE251, HCE261, and permission of coordinator.

HIM105 - Health Record Documentation Introduction to health record content, structure, and origin of clinical information for various healthcare settings. A basic review of federal, state, and organizational documentation guidelines. Legal and ethical issues applicable to health information documentation and coding practices. Prerequisites: HCC130 or permission of Program Director.
Phlebotomy Program
This 410 clock hour program is designed to prepare a person to obtain blood specimens by skin puncture and venipuncture. The phlebotomist may find employment in hospitals, patient service centers, life insurance companies, doctor’s offices, outreach services, and donor centers. This program can be customized to accommodate the phlebotomy needs of any health care professional currently employed in the health care setting. Students in the Phlebotomy program will be in contact with potentially infectious blood, tissues, and body fluids. Upon completion of the program, the student are eligible to take a national certification examination. Enrollment requirements must be met in order to enroll. For more information, call at (623) 535-2802.

Health Care Core Curriculum - Prerequisite or Corequisite - 150 Clock Hours +
Please note: Students are exempt from HCC’s (except CPR) if they have current credential license or degree in health care discipline, or two years of work experience in a related health sciences field.

- HCC109 - CPR for Health Care Provider
- HCC130AA - Health Care Today
- HCC130AB - Workplace Behaviors in Health Care
- HCC130AC - Personal Wellness and Safety
- HCC130AD - Communication and Teamwork in Health Care Organizations
- HCC130AE - Legal and Ethical Issues in Health Care
- HCC130AF - Decision Making in the Health Care Setting
- HCC145AA - Medical Terminology for Health Care Workers I
- HCC145AB - Medical Terminology for Health Care Workers II
- HCC145AC - Medical Terminology for Health Care Workers III

Course Descriptions
HIM105 - Health Record Documentation Introduction to health record content, structure, and origin of clinical information for various healthcare settings. A basic review of federal, state, and orantizational documentation guidelines. Legal and ethical issues applicable to health information documentation and coding practices. Prerequisites: HCC130 or permission of Program Director.

BPC005- Introduction to Computers Introductory course in fundamentals of computers, including hardware components, operating system characteristics, and basic software applications. Prerequisites: None.

BPC111AA- Computer Keyboarding Level I Mastery of essential microcomputer keyboarding skills. Emphasis on touch typing of alphabetic and numeric keys and symbols. Prerequisites: None

HCE109 - Phlebotomy & Specimen Processing Basic Skills Theory and practice of basic phlebotomy and specimen processing including laboratory test codes, equipment, and procedures. Prerequisites: None. Corequisites: HCC130, HCC145AA or permission of coordinator.

HCE111 - Specimen Processing and Advanced Techniques in Phlebotomy Procedures Theory and practice of advanced techniques in phlebotomy and specimen processing including laboratory test codes, equipment, and procedures. Prerequisites: HCE109 or permission of instructor.

HCE122 - Practicum: Phlebotomy and Specimen Processing Application of phlebotomy and specimen processing techniques in a clinical laboratory setting or health care environment. Prerequisites or Corequisites: HCE111 or permission of Program Director.
Program Description: The Nursing Program is available at nine of the Maricopa Community Colleges. The nursing pathway provides multiple exit points for employment that begins with Nurse Assisting and continues to the Practical Nurse certificate and Registered Nurse degree program. The Nursing Program provides eligibility for students seeking certification and licensure through the Arizona State Board of Nursing. Licensing requirements are the exclusive responsibility of the Arizona State Board of Nursing.

The Nursing Program is approved by the Arizona State Board of Nursing and accredited by the National League for Nursing Accrediting Commission (NLNAC), 61 Broadway 33rd Floor, New York, New York 10006, 212.363.5555, ext 153.

Waiver of Licensure/Certification Guarantee:
Admission or graduation from the Nursing Program does not guarantee obtaining a license or certificate to practice nursing. Licensure and certification requirements and the subsequent procedures are the exclusive right and responsibility of the Arizona State Board of Nursing. Students must satisfy the requirements of the Nurse Practice Act: Statutes, Rules and Regulations, independently of any college of school requirements for graduation.

Pursuant to A.R.S. § 32-1606(B)(17), an applicant for professional or practical nurse license by examination is not eligible for licensure if the applicant has any felony convictions and has not received an absolute discharge from the sentences for all felony convictions. The absolute discharge must be received five or more years before submitting this application. If you cannot prove that the absolute discharge date is five or more years, the Board cannot process your application.

All nurse and nursing assistant applicants for certification and licensure will be fingerprinted to permit the Department of Public Safety to obtain state and federal criminal history information. If there is any question about eligibility for licensure or certification, contact the nursing education consultant at the Arizona State Board of Nursing (602-331-8111). All students must submit a copy of a fingerprint clearance card with their application for the Maricopa Community College District Nursing Program.

Health Declaration:
It is essential that Nursing students be able to perform a number of physical activities in the clinical portion of the program. At a minimum, students will be required to lift patients, stand for several hours at a time and perform bending activities. The clinical nursing experience also places students under considerable mental and emotional stress as they undertake responsibilities and duties impacting patients’ lives. Students must be able to demonstrate rational and appropriate behavior under stressful conditions. Individuals should give careful consideration to the mental and physical demands of the program prior to making application.

Health & Safety Requirements for the Nursing Program:
1. Students must submit a completed Health and Safety Documentation Checklist and maintain current status throughout the program.
2. Students must submit a CPR card for Health Care Provider and maintain current status throughout the program.
3. Health Declaration Form signed by a licensed health care provider.
4. Negative urine drug screen.
The Nurse Assisting Pathway
The nurse assisting pathway is designed to prepare students to complete the Nurse Assistant Certification through the Arizona State Board of Nursing to practice in a health care agency as a Certified Nurse Assistant. Students may apply to the Nursing Program after completing the prerequisite courses and admission requirements.

Practical Nurse Pathway
Following completion of the practical nurse level program of study, the student is eligible to apply for licensure as a practical nurse. Licensed Practical Nurses (L.P.N.) are employed in acute, long-term, and community-based health care agencies under the direction of a registered nurse or physician. Practical Nurses function within their legal scope of practice and use professional standards of care in illness and health promotion activities for clients and families across the life span.

SouthWest Skill Center Nursing Program
The SouthWest Skill Center offers their students two exit points for employment that begins with Nurse Assistant and continues to the Practical Nurse Certificate Program.

Nurse Assistant Program
The Nurse Assistant (NA) Program is a 6 week, 144 hour program. The program prerequisite, the Health Care Core Curriculum (150 clock hours), is an introduction into the health care field and is preparation for the NA course, and competencies required by the Arizona State Board of Nursing to be able to take the certification examination to become a certified nurse assistant. Completion of the NA Program does not guarantee certification. Skills lab and clinical experiences are conducted. For more information, contact the SouthWest Skill Center Nursing Department, at (623) 535-2702.

Health Care Core Curriculum (6 - 9 weeks - 150 hours)
- HCC109 - CPR for Health Care Provider
- HCC130AA - Health Care Today
- HCC130AB - Workplace Behaviors in Health Care
- HCC130AC - Personal Wellness and Safety
- HCC130AD - Communication and Teamwork in Health Care Organizations
- HCC130AE - Legal and Ethical Issues in Health Care
- HCC130AF - Decision Making in the Health Care Setting
- HCC145AA - Medical Terminology for Health Care Workers I

Nurse Assistant Curriculum (6 weeks - 144 hours)
NUR156 - Nurse Assisting  Role of the nurse assistant for clients across the wellness/illness continuum within the nurse assisting scope of practice. Introduction to problem solving process specific to meeting the basic and holistic needs of clients. Professional communication skills essential for the nursing assistant. Nursing interventions to ensure the needs and safety of the client. Specific types of diseases, conditions and alterations in behavior of the client. Principles of nutrition and fluid balance. Special needs of the elder client in the acute and long-term care settings. Basic emergency care skills and procedures. Prerequisites or Corequisites: [HCC130 or (HCC130AA, HCC130AB, HCC130AC, HCC130AD, HCC130AE, and HCC130AF)] and HCC145AA, or equivalent. Corequisites: NUR157.

NUR157 - Nurse Assisting Lab Demonstration of problem solving, professional behavior and therapeutic communication skills. Demonstration of caring behaviors and ensuring environmental safety for the client. Provides opportunity for the development of clinical competency in the performance of selected nursing assisting skills and procedures through participation in the care of clients. Prerequisites: None. Corequisites: NUR156.
SouthWest Skill Center Practical Nurse Program

The Practical Nurse Program (PN) is an accelerated program which meets the requirement of the Arizona State Board of Nursing to prepare students to take the NCLEX-PN licensing examination to become a Licensed Practical Nurse. The program is up to 42 weeks after completion of prerequisites or 1008 clock hours.

Practical Nurse Curriculum

HCC145AA - Medical Terminology for Health Care Workers I
HCR240AA Human Pathophysiology I
HCR240AB Human Pathophysiology II
PNC200AA Therapeutic and Clinical Communication
PNC200AB Structure and Function of the Body
PNC200AD Medical Math Calculations
PNC200AE Fundamentals of Nursing
NUR156 Nurse Assisting
NUR157 Nurse Assisting Lab/Clinical
NUR161 Nursing Process/Critical Thinking
NUR163 Health Assessment/Health Promotion I
NUR167 Pharmacology Medication Administration I
NUR169 Nursing Science I
NUR181 Nursing Process/Critical Thinking
NUR185 Developing Nurse’s Role I
NUR187 Pharmacology and Medication Administration II
NUR189 Nursing Science II

Course Descriptions:

HCC145AA - Medical Terminology for Health Care Workers I

Introduction to medical terms used in health care. Body systems approach to selected terms related to structures, functions, diseases procedures, and diagnostic tests. Building and analyzing terms using basic word parts. Selected medical abbreviations and symbols and term spelling. Prerequisites: None.

NUR161 - Nursing Process/ Critical Thinking

Overview of nursing concepts and theories focusing on meeting basic human needs across the life span based on the wellness/illness continuum within the practical nurse scope of practice. Theoretical concepts focus on care of the well client, elder client, and clients with selected alterations in health and psychological/mental health disorders. Emphasis on the role of the practical nurse in the nursing care plan utilizing established nursing diagnoses. Focus on the development of the critical thinking process related to nursing care of clients in acute care and community settings. Prerequisites: Admission into the Practical Nursing Program. Corequisites: NUR169 or permission of Nursing Department Chairperson. Course note: Nursing Process/Critical Thinking course and Nursing Science course must be successfully completed concurrently to meet program requirements.

NUR163 - Health Assessment/Health Promotion I

Emphasis on basic health assessment and history skills and promotion of wellness by using holistic nursing assessments for clients. Includes use of healthy lifestyle strategies and primary prevention. Prerequisites: Admission into the Practical Nursing Program.
NUR167 - Pharmacology Medication Administration I Basic pharmacology knowledge and skills to administer medications. Emphasis on developing the role of the nurse using critical thinking skills for safe practice in the administration of medications. Introduction and application of mathematical concepts to drug dosage calculations. Overview of selected drug classifications and groupings. Emphasis on principles of drug metabolism and effects, interactions and adverse reactions, and nursing implications for safe practice. Prerequisites: Admission into the Practical Nursing Program.

NUR169 - Nursing Science I Development of clinical competency in the performance of selected nursing skills and procedures. Participation in the care of clients experiencing problems of alteration in health and selected mental health disorders. Clinical practice experiences with individuals and families in a variety of acute and community settings. Includes application of nursing process to care of elderly clients in acute and long-term care. Application of holistic nursing concepts and theories related to health promotion, disease/illness prevention, and health restoration of individuals. Prerequisites: Admission into the Practical Nursing Program. Corequisites: NUR161 or permission of Nursing Department Chairperson. Course Note: Nursing Process/Critical Thinking course and Nursing Science course must be successfully completed concurrently to meet program requirements.

NUR181 - Nursing Process/Critical Thinking II Focus on nursing concepts and theories to meet basic human needs across the life span based on the wellness/illness continuum. Includes concepts of anatomy, physiology, pathophysiology, and concepts of clinical nutrition to care of clients across the lifespan. Emphasis on the nursing process related to pediatric and adult clients with selected alterations in health. Introduction to care of the well childbearing client and childbearing family. Role of the practical nurse in planning nursing care and applying established nursing diagnoses for clients. Emphasis on the utilization of critical thinking processes related to nursing care of clients in acute care and community settings. Prerequisites: NUR161, NUR163, NUR169, and (HCR240 or HCR240AA) Corequisites: NUR189 or permission of Nursing Department Chairperson. Course Note: Nursing Process/Critical Thinking course and Nursing Science course must be successfully completed concurrently to meet program requirements.

NUR185 - Developing Nurse’s Role I Overview of roles in nursing with emphasis on transition from nursing assistant to practical nurse. Includes introduction of the core values of the nursing program, nursing history, standards, and scope of practice. Introduces concepts and skills required of the practical nurse, and application of communication techniques and delegation to teamwork and leadership. Prerequisites: Admission into the Practical Nursing Program.

NUR187 - Pharmacology & Medication Administration II Overview of selected drug classifications and groupings. Emphasis on principles of drug metabolism and effects, interaction and adverse reactions, and nursing implications for safe practice. Prerequisites: (HCR240 or HCR240AA), NUR161, NUR163, HUR167, and NUR169.

NUR189 - Nursing Science II Application of holistic nursing concepts and theories related to health promotion, disease/illness prevention and health restoration of individual and families. Development of clinical competency in the performance of selected nursing skills, participation in the care of clients across the life span including clients with alterations in health. Experiences with individuals, families, and small groups of clients in a variety of acute care, and community settings. Application of nursing concepts and theories related to the development of care plans, client teaching, and discharge planning. Prerequisites: NUR161, NUR163, NUR169, and (HCR240 or HCR240AA) Corequisites: NUR181 or permission of Nursing Department Chairperson. Course Note: Nursing Process/Critical Thinking course and Nursing Science course must be successfully completed concurrently to meet program requirements.
Nursing Core Classes
Nursing Core Classes are non-transferable. The competencies for each course are derived from the Practical Nursing curriculum and were created to better prepare the student for the program.

PNC200AA -Therapeutic and Clinical Communication Learning and developing a purposeful and goal-directed way to communicate with your patient, colleagues, subordinates and other professionals to create beneficial outcomes. The course is designed to help you understand what communication is, how therapeutic communication differs from normal conversation and finally, how to identify and incorporate the many positive influences and overcome the negative influences to successful communication. The course also includes documentation, the different forms of documentation, proper terminology, and documentation as a form of communication. Within documentation an overview of the Nursing Process is presented.

PNC200AB -Structure and Function of the Body Structure and Function of the body is the study of anatomy & physiology. Includes cells, tissues, integumentary system, skeletal system, muscular system, nervous system, endocrine system, circulatory

PNCAD -Medical Math Calculations Review of basic math skills, addition, subtraction, multiplication, division, fractions, decimals, percentages, metric conversions, pharmacology abbreviations, common equivalents and drug calculations.

PNC200AE -Fundamentals of Nursing Overview of nursing concepts and theories focusing on promoting health and wellness, preventing illness, restoring health, and caring for the dying within the practical nurse scope and practice. Includes concepts focus on developing critical thinking skills and performing basic therapeutic, rehabilitative, preventive, and palliative care for individuals.
# MCCCD OCCUPATIONAL PROGRAMS

The Maricopa County Community College Occupational Program Matrix identifies all programs currently available for offering within the 10 community colleges and two skill centers of the district. The programs are grouped under broad occupational areas as requested by the colleges. For specific information regarding individual programs, contact the college(s) listed as participating institutions.

## COLLEGE INDEX:
- **CG** = Chandler Gilbert Community College
- **EM** = Estrella Mountain Community College
- **GC** = Glendale Community College
- **GW** = GateWay Community College
- **MC** = Mesa Community College
- **PC** = Phoenix College
- **PV** = Paradise Valley Community College
- **RS** = Rio Salado College
- **SC** = Scottsdale Community College
- **SM** = South Mountain Community College

## AGRICULTURE

### Agricultural Production and Management

#### Agribusiness

- Pest Management Aide: MC
- (See Agribusiness Sales and Service and Horticulture sections for additional programs and related areas)

#### Agricultural Production and Management

- Agribusiness: GC, MC
- (See Agricultural Production and Management section for additional programs and related areas)

#### Ranch and Livestock Management

- Ranch and Livestock Management Aide: MC
- Ranch and Livestock Management Specialist: MC
- Urban Horticulture: GC, MC

### Equine Training and Management

- Equine Science: SC
- Veterinary Technology/Animal Health: MC

## HORTICULTURE

#### Landscape Aide

- Landscape Aide: MC
- Landscape Design and Installation: CC
- Landscape Management: CC
- Landscape Specialist: MC
- Nursery Operations: CC

(See Agricultural Production and Management section for additional programs and related areas)

## BUSINESS

### Accounting

#### Accounting

- Accounting: PC
- Accounting - Specialized Para-Professional: PV

#### Bookkeeping

- Bookkeeping: SC

#### Bookkeeping/Accounting

- Bookkeeping/Accounting: GW
- Microcomputer Accounting: GW, PC, PV

(See Business Administration for additional information and related areas)

#### Paraprofessional Accounting

- Paraprofessional Accounting: GC

## BUSINESS ADMINISTRATION

- Business: MC, SC
<p>| Business (Fastrack)                      | SC | Microsoft Networking Technology | CG, EM, GC, GW, PV, SC |
| General Business                        | CG, GC, GW, PC, PV | Microsoft Product Specialist | CG, EM, GC, GW, PV, SC |
| (See Management and Finance section for additional programs and related areas) | | Microsoft Applications Development | CG, GW, MC, PV, SC |
| International Business                  | SC | Microsoft Systems Administration | CG, EM, GC, GW, PV, SC |
| International Trade                     | MCC | Microsoft Systems Engineer | CG, EM, GC, GW, PV, SC |
| <strong>Computer Science</strong>                    |     | Network Administration | SC |
| Computer Applications Technology        | EM | Network Administration: CISCO Network Professional | MC |
| Computer Applications: Microsoft Office |     | Network Administration: CISCO Network Associate | MC |
| Specialist/Advanced                     | MC | Network Administration: Microsoft Windows NT | MC |
| Computer Applications: Microsoft Office | | Network Administration: Microsoft Windows | MC |
| Specialist/Basic                        | MC | Network Administration: Novell | MC |
| Computer Hardware and Desktop Support   | CG, EM, GW, MC, PC, SC | Network Administration: UNIX-Solaris | MC |
| Computer Hardware and Network Support   | SC | Network Administration: Microsoft Windows | MC |
| Computer Networking Technology          | GC, MC, PC, PV, SC, SM | Network Professional | RS |
| Computer Programming &amp; Analysis        | PV | Network Security | MC |
| Computer Systems Maintenance            | RS | Programming | RS |
| Computer Technology                     | SC | Programming and System Analysis | EM, GC, GW, MC, PC, PV, SC |
| Computer Usage and Applications         | SC | Software Development | SC |
| Database Development                    | SC | Technology Helpdesk Support | RS |
| Desktop Publishing                      | EM | Technology Troubleshooting and A+ Preparation | RS |
| Education Technology                    | GW | Web Design | GC, GW, PV, SC |
| Geographic Information Systems          | MC | Web Designer Assistant | MC |
| Helpdesk Specialist                     | GC | Web Designer | MC |
| Information Assurance                   | MC | Web Developer | GC, GW, MC, PC, PV, EM |
| Information Security                    | CG, EM, GC, GW, PC | Web Development | SC |
| Information Security Administration     | CG, EM, GC, GW | Web Master | RS |
| Information Security Technology         | CG, EM, GC, GW, PC | Web Server Administrator | MC |
| Information Security Wireless Networks   | CG, EM, GC, GW | Web Technology | MC |
| Information Technology                  | CG, SM | Banking and Finance | PC |
| Internet Design and Development         | SM | General Business - Insurance Level I | PC |
| Web Developer                           | MC | General Business - Insurance Level II | PC |
| Linux Associate                         | CG, EM, GC, GW, MC | General Business - Insurance | PC |
| Linux Networking Administration         | CG, EM, GC, GW, MC | Real Estate | GC, MC |
| Linux Professional                      | CG, EM, GC, GW, MC | Real Estate: Prelicense | PC |
| Linux Systems Administration            | SM | Home Inspection | MC |
| Microcomputer Applications              | GC | Home Inspection: Basic Inspector | PC |
| (See Office Occupations section for additional programs and related areas) | | Home Inspection: Business Owner Operator Inspector | PC |
| Microcomputer Applications: Office Specialist/Core Level | CG | Business Management | SM |
| (See Office Occupations section for additional programs and related areas) | | Credit Union Management | PC |
| Microcomputer Applications: Office Specialist/Expert Level | CG | General Business | GW, PC |
| (See Office Occupations section for additional programs and related areas) | | Management | PC |
| Microcomputer Business Applications     | CG, GC | Management I | PC |
| (See Office Occupations section for additional programs and related areas) | | Management II | PC |
| Microsoft Applications Specialist       | SM | Middle Management | SC |
| Microsoft Database Administration       | GC | | |
| Microsoft Desktop Support Technology    | CG, EM, GC, GW, MC, PV, SC | | |</p>
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<td><strong>Quality Process Leadership</strong></td>
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<td><strong>HEALTH OCCUPATIONS</strong></td>
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<td><strong>Diagnostic Medical Ultrasound</strong></td>
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<td>Medical Billing</td>
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<tr>
<td>Medical Coding: Hospital- Based</td>
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<td>Medical Radiography</td>
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<td>Recruit Firefighters</td>
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<td>Airline Operations</td>
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<tr>
<td>Airline Operations: Ground Operations</td>
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<tr>
<td>Airline Operations: Initial Flight Attendant</td>
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<tr>
<td>Airline Operations: Passenger Services</td>
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<tr>
<td>Airline Operations: Reservations &amp; Ticketing Operations</td>
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<tr>
<td>Airline Operations: Reservations</td>
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<tr>
<td>Airline Operations: Vacations</td>
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<td>Culinary Arts</td>
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<tr>
<td>(See Food &amp; Nutrition section for additional programs</td>
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<td>and related areas)</td>
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<tr>
<td>Hospitality and Tourism/Golf Management</td>
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<tr>
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<tr>
<td>Hospitality and Tourism/Restaurant Management</td>
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<td>Hospitality and Tourism/Spa &amp; Wellness Center Management</td>
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<td>Library Information Technology</td>
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<td>Library Information Technology: Practitioners</td>
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<td><strong>Music</strong></td>
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<td>Music Business</td>
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<tr>
<td>Group Fitness Instructor</td>
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<td>Therapeutic Massage</td>
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<td><strong>Social Sciences</strong></td>
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<td>Assisted Living: Directed Care Services</td>
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<tr>
<td>Assisted Living: Management</td>
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<td>Assisted Living: Personal Care Services for Certified Nursing Assistants</td>
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<td>Gerontology: Foundations</td>
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<td><strong>TECHNOLOGY AND TRADE INDUSTRIAL</strong></td>
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<td>Air Conditioning and Refrigeration</td>
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<tr>
<td>Residential &amp; Light Commercial Air Conditioning</td>
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<td><strong>Apprenticeship Related Instruction</strong></td>
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<td>Bricklaying</td>
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<tr>
<td>Construction Trades: Carpentry</td>
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<tr>
<td>Construction Trades: Millwright</td>
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<tr>
<td>Construction Trades: Painting</td>
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<td>Construction Trades: Sheet Metal</td>
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<td>Electricity</td>
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<td>Heat and Frost Insulation</td>
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<td>Ironworking</td>
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<td>Mechanical Trades: Plumbing</td>
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<td>Painting</td>
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<td>Pipefitter-Refrigeration</td>
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<td>Plumbing</td>
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<td>Roofing</td>
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<td>Steamfitting</td>
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<td>Aircraft Construction Technology</td>
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<td>Aircraft Maintenance Technology (Part 147)</td>
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<td><strong>Commercial Art/Advertising Art</strong></td>
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### Computer Technology Programs

**Accounting**
- Accounting/Payroll Associate
- Accounting/Payroll Clerk
- Accounts Receivable/Payable Clerk
- Accounts Receivable Clerk
- Accounting Clerk
- Introductory Accounting Skills

**Administrative Assistant**
- Administrative Assistant
- Administrative Assistant with Prior Skills
- Administrative Clerk
- Introductory Administrative Skills

**Banking/Retail**
- Banking Operations Specialist
- Banking Operations Clerk
- Bank Teller
- Cashier

**Computer Aided Drafting**
- Drafting with AutoCAD Level 3 Advanced
- Drafting with AutoCAD Level 2 Intermediate
- Drafting with AutoCAD Level 1 Beginning
- Drafting with AutoCAD Introduction
- Computer Literacy with Microsoft Office Basics
- Mechanical Drafting using AutoCAD
- Architectural Drafting using AutoCAD
- Civil Drafting using AutoCAD

**Customer Service**
- Customer Service Specialist
- Customer Service Representative
- Call Center Operator

**Graphic Communications**
- Digital Graphic Designer
- Digital Pre-Press Technician
- Desktop Publisher

**Information Processor**
- Information Processor Specialist
- Data Entry Operator
- Data Input Clerk

**Repair/Networking**
- PC/Network Technician
- PC Technician
- Residential Structured Cable Installer

### Specialized/Individual Courses
- Adobe Illustrator
- Adobe In-Design
- Adobe PageMaker
- Adobe Photoshop
- Business & Computer Technology Special Projects
- Computer and Software Skills
- Computer Literacy
- Data Entry Upgrade
- Internet Explorer
- Keyboarding Skills
- Macromedia Studio MX
- Microsoft Access - Basic Level

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### Engineering

| Civil Engineering Technology |
| Surveying Technology         |

### Manufacturing

| Aerospace Manufacturing Technology |
| Automated Manufacturing Systems |
| Manufacturing CNC               |
| Manufacturing Engineering Technology |
| Manufacturing Machining        |
| Manufacturing Management       |
| Manufacturing Technology       |
| Manufacturing Welding          |

(See Welding Technology section for additional programs and related areas)

### Machinist

| Machinist, Tool and Die               |
| Machinist, Tool and Die Level I       |
| Machinist, Tool and Die Level II      |
| Tractor-Trailer Driving               |

Welding Technology

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(See Manufacturing section for additional information and related areas)

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### MARICOPA SKILL CENTER AREAS/PROGRAMS/CERTIFICATES:
The Maricopa Skill Center (MSC), a division of GateWay Community College, offers entry-level courses and programs for hands-on job training at 1245 E. Buckeye Road, Phoenix. The more than 150 non-credit Maricopa Skill Center certificates are open-entry /open-exit, and self-paced (with the exception of nursing):

**Auto Body**
- Auto Body Basic Refreshing and Metal Repair
- Auto Body Metal Repair
- Auto Body Basic Refinishing
- Auto Body Repair Helper
- Auto Body Special Projects
- Industrial Spray Painter
Specialized/Individual Courses Continues..

Microsoft Access – Basic through Expert
Microsoft Access – Basic through Intermediate
Microsoft Excel – Basic Level
Microsoft Excel – Basic through Expert
Microsoft Excel – Basic through Intermediate
Microsoft FrontPage
Microsoft Office – Basic Level
Microsoft Office – Basic through Expert Level
Microsoft Office – Basic through Intermediate Level
Microsoft Outlook
Microsoft PowerPoint – Basic Level
Microsoft PowerPoint – Basic through Expert
Microsoft Publisher
Microsoft Word – Basic Level
Microsoft Word – Basic through Expert
Microsoft Word – Basic through Intermediate
Peachtree Accounting
Quark Xpress
Ten-Key Skills
Windows

Travel
Travel & Tourism Specialist
Travel & Tourism Coordinator
Travel & Tourism Representative
SABRE/WorldSpan

Facilities Maintenance
Facilities Maintenance with Introduction to HVAC
Facilities Maintenance Worker II
Maintenance Electrician Worker with Introduction to HVAC
Facilities Maintenance Worker I
Maintenance Electrician Worker
Maintenance Carpentry Worker
Maintenance Plumbing Worker
Facilities Maintenance Overview/City of Phoenix
Facilities Maintenance Special Projects

Health Care Services
Health Core Curriculum

Medical Administrative Assistant
Medical Administrative Assistant
Medical Transcriber
Medical Biller/Coder

Medical Assistant
Medical Assistant/Front & Back Office
Medical Assistant Back Office
Medical Assistant Front Office
Medical Insurance Billing and Coding
Medical Assistant Special Projects

Nursing
Nursing Assistant
Practical Nursing

Introduction to Culinary Arts
Cook’s Apprentice
Kitchen Helper
Baker’s Helper
Cook’s Helper

Pantry Goods (Salad) Maker

Machine Trades
Automated Manufacturing Program
CNC Turning and Machining Center Operator with FANUC Control
CNC Turning and Machining Center Operator
Manual Machine Operator
CNC Machining Center Operator
CNC Turning Center Operator
Manual Milling Machine Operator

Manual Lathe Operator
Drill Press Operator
Saw Operator
Machine Trades Special Projects Upgrade to CNC

Meat Cutting
Apprentice Meat Cutter
Self-Service Meat Wrapper
Meat Department Helper
Portion Control Cutter
Meat Room Cleanup
Meat Cutting Special Projects

Printing Trades
Advanced Press Operator
Offset Press Operator
Bindery/Finisher
Printing Trades Special Projects

Welding
Combination Welder (Arc, MIG, FLUX Core)
Combination Welder – Any two-Arc, MIG, FLUX Core, TIG
Combination Welder with Arc, MIG, FLUX Core w/TIG
Combination Welder – Arc, MIG, Flux Core with Introduction to Pipe Welding
Arc Welder
MIG Welder
Flux Core Welder
TIG Welder/TIG Fingertip Welder
Welder Fitter-Helper
Welding Special Projects
SOUTHWEST SKILL CENTER AT EMCC CERTIFICATES

The SouthWest Skill Center at Estrella Mountain Community College, located at 3000 North Dysart Road, Avondale, offers entry-level courses and programs for hands-on job training.

Our Programs are listed below and reference any certificate issued by that program:

**Business Technology Program (Certificate Programs)**
- Office Assistant
- Office Assistance w/Microsoft Office Suite
- General Office Secretary
- Administrative Secretary

**Medical Assistant Program (Certificate Programs)**
- Medical Assistant Front/Back Office
- Medical Assistant Front Office
- Medical Assistant Back Office
- Phlebotomy

**Nursing Programs (Certificate Programs)**
- Nurse Assistant Program
- Practical Nurse Program

THE MCCD HEALTH CARE INTEGRATED EDUCATIONAL SYSTEM (HCIES)

In collaboration and partnership with the health care community and its response to the dynamic changes occurring in the health care arena and health care professions' practice, the Maricopa Community Colleges integrated the curriculum of all allied health and nursing programs. All HCIES program pathways and educational offerings emphasize the achievement of relevant competencies and provide value to the individual, the employer, and the community. As a result, graduates of the various HCIES program pathways will meet the community’s demand for a flexible, multi-skilled health care workforce that meets employer and consumer needs. Refer to individual college catalogs for specific health care program pathways. For further information, http://healthcare.maricopa.edu is a comprehensive information source.

Note:
1. Students are responsible for completing General Education coursework required for their particular Health Care Pathway.
2. All students must successfully demonstrate required reading, writing, and mathematics competencies. Academic remediation is available.
3. It may be possible for some students to meet Health Care Competency requirements for Level I and Level II common competencies through assessment of prior experience and/or education.
4. Completion of Level I and Level II does not guarantee admission into Level III Health Care Pathways.
Chandler Gilbert (CGCC), Estrella Mountain (EMCC), GateWay (GWCC), Glendale (GCC), Mesa (MCC), Phoenix (PC), Paradise Valley (PVCC), Rio Salado (RSC), Scottsdale (SCC), South Mountain (SMCC), and the Maricopa Skill Center (MSC) and the Southwest Skill Center (SWCC/EMCC) offer health care courses. Not all courses are offered at all sites. Please contact the specific college for more information regarding the availability of courses and course schedule information.

Entry Point
- Assessment of Basic Academic Skills
- Specialized Placement (if appropriate)
LEVEL I - Common Competencies - 2.0 credits

ALL Health Care Students must satisfactorily achieve the Level I Common Competencies found in the following courses.

HCC130AA  Health Care Today ........................................ 0.5
HCC130AB  Workplace Behavior in Healthcare .................. 0.5
HCC130AC  Personal Wellness and Safety ..................... 0.5
HCC130AD  Communication and Teamwork in Health Care Organizations .......... 0.5

LEVEL II - Common Competencies - Credits Vary

ALL Health Care Students must satisfactorily achieve the Level II Common Competencies. See your advisor for which Medical Terminology course satisfies your pathway’s course requirements.

HCC130AE  Legal and Ethical Issues in Health Care ................. 0.5
HCC130AF  Decision Making in the Health Care Setting ........... 0.5
HCC145AA  Medical Terminology for Health Care Workers I ....... 1.0
HCC145AB  Medical Terminology for Health Care Workers II .......... 1.0
HCC145AC  Medical Terminology for Health Care Workers III ....... 1.0

LEVEL II - Shared and Program Competencies Credits Vary

Required of only certain health occupations program pathways. Refer to specific program pathway curriculum or check with a program advisor. Shared Competencies are shared by several health program pathways. Program Competencies are specific to individual health occupations program pathways.

LEVEL III - Shared and Program Competencies*

Credits Vary

Share Competencies are shared by several Health Care Pathways. Program Competencies are specific to individual Health Care Pathways. These are required for certain Health Occupations Program Pathways. Refer to specific Pathway requirements or check with an advisor.

* Certain Health Care Pathways require satisfactory achievement of all level I and II common Competencies prior to being admitted and registering for courses in Level III. Admission into Level III Health Care Pathways is based on meeting additional requirements and involves a separate admission process. See your advisor for more information.

Examples of Level II Health Care Pathways**

Clinical Research Coordinating (GWCC)
Community Health Advocate for Diabetes (MCC)
Dental Assisting (PC, RSC)
Dental Office Management (PC)
Diagnostic Medical Ultrasound (GWCC)
Direct Care Practice (MCC)
Health Information Technology (PC)
Health Unit Coordinating (GWCC)
Histology Technician (PC)
Hospital Central Service (GWCC)
Laboratory Assisting (PC)
Medical Assisting (MSC, PC, SWSC/EMCC)
Medical Billing (PC)
Medical Coding: Physician or Hospital Based (PC)
Medical Transcription (GWCC, SWSC/EMCC)
Nuclear Medicine Technology (GWCC)
Nurse Assisting (GCC, GWCC, MCC, MSC, PC, PVCC, SCC, SWSC/EMCC)
Patient Care Technician (PC)
Perioperative Nursing (GWCC)
Phlebotomy (PC)
Surgical Technician First Assistant (GWCC)
Surgical Technology (GWCC)
Teaching Healing Meditation and Stress Management (PVCC)
Therapeutic Massage (CGCC, PC)

Examples of Level III Health Care Pathways**

Dental Hygiene (PC, RSC)
Dental Office Management (PC)
Diagnostic Medical Ultrasound (GWCC)
Direct Care Practice (MCC)
Health Information Technology (PC)
Health Services Management (GWCC)
Histology Technician (PC)
Medical Assisting (MSC, PC, SWSC/EMCC)
Medical Radiography (GWCC)
Nuclear Medicine Technology (GWCC)
Nursing (CGCC, EMCC, GCC, GWCC, MCC, PC, RSC, SCC)
Physical Therapist Assisting (GWCC)
Practical Nursing (GCC, GWCC, MCC, MSC, PC, PVCC, RSC, SCC, SWSC/EMCC)
Respiratory Care (GWCC)
Surgical Technology (GWCC)
Therapeutic Massage (CGCC, PC)

**subject to change
**HCIES Assumption of Risk/Release of Liability**

Most of the program pathways of the HCIES include a program of study in a clinical training environment which may contain exposures to risks inherent in patient-oriented educational experiences, such as but not limited to bodily injury or communicable and infectious diseases. Students enrolling in clinical educational courses will be asked to sign a statement assuming all risks inherent in their coursework.

**Use of Confidential Information**

Students enrolled in program pathways of HCIES will have learning experience in a health care setting where they will begin have access to confidential information. Prior to beginning any clinical studies, the students will be asked to sign an agreement to adhere to the requirements of those clinical sites and applicable law, including the Health Insurance Portability and Accountability Act of 1996 (HIPAA).

**HCIES College of Attendance**

As the programs within the HCIES are integrated across the Maricopa Community College District, college of attendance requirements for the completion of the healthcare program pathways can be met through the completion of coursework taken at all the Maricopa Community Colleges and Skill Centers.

**Requirement of Background Check**

Students enrolled in most of the HCIES pathways will be in a clinical learning experiences, working with children, elderly persons, and other vulnerable populations. Arizona State law and healthcare agency policies require evidence of clear background checks prior to entering such learning experiences. Students seeking admission to some health programs will be required to provide a current Fingerprint Clearance Card at the time of application to or enrollment in clinical courses, according to program guidelines. The Fingerprint Clearance Card must remain in effect for the durations of time of program enrollment. It is advised that students carry proof of clearance at all times during any agency learning experience.

Note: Even though the Fingerprint Clearance Card is valid for 6 years, certain State licensing boards may require a new background check or clearance card upon request for State licensure or certification.

**Waiver of Licensure/Certificate Guarantee**

Many of the HCIES programs prepare graduates for application for State or National certificates or licenses. In some professions, such licensure and certification is required prior to employment or practice in the profession. Graduation from HCIES program does not guarantee the receipt of a license or certificate to practice in the field of study.
Additional Campus Programs

Estrella Mountain offers a variety of campus programs designed for specialized and flexible needs. These include Developmental Education, Fitness Center, Genesis West, Honors Program, Inspire.Teach, Learning for Life (Community Education Program) and Workforce Development.
DEVELOPMENTAL EDUCATION

DEVELOPMENTAL EDUCATION PROGRAM

Developmental Education is a program that enhances student skills in English, English as a Second Language, Mathematics and Reading. Strong emphasis is placed on instruction with individual support, small classes, caring faculty and creative learning experiences. Instruction is enriched through technology, interaction with other learners, and opportunities to conduct volunteer work in the community. Additional instructional support is provided by the Learning Enhancement and Writing Support Center, Information Resources and the Nasa Center. (See page 20-21 for more information.)

Students are advised to participate in the Developmental Education program based on assessment scores and advisor referral. Students enrolled in one or more developmental courses are considered participants in the developmental program.

Developmental Education courses build confidence and contribute to student academic success. Developmental Education courses are designed to maximize a student’s ability to pursue additional education and training. In addition, Developmental Education courses also offer students the opportunity to build an educational foundation for transfer programs, degree programs and training/career programs.

Credit Classes

A variety of credit classes are offered to students who wish to improve their literacy and communication skills including English as a Second Language (ESL), English, Mathematics, and Reading.

English as a Second Language

English as a Second Language (ESL) increases a student’s ability to perform basic communication skills in English. Students learn to read and write basic English. Vocabulary and learning strategies are also emphasized. Students use software and computers to review grammar, write sentences and paragraphs, and read short selections.

Note: *Some courses are taught in hybrid format.

ESL Classes offered in the Developmental Education Program include:

- +ESL001BA Basic ESL I: Personal and Health Safety 2
- +ESL001BB Basic ESL I: Services and Employment 2
- +ESL010 English as a Second Language I: Grammar 3
- +ESL011 ESL I: Listening and Speaking 3
- +ESL012 ESL I: Writing with Oral Practice 3
- *+ESL013 Vocabulary for ESL I 1
- *+ESL014 Idiomatic English for ESL I 1
- +ESL020 English as a Second Language II: Grammar 3
- +ESL021 ESL II: Listening and Speaking 3
- +ESL022 ESL II: Writing with Oral Practice 3
- *+ESL030 English as a Second Language III: Grammar 3
- +ESL031 ESL III: Listening and Speaking 3
- +ESL032 ESL III: Writing with Oral Practice 3
- +ESL040 English as a Second Language IV: Grammar 3
- *+ESL041 ESL IV: Listening and Speaking 3
- +ESL042 ESL IV: Writing with Oral Practice 3
- +ESL043 Basic Vocabulary for ESL IV 1
English

Developmental English courses are designed for recent high school graduates, GED graduates or any re-entry student who needs to fortify his/her skills before taking other college English classes. Students have opportunities for group interaction and engage in writing projects using the computer/software with support from Learning Enhancement and Information Resources.

English Courses taught in the Developmental Education Program include:

+ENG061 Basic Writing Skills 3
+ENG071 Fundamentals of Writing 3

Note: Course descriptions are listed on page 193.

Reading

Developmental reading courses are designed to meet the needs of recent high school graduates, GED graduates, the returning student or college students who wish to improve their reading skills. Reading classes emphasize learning strategies for life skills reading and for understanding college textbooks. Learning vocabulary, reading for enjoyment, volunteering in the community, and using technology are major class activities.

Reading Classes in the Developmental Education Program include:

+RDG071 Basic Reading 3
+RDG081 Reading Improvement 3
+RDG091 College Reading Skills I 3

Note: Course descriptions are listed on page 219.

Non-Credit Classes

Estrella Mountain provides non-credit programs and services for students who want to improve their literacy and communication skills. Through a Literacy Partnership with Rio Salado College, Estrella Mountain offers non-credit classes in English for Speakers of Other Languages (ESOL) and General Educational Development (GED) at no cost to students. Classes are offered at Buckeye High School, and the Southwest Skill Center.

English for Speakers of Other Languages (ESOL)

ESOL classes are available in a multi-level format and are designed for adult speakers of languages other than English who wish to learn English in a warm and caring setting. Emphasis is on language survival skills for newcomers to the United States or the second language speaker who needs help with basic conversational skills. The course teaches oral and written communication, vocabulary, spelling and reading comprehension as needed to deal with real-life situations.
These are self-paced classes. Students may start the classes anytime during the year beginning in the fall. Students should register in the classroom where the class is held (see Schedule of Classes). Classes are taught in English using books, handouts, manipulatives and computers.

**General Educational Development (GED)**

GED test preparation classes are available for persons who have not yet earned a GED or high school diploma. GED instruction is available in a traditional classroom setting. Subjects taught include mathematics, reading from literature and the arts, writing, social studies, and science. After an initial assessment has been completed to determine whether the student has the basic skills necessary to successfully complete the GED program, an individual plan is developed. Continuous evaluation is provided to ensure that students receive the level of instruction that is appropriate to their individual abilities and goals, and to assist them in passing the national GED examination.

For additional information call the SouthWest Skill Center at (623) 535-2764 or to schedule a GED test call (623) 935-8860.

Students who do not have a high school diploma, and are eighteen years of age are eligible to take this class. GED Testing is also available for students in the Assessment Center in Komatke Hall.

Students may enroll beginning in the fall for classes and should register for the class in the classroom where the class is being taught (see Schedule of Classes). All books, materials and predictor tests are provided at no cost to the student.

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**FITNESS CENTER**

Estrella Mountain offers credit courses in physical education including PED115, the Lifetime Fitness course (2 credits). The Fitness Center offers students, employees, and community members the finest exercise program in the West Valley. The latest fitness equipment, including a full line of free weights, Cybex Circuit Equipment, Stairmaster Climbers, Upright and Recumbent Bikes, Gravitron, Schwinn Airdynes, Elliptical Trainers, Crossrobic Trainer, Indoor Rowers and full array of treadmills.

Professional, caring staff provide participants with individual instruction and supervision in all aspects of a personal exercise program, including warm-up, flexibility, strength and cardiovascular training and cool down. The Fitness Center offers easily accessible exercise education so participants are ensured the support that empowers efficient, effective, safe and enjoyable exercise. In addition, Fitness Center participants receive information, encouragement, and support to develop and maintain healthy lifestyle behaviors.

Flexible hours allow participants use of the center at their convenience. Special programs designed specifically for business, industry, families, and seniors are available.

In addition, a comprehensive aerobics program, which features step, slide, body sculpting, high and low impact exercises, yoga and pilates gives participants the benefits of additional exercise options. A variety of other wellness recreation and activity classes are also available.
GENESIS WEST

Genesis West offers students an alternative to traditional high school. Genesis West is a program that allows students to obtain a high school diploma while also earning college credit. The Genesis West program is made possible through a partnership with Agua Fria, Dysart and Tolleson High School Districts and Estrella Mountain Community College. For more information, call (623) 935-8900

Students are fully integrated into the college environment therefore must possess the maturity and the independence to meet the challenge of being a high school student on a college campus. The criteria is as follows:

- Be between 16 and 21 years of age
- Possess a minimum ability level at 8th grade or above
- Obtain a high school counselor referral
- Provide a written application and complete a formal interview
- Obtain two written recommendations
- Attend all classes and Genesis West activities
- Maintain good academic standing
- Be willing to contribute positively to the community

HONORS PROGRAM

Program Description

The Honors Program is designed to enhance the intellectual experience of students through enrollment in Honors courses, the Honors Forum, and increased contact with other Honors students at Estrella Mountain and within the Maricopa District. Participation in the program also presents students with growth potential in the areas of leadership through attendance at local, regional and national conferences. Cultural enrichment activities are also stressed with frequent attendance at theater, symphony, museum, and lecture events.

Honors Program Graduation Requirements

Honors students who graduate with at least twelve (12) credits in honors courses and who maintain a cumulative 3.25 GPA or higher, will be designated as Honors Program graduates. Honors students who graduate with at least fifteen (15) credits in honors courses, (including 3 credits from HUM190), and who have a cumulative 3.5 GPA or higher, at graduation, will be designated as Honors Program graduates with Distinction.

Honors Program Eligibility

Presidents’ Scholarships are available for new students who have recently graduated from an accredited Maricopa County high school. To be eligible, students must verify that they rank in the top 15% of their graduating class or have been placed in ENG101 Honors, into Intermediate Algebra or higher, and are exempt from CRE101 (Critical Reading) on the ASSET placement test. They must begin their college studies in the academic year following high school graduation. Fee Waivers are available for continuing and transfer students who have accumulated a minimum of 12 credits in courses numbered 100-level or above and who have a cumulative grade point average of 3.25 or better. Applicants are required to submit two letters of recommendation from Estrella Mountain faculty addressed to the Honors Program Coordinator prior to the start of classes. Partial tuition fee waivers (based on the number of credits for which the applicant is enrolled and completes) will be granted to those who are accepted into the program. To retain fee waiver eligibility, students must complete at least one honors course each semester and maintain a cumulative grade point average of 3.25 or higher. Fee waiver students are also eligible for additional Honors Program scholarships once they are enrolled in the Program.
INSPIRE.TEACH

Inspire.teach was created by Estrella Mountain Community College in partnership with West Valley high school districts and ASU West to attract future education majors. The program’s structure insures a smooth transition from high school to the community college; and from the community college to the university, increasing likelihood for success. Inspire.teach is a program that supports and encourages the choice of teaching as a profession. It reflects a commitment among secondary, community college and university partners to inspire students from underrepresented groups to explore, pursue and excel in teaching careers. For more information call (623) 935-8479.

LEARNING FOR LIFE (COMMUNITY EDUCATION)

Learning For Life is the community education program at Estrella Mountain Community College. We provide flexible and convenient general interest, non-credit courses designed to upgrade skills for personal and professional development. Courses are offered in the following areas of interest; Arts and Crafts, Business and Occupations, Computers, Health and Fitness, Home in and Out, Personal Enrichment, Next Chapter, and Kid’s College. For specific information concerning any of our programs, please contact Registration at (623) 935-8888 or our office at (623) 935-8426.

TEACHER EDUCATION ALLIANCE (TEALL)

The Teacher Education Alliance (TEALL) is a new program designed to assist students working on their Associate in Arts in Elementary Education (AAEE) Degree through Maricopa Community Colleges to smoothly transition to Arizona State University. Benefits for those who join include:

• Guaranteed admission to one of ASU’s professional teacher preparation programs
• Direct and guaranteed transfer of your AAEE degree to a Bachelor of Arts in Elementary Education degree program at Arizona State University Tempe, West or Polytechnic campus
• Advising, scholarship opportunities and special events specific to Alliance students
• Access tutoring, electronic and technology resources, library collections, and athletic events at both the Maricopa Community Colleges and ASU.
For more information call 623-935-8479

WORKFORCE DEVELOPMENT

In addition to the college’s numerous programs and courses, Estrella Mountain designs, develops and delivers customized training solutions to help organizations reach their business objectives. We work closely with clients, assessing their needs and goals, to build training solutions that provide convenience and enhance business performance. Quality faculty, targeted curriculum and flexible locations are hallmarks of the service. For more information, call 623-935-8492.
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<td>THP Theatre Performance/Production</td>
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ACCOUNTING

ACC111
Accounting Principles I
3 Credits. 3 Periods.
Fundamental theory of accounting principles and procedures. Prerequisites: None.

ACC112
Accounting Principles II
3 Credits. 3 Periods.
Continuation of the fundamental theory of accounting principles and procedures, including interpretation of general purpose financial statements. Prerequisites: ACC111 with a grade of “C” or better, or permission of department/division.

ACC230
Uses of Accounting Information I
3 Credits. 3 Periods.
Introduction to the uses of accounting information for internal and external purposes with emphasis on financial statement analysis. Prerequisites: Grade of “C” or better in ACC111 or ACC211, or a grade of “C” or better in ENG101 and MAT151 and CRE101, or equivalent, or satisfactory score on District placement exam.

ACC240
Uses of Accounting Information II
3 Credits. 3 Periods.
Introduction to the uses of accounting information for internal and external purposes with emphasis on analysis for use by management. Prerequisites: ACC230.

ACC250
Introductory Accounting Lab
1 Credit. 3 Periods.
Procedural details of accounting for the accumulation of information and generation of reports for internal and external users. Prerequisites: None.

AEROSPACE STUDIES

AES103
The Air Force Today II
LEC 2 Credits. 1 Period.
LAB 0 Credits. 1 Period.
Introduction to U.S. Air Force and AFROTC. Topics include: the Air Force mission and organization, customs and courtesies, officer opportunities, officership, and professionalism. Prerequisites: AES101 or ASU Department of Aerospace Studies approval.

AES201
Evolution of USAF Air and Space Power I
LEC 2 Credits. 1 Period.
LAB 0 Credits 1 Period.
Further preparation of AFROTC candidate. Topics include: Air Force heritage and leaders, communication skills, ethics, leadership, quality Air Force, and values. Prerequisites: AES103 or ASU Department of Aerospace Studies approval.

AES203
Evolution of USAF Air and Space Power II
LEC 2 Credits. 1 Period.
LAB 0 Credits 1 Period.
Topics include: the Air Force mission and organization, customs and courtesies, officer opportunities, officership, and professionalism. Prerequisites: AES201 or ASU Department of Aerospace Studies approval.

AES294
Air Force Physical Fitness
LEC 1 Credit. 3 Period.
Beginning instruction in adapted physical activities and a variety of sports and sports activities to include calisthenics, sit-ups, push-ups, running, basketball, volleyball, and other physical events. Prerequisites: None. Corequisites: AES101, or AES103, or AES201, or AES203. Course Note: AES294 may be repeated for credit.

AJS107
Patrol Procedures
3 Credits. 3 Periods.
Specialized areas of the patrol function, including responding to crowds, riots, bomb threats, intoxication, hazardous materials, fires, and domestic disputes. Partially fulfills Arizona POST (Peace Officer Standards and Training) requirements for proficiency skills academy attendance. Prerequisites: None.

AJS109
Substantive Criminal Law
3 Credits. 3 Periods.
Covers philosophy of legal sanctions and historical development from the common law to modern American criminal law, classifications of crimes, elements of and parties to crimes, general definition of crimes, common defenses utilized. Includes specific offenses and the essential elements of each offense. Required in AJS curriculum. Prerequisites: None.

AJS110
Law and Legal Review I
3 Credits. 3 Periods.
In-depth study of the Arizona laws governing arrest by peace officers, as well as, an intensive study of the Arizona substantive criminal law code (ARS Title 13). Focuses on specific sections of ARS Title 4 and ARS Title 8, as they apply to peace officers in Arizona. Partially fulfills the Arizona POST (Peace Officer Standard and Training) Board requirements for Proficiency Skills Academy attendance. Prerequisites: None.

AJS123
Ethics and the Administration of Justice
3 Credits. 3 Periods.
Introduces and explores ethical issues and the justice system. Focuses on ethics and the law, the police, courts and corrections. Reviews ethical theory, concepts and practices as they relate to administration of justice. Encourages critical thinking and value decision making in criminal justice system situations. Prerequisites: None.

AJS124
Correctional Institutions
3 Credits. 3 Periods.
An examination of correctional institutions with an emphasis on personnel and security measures, care and treatment programs and institutional planning. The criminal justice system and matters of custody and treatment. Inmate subcultures, and organized crime in correctional institutions and jails. Prerequisites: None.
AJS131  
**Police Management Techniques I**  
3 Credits. 3 Periods.  
Police supervisory techniques for planning, organizing, coordination, reporting, budgeting and handling related personnel problems. Prerequisites: None.

AJS132  
**Police Management Techniques II**  
3 Credits. 3 Periods.  
Management of police personnel including selection procedures, disciplinary practices, public relations, elements of supervision, service ratings, recruiting and probation, and related personnel problems. Prerequisites: AJS131 or instructor’s approval.

AJS133  
**Correctional Supervision I**  
3 Credits. 3 Periods.  
Basic supervision of correctional employees. Personnel practices, employee discipline and motivation, trust/team building, and one-minute manager principles. Prerequisites: None.

AJS150  
**Defensive Tactics**  
1 Credit. 1 Period.  
Skills in the protection against persons armed with dangerous and deadly weapons, demonstration and drill in a limited number of holds and come-alongs, and restraint of prisoners and the mentally ill. May be repeated twice for credit. Prerequisites: None.

AJS200  
**Current Issues in Criminal Justice**  
3 Credits. 3 Periods.  
Examines current issues, techniques and trends in the Criminal Justice System. Prerequisites: None.

AJS201  
**Rules of Evidence**  
3 Credits. 3 Periods.  
A practical insight into the rules of evidence to include how to recognize evidence: the general rules governing admissibility of evidence; the “hearsay” rule and its exceptions; the use of documentary evidence, written memoranda, photographs, and recordings; corpus delicti; opinion evidence, circumstantial evidence, evidential privileges. Required in AJS curriculum. Prerequisites: None.

AJS205  
**Criminal Justice Report Writing**  
3 Credits. 3 Periods.  
Characteristics of reports and field notes, and the importance and uses of each. Form, style, and procedures for writing various reports, including elements of composition, required substance, proper and improper conclusions, and descriptions of persons and property. Prerequisites: None.

AJS210  
**Constitutional Law**  
3 Credits. 3 Periods.  
An examination of the U.S. Constitution as it relates to the law enforcement function. Includes statutory law and judicial decisions governing the areas of arrest, search and seizure, interrogations and confessions, self-incrimination and other constitutional guarantees. Required in AJS curriculum. Prerequisites: None.

AJS211  
**Police Planning**  
3 Credits. 3 Periods.  
An analysis of the process of planning, and a descriptive study of logical and systematic approaches to strategic, short-range, operational, organizational and tactical planning within a law enforcement organization. Prerequisites: None.

AJS212  
**Juvenile Justice Procedures**  
3 Credits. 3 Periods.  
Examines the history and development of juvenile justice theories, procedures, and institutions. Prerequisites: None.

AJS215  
**Criminalistics: Physical Evidence**  
3 Credits. 3 Periods.  
The scientific analysis and examination of physical evidence with emphasis on scientific investigation, recognition, collection, and preservation of evidence. Topics include fingerprints, shoe prints, tool marks, firearms identification, paint chips and arson. Prerequisites: None.

AJS220  
**Organized Crime**  
3 Credits. 3 Periods.  
Examines the history, structure and activities of organized crime groups. Reviews theories explaining the existence of organized crime and enforcement strategies used to combat it. Prerequisites: None.

AJS225  
**Criminology**  
3 Credits. 3 Periods.  
Study of deviance, society’s role in defining behaviour; theories of criminality and the economic, social, and psychological impact of crime; relationships between statistics and crime trends. Examines crime victimization and the various types of crimes and categories of offenders. Required in the AJS curriculum. Prerequisites: None.

AJS230  
**The Police Function**  
3 Credits. 3 Periods.  
Theories of procedures and methods of operations of public police with emphasis on discretionary powers available to the working police officer. Career opportunities and current trends in law enforcement presented. Prerequisites: None.

AJS241  
**Police Photography**  
3 Credits. 3 Periods.  
Emphasis on proper procedure for photographing crime scenes, accident scenes, and laboratory specimens. Discussion of photographic techniques, equipment, lighting techniques, aerial photography, video and motion pictures, macro and micro photography, filters, and preparation for court presentation using selected simulations. Prerequisites: None.

AJS242  
**Crime Scene Processing**  
3 Credits. 3 Periods.  
Procedures and technology required to process crime scenes including how to protect a crime scene, collect information, search for, collect, and preserve physical and biological evidence, and conduct field tests. Practical experience in evidence collection and crime scene sketching and processing. Prerequisites: AJS213 and (AJS214 or AJS241) or permission of instructor.

AJS249  
**Community Policing**  
3 Credits. 3 Periods.  
Examines the history, philosophy, implementation, administration, application, benefits and future of community policing. Prerequisites: None.
AJS260  
Procedural Criminal Law  
3 Credits.  3 Periods.  
Concerned with the understanding of procedural criminal law. Examines the rationale underlying major court holdings, the procedural requirements that stem from these holdings, and their effect on the daily operations of the criminal justice system. Prerequisites: None.

AJS269AC  
Internship  
3 Credits.  15 Periods.  
Supervised field training for preservice administration of justice students. Maximum of three (3) credit hours allowed in program. Prerequisites: Student sponsored by governmental enforcement agency, and departmental approval.

AJS270  
Community Relations  
3 Credits.  3 Periods.  
Examination, recognition and understanding of community problems; community action programs; methods of coping with human behaviour, victimology, conflict and communication; ethnic and minority cultures and environments; the community and relationships with the criminal justice system. Prerequisites: None.

AJS275  
Criminal Investigation I  
3 Credits.  3 Periods.  
Introduction to the theory of criminal investigation. Examines crime scene procedures, case preparation, interviewing, and basic investigative techniques. Prerequisites: None.

ANTHROPOLOGY

ASB102  
Introduction to Cultural and Social Anthropology  
3 Credits.  3 Periods.  
Principles of cultural and social anthropology, with illustrative materials from a variety of cultures. The nature of culture; social, political, and economic systems; religion, aesthetics and language. Prerequisites: None.

ASB220  
Anthropology Goes to the Movies  
3 Credits.  3 Periods.  
Archaeology and anthropology through the lens of popular films of the 20th and 21st Century. Explores the popularity of ancient humans as a topic for film ventures and how accurately they are portrayed. Provides the student with a basic knowledge of anthropology and offers film images of anthropologists and archaeologists and the practice of archaeology and anthropology. Analyzes accuracy of films depicting culture and our human past. Prerequisites: None.

ASB223  
Buried Cities and Lost Tribes: New World  
3 Credits  3 Periods  
Introduction to archaeology through discoveries and the researchers who made them. Emphasis on methods of archaeological fieldwork and what these discoveries reveal about humanity, including the nature of archaeological inquiry, the development of human social groups, the changing role of religion in evolving societies, the origins of agriculture, the origins of settled lifeways, the rise of cities and complex societies, political strife across different cultures and the forces which fragment societies. Examples drawn from North American, Central America, and South America. Prerequisites: None.

ASB251  
Introduction to Museums  
3 Credits.  3 Periods.  
The changing nature of museum practice in acquiring and managing collections and disseminating information. Prerequisites: None.
ART161
Ceramics I
3 Credits. 6 Periods.
Introduction to ceramic materials and techniques of hand construction, decorating, glazing and throwing on potters’ wheel. Prerequisites: None.

ART162
Ceramics II
3 Credits. 6 Periods.
Major emphasis on wheel throwing, glaze making and decorating techniques. Prerequisites: ART161.

ART167
Painting I
3 Credits. 6 Periods.
Exploration of technical and expressive possibilities of various painting media in easel painting. Prerequisites: ART167 or permission of instructor.

ART168
Painting II
3 Credits. 6 Periods.
Continued refinement of painting skills and investigation of new possibilities in painting. Prerequisites: ART167 or permission of instructor.

ART180AE
Designer’s Tools: Adobe Photoshop
1 Credit. 2 Periods.
Introduction to the multiple elements of Photoshop software package using the microcomputer. Basic foundation in the use of electronic techniques including appropriate input and output production devices. Prerequisites: ART100 or permission of instructor. Cross-References: ADA180AE.

ART211
Drawing and Composition III
3 Credits. 6 Periods.
Advanced development of drawing skill with emphasis on compositional theory. Prerequisites: ART122 or permission of instructor.

ART222
Drawing and Composition IV
3 Credits. 6 Periods.
Further study of drawing techniques with emphasis on individual problems and techniques. Prerequisites: ART211 or permission of instructor.

ART261
Ceramics III
3 Credits. 6 Periods.
Emphasis on wheel throwing skill and individual style development. Prerequisites: ART162.

ART262
Ceramics IV
3 Credits. 6 Periods.
Experimental work in clays and glazes. Prerequisites: ART261.

ART298AA
Special Projects
Lab 1 Credit. 1 Period.
Lab organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or instructor.

ART298AC
Special Projects
Lab 3 Credits. 3 Periods.
Lab organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or instructor.

ART HUMANITIES

ARH109
History of American Art
3 Credits. 3 Periods.
Development and variety of American Art. Presentation of architecture, sculpture, painting and decorative objects. Prerequisites: None.

ARH112
History of Modern Art
3 Credits. 3 Periods.
Development and significant aspects of modern art, including comparisons of relationships in expressionism, abstractions, fantasy, and art since mid-century. Prerequisites: None.

ARH115
History of Photography
3 Credits. 3 Periods.
Survey of history of photography from beginning to present. Emphasizes medium’s impact upon society and other visual arts. Technical developments, aesthetic concerns, and individual photographers studied. Prerequisites: None.

ARH217
Mexican Art History
3 Credits. 3 Periods.
Art of Mexico and related cultures, from the prehistoric to the contemporary period. Prerequisites: None.

ASTRONOMY

AST111
Introduction to Astronomy
LEC 3 Credits. 3 Periods.
Introduction to astronomy for the non-science major. History of astronomy, properties of light, instruments, the solar system and nearby stars. Prerequisites: MAT092 or equivalent.

AST112
Introduction to Astronomy II
LEC 3 Credits. 3 Periods.
Introduction to astronomy for the non-science major. Structure and evolution of stars; star clusters; galaxies; cosmology. Prerequisites: MAT092 or equivalent.

AST113
Astronomy I Laboratory
LEC 1 Credit. 3 Periods.
Astronomical observations and exercises to supplement AST111. Prerequisites or Corequisites: AST111.
AST114  
Astronomy II Laboratory  
LEC 1 Credit. 3 Periods.  
Astronomical observations and exercises to supplement AST112. Prerequisites or Corequisites: AST112.

BIO100  
Biology Concepts  
LEC 4 Credits. 3 Periods.  
LAB 0 Credits. 3 Periods.  
A one-semester introductory course covering basic principles and concepts of biology. Methods of scientific inquiry and behaviour of matter and energy in biological systems are explored. Field trips may be required at student’s expense. Prerequisites: None.

BIO105  
Environmental Biology  
LEC 4 Credits. 3 Periods.  
LAB 0 Credits. 3 Periods.  
Fundamentals of ecology and their relevance to human impact on natural ecosystems. Field trips may be required at students’ expense. Prerequisites: None.

BIO107  
Introduction to Biotechnology  
LEC 4 Credits. 3 Periods.  
LAB 0 Credits. 3 Periods.  
Introduction to biotechnology and its global impact on society. Covers applications, laboratory techniques, limitations and the international economic benefits, risks, and legal and moral issues associated with biotechnology. Prerequisites: None.

BIO109  
Natural History of the Southwest  
LEC 4 Credits. 3 Periods.  
LAB 0 Credits. 3 Periods.  
Study of the common plants and animals of the Southwest including their distribution, adaptation, behavior, and ecology. Introduction to basic field and laboratory techniques used in the study of natural history. Specific field problems presented dealing with plant and animal analysis and ecological interrelationships. Prerequisites: None. Course Note: Field trips may be required.

BIO160  
Introduction to Human Anatomy and Physiology  
LEC 4 Credits. 3 Periods.  
LAB 0 Credits. 3 Periods.  
Principles of scientific method. Structural organization, homeostasis, and control mechanisms of the body. Specific chemistry concepts. Structure and function of the major systems of the body. Prerequisites: None.

BIO181  
General Biology I (Majors)  
LEC 4 Credits. 3 Periods.  
LAB 0 Credits. 3 Periods.  
The study and principles of structure and function of organisms at the molecular and cellular levels. A detailed exploration of the chemistry of life, the cell, and genetics. Prerequisites: None. One year of high school or one semester of college-level biology and chemistry is strongly recommended.

BIO182  
General Biology I (Majors) II  
LEC 4 Credits. 3 Periods.  
LAB 0 Credits. 3 Periods.  
The study and principles of structure and function of living things at cellular, organismic, and higher levels of organization. A detailed exploration of the mechanisms of evolution, biological diversity, biology of organisms, and ecology. Prerequisites: A grade of C or better in BIO181. Course Note: Field trips may be required.

BIO201  
Human Anatomy and Physiology I  
LEC 4 Credits. 3 Periods.  
LAB 0 Credits. 3 Periods.  
Study of structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Prerequisites: (BIO156 or BIO181 with a grade of “C” or better) or (one year high school biology course with a grade of “C” or better). (CHM130 or higher numbered CHM prefixed course) or (one year of high school chemistry) suggested but not required.

BIO202  
Human Anatomy and Physiology II  
LEC 4 Credits. 3 Periods.  
LAB 0 Credits. 3 Periods.  
Continuation of structure and function of the human body. Topics include endocrine, circulatory, lymphatic, respiratory, digestive, urinary, and reproductive systems; and fluid and electrolyte balance. Prerequisites: A grade of “C” or better in BIO201.

BIO205  
Microbiology  
LEC 4 Credits. 3 Periods.  
LAB 0 Credits. 3 Periods.  
Study of microorganisms and their relationship to health, ecology, and related fields. Prerequisites: (BIO156 or BIO181 with a grade of “C” or better) or (one year high school biology with a grade of “C” or better). (CHM130 or higher numbered CHM prefixed course) or (one year of high school chemistry) suggested but not required.

BLT121  
Electrical Codes  
3 Credits 3 Periods.  
Principles of safe electrical installations and proper inspection procedures. Topics include conduit installation, transformer service, raceways, control circuits, grounding and bonding, hazardous occupancies and the National Electrical Code. Prerequisites: None.

BLT127  
Plumbing Codes  
3 Credits 3 Periods.  
Code requirements and construction practices. Topics include underground and above ground plumbing, venting and finish plumbing. Prerequisites: None.

BLT128  
Mechanical Codes  
3 Credits 3 Periods.  
Code requirements and construction practices. Topics include duct work, conductors and fuel supply, insulation, and controls. Prerequisites: None.

BLT262  
Introduction International Residential Code (IRC)  
3 Credits 3 Periods.  
Covers International Residential Code for various trades, including building, mechanical, plumbing and electric, for one and two family residential construction. Preparation for voluntary certification (IRC building inspection). Prerequisites: None.
BLT263
Building Codes
3 Credits 3 Periods.
Designed specifically to acquaint students with safety principles of building construction under the Uniform Building Code, including structural requirements for wood, masonry and concrete, fire resistance of building construction, fire resistant materials, and ratings and occupancy requirements. Prerequisites: None.

CHM107
Chemistry and Society
3 Credits 3 Periods.
A survey of chemistry and its impact on the environment. Completion of CHM107LL required to meet the Natural Science requirement. Prerequisites: None.

CHM107LL
Chemistry and Society Lab
1 Credit 3 Periods.
A Laboratory experience in support of CHM107. Prerequisites or Corequisites: CHM107.

CHM130
Fundamental Chemistry
3 Credits 3 Periods.
Elements of general chemistry for all students. Serves to prepare the student for CHM151, or CHM230. Prerequisites: Grade of “C” or better in CHM090, or MAT091, or MAT092, or MAT102, or satisfactory score on math placement exam. Course Note: Course content designed to meet the needs of students in such areas as agriculture, home economics, nursing, and physical education among others.

CHM130LL
Fundamental Chemistry Laboratory
1 Credit 3 Periods.
Laboratory experience in support of CHM130. Prerequisites or Corequisites: CHM130.

CHM150
General Chemistry I
4 Credits 4 Periods.
Detailed study of principles of chemistry for science majors and students in pre-professional curricula. Prerequisites: (CHM130 and CHM130LL), or (one year of high school chemistry with a grade of C or better taken within the last five year), and completion of intermediate algebra or equivalent.

CHM151
General Chemistry I
3 Credits 3 Periods.
Detailed study of principles of chemistry for science majors and students in pre-professional curricula. Prerequisites: (CHM130 and CHM130LL), or (one year of high school chemistry with a grade of C or better taken within the last five year), and completion of intermediate algebra or equivalent. Completion of all prerequisites within the last two years is recommended. Course Notes: Students may receive credit for only one of the following: CHM150 or CHM151.

CHM151LL
General Chemistry I Lab
1 Credit 3 Periods.
Laboratory experience in support of CHM151. Prerequisites: CHM130LL or permission of instructor. Prerequisites or Corequisites: CHM150 or CHM151.

CHM152
General Chemistry II
3 Credits 3 Periods.
A study of the chemical properties of the major groups of elements, equilibrium theory, thermodynamics, electrochemistry, and other selected topics. Completion of CHM152LL required to meet the Natural Science requirement. Prerequisites: CHM150 or CHM151 and CHM151LL. Completion of CHM150 or CHM151 and CHM151LL within the last two years recommended.

CHM152LL
General Chemistry II Lab
1 Credit 3 Periods.
Laboratory experience in support of CHM152. Prerequisites: CHM151LL or permission of instructor. Prerequisites or Corequisites: CHM152.

CHM154
General Chemistry II with Qualitative Analysis
3 Credits 3 Periods.
A study of the chemical properties of the major groups of elements, equilibrium theory, thermodynamics, kinetics, electrochemistry, and other selected topics. Includes qualitative analysis. Prepares students for all sophomore chemistry courses. Completion of CHM154LL required to meet the Natural Science requirement. Prerequisites: CHM150 or CHM151 and CHM151LL. Completion of CHM150 or CHM151 and CHM151LL within the last two years recommended.

CHM154LL
General Chemistry II with Qualitative Laboratory
2 Credits 6 Periods.
Laboratory experience in support of CHM154. Includes qualitative analysis. Prerequisites: CHM151LL or equivalent. Prerequisites or Corequisites: CHM154.

CHM235
General Organic Chemistry I
3 Credits 3 Periods.
Rigorous introduction to chemistry of carbon-containing compounds. Reaction mechanisms and recent methods of synthesis emphasized. Prerequisites: CHM152 and CHM152LL, or CHM154 and CHM154LL. Completion of (CHM152 and CHM152LL) or (CHM154 and CHM154LL) within the last two years recommended.

CHM235LL
General Organic Chemistry I Laboratory
1 Credit 4 Periods.
Laboratory experience in support of CHM235. Prerequisites: CHM152LL, or CHM154LL, or equivalent. Prerequisites or Corequisites: CHM235.

CHM236
General Organic Chemistry II
3 Credits 3 Periods.
Study of chemistry of carbon-containing compounds continued. Structural determination and additional reaction mechanisms and modern methods of synthesis emphasized. Prerequisites: CHM235 and CHM235LL. Completion of CHM235 and CHM235LL within the last two years recommended.

CHM236LL
General Organic Chemistry II Laboratory
1 Credit 4 Periods.
Laboratory experience in support of CHM236. Prerequisites: CHM235LL or equivalent. Prerequisites or Corequisites: CHM236.

CFS176
Child Development
3 Credits 3 Periods.
Study of the science of human development from conception through adolescence. Includes observation skills, parent and adult roles in the lives of children, and contemporary issues. Prerequisites: None. Cross-References: ECH176
CFS178
Survey of Early Childhood Education
3 Credits. 3 Periods.
Orientation to basic concepts of day care and nursery programs. History and philosophy of child care services including state regulations governing those services. Observation opportunities provided. Prerequisites: None.

CFS192
Child Care Center Staff Development
1 Credit. 1 Period.
Prepares strategies to administrators and supervisors in child care centers for developing the personal and professional growth of child care staff. Prerequisites: None.

CFS269
Child Care Seminar
1 Credit. 1 Period.
Emphasizes the blend of job-related activities including career exploration, employment procedures, human relations, and on-the-job issues. May be repeated for a total of three (3) credit hours. Prerequisites: Departmental approval.

CFS284AB
Early Childhood Teaching Internship
3 Credits. 3 Periods.
Work experience in child care centers. 80 hours of designated work per credit. Maximum of 6 credits allowed. Prerequisites: CFS/ECH176 and permission of department. Corequisites: CFS/ECH269. Cross Referenced: ECH284AB

CFS285AA
Family-School Interaction: Preschool
1 Credit. 1 Period.
Interaction among parents, teachers and the preschool. Emphasis on methods used cooperatively by parents and preschool teachers to provide for education and developmental needs. Prerequisites: CFS176 or CFS278 or permission of instructor.

CNS290AC
Construction Internship
3 Credit. 15 Period.
Construction internship office/field experience with private / public agencies or citizen volunteer groups. Prerequisites: CNS282, or permission of department. Course Note: May not repeat specific assignment for more than (3) credit hours. Standard grading available according to procedures outlined in college catalog.

CNS175
Working Drawing Analysis: Blueprint Reading
3 Credits. 3 Period.
Detailed analysis and interpretation of construction drawings (blueprint reading); interpretation of symbols, annotations, conventions, terms of trade; and understanding of drawing, dimensioning, plan organization, and specifications. Prerequisites: None

CNS120
Adobe Web Design
3 Credits. 4 Periods.
Development of knowledge and skills required to design web pages and their elements using a variety of Adobe applications including GoLive, Premiere, Photoshop, Illustrator and Live Motion. Design theory relevant to maximizing web readership including interactive and multimedia elements, speed and accessibility optimization, and intuitive user interfaces. Prerequisites: CIS105 or permission of instructor. CIS150 recommended.

CNT140AA
Cisco Networking Fundamental
4 Credits. 6 Periods.
Introduction to the computer networking field. Covers network terminology and protocols, communication fundamentals in Data networks and the Internet. Includes study of the Open Systems Interconnection (OSI) models, using a top down approach, cabling and cabling tools, basic Cisco router configuration, Ethernet technologies, Internet Protocol (IP) addressing, and overview of Internet Protocol version 6 (IPv6), basic configuring and testing of the network and network standards. Preparation for the Cisco Certified Network Associate (CCNA) examination. Prerequisites: None.

CNT150AA
Cisco Routing Protocols and Concepts
4 Credits. 6 Periods.
Knowledge of skills to install, configure, customize, maintain and troubleshoot Cisco routers utilizing Advanced Internet Protocol (IP) addressing techniques, Variable Length Subnet Masking (VLSM), distance vectored and Link State dynamic routing protocols, Routing Internet Protocol version 1 (RIPv1) and version 2 (RIPv2), Enhanced Interior Gateway Routing Protocol (EIGRP), Single-area Open Shortest Path First (OSPF), and understanding the structure and behaviour of routing tables. Preparation for Cisco certification examination. Prerequisites: CNT140 or permission of instructor.

CNT160
Cisco Switching Basics and Intermediate Routing
3 Credits. 4 Periods.
Advanced Internet Protocol (IP) addressing techniques, Variable Length Subnet Masking (VLSM), Intermediate routing protocols, Routing Internet Protocol version 2 (RIPv2), Single-area Open Shortest Path First (OSPF), and Enhanced Interior Gateway Routing Protocol (EIGRP), Command Line Interface configuration of switches, Ethernet switching, Virtual Local Area Networks (VLANS), Spanning Tree Protocol (STP) and Virtual local-area Network Trunking Protocol (VTP). Preparation for Cisco Certified Network Associate certification examination. Prerequisites: CNT150 or permission of instructor.

CNT170
Cisco Wide Area Networks (WAN) Technologies
3 Credits. 4 Periods.
Advanced Internet Protocol (IP) addressing techniques including Network Address Translation (NAT) Port Address Translation (PAT) and Dynamic Host Control Protocol (DHCP). Also covers Wide Area Network (WAN) technology and terminology, Point-to-Point Protocol (PPP), Integrated Services Digital Network (ISDN), Dial on Demand Routing (DDR), Frame Relay, and network management. Preparation for Cisco Certified Network Associate certification examination. Prerequisites: CNT160 or permission of instructor.

CNT182
Cisco Secure PIX Firewall Configuration
3 Credits. 4 Periods.
Applications of Cisco Networking technologies in designing and implementing security solutions to reduce risk of revenue loss and vulnerability. Hands-on experience and skills in security policy design and management, security technologies, products and solutions, secure firewall design, installation, configuration and maintenance, AAA (Authentication, Authorization, and Accounting) and VPN (Virtual Private Network) implementation using firewalls. Preparation for the CSPFA (Cisco Secure PIX Firewall Advanced) exam, which applies toward the CCSP (Cisco Certified Security Professional) and the Cisco Firewall Specialist certifications. Prerequisites: CNT170 or permission of instructor.
CNT185
Cisco Network Security
4 Credits. 5 Periods.
Applications of Cisco Networking technologies in designing and implementing security solutions to reduce risk of revenue loss and vulnerability. Hands-on experience and skills in security policy design and management, security technologies, products and solutions, firewall and secure router design, installation, configuration and maintenance, AAA (Authentication, Authorization, and Accounting) and VPN (Virtual Private Network) implementation using firewalls and routers. Preparation for the MCNS (Managing Cisco Network Security) and CSPFA (Cisco Secure PIX Firewall Advanced) exams toward certification as a Cisco Firewall Specialist. Exams also apply to CCSP (Cisco Certified Security Professional) certification. Prerequisites: CNT170, or permission of instructor.

CNT186
Fundamentals of Wireless LANs
4 Credits. 5 Periods.
Design, planning, implementation, operation, and troubleshooting of wireless networks. Overview of technologies, security, and design best practices with emphasis on hands-on skills in wireless LAN (local area network) setup and troubleshooting, 802.11a & 802.11b technologies, products and solutions, site surveys, resilient WLAN design, installation and configuration, WLAN Security - 802.1x, EAP (Extensible Authentication Protocol), LEAP (Light Extensible Authentication Protocol), WEP (Wired Equivalent Privacy), SSID (Service Set Identifier), and vendor interoperability strategies. Prepare students to earn Cisco Wireless LAN Support Specialist designation and to take the Certified Wireless Network Administrator (CWNA) exam. Prerequisites: CNT170, or permission of instructor.

CNT190
Cisco Network Design
3 Credits. 4 Periods.
Development of knowledge and skills required to design small-to-midsize local and wide-area networks according to design principals developed by Cisco Systems. Preparation for Cisco Certified Design Associate (CCDA) industry examination. Prerequisites: CNT170, or Cisco Certified Network Associate certification, or permission of instructor.

CNT200
CCNP: Building Scalable Cisco Internetworks (BSCI)
4 credits. 6 Periods.
Development of knowledge and skills needed to manage Internet Protocol (IP) traffic and access, understand scalable internetworks and Quality of Service (QoS), configure advanced routing protocols, Border Gateway Protocol (BGP), Intermediate System to Intermediate System (IS-IS), Enhanced Interior Gateway Routing Protocol (EIGRP), Open Shortest Path First (OSPF), as well as multicast routing, Internet Protocol (IPv6), and perform advanced IP addressing configuration. (Dynamic Host Configuration Protocol (DHCP), Preparation for Cisco Certified Network Professional (CCNP) exam. Prerequisites: CNT170 or CCNA industry certification, or permission of instructor. Corequisites: CNT210 and CNT220.

CNT210
Cisco Networking Remote-Access Networks
4 Credits. 6 Periods.
Emphasis on development of knowledge and skills to build, configure and troubleshoot a remote-access network to interconnect central sites of branch offices, home offices and control access to the central site plus maximize bandwidth over remote links. Preparation for Cisco Certified Network Professional (CCNP) exam. Prerequisites: CNT170, or CCNA industry certification, or permission of instructor. Corequisites: CNT200 and CNT220.

CNT220
Cisco CCNP: Building Multi-Layer Switched Networks
4 Credits. 6 Periods.
Development of knowledge and skills in building campus networks using advanced and multi-layer switching technologies. Preparation for Cisco Certified Network Professional (CCNP) exam. Prerequisites: CNT170 or CCNA industry certification, or permission of instructor. Corequisites: CNT200 and CNT220.

CNT230
Cisco Network Troubleshooting
4 Credits. 6 Periods.
Emphasis on troubleshooting complex network problems by focusing on documenting and baselining a network, utilizing troubleshooting methodologies and tools, and learning effective skills in Layer 1 to 7 troubleshooting.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Periods</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPC101AB</td>
<td>Introduction to Computers II:</td>
<td>1</td>
<td>1</td>
<td>Use of Powerpoint software for advanced desktop presentation techniques, including advanced animation and sound sequences. Prerequisites: BPC/CIS118BB. Cross-reference: CIS118CB.</td>
</tr>
<tr>
<td>BPC110</td>
<td>Computer Usage and Application</td>
<td>3</td>
<td>4</td>
<td>Introduction to business and personal computer operations and usage. Software applications for analyzing and solving business problems including word processing, spreadsheet, database, and presentation graphics. Prerequisites: None.</td>
</tr>
<tr>
<td>BPC117DK</td>
<td>DB2: Database Management</td>
<td>3</td>
<td>4</td>
<td>Use of the Microsoft command line within windows: basic concepts, internal and external commands, subdirectories, and editor. Prerequisites: None. Cross-References: CIS118DB.</td>
</tr>
<tr>
<td>BPC117DM</td>
<td>Microsoft Access: Database Management</td>
<td>3</td>
<td>5</td>
<td>Presents basic concepts of commercially prepared software used to do desktop publishing. Incorporates a combination of narrative and pictorial/graphic creation and presentation, including set up, text entry, graphic generation, text and graphic merging, and other computer-based functions. Prerequisites: None.</td>
</tr>
<tr>
<td>BPC118AB</td>
<td>Powerpoint: Level I</td>
<td>1</td>
<td>2</td>
<td>Use of Powerpoint software to produce professional-quality presentation visuals. Prerequisites: None. Cross-reference: CIS118AB.</td>
</tr>
<tr>
<td>BPC118BB</td>
<td>Powerpoint: Level II</td>
<td>1</td>
<td>2</td>
<td>Use of Powerpoint software for advanced desktop presentation techniques, including advanced animation and sound sequences. Prerequisites: BPC/CIS118AB. Cross-reference: CIS118BB.</td>
</tr>
<tr>
<td>BPC118DB</td>
<td>Desktop Presentation: Powerpoint</td>
<td>3</td>
<td>5</td>
<td>Use of Powerpoint to produce professional-quality presentation visuals with animation and sound. Prerequisites: None. Cross-Reference: CIS118DB.</td>
</tr>
<tr>
<td>BPC120DC</td>
<td>Flash: Digital Animation</td>
<td>3</td>
<td>4</td>
<td>Provides students with the ability to use Macromedia Flash graphics software on microcomputers. Covers basic animation techniques used in the creation, manipulation, and editing of Flash animation graphics. Prerequisites: None. Cross-References: CIS120DC</td>
</tr>
<tr>
<td>BPC121AB</td>
<td>Microsoft Command Line Operations</td>
<td>1</td>
<td>2</td>
<td>Use of the Microsoft command line within windows: basic concepts, internal and external commands, subdirectories, and editor. Prerequisites: None. Cross-References: CIS121AB</td>
</tr>
<tr>
<td>BPC128</td>
<td>Introduction to Desktop Publishing</td>
<td>1</td>
<td>2</td>
<td>Provides students with the ability to use Macromedia Flash graphics software on microcomputers. Covers basic animation techniques used in the creation, manipulation, and editing of Flash animation graphics. Prerequisites: None. Cross-References: CIS120DC</td>
</tr>
<tr>
<td>BPC133AA</td>
<td>Internet/Web Development Level I -A</td>
<td>1</td>
<td>2</td>
<td>Overview of the Internet and its resources. Hands-on experience with various Internet communication tools. Prerequisites: None. Cross-References: CIS133AA</td>
</tr>
<tr>
<td>BPC133BA</td>
<td>Internet/Web Development Level I -B</td>
<td>1</td>
<td>1</td>
<td>Exploration of additional Internet resources. Hands-on experience with a variety of resource discovery and information retrieval tools as well as enhancement of Web pages. Prerequisites: BPC/CIS133AA. Cross-References: CIS133BA</td>
</tr>
</tbody>
</table>
BPC133CA
Internet/Web Development Level I-C
1 Credit.  1 Periods.
Web site development using enhancement codes. Includes frames, style sheets and javascript as well as design principles and typography. Prerequisites: BPC/CIS133BA. Cross-References: CIS133CA

BPC133DA
Internet/Web Development Level I
3 Credits.  4 Periods.
Overview of the Internet/WWW and its resources. Hands-on experience with various Internet/WWW communication, resource discovery, and information retrieval tools. Web page development also included. Prerequisites: None. Cross-References: CIS133DA

BPC135DK
Word: Level I
2 Credits.  2 Periods.
Using word processing software to create and name files, edit text, format and print a variety of documents. Prerequisites: The ability to use a keyboard at a minimum of 24 wpm or permission of instructor. Cross-reference: OAS135DK.

BPC138AA
Windows Desktop Design & Publishing
3 Credits.  4 Periods.
Use of Windows based microcomputers and appropriate commercial software package to compose and print textual and graphic materials of high quality. Includes overview of micro operating system, word processing of copy, use of graphics programs, layout of design elements, and printing alternatives. Prerequisites: CIS105 or BPC110 or permission of instructor.

BPC138BA
Windows Desktop Design & Publishing Using Quark Express
3 Credits.  4 Periods.
Use of Windows based microcomputers and appropriate commercial software package to compose and print textual and graphic materials of high quality. Includes overview of micro operating system, word processing of copy, use of graphics programs, layout of design elements, and printing alternatives. Prerequisites: CIS105 or BPC110 or permission of instructor.

BPC138CA
Windows Desktop Design & Publishing Using Pagemaker
3 Credits.  4 Periods.
Use of Windows based microcomputers and appropriate commercial software package to compose and print textual and graphic materials of high quality. Includes overview of micro operating system, word processing of copy, use of graphics programs, layout of design elements, and printing alternatives. Prerequisites: CIS105 or BPC110 or permission of instructor.

BPC138DA
Desktop Design & Publishing Using Adobe InDesign
3 Credits.  4 Periods.
Use of Adobe InDesign to compose and print textual and graphic materials of high quality. Includes word processing of copy, use of graphics programs, layout of design elements, printing alternatives, and file formats. Prerequisites: CIS105 or BPC110 or permission of instructor.

BPC170
Computer Maintenance I: A+ Prep
3 Credits.  4 Periods.
Technical aspects of the microcomputer, including system setup (hardware and software) and basic troubleshooting. Emphasis on basic troubleshooting, use of tools, hardware components and hardware/software interfacing. Prerequisites: CIS105 and BPC121AB or permission of instructor

BPC171
Recycling Used Computer Technology
1 Credit.  2 Periods.
Use of hardware maintenance knowledge and skills to refurbish used computers. May be repeated for a total of three (3) credits. Prerequisites or Corequisites:BPC170 or permission of instructor.

BPC238BA
Windows Advanced Desktop Design & Publishing Using Quark Express
3 Credits.  4 Periods.
Advanced use of Windows microcomputers and commercial software packages to compose and print textual and graphic materials of high quality. Includes review of fundamental desktop techniques and concepts, alternative treatment of copy, use of complex graphics programs, typographical manipulation, color separating, exploration of alternative layout programs, preparation of larger-scale and unusual publications, and additional printing alternatives. Prerequisites: BPC138BA or permission of instructor.

BPC238CA
Windows Advanced Desktop Design & Publishing Using Pagemaker
3 Credits.  4 Periods.
Advanced use of Windows microcomputers and commercial software packages to compose and print textual and graphic materials of high quality. Includes review of fundamental desktop techniques and concepts, alternative treatment of copy, use of complex graphics programs, typographical manipulation, color separating, exploration of alternative layout programs, preparation of larger-scale and unusual publications, and additional printing alternatives. Prerequisites: BPC138CA or permission of instructor.
CIS103  
Using Help Desk Software  
2 Credits.  3 Periods.  
Help desk software applications for tracking calls, querying data, recording macros, and generating reports. Prerequisites: CIS105 or permission of instructor.

CIS105  
Survey of Computer Information Systems  
3 Credits.  4 Periods.  
Overview of computer technology, concepts, terminology, and the role of computers in society. Discussion of social and ethical issues related to computers. Use of word processing, spreadsheet, database, and presentation software. Includes programming and use of the Internet. Exploration of relevant emerging technologies. Prerequisites: None.

CIS107  
The Electronic Game Industry  
3 Credits.  4 Periods.  
Introduction to the electronic game industry, including history, market, distribution and publishing channels, business models, team roles, and career landscape. Technical topics covered include software engineering, artificial intelligence, game physics, computer graphics, and networking. Prerequisites: CIS105, or permission of instructor.

CIS110  
Home Entertainment and Computer Networking  
3 Credits.  4 Periods.  
Fundamentals of networking for the home user including internet connectivity, wired and wireless local area networks, networking device configuration, integration of entertainment electronics, security and ethics. Prerequisites: None.

CIS114AE  
Excel: Level I  
1 Credit.  2 Periods.  
Computer spreadsheet skills for solving business problems using Excel, including calculations, forecasting and projections. Prerequisites: None. Cross-reference: BPC114AE.

CIS114BE  
Excel: Level II  
1 Credit.  2 Periods.  
Additional Excel spreadsheet techniques, including macro programming, database searching, extraction, and linking to obtain prescribed reports and graphs. Prerequisites: BPC/CIS114AE or permission of instructor. Cross-reference: BPC114BE.

CIS114CE  
Excel: Level III  
1 Credit.  1 Period.  
Additional Excel spreadsheet techniques, including complex macros, statistics, and matrix manipulation. Project design using multiple, integrated spreadsheets. Prerequisites: BPC/CIS114BE or permission of instructor. Cross-reference: BPC114CE.

CIS117AM  
Database Management: Microsoft Access: Level I  
1 Credit.  2 Periods.  
Introduction to the basic elements of a current version of the Microsoft Access database management program, for casual and beginning users. Prerequisites: None. Cross-reference: BPC117AM.

CIS117BM  
Database Management: Microsoft Access: Level II  
1 Credit.  2 Periods.  
Exploration of additional components of the Microsoft Access database management program. Prerequisites: BPC/CIS117AM or permission of instructor. Cross-reference: BPC117BM.

CIS117CM  
Database Management: Microsoft Access: Level III  
1 Credit.  1 Period.  
Application of the features of the Microsoft Access program to some common database management problems. Prerequisites: BPC117BM or CIS117BM. Cross-reference: BPC117CM.

CIS117DK  
DB2: Database Management  
3 Credits.  4 Periods.  
Introduction to the basic elements, exploration of additional components and common database management problems related to the DB2 program. Prerequisites: None. Cross-References: BPC117DK.
CIS117DM
Microsoft Access: Database Management
3 Credits. 5 Periods.
Introduction to the basic elements, exploration of additional components and common database management problems related to the Microsoft Access program. Prerequisites: None. Cross-reference: BPC117DM.

CIS119DO
Introduction to Oracle: SQL
3 Credits. 4 Periods.
Use of Oracle tools and methodologies to fulfill real-world business information requirements. Hands-on exercises for designing, creating, and maintaining database structures to store, retrieve, update, and display data in a relational database using the SQL programming language. Creating and maintaining database objects. Advanced retrieval techniques. Prerequisites: CIS105 or permission of instructor.

CIS119DP
Oracle: Database Administration
3 Credits. 4 Periods.
Basic administrative tasks performed by a database administrator (DBA). Conceptual understanding and hands-on applications of the Oracle database architecture and interaction of its components. Prerequisites: (CIS119DO, and CIS164AB), or CIS126++, or permission of instructor.

CIS119DQ
Oracle: Backup and Recovery
2 Credits. 3 Periods.
Various backup, failure, restore, and recovery scenarios that apply to Oracle database environments. Backup methodologies based on business requirements in a mission critical enterprise. Multiple strategies and Oracle tools such as Recovery Manager. Prerequisites: CIS119DP or permission of the instructor.

CIS119DR
Oracle: Performance Tuning
3 Credits. 4 Periods.
Recognizing, troubleshooting, and resolving common performance related problems in administering an Oracle database. Includes an interactive workshop that will provide participants with the opportunity to walk through numerous real-world performance tuning case studies. Prerequisites: CIS119DP or permission of the instructor.

CIS120AB
Computer Graphics: Adobe Illustrator- Level I
1 Credit. 2 Periods.
Provides students with the capability to use Adobe Illustrator graphics software on a computer. Basic foundation course in the use of electronic techniques to create, manipulate, and edit images, graphics design, and color graphics. Prerequisites: None. Cross-References: BPC120AB

CIS120AF
Computer Graphics: Adobe Photoshop: Level I
1 Credit. 2 Periods.
Provides students with the capability to use Adobe Photoshop graphics software on a computer. Basic foundation course in the use of electronic techniques to select, manipulate, and edit images, for graphic design and image correction. Prerequisites: None. Cross-reference: BPC120AF.

CIS120BB
Computer Graphics: Adobe Illustrator- Level II
1 Credit. 1 Periods.
Provides students with the capability to use Adobe Illustrator graphics software on a computer. Basic foundation course in the use of electronic techniques to create, manipulate, and edit images, text, abstract art, graphics design, color graphics and business charts, and create a PDF file. Prerequisites: BPC/CIS120AB Cross-References: BPC120BB

CIS120BF
Computer Graphics: Adobe Photoshop: Level II
1 Credit. 1 Periods.
Provides students with the capability to use Adobe Photoshop graphics software on a computer. Basic foundation course in the use of electronic techniques to select, manipulate, and edit images, work with masks, channels and layers, convert raster and vector graphics. Prerequisites: BPC/CIS120AF. Cross-References: BPC120BF

CIS120CB
Computer Graphics: Adobe Illustrator- Level III
1 Credit. 1 Periods.
Provides students with the capability to use Adobe Illustrator graphics software on a computer. Basic foundation course in the use of electronic techniques to create, manipulate, and edit images, text, graphics design, color graphics, determine file formats appropriate for web and print, and utilize tools to optimize graphics. Prerequisites: BPC/CIS120BB. Cross-References: BPC120CB

CIS120CF
Computer Graphics: Adobe Photoshop: Level III
1 Credit. 1 Period.
Provides students with the capability to use Adobe Photoshop graphics software on a computer. Includes color printing, color management, creation of graphics for the Web. Prerequisites: BPC/CIS120BF. Cross-Reference: BPC120CF.

CIS120DB
Computer Graphics: Adobe Illustrator
3 Credits. 4 Periods.
Provides students with the capability to use Adobe Illustrator graphics software on a computer. Basic foundation course in the use of electronic techniques to create, manipulate, and edit images, text, abstract art, graphics design, color graphics and business charts; determine file formats appropriate for web and print; utilize tools to optimize graphics and create a PDF file. Prerequisites: None. Cross-References: BPC120DB

CIS120DC
Flash: Digital Animation
3 Credits. 4 Periods.
Provides students with the ability to use Macromedia Flash graphics software on microcomputers. Covers basic animation techniques used in the creation, manipulation, and editing of Flash animation graphics. Prerequisites: None. Cross-References: BPC120DC

CIS120DF
Computer Graphics: Adobe Photoshop
3 Credits. 4 Periods.
Provides students with the capability to use Adobe Photoshop graphics software on a computer. Basic foundation course in the use of electronic techniques to select, manipulate, and edit images, work with masks, channels and layers; combine raster and vector graphics; print in color, manage color, and create graphics for the web. Prerequisites: None.Cross-References: BPC120DF

CIS121AB
Microsoft Command Line Operations
1 Credit. 2 Periods.
The use of the microsoft command line within windows: basic concepts, internal and external commands, subdirectories, and editor. Prerequisites: None. Cross-reference: BPC121AB.
CIS121AE
Windows Operating System: Level I
1 Credit. 2 Periods.
Specific topics include booting and shutting down the computer, navigating the desktop, start button features, taskbar status, and receiving on-line help support. Exploring and managing folders and files, running programs, and learning about Wordpad and Paint application programs. Prerequisites: None. Cross-References: BPC121AE.

CIS124AA
Project Management Software: Level I
1 Credit. 1.7 Periods.
Utilization of project management software packages by managers and advanced business students to solve critical management planning tasks. Evaluation of management opportunities utilizing software packages to monitor project progress and resource allocation. Includes “what-if” analyses, and preparation of management reports. Prerequisites: None.

CIS126AA
Unix Operating System: Level I
1 Credit. 2 Periods.
Use of the UNIX operating system: system components, built-in commands, files and directories, editors, and UNIX Shell and command lines. Prerequisites: None.

CIS126AL
Linux Operating System I
1 Credit. 2 Periods.
Introduction to the Linux Operating system. Develop knowledge and skills required to install, configure a Linux-based workstation including basic network functions. Prerequisites: None.

CIS126BA
Unix Operating System: Level II
1 Credit. 1 Period.
Installation, configuration, and maintenance of the UNIX operating system. Prerequisites: CIS126AA

CIS126BL
Unix Operating System: Level III
1 Credit. 1 Periods.
Create login scripts and batch files, and maintain system communications. Prerequisites: CIS126BA.

CIS126CL
Linux Operating System III
1 Credit. 1 Periods.
Introduction to the Linux Operating system. Develop knowledge and skills required to install and configure applications, and to troubleshoot a Linux-based workstation including basic network functions. Learn basic command line and Graphical User Interface (GUI) desktop environment utilities and applications. Prerequisites: CIS126BL or Permission of Instructor

CIS126DA
UNIX Operating System
3 Credits. 4 Periods.
Use of a UNIX operating system including system components, built-in commands, files, and directories, editors, and UNIX shell and command lines. Installation, configuration, and maintenance of a UNIX operating system. Create scripts and batch files, and maintain system communications. Prerequisites: None.

CIS126DL
Linux Operating System
3 Credits. 4 Periods.
Introduction to the Linux Operating system. Develop knowledge and skills required to install, configure and troubleshoot a Linux-based workstation including basic network functions. Learn basic command line and Graphical User Interface (GUI) desktop environment utilities and applications. Fundamental abilities to achieve the entry-level industry certification covered. Prerequisites: None.

CIS123AA
Internet/Web Development Level I-A
1 Credit. 2 Periods.
Overview of the Internet/WWW and its resources. Hands-on experience with various Internet/WWW communication, resource discovery, and information retrieval tools. Web page development also included. Prerequisites: None. Cross-References: BPC133DA.

CIS140
Survey of Multimedia Technology
2 Credits. 3 Periods.
Introduction to multimedia technology and its uses. Overview of the various hardware and software used in developing and delivering multimedia. Emphasis on how multimedia is used in education and training. Provides a basic understanding of the process used to define and develop multimedia applications. Prerequisites: CIS105 or permission of instructor. Cross-reference: MMT140.

CIS150
Programming Fundamentals
3 Credits. 4 Periods.
Structured program design and logic tools. Use of computer problems to demonstrate and teach concepts using appropriate programming language. Prerequisites: CIS105 or permission of instructor.

CIS150AB
Object-Oriented Programming Fundamentals
3 Credits. 4 Periods.
Structured and Object-Oriented design and logic tools. Use of computer problems to demonstrate and teach concepts using an appropriate programming language. Prerequisites: CIS105 or permission of instructor.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Periods</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS151</td>
<td>Computer Game Development -Level I</td>
<td>3</td>
<td>4</td>
<td>Introduction to object-oriented game development, game design, and game theory. Use of computer software to demonstrate and teach concepts using an appropriate game development platform to model real-time simulations and create computer games using object oriented tools. Introduction to developing PC games, educational software, and training software using windows based object oriented developments tools. Prerequisite: CIS105 or permission of instructor.</td>
</tr>
<tr>
<td>CIS158</td>
<td>COBOL Programming I</td>
<td>3</td>
<td>4</td>
<td>Programming in structured COBOL for preparation of business reports. Hands-on computer experience. Prerequisites: CIS105, or permission of instructor.</td>
</tr>
<tr>
<td>CIS159</td>
<td>Visual Basic Programming I</td>
<td>3</td>
<td>4</td>
<td>Use of the Visual Basic programming language to solve problems using suitable examples from business or other disciplines. Prerequisites: CIS105 or permission of instructor.</td>
</tr>
<tr>
<td>CIS162</td>
<td>C Programming I</td>
<td>3</td>
<td>4</td>
<td>Beginning C programming. Includes features needed to construct programs, functions, pointers, input and output options, data types, structures, and unions, and disk file operations. Prerequisites: CIS105 or permission of instructor.</td>
</tr>
<tr>
<td>CIS162AA</td>
<td>C: Level I</td>
<td>3</td>
<td>4</td>
<td>Beginning C programming. Includes features needed to construct programs, functions, pointers, input and output options, data types, structures, and unions, and disk file operations. Prerequisites: CIS105 or permission of instructor.</td>
</tr>
<tr>
<td>CIS162AB</td>
<td>C++: Level I</td>
<td>3</td>
<td>4</td>
<td>Introduction to C++ programming including general concepts, program design, development, data types, operators, expressions, flow control, functions, classes, input and output operations, debugging, structured programming, and object-oriented programming. Prerequisites: CIS105, or permission of instructor.</td>
</tr>
<tr>
<td>CIS162AC</td>
<td>Visual C++: Level I</td>
<td>3</td>
<td>4</td>
<td>Beginning C programming. Includes features needed to construct programs, functions, pointers, input and output options, data types, structures, and unions, and disk file operations. Prerequisites: CIS105, or permission of instructor.</td>
</tr>
<tr>
<td>CIS162AD</td>
<td>C#: Level I</td>
<td>3</td>
<td>4</td>
<td>Introduction to C# programming including general concepts, program design, development, data types, operators, expressions, flow control, functions, classes, input and output operations, debugging, structured programming, and object-oriented programming. Prerequisites: CIS105, or permission of instructor.</td>
</tr>
<tr>
<td>CIS163AA</td>
<td>Java Programming: Level I</td>
<td>3</td>
<td>4</td>
<td>Introduction to Java programming. Includes features needed to construct Java Applets, Java Applications, control structures, methods, arrays, character and string manipulation, graphics, and object-oriented programming. Prerequisites: CIS105, or permission of instructor.</td>
</tr>
<tr>
<td>CIS164AC</td>
<td>Oracle: Developer Forms I</td>
<td>3</td>
<td>4</td>
<td>Building and testing interactive applications consisting of one or more Developer forms modules. Building a complete forms application using Oracle Developer. Customizing forms with graphical user input items, such as check boxes, list items and radio groups. Modifying data access by creating event-related triggers. Prerequisites: CIS164AB, or permission of instructor.</td>
</tr>
<tr>
<td>CIS164AD</td>
<td>Oracle: Developer Forms II</td>
<td>2</td>
<td>3</td>
<td>An opportunity to broaden skills using Developer Forms. Complex concepts, such as programming function keys, timers, and record groups. Using programmatic controls to manage the behavior and appearance of windows at runtime. Creating advanced multiple-form applications and managing multiple transactions across modules. Prerequisites: CIS164AC or permission of instructor.</td>
</tr>
<tr>
<td>CIS164AE</td>
<td>Oracle: Developer Reports</td>
<td>3</td>
<td>4</td>
<td>Building a variety of standard and custom reports in a client-server environment. Using a graphical user interface (GUI) environment to retrieve, display, and format data in many styles to create tabular, matrix, mailing label, and letter reports. Customizing more complex reports, embedding graphical charts in reports, and using the Intelligent Remote Reports Server. Prerequisites: CIS164AB or permission of instructor.</td>
</tr>
<tr>
<td>CIS164AG</td>
<td>Oracle: Data Modeling and Relational Database Design</td>
<td>2</td>
<td>3</td>
<td>Top-down, systematic approach to developing a relational database and defining requirements as entities, attributes, and relationships. Developing an entity-relationship (ER) diagram that accurately reflects the business. Mapping the ER diagram to an initial database design. Prerequisites: CIS105 or permission of instructor.</td>
</tr>
<tr>
<td>CIS166</td>
<td>Web Scripting/Programming</td>
<td>3</td>
<td>4</td>
<td>Software development for Web sites, including client-side script and Common Gateway Interface (CGI) scripting. Covers Web-based transaction processing and use of databases in conjunction with the Web. Includes security issues. Prerequisites: CIS133CA or CIS133DA or permission of instructor.</td>
</tr>
<tr>
<td>CIS166AA</td>
<td>Introduction to JavaScript</td>
<td>3</td>
<td>4</td>
<td>Introduction to basic JavaScript programming concepts including syntax. Covers Hypertext Markup Language (HTML), programming logic and debugging, as well as forms manipulation and animation. Prerequisites: CIS133CA or CIS133DA or permission of instructor.</td>
</tr>
<tr>
<td>CIS166AB</td>
<td>Web Scripting with Perl/CGI</td>
<td>3</td>
<td>4</td>
<td>Introduction to basic server-side programming using the common gateway interface (CGI) with the Perl programming language. Covers basic form development programming logic, Structured Query Language (SQL) and the Perl Database Interface (DBI) and CGI modules. Prerequisites: CIS133CA or CIS133DA or permission of instructor.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Periods</td>
<td>Description</td>
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<tr>
<td>CIS166AC</td>
<td>Web Scripting with Active Server Pages (ASP.NET)</td>
<td>3</td>
<td>4</td>
<td>Introduction to web scripting using Microsoft’s ASP.Net (Active Server Pages). Web application development using Hypertext Markup Language (HTML), ASP.Net Web Forms, and Structured Query Language (SQL). Prerequisites: ((CIS133CA or CIS133DA) and (CIS159 or CIS162AD)) or permission of instructor.</td>
</tr>
<tr>
<td>CIS166AD</td>
<td>Web Scripting with Java Server Pages (JSP)</td>
<td>3</td>
<td>4</td>
<td>Introduction to web scripting using JSP (Java Server Pages). Web application development using Hypertext Markup Language (HTML), JSP programming logic, and Structured Query Language (SQL). Prerequisites: (CIS133CA or CIS133DA) and CIS163AA or permission of instructor.</td>
</tr>
<tr>
<td>CIS166AE</td>
<td>Web Scripting with PHP: Hypertext Preprocessor (PHP)</td>
<td>3</td>
<td>4</td>
<td>Introduction to web scripting using PHP (PHP: Hypertext Preprocessor). Web application development using Hypertext Markup Language (HTML), PHP, programming logic, and Structured Query Language (SQL). Prerequisites: CIS133CA or CIS133DA or permission of instructor.</td>
</tr>
<tr>
<td>CIS169</td>
<td>Introduction to Visual Basic for Applications</td>
<td>3</td>
<td>4</td>
<td>Introduction to Visual Basic for Applications (VBA) using Microsoft Office environments. Includes Dynamic Data structures, VBA class modules and error trapping and handling. Creation of customized office applications and network shares as well as multimedia techniques also covered. Prerequisites: CIS159 or permission of instructor.</td>
</tr>
<tr>
<td>CIS175EA</td>
<td>Introduction to Structured Query Language</td>
<td>1</td>
<td>2</td>
<td>Introduction to Structured Query Language. Focuses on the query operation, including data collection, grouping and multi-table queries. Prerequisites: None. Cross-References: CCT175</td>
</tr>
<tr>
<td>CIS181</td>
<td>IBM Mainframe Z/OS - Level I</td>
<td>3</td>
<td>4</td>
<td>Fundamental knowledge and skills to begin using the basic functions of a mainframe computer. User interfaces of the z/OS mainframe operating system and the role of mainframes in today’s business world. Tools, utilities and processes for developing a simple program to run on z/OS. Prerequisites: CIS105 and CIS150, or permission of instructor.</td>
</tr>
<tr>
<td>CIS190</td>
<td>Introduction to Local Area Networks</td>
<td>3</td>
<td>4</td>
<td>Overview of local area networks. Emphasis on the elements of a local area network, current issues and products, and use of a local area network. Includes terminology, hardware and software components, connectivity, resource monitoring and sharing, electronic mail and messaging, and security issues. Prerequisites: CIS105 or permission of instructor.</td>
</tr>
<tr>
<td>CIS191</td>
<td>Novell NetWare System Administration</td>
<td>3</td>
<td>4</td>
<td>Knowledge and skills required to administer or manage a Novell NetWare local area network operating system. Level I, II, and III network management tasks. Prerequisites: CIS105 or permission of instructor.</td>
</tr>
<tr>
<td>CIS214DE</td>
<td>Advanced Excel Spreadsheet: Level II</td>
<td>3</td>
<td>5</td>
<td>Advanced Excel spreadsheet features including formatting techniques, macros and Visual Basic for applications. Templates, built-in functions and lists as well as analysis tools including Pivot Tables and Goal Seek covered. Import and export data, workgroup collaboration and Internet features of Excel emphasized. Prerequisites: CIS114DE or permission of instructor. Cross-References: BPC214DE.</td>
</tr>
<tr>
<td>CIS217AM</td>
<td>Advanced Microsoft Access: Database Management</td>
<td>3</td>
<td>4</td>
<td>Advanced database concepts including database design, primary and secondary key selection and relationships between tables. Queries, sub forms, macros, events, Visual Basic modules and Access Internet features also covered. Prerequisites: (BPC/CIS117DM or BPC/CIS117CM). Cross-References: BPC217AM</td>
</tr>
<tr>
<td>CIS220DF</td>
<td>Advanced Photoshop</td>
<td>3</td>
<td>4</td>
<td>Goes beyond the basic use of palettes, selections, layers, menus, and tool options, and focuses on using Photoshop software's advanced features to manipulate and correct digital and digitally produced images. Prerequisites: (BPC/CIS120AF, BPC/CIS120BF and BPC/CIS120CF) or BPC/CIS120DF, or permission of instructor. Cross-References: BPC220DF</td>
</tr>
<tr>
<td>CIS221</td>
<td>Advanced DOS</td>
<td>2</td>
<td>3</td>
<td>Advanced DOS commands, concepts, and usage. Emphasis on batch file programming, configuration and optimization of the DOS environment, various commercial utilities, security and disaster planning, and legal considerations. Prerequisites: CIS121AB or (BPC102AA and BPC102BA) or permission of instructor.</td>
</tr>
<tr>
<td>CIS224</td>
<td>Project Management Microsoft Project for Windows</td>
<td>3</td>
<td>4</td>
<td>Introduction to project management concepts while working with MS Project to solve complex project management networks, including creating Gantt and PERT charts, tracking project progress, planning for restrictions, and integrating MS Project with other software packages such as Excel, Word, Powerpoint, and ccMail. Prerequisites: None. Cross-References: BPC224</td>
</tr>
<tr>
<td>CIS225</td>
<td>Business Systems Analysis and Design</td>
<td>3</td>
<td>3</td>
<td>Investigation, analysis, design, implementation and evaluation of business computer systems. Prerequisites: Any programming language or permission of instructor.</td>
</tr>
<tr>
<td>CIS225AB</td>
<td>Object-Oriented Analysis and Design</td>
<td>3</td>
<td>3</td>
<td>Methodologies and notations for fundamental object-oriented analysis and design including use cases, objects, classes, stereotypes, and relationships. Object-oriented iterative process for system development. A continuous application development exercise for applying the analysis and design concepts. Prerequisites: Any program language, or permission of instructor.</td>
</tr>
</tbody>
</table>
CIS226AA  
Internet/Intranet Server Administration-UNIX  
3 Credits.  4 Periods.  
Set up and management of internet/intranet services, including World Wide Web (WWW) and Simple Mail Transfer Protocol (SMTP) in a UNIX environment. Includes coverage of security issues. Prerequisites: (CIS126DA and CIS133DA), or permission of instructor.

CIS233AA  
Internet/Web Development Level II-A  
1 Credit.  2 Periods.  
Design and creation of pages on the World Wide Web using hypertext markup language (HTML). Hands-on experience authoring HTML and preparing sophisticated web documents. Prerequisites: BPC/CIS133BA or permission of instructor.

CIS233BA  
Internet/Web Development Level II-B  
1 Credit.  1 Period.  
Hands-on experience designing Web presentations using advanced markup languages, programming languages, scripts, and multimedia. Prerequisites: CIS233AA or permission of instructor.

CIS233CA  
Internet/Web Development Level II-C  
1 Credit.  1 Period.  
Exploration of best practices/issues for web design and publishing and careers in web development and e-commerce. Prerequisites: CIS233BA or permission of instructor.

CIS233DA  
Internet/Web Development Level II  
3 Credits.  4 Periods.  
Design and create pages on the World Wide Web with a variety of markup languages, programming languages, scripts, and multimedia. Hands-on experience authoring and preparing sophisticated web documents. Exploration of best practices/issues for web design and publishing and careers in web development and e-commerce. Prerequisites: BPC/CIS133CA or BPC/CIS133DA or permission of instructor.

CIS234  
XML Application Development  
3 Credits.  4 Periods.  
The use of Extensible Markup Language (XML) to make documents smarter, simplify Web automation, and to communicate between databases, both within and between corporations. Includes techniques for XML generation, data extraction and sharing, and transformation and managing of XML files. Prerequisites: CIS133CA or CIS133DA, or permission of the instructor.

CIS235  
e-Commerce  
3 Credits.  4 Periods.  
Introduction to Electronic Commerce on the Internet. Designing an electronic storefront including web page content and development, e-commerce site marketing, advertisement, legal and security considerations, credit card and other debit transaction covered. Also includes current issues in e-commerce. Prerequisites: CIS133CA, or CIS133DA, or permission of instructor.

CIS238DL  
Linux System Administration  
3 Credits.  4 Periods.  
Managing Linux Operating Systems including sophisticated manipulation of file structures, backup systems, printing processes, troubleshooting, user account management, hard disk maintenance and configuration, process monitoring and prioritizing, kernel customization, and system resource control. Preparation for industry certifications such as the SAIR/GNU LCP and LCA certificates, CompTIA's Linux+, RHCT, RHCE, and LPIC. Prerequisites: CIS126AL, CIS126BL and CIS126CL; or CIS126DL or Permission of Instructor.

CIS238US  
Unix Security  
3 Credits.  4 Periods.  
Unix system administration and security management including directory structure, access control and authentication mechanisms, password management, system logs and monitoring, process accounting, configuring public services, restricted environments, the sudo command, SSH (Secure Shell), file system mount options, file integrity management, immutable/append-only files and system security levels, loadable kernel modules, rootkits, non-executable stacks, backups, common vulnerabilities and exposures, and firewall filtering. Prerequisites: CIS238, or permission of instructor.

CIS239DL  
Linux Shell Scripting  
3 Credits.  4 Periods.  
Linux Shell Scripting syntax and methods including the automation of system tasks as well as interpreted user-level programming. Course includes the Linux Borne Again Shell (BASH) as well as a variety of industry competitors. Prerequisites: CIS238DL or permission of instructor.

CIS240DL  
Linux Network Administration  
3 Credits.  4 Periods.  
In depth networking based on Linux servers and the Transmission Control Protocol/Internet Protocol (TCP/IP) protocol suite. Integrating Linux servers and workstations into a network environment with multi-platform network operating systems including a variety of open-standard and proprietary protocols. Preparation for industry certifications such as the SAIR/GNU LCP and LCA certificates, CompTIA's Linux+, RHCT, RHCE, and LPIC. Prerequisites: CIS126AL, CIS126BL and CIS126CL; or CIS126DL or instructor approval.

CIS241DL  
Apache Web Server Administration (Linux/Unix)  
3 Credits.  4 Periods.  
Knowledge and skills to install, configure and secure an Apache/Linux/Unix Apache web server in an Open Source Environment. Securely incorporates Common Gateway Interface (CGI) handlers, Secure Socket Layer (SSL), dynamic content, and customization of the Apache web server with add-in modules. Preparation for entry-level industry certification exams will be covered. Prerequisites: CIS266AA, or CIS226AL, or CIS238DL, or permission of instructor.

CIS250  
Management Information Systems  
3 Credits.  4 Periods.  
The study of business information systems and its management, communication, e-business strategies, emerging technologies, database concepts, and project management. Overview of systems analysis and design. Learn about the competitive and strategic uses of information systems and how they are transforming organizations and their management. Prerequisites: CIS105.

CIS251  
Computer Game Development -Level II  
3 Credits.  4 Periods.  
Advanced object-oriented game development, advanced game design, and advanced game theory. Use of game development software tools to demonstrate advanced concepts for modeling real-time simulations and creating computer games using object oriented development tools. In depth coverage of game programming (scripting) techniques, and decision logic using object oriented techniques. Prerequisites: CIS151 or permission of instructor.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CIS253</td>
<td>Computer Game Development - Level III</td>
</tr>
<tr>
<td></td>
<td>3 Credits. 4 Periods. Advanced object oriented game development, controlling and programming game and windows resources using the game development language. Modeling real-time simulations and game worlds using advanced programming techniques and artificial intelligence. Creation of network and Internet based multi-player games using object oriented techniques and packet based communication protocols. Prerequisites: CIS251 or permission of Instructor.</td>
</tr>
<tr>
<td>CIS259</td>
<td>Visual Basic Programming II</td>
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<tr>
<td></td>
<td>3 Credits. 4 Periods. Use of the Visual Basic programming language to identify and solve advanced problems using suitable examples from business or other disciplines. Prerequisites: CIS159 or permission of instructor.</td>
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<tr>
<td>CIS262</td>
<td>C Programming II</td>
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<tr>
<td></td>
<td>3 Credits. 4 Periods. Advanced level C programming. Programming with emphasis on data management, dynamic allocation, varied memory models, interfacing with the operating system, efficiency, and advanced debugging techniques. Prerequisites: CIS162, or permission of instructor.</td>
</tr>
<tr>
<td>CIS262AA</td>
<td>C: Level II</td>
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<td></td>
<td>3 Credits. 4 Periods. Advanced level C programming. Programming with emphasis on data management, dynamic allocation, varied memory models, interfacing with the operating system, efficiency, and advanced debugging techniques. Prerequisites: CIS162AA, or permission of instructor.</td>
</tr>
<tr>
<td>CIS262AB</td>
<td>C++: Level II</td>
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<tr>
<td></td>
<td>3 Credits. 4 Periods. Advanced level C++ programming with emphasis on arrays, data management, dynamic memory allocation, object-oriented programming concepts, input/output operations, libraries, and debugging techniques. Includes overview of other advanced applications of C++. Prerequisites: Permission of instructor.</td>
</tr>
<tr>
<td>CIS262AC</td>
<td>Visual C++: Level II</td>
</tr>
<tr>
<td></td>
<td>3 Credits. 4 Periods. Advanced level C programming. Programming with emphasis on data management, dynamic allocation, varied memory models, interfacing with the operating system, efficiency, and advanced debugging techniques. Prerequisites: CIS162AC, or permission of instructor.</td>
</tr>
<tr>
<td>CIS263AA</td>
<td>Java Programming: Level II</td>
</tr>
<tr>
<td></td>
<td>3 Credits. 4 Periods. Intermediate Java programming. Includes features needed to construct object-oriented programming, multithreading, multimedia, files, streams and data structure. Prerequisites: CIS163AA or permission of the instructor.</td>
</tr>
<tr>
<td>CIS270</td>
<td>Essentials of Network and Information Security</td>
</tr>
<tr>
<td></td>
<td>3 Credits. 4 Periods. Threats to security of information systems; responsibilities and basic tools for information security, including communication security, infrastructure security, organizational security and basic cryptography. Introduction to the language of network security and hardware, software and firmware components of an information security system for local, metropolitan, enterprise, and wide area networks. Helps prepare participants for the Comptia Security+ exam and the GIAC Security Essentials Certificate (GSEC). Prerequisites: CNT150, or (MST150 or MST150 any module), or permission of instructor.</td>
</tr>
<tr>
<td>CIS271DL</td>
<td>Linux Security</td>
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<tr>
<td></td>
<td>3 Credits. 4 Periods. Implementing in-depth security methods and techniques in a Linux-based network environment. Utilize programs, utilities and configuration techniques to provide user-level, file system, and network security. Gain knowledge in a variety of security cracking techniques and how to guard against them. In all aspects of security, the standard of practicing professional ethics seriously emphasized. Preparation for industry certifications such as the SAIR/GNU LCP and LCA certificates, CompTIA's Linux+, RHCT, RHCE, and LPIC. Prerequisites: CIS240DL or Permission of Instructor.</td>
</tr>
<tr>
<td>CIS280</td>
<td>Current Topics in Computing</td>
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<td>3 Credit. 4 Periods. Critical inquiry of current topics in computing. Application of industry trends to solve problems and/or investigate issues. Prerequisites: None.</td>
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<tr>
<td>CIS281</td>
<td>IBM Mainframe ZOS - Level II</td>
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<td></td>
<td>3 Credit. 4 Periods. Examines the major categories of z/OS mainframe operating system interactive workloads such as transaction processing, database management and web-serving. Introduces z/OS system programming concepts including system libraries, security and network communications. Prerequisites: CIS181, or permission of instructor.</td>
</tr>
<tr>
<td>CIS290AA</td>
<td>Computer Information Systems Internship</td>
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<tr>
<td></td>
<td>1 Credit. 6 Periods. Work experience in business or industry. Prerequisites: Permission of instructor. Cross-References: BPC290AA</td>
</tr>
<tr>
<td>CIS290AB</td>
<td>Computer Information Systems Internships</td>
</tr>
<tr>
<td></td>
<td>2 Credits. 12 Periods. Work experience in business or industry. Prerequisites: Permission of instructor. Cross-References: BPC290AB</td>
</tr>
<tr>
<td>CIS290AC</td>
<td>Computer Information Systems Internships</td>
</tr>
<tr>
<td></td>
<td>3 Credits. 18 Periods. Work experience in business or industry. Prerequisites: Permission of instructor. Cross-References: BPC290AC</td>
</tr>
<tr>
<td>CIS296WB</td>
<td>Cooperative Education</td>
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<tr>
<td></td>
<td>2 Credits. 10 Periods. Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student’s academic or career goals (student’s present job may qualify); or permission of instructor. Corequisites: Must be concurrently enrolled in at least one class which is related to student’s major or career interest or with permission of the instructor.</td>
</tr>
</tbody>
</table>
CIS296WC  
Cooperative Education  
3 Credits. 15 Periods.  
Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student’s academic or career goals (student’s present job may qualify); or permission of instructor. Corequisites: Must be concurrently enrolled in at least one class which is related to student’s major or career interest or with permission of the instructor.

CIS298AA  
Special Projects  
1 Credits. 1 Periods.  
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or instructor.

CIS298AB  
Special Projects  
2 Credits. 2 Periods.  
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or instructor.

CIS298AC  
Special Projects  
3 Credits. 3 Periods.  
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or instructor.

COUNSELING AND PERSONAL DEVELOPMENT

CPD100  
Orientation for Student Development  
1 Credit. 1 Period.  
Offered to orient new students to college life. Emphasis on assessing students’ academic potential, facilitating curricular advisement and registration procedures, learning academic survival skills, and becoming aware of all services available to students on campus and in the community. Prerequisites: None.

CPD103BL  
Dynamics of Leadership  
2 Credits. 2 Periods.  
Designed to provide strategies that may be used when assuming leadership roles. Focus on improving supervisory confidence through the development of appropriate competitive behaviors, problem-solving skills, and techniques of leadership. Prerequisites: None.

CPD104  
Career and Personal Development  
3 Credits. 3 Periods.  
An overview of the process of career/life planning through self-awareness and understanding. Focus on specific skill development such as dealing with change, decision making, goal setting and understanding lifestyles. Provides opportunity to evaluate interests, skills and values. Emphasis on the development of a comprehensive career search process which includes current occupational information, specific tools for researching the job market and acquiring employment. Prerequisites: None.

CPD150  
Strategies for College Success  
3 Credits. 3 Periods.  
Focus on increasing student success through the college orientation and personal growth, study skills development, and educational and career planning. Prerequisites: None. Cross-reference: AAA150.

CPD150AA  
College Orientation & Personal Growth  
1 Credit. 1 Period.  
Emphasis on increasing student success through college orientation, identification of learning style and the use of time management, goal-setting, and interpersonal communication strategies. Prerequisites: None. Cross-References: AAA150AA

CREATIVE WRITING

CRW150  
Introduction to Creative Writing  
3 Credits. 3 Periods.  
Introduces the student to elements and techniques of creative writing in a variety of genres; teaches terminology and concepts needed for successful participation in writing workshops; facilitates writing practice and evaluation; offers individual guidance on the student’s development as a writer. Prerequisites: None.

CRW272  
Planning and Structuring the Novel  
3 Credits. 3 Periods.  
Focus on planning, structuring, and beginning a novel: prewriting, writing, analysis, evaluation, and revision of novel plans and excerpts. Prerequisites: CRW150 or permission of instructor.
CRITICAL READING

CRE101
Critical and Evaluative Reading I
3 Credits. 3 Periods.
Emphasis on applying critical inquiry skills to varied and challenging reading materials. Includes analysis, synthesis, and evaluation through written discourse. Prerequisites: ENG101 and (reading placement test score of 41 or higher (ASSET), or grade of “C” or better in RDG091, or permission of instructor.)

CRE111
Critical Reading for Business and Industry
3 Credits. 3 Periods.
Emphasis on reading skills required for success in business and technology. Includes interpretation of technical and professional materials with an emphasis on critical analysis and reading. Prerequisites: Reading Asset test score, or grade of “C” or better in RDG091, or permission of instructor.

DANCE

DAN133
Modern Jazz Dance I
1 Credit. 3 Period.
Introduction to the theory and practice of modern jazz dance at the beginning level. Development of movement quality and performance skills. Prerequisites: None. Course Note: May be repeated for a total of two (2) credit hours.

DAN120AE
World Dance: Middle Eastern Dance
1 Credit. 3 Period.
Theory and practice of Middle Eastern dance. Development of movement quality and performance skills. Prerequisites: None.

DAN136
Modern Jazz Dance II
1 Credit. 3 Period.
Theory and practice of modern jazz dance at the advanced beginning level. Development of movement quality and performance skills. Prerequisites: DAN133 or permission of instructor.

EARLY CHILDHOOD EDUCATION

ECH176
Child Development
3 Credits. 3 Periods.
Study of the science of human development from conception through adolescence. Includes observation skills, parent and adult roles in the lives of children, and contemporary issues. Prerequisites: None. Cross-References: CFS176

ECH270
Observing Young Children
1 Credit. 1 Period.
Introduction to techniques of observing young children. Recording methods, interpretation and use of collected information including legal and ethical implications. Prerequisites: None.

ECH271
Arranging the Environment
1 Credit. 1 Period.
Exploration of the influence of the environment on the behavior of young children. Indoor and outdoor spaces considered and analysis of environments practiced. Prerequisites: None.

ECH275
Literacy Development and the Young Child
1 Credit. 1 Period.
Literacy from birth through the early childhood years. Focus on developmentally appropriate ways to encourage speaking, listening, writing, and reading in the home and classroom. Prerequisites: None.

ECH279
Early Childhood Curriculum Development
1 Credit. 1 Period.
An intensive focus on the process of building curriculum units appropriate to the developmental needs and abilities of the young child. Design, use and evaluation of materials and activities. May be repeated for a total of four (4) credits. Prerequisites: None.

ECH282
Discipline/Guidance of Child Groups
1 Credit. 1 Period.
Exploration of techniques for guiding children in groups with focus on individual child and adult needs for a disciplined environment. Prerequisites: None.

ECH287
Professional Development in Early Childhood Education
1 Credit. 1 Period.
Emerging professionalism within the field of early childhood education. Consideration of job responsibilities, rewards, ethics and current issues facing practitioners. Includes assessment and career planning. Prerequisites: None.

ECONOMICS

ECN211
Macroeconomic Principles
3 Credits. 3 Periods.
A descriptive analysis of the structure and functioning of the American economy. Emphasis on basic economic institutions and factors that determine national income and employment levels. Consideration given to the macroeconomic topics of national income, unemployment, inflation and monetary and fiscal policies. Prerequisites: None.

ECN212
Microeconomic Principles
3 Credits. 3 Periods.
Microeconomic analysis including the theory of consumer choice, price determination, resource allocation and income distribution. Includes non-competitive market structures such as monopoly and oligopoly; and the effects of government regulation. Prerequisites: None.

EDUCATION

EDU205
Self Assessment for Teaching
3 Credits. 3 Periods.
An exploratory course for students considering a teaching career. Examination of the field of education in the United States through field experiences, self-assessment activities and career information. Prerequisites: None.
EDU220
Introduction to Serving English Language Learners (ELL)
3 Credits. 3 Periods.
Rationale for and current educational and legal issues for serving English Language Learners (ELL). Comparison and evaluation of various types of language educational models including Structured English Immersion (SEI), English as a Second Language (ESL) and bilingual. Includes SEI, ESL, and bilingual strategies. Prerequisites: None. Course Note: Approved school-based practicum is required. EDU220 incorporates the 45-clock hour curricular framework for provisional SEI endorsement through the Arizona Department of Education.

EDU221
Introduction to Education
3 Credits. 3 Periods.
Overview of the historical, political, economic, social, and philosophical factors that influence education and make it so complex. Opportunity for students to assess their interest and suitability for teaching. Prerequisites: None. Course Note: Requires minimum of 30 hours of field experience in elementary or secondary classroom environment.

EDU222
Introduction to the Exceptional Learner
3 Credits. 3 Periods.
Overview of the exceptional learner, one who differs from the average or normal, with emphasis on factors relating to current practices, identification, characteristics, and educational adaptations. Issues related to mildly disabled, severely disabled, emotionally and behaviorally disordered, mentally retarded, and gifted students. Includes school-based practicum. Prerequisites: None.

EDU225
Foundations for Serving English Language Learners (ELL)
3 Credits. 3 Periods.
Rationale for and current educational and legal issues for English Language Learners (ELL). Comparison and evaluation of various types of language educational models including Structured English Immersion (SEI), English as a Second Language (ESL) and bilingual. Prerequisites: None.

EDU230
Cultural Diversity in Education
3 Credits. 3 Periods.
Examination of the relationship of cultural values to the formation of self-concept and learning styles. Examination of the role of prejudice, stereotyping and cultural incompatibilities in education. Emphasis on teacher preparation (preservice and/or inservice) to offer an equal educational opportunity to students of all cultural groups. Prerequisites: None.

EDU233
Structured English Immersion (SEI) and English as a Second Language (ESL) Teaching Methods
3 Credits. 3 Periods.
Methods of planning, developing, and analyzing lesson plans in all content areas using English Language Learners (ELL) Standards. Emphasis on components of curriculum content, teaching strategies, development/evaluation/adaptation of teaching materials, and the role of culture in learning. Examines the alignment of ELL Proficiency Standards to the Arizona Language Arts Academic Standards. Covers multiple assessment techniques, tracking of student progress using the Stanford English Language Proficiency (SELP) assessment, and use of assessment results for placement and accommodation. Prerequisites: Provisional or standard elementary, secondary, or special education teaching certificate and (EDU220 or EPD220 or EDU225), or permission of Department or Division. Course Note: Approved school-based practicum required. EDU233 incorporates curricular framework for the 45-clock hour requirement for SEI endorsement through the Arizona Department of Education.

EDU282AA
Volunteerism for Education: A Service Learning Experience
1 Credit. 1 Period.
Service-learning field experience within educational systems, citizen advocacy groups, and human service organizations/agency. May be repeated for a total of six (6) EDU282 credit hours; may not repeat specific agency assignment for more than three (3) credit hours. Standard grading available according to procedures outlined in catalog. Prerequisites: Permission of instructor.

EDU282AB
Volunteerism for Education: A Service Learning Experience
2 Credit. 2 Period.
Service-learning field experience within educational systems, citizen advocacy groups, and human service organizations/agency. May be repeated for a total of six (6) EDU282 credit hours; may not repeat specific agency assignment for more than three (3) credit hours. Standard grading available according to procedures outlined in catalog. Prerequisites: Permission of instructor.

EDU282AC
Volunteerism for Education: A Service Learning Experience
3 Credit. 3 Period.
Service-learning field experience within educational systems, citizen advocacy groups, and human service organizations/agency. May be repeated for a total of six (6) EDU282 credit hours; may not repeat specific agency assignment for more than three (3) credit hours. Standard grading available according to procedures outlined in catalog. Prerequisites: Permission of instructor.

EDU291
Children’s Literature
3 Credits. 3 Periods.
Review of folk and modern literature from a variety of world cultures, including application of literary criteria to folk and modern literature for children Prerequisites: None.

EDU292
The Art Of Storytelling
3 Credits. 3 Periods.
Explore the art and origin of storytelling. Provide a variety of storytelling techniques, styles and exercises to enhance the delivery of telling stories. Assist in the integration and application of storytelling to the learning environment in the classroom. Prerequisites: None. Cross-References: HUM292, STO292

EDU296WA
Cooperative Education
1 Credit. 5 Periods.
Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of instructor. Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the instructor.
EDU296WB
Cooperative Education
2 Credits. 10 Periods.
Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of instructor. Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the instructor.

EDU296WC
Cooperative Education
3 Credits. 15 Periods.
Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of instructor. Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the instructor.

ELECTRICITY
EDC220
Introduction to Serving English Language Learners (ELL)
3 Credits. 3 Periods.
Rationale for and current educational and legal issues for English Language Learners (ELL). Comparison and evaluation of various types of language educational models including Structured English Immersion (SEI), English as a Second Language (ESL) and bilingual. Prerequisites: Provisional or standard elementary, secondary, or special education teaching certificate, or permission of department. Cross-References: EDC220 Course Note: Approved school-based practicum required. EDC220 incorporates the 45-hour curricular framework for provisional SEI endorsement through the Arizona Department of Education. Cross-references: EDC220

EPD233
SEI and ESL Teaching Methods for Certified Teachers
3 Credits. 3 Periods.
Methods of planning, developing, and analyzing lesson plans in all content areas using English Language Learners (ELL) Standards. Emphasis on components of curriculum content, teaching strategies, development/evaluation/adaptation of teaching materials, and the role of culture in learning. Examines the alignment of ELL Proficiency Standards to the Arizona Language Arts Academic Standards. Covers multiple assessment techniques, tracking of student progress using the Stanford English Language Proficiency (SELP) assessment, and use of assessment results for placement and accommodation. Prerequisites: Provisional or standard elementary, secondary, or special education teaching certificate and (EDU220 or EPD220 or EDU225), or permission of Department or Division.
Course Note: Approved school-based practicum required. EDU233 incorporates curricular framework for the 45-clock hour requirement for SEI endorsement through the Arizona Department of Education.

ELC115
Motors Controls and Wiring Diagrams
3 Credits. 3 Periods.
Principles of three-phase motors. Wye and Delta wiring. Calculation of motor current draw. Sequence of operation, wiring diagram and electrical components associated with industrial equipment. Procedures for evaluating electrical problems. Safety stressed. Prerequisites: ELC/FAC/HVA105 or permission of department or ELC/FAC/HVA105LL or permission of department. Corequisites: ELC/FAC/HVA115LL or permission of department. Cross-References: FAC115, HVA115

ELC115LL
Motors, Controls, and Wiring Diagrams Lab
1 Credits. 3 Periods.
Drawing wiring diagrams, wiring systems and checking electrical circuits. Troubleshooting electrical problems of three-phase motors and controls. Safety stressed. Prerequisites: ELC/FAC/HVA105 or permission of department or ELC/FAC/HVA105LL or permission of department. Corequisites: ELC/FAC/HVA115 or permission of department. Cross-References: FAC115LL, HVA115LL

ELC119
Concepts of Electricity and Electronics
3 Credits. 3 Periods.
Principles of electric circuits, magnetism and electromagnetism including basic motors and generators. Use of basic measuring instruments. Includes an overview of electronics in the modern world. Prerequisites: None.

ELC120
Solid State Fundamentals
3 Credits. 3 Periods.
Theory of operation of semi-conductor devices, component and system construction, operation, installation, and service. Specific and practical applications in relations to temperature, light, speed and pressure control. Includes amplifiers, power supplies, integrated circuits, fiberoptics, and safety. Prerequisites: None.
ELC210
AC Machinery and DC Machinery
3 Credits. 3 Periods.
Principles and operation of AC (Alternating current) and DC (direct current) motors, generators, and alternators. Includes single-phase motors along with induction, synchronous, and wound-rotor types of three-phase motors. DC motors including shunt-field, series field, wound rotor, permanent magnet, stepper and brushless types. Prerequisites: None.

ELC217
Motor Controls
3 Credits. 3 Periods.
Electrical symbols, line diagrams and logic. Contacts and starters, control devices, reversing circuits and power distribution systems. Magnetism and magnetic solenoids, reduced voltage starters, and circuits. Hand tools and safety procedures. Prerequisites: None.

ELC218
Variable Frequency Drives
3 Credits. 3 Periods.
Principles and operation of frequency controlled AC (Alternating current) motor drives, including current source inverters (CSI), variable voltage inverters (VVI) and pulse width modulated inverters (PWM). Heating, ventilation and air conditioning (HVAC) applications along with energy savings, motor pump sizing and torque load calculations. Prerequisites: Permission of instructor.

ELC219
Programmable Controllers
4 Credits. 6 Periods.
Principles and applications of programmable logic controls (PLCs). Numbering systems, control strategies, and ladder logic. Basic machine functions and operations to include programming, troubleshooting and maintenance. Application of PLC programming, operations and troubleshooting skills. Prerequisites: ELC105 and ELC115 and ELC119, or permission of instructor.

ELT100
Survey of Electronics
3 Credits. 3 Periods.
An introduction to the field of electronics for those who may not intend to specialize in electronics. Essentially nonmathematical in nature; includes familiarization with a wide range of electronic components. Application to electronic systems, such as radio transmitters and receivers - both AM(amplitude modulation) and FM(frequency modulation), television transmitters and receivers, logic control, and computers. Application also to automotive electronics. Prerequisites: None.

ELT101
Mathematics for Electronic I
3 Credits. 3 Periods.
Basic principles of Algebra with applications to the analysis of electronic circuits. Emphasis on the use of the calculator for conversions and DC (direct current) circuit problems. Prerequisites: None.

ELT102
Mathematics for Electronic II
3 Credits. 3 Periods.
The study of simultaneous equations, quadratic equations, trigonometric relationships, periodic functions and logarithms as applied to AC(alternating current) circuit analysis. Application of the scientific calculator to technical problem solving in electronics. Prerequisites: ELT101 or equivalent.

ELT103
Basic Electronics
LEc 4 Credits. 3 Periods.
LAB 0 Credits. 3 Periods.
Direct and alternating current electrical circuits. Theory and practical lab experience, using the appropriate test equipment and computer solutions. Ohm's Law, Kirchhoff's Laws, and various network theorems applied to the study and analysis of series, parallel, and series-parallel circuit configurations. Includes complex algebra, impedance, frequency response, and resonance. Prerequisites or Corequisites: ELT102 or equivalent.

ELT104
Digital and Logic Circuits
LEc 4 Credits. 3 Periods.
LAB 0 Credits. 3 Periods.
Digital concepts and fundamentals, number systems and codes, Boolean algebra and combinational logic, logic reduction techniques, and logic hardware. Memories and programmable logic arrays. Hands-on hardware and computer-aided logic design experiments. Prerequisites: ELT113 or permission of instructor. Cross-References: SMT131

ELT195
Solid State Electronics
LEc 4 Credits. 3 Periods.
LAB 0 Credits. 3 Periods.
Characteristics and use of solid state devices in practical circuit applications. Circuit analysis techniques and computer simulations. Includes, diodes, transistors, four-layer devices, operational amplifiers, and interfacing devices. Prerequisites: ELT113 or departmental approval.

ELT251
Electronic Instrumentation
LEC 3 Credits. 2 Periods.
LAB 0 Credits. 3 Periods.
Electronic instruments and their usage in measuring and analyzing electronic circuits. Includes both analog and digital meters, oscilloscopes, and digital logic analyzers. Covers automatic test equipment, various transducers, and reliability requirements. Prerequisites: (ELT195 and ELT131) or departmental approval.

ENGINEERING SCIENCE

ECE102AA
Engineering Analysis Tools and Techniques
LEC 2 Credits. 2 Periods.
LAB 0 Credits. 2 Periods.
Learning culture of engineering, engineering use of computer tools, and computer modeling as applied to engineering analysis and design. Prerequisites: Two years of high school algebra or MAT122 or departmental approval. Corequisites: MAT151 or MAT182 or MAT187.

ENGLISH

ENG061
Basic Writing Skills
3 Credits. 3 Periods.
Emphasis on preparation for college-level composition with a focus on foundational skills. Establishing effective writing strategies through six or more writing projects comprising at least 1500 words in total. Prerequisites: Appropriate English placement test score or permission of department/division chair. Course Note: Through six or more writing projects comprising at least 1500 words (final drafts), the student will demonstrate an understanding of writing as a process through the ability to complete the ENG061 competencies.

ENG071
Fundamentals of Writing
3 Credits. 3 Periods.
Emphasis on preparation for college-level composition with a focus on organizational skills. Developing effective writing strategies through five or more writing projects comprising at least 2000 words in total. Prerequisites: Appropriate English placement test score or permission of department/division chair. Course Note: Through five or more writing projects comprising at least 2000 words (final drafts), the student will demonstrate an understanding of writing as a process through the ability to complete the ENG071 competencies.
ENG101  
First-Year Composition  
3 Credits. 3 Periods.  
Emphasis on rhetoric and composition with a focus on expository writing and understanding writing as a process. Establishing effective college-level writing strategies through four or more writing projects comprising at least 3,000 words in total. Prerequisites: Appropriate English placement test score or (a grade of “C” or better in ENG071). Course Note: Through four or more writing projects comprising at least 3,000 words (final drafts), the student will demonstrate an understanding of expository writing as a process per the course competencies.

ENG102  
First Year Composition  
3 Credits. 3 Periods.  
Emphasis on rhetoric and composition with a focus on persuasive, research-based writing and understanding writing as a process. Developing advanced college-level writing strategies through three or more writing projects comprising at least 4,000 words in total. Prerequisites: ENG101 with a grade of “C”, or better.

ENG107  
First-Year Composition for ESL  
3 Credits. 3 Periods.  
Equivalent of ENG 101 for students of English as a Second Language (ESL). Emphasis on rhetoric and composition with a focus on expository writing and understanding writing as a process. Establishing effective college-level writing strategies through four or more writing projects comprising at least 3,000 words in total. Prerequisites: Appropriate ASSET/COMPASS placement test score, or a grade of “C” or better in ENG071 or ESL077. Course Note: Through four or more writing projects comprising at least 3,000 words in total, the student will demonstrate an understanding of writing as a process per the course competencies.

ENG108  
First Year Composition for ESL  
3 Credits. 3 Periods.  
Equivalent of ENG102 for students of English as a Second Language (ESL). Emphasis on rhetoric and composition with a focus on persuasive, research-based writing and understanding writing as a process. Developing advanced college-level writing strategies through three or more writing projects comprising at least 4,000 words in total. Prerequisites: Grade of C, or better, in ENG107. Course Note: Through three or more writing projects comprising at least 4,000 words in total, the student will demonstrate an understanding of writing as a process per the course competencies. Not open to students who have completed ENG101.

ENG111  
Technical Writing  
3 Credits. 3 Periods  
Analysis, planning, organization, research, and writing of technical reports and oral presentations for specific job-related audiences. Preparation of recommendation and feasibility reports, proposals, and applications of graphics in documents and oral presentations. Prerequisites: ENG101 with a grade of “C”, or better, or permission of instructor.

ENG200  
Reading and Writing About Literature  
3 Credits. 3 Periods  
Emphasis on critical analysis of various genres of literature; includes study of necessary terminology, introduction to methods of literary criticism, and practice in interpretation and evaluation. Prerequisites: ENG102.

ENG210  
Creative Writing  
3 Credits. 3 Periods  
Skills and techniques used in the production of marketable materials for contemporary publications that buy prose fiction, poetry, and expository articles. May be repeated for a total of six (6) credit hours with departmental approval. Prerequisites: ENG102 with a grade of “C”, or better, or permission of department.

ENG213  
Introduction to the Study of Language  
3 Credits. 3 Periods  
Study of language as code; phonetics, phonology, morphology, syntax, semantics; language acquisition; historical and sociolinguistics. Prerequisites: ENG102, or ENG111 with a grade of “C”, or better, or permission of instructor.

ENG217  
Personal and Exploratory Writing  
3 Credits. 3 Periods  
Using writing to explore one’s self and the world one lives in; emphasis on journal writing as a source and inspiration for public writing. Prerequisites: ENG101 or ENG107 or equivalent.

ESL001BA  
Basic ESL I: Personal Health and Safety  
2 Credits. 2 Periods.  
Listening, speaking, reading and writing in English at a basic level. Focus on survival skills related to personal health and safety when living in the United States. Introduction to elementary grammatical patterns. Prerequisites: None. Course Note: Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog. May be repeated for a total of four (4) credits.

ESL001BB  
Basic ESL I: Services & Employment  
2 Credits. 2 Periods.  
Listening, speaking, reading and writing in English at a basic level. Focus on survival skills related to services and employment when living in the United States. Introduction to elementary grammatical patterns. Prerequisites: ESL001BA or permission of instructor. Course Note: Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog. May be repeated for a total of four (4) credits.

ESL010  
English as a Second Language I: Grammar  
3 Credits. 3 Periods.  
First level of English as a Second Language (ESL). Emphasis on basic conversational skills, pronunciation, vocabulary building and grammar. Some reading and sentence level writing. Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL placement test score.

ESL011  
ESL I - Listening & Speaking  
3 Credits. 3 Periods.  
Emphasis on listening and speaking skills involving survival skills. Asking and answering questions related to work, shopping, and personal safety. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL placement test score or ESL002.
ESL012
ESL I-Writing with Oral Practice
3 Credits. 3 Periods.
Emphasis on basic conventions of writing in English. Includes introduction to the alphabet, capitalization, punctuation, and simple sentence structure. May be repeated for a maximum of six (6) credits. Prerequisites: Approximate ESL placement test score or permission of instructor.

ESL013
Vocabulary for ESL I
1 Credit. 1 Periods.
Emphasis on the acquisition of basic English vocabulary including identifying and pronouncing words related to people, medical/dental care, occupations and other activities. May be repeated for a maximum of two (2) credits. Prerequisites: Appropriate ESL placement test score or permission of instructor.

ESL020
English as a Second Language II:
Grammar
3 Credits. 3 Periods.
Second level of English as a Second Language (ESL). Continued emphasis on conversational skills, pronunciation, vocabulary building and grammar with some reading and sentence level writing. Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL placement test score or a grade of "P" or "C" or better in ESL010 or ESL010AC.

ESL021
ESL II - Listening & Speaking
3 Credits. 3 Periods.
Emphasis on listening and speaking skills involving social exchange. Asking and answering questions, using tag questions. Practice with question and answer patterns. Polite questions and responses. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL placement test score or ESL010 or ESL011 or ESL012 or RDG010.

ESL022
ESL II-Writing with Oral Practice
3 Credits. 3 Periods.
Emphasis on basic writing skills, accompanied by recitation of short writings. Sentence patterns and introduction of paragraph writing. May be repeated for a maximum of six (6) credits. Prerequisites: Approximate ESL course placement score, or a grade of C or better in ESL012, or permission of instructor.

ESL023
ESL III-Writing with Oral Practice
3 Credits. 3 Periods.
Emphasis on complex sentence patterns in writing and speech. Introduction to the prewriting and writing process in a college setting. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL course placement score, or a grade of "P" or "C" or better in ESL020 or ESL020AC.

ESL030
English as a Second Language III:
Grammar
3 Credits. 3 Periods.
Third level of English as a Second Language (ESL). Emphasis on sentence structure and paragraph building. Extensive grammar study and writing practice. Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL placement test score or ESL020 or ESL020AC.

ESL031
English as a Second Language III-
Listening and Speaking
3 Credits. 3 Periods.
Emphasis on listening and speaking skills related primarily to the academic environment. Asking questions, working in small groups, using college resources, informal oral presentation. May be repeated for a maximum of six credits. Prerequisites: Appropriate ESL placement test score or ESL020 or ESL021 or ESL022 or RDG020.

ESL032
ESL IV - Writing with Oral Practice
3 Credits. 3 Periods.
Emphasis on complex sentence patterns in writing and speech. Introduction to the prewriting and writing process in a college setting. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL course placement score, or a grade of C or better in ESL030, or ESL030AB, ESL030AC, or ESL030AC.

ESL041
English as a Second Language IV:
Listening and Speaking
3 Credits. 3 Periods.
Emphasis on academic skills. Listening to lectures, notetaking, peer interaction, accessing and using media resources, formal oral presentations. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL placement test score or ESL030 or ESL031 or ESL032 or RDG030.

ESL042
ESL IV - Writing with Oral Practice
3 Credits. 3 Periods.
Emphasis on paragraph writing and oral recitation of complex sentences and paragraphs. Introduction to the prewriting and writing process for short essays. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL course placement score, or a grade of C or better in ESL030, or permission of instructor.

ESL043
ESL IV - Vocabulary for ESL IV
1 Credit. 1 Periods.
Emphasis on the acquisition of basic English vocabulary including identifying and pronouncing words related to people, medical/dental care, occupations and other activities. May be repeated for a maximum of two (2) credits. Prerequisites: Appropriate ESL placement test score or permission of instructor.

ESL044
ESL IV - Idiomatic English for ESL IV
1 Credit. 1 Periods.
Study of idiomatic English for speakers of English as a Second Language (ESL). Emphasis on commonly misunderstood expressions. Includes practice on a computer or with audio tapes. May be repeated for a maximum of two (2) credits. Prerequisites: Appropriate ESL placement test score or permission of instructor.
ESL050
Review Grammar For ESL
3 Credits. 3 Periods.
Review of grammatical concepts for ESL (English as a Second Language) students who have some previous experience in reading and writing English. Appropriate for students who want to practice sentence skills in English. May be repeated for a total of six (6) credits. Prerequisites: Appropriate ESL course placement score, or a grade of C or better in ESL040, or permission of instructor.

ESL051
Pronunciation Improvement for ESL
Speakers
3 Credits. 3 Periods.
Individualized pronunciation practice and drills for English as a second language (ESL) speakers. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL course placement score, or a grade of C or better in (ESL020 or ESL021 or ESL022 or RDG020), or permission of instructor.

ESL071
Advanced Pronunciation and Oral Reading for ESL
3 Credits. 3 Periods.
Pronunciation practice and review, spelling of Pronunciation practice and review, spelling of English sounds, and oral reading for stress and intonation patterns in English. Prerequisites: A grade of C or better in ESL051, or permission of instructor. Course Note: May be repeated for a total of six (6) credit hours.

ENG101 or ENG107 or equivalent.

ENH110
Introduction to Literature
3 Credits. 3 Periods.
Introduction to international literature through various forms of literary expression; e.g., poetry, drama, essay, biography, autobiography, short story, and novel. Provides a global overview of literature with special emphasis on diverse cultural contributions of women, African Americans, Asian Americans, Hispanic Americans, and Native Americans. Prerequisites: None.

ENH112
Chicano Literature
3 Credits. 3 Periods.
Introduction to the works of Mexican-American writers of the Southwest. Samples poetry, fiction, and essays viewed in their relationship to American cultural heritage and to contemporary culture. Prerequisites: None.

ENH114
African-American Literature
3 Credits. 3 Periods.
Survey of major African-American writers from Colonial period through the present; analysis of trends and movements within African-American literary history; analysis of literary types and selected works. Prerequisites: None.

ENH117
Rap Literature: The Oral Tradition
3 Credits. 3 Periods.
Survey of selected rap poetry looking at the oral tradition of Africa, the Caribbean, and the United States as precursors to East Coast, West Coast, Southern, North Central, and International development of the genre. Investigation of cultural environments, historical events, competitions (the "battles"), artists' biographies, and parallel art forms as they relate to the analysis of the genre and its themes. Prerequisites: None.

ENH120
The Literature of Science Fiction
3 Credits. 3 Periods.
Survey of the last two hundred years of Science Fiction literature and various other media. Investigates the similarities between Science Fiction and other imaginative literatures and media. Examines the Science Fiction genre, sub genres, and themes from a variety of perspectives, as well as social issues. Prerequisites: None.

ENH201
World Literature Through the Renaissance
3 Credits. 3 Periods.
Includes a selection of the world's literary masterpieces in their cultural background, beginning with ancient Oriental and Occidental writings and concluding with Renaissance writings. Prerequisites: None.

ENH202
World Literature After the Renaissance
3 Credits. 3 Periods.
Includes a selection of the world's literary masterpieces from the Renaissance to modern times. Prerequisites: None.

ENH205
Asian American Literature
3 Credits. 3 Periods.
Survey of major Asian American writers. Examines literary types and selected works in their relationship to American cultural heritage and to contemporary culture. Prerequisites: ENG101 or ENG107.

ENH212
The Mexican American Novel
3 Credits. 3 Periods.
A study of the social, historical, and cultural backgrounds as well as the form and content of the Mexican American novel. Prerequisites: ENG101. ENH112 suggested but not required. Cross-References: CCS212

ENH221
Survey of English Literature
Before 1800
3 Credits. 3 Periods.
Emphasizes the social and political backgrounds as well as the form and content of English literature from Anglo-Saxon times to the end of the eighteenth century. Prerequisites: (ENG101 or ENG107) or equivalent.

ENH230
Introduction To Shakespeare
3 Credits. 3 Periods.
Introduces Shakespeare the playwright, the sonneteer, the linguist, and the citizen of the 17th century. Considers the major tragedies, comedies, histories, and sonnets; focuses on the use of language; and connects the writer to the time. Some emphasis on Shakespeare's influence through the centuries, noting parallels between the late 16th century and the late 20th century. Prerequisites: None.

ENH241
American Literature Before 1860
3 Credits. 3 Periods.
Includes literature written prior to 1860 in the United States. Prerequisites: None.

ENH242
American Literature After 1860
3 Credits. 3 Periods.
Includes literature written after 1860 in the United States. Prerequisites: None.

ENH251
Mythology
3 Credits. 3 Periods.
Deals with the myths and legends of civilizations with the greatest influence upon the development of the literature and culture of the English speaking people, and compares those myths with myths from other cultures. Prerequisites: None.

ENH254
Literature and Film
3 Credits. 3 Periods.
Presents works of literature and their film versions and analyzes distinguishing techniques of each medium. Prerequisites: ENG101 or ENG107 or equivalent.
ENH256
Shakespeare on Film
3 Credits.  3 Periods.
Presents cinematic versions of Shakespeare’s plays and explains and analyzes how the dramatist’s major tragedies, comedies, histories and romances have been presented on film. Prerequisites: None

ENH259
American Indian Literature
3 Credits.  3 Periods.
Contemporary American Indian forms of literary expression. Selected oral traditions of American Indians. Trends and movements within American Indian literary history. Prerequisites: None.

ENH275
Modern Fiction
3 Credits.  3 Periods.
Includes novels and short stories of modern writers which reflect significant themes of our time. Prerequisites: None.

ENH284
19th Century Women Writers
3 Credits.  3 Periods.
Investigates major themes in literature by women writing in the 19th century including the nature of women’s lives in the family, in work situations, and in society. Poetry, prose, essays and drama are examined with an emphasis on common themes. Prerequisites: None. Cross-Reference: WST284

ENH285
Contemporary Women Writers
3 Credits.  3 Periods.
Explores twentieth century literature (short stories, essays, plays, and poetry) written by women and about women. Focus on themes relevant to women’s lives regardless of age, creed, or ethnic background. Prerequisites: None. Cross-reference: WST285.

ENH291
Children’s Literature
3 Credits.  3 Periods.
Review of folk and modern literature from a variety of world cultures, including application of literary criteria to folk and modern literature for children. Prerequisites: None. Cross-reference: EDU291.

ENH294
Multicultural Folktales
3 Credits.  3 Periods.
Study of multicultural folktales, exploring the impact of the oral tradition in American society and showing classroom applications. Prerequisites: None. Cross-References: EDU294, STO294

FAC101
Refrigeration Components and Applications I
2 Credits.  2 Periods.
Major components of refrigeration systems. Properties of refrigerants and piping practices. Prerequisites: None. Corequisites: FAC/HVA101LL or permission of instructor. Cross-References: HVA101

FAC101LL
Refrigeration Applications and Components I Lab
1 Credits.  3 Periods.
Servicing refrigeration units. Includes soldering tubing, installing/removing manifold gauge set, evacuating and charging the system. Emphasis on safety. Prerequisites: None. Corequisites: FAC/HVA101 or permission of instructor. Cross-References: HVA101LL

FAC104
Introduction to Facilities Management
3 Credits.  3 Periods.
Survey of the total responsibilities of the facilities organization in manufacturing, business, and government. Includes methods for coordinating the physical workplace with the people and work of the organization. Prerequisites: None.

FAC105
Electricity for Industry
3 Credits.  3 Periods.

FAC105LL
Electricity for Industry Lab
1 Credits.  3 Periods.
Diagramming and assembling series circuits, parallel circuits and wiring relays, thermostats, switches and lights. Electrical readings on compressors. Emphasis on safety. Prerequisites: None. Corequisites: ELC/FAC/HVA105 or permission of instructor. Cross-References: ELC105LL, HVA105LL

FAC115
Motors, Controls and Wiring Diagrams
3 Credits.  3 Periods.

FAC115LL
Motors, Controls and Wiring Diagrams Lab
1 Credits.  3 Periods.
Drawing wiring diagrams, wiring systems and checking electrical circuits. Troubleshooting electrical problems of three-phase motors and controls. Safety stressed. Prerequisites: ELC/FAC/HVA105, or permission of department, or ELC/FAC/HVA105LL, or permission of department. Corequisites: ELC/FAC/HVA115 or permission of department. Cross-References: ELC115LL, HVA115LL

FAC185
Electro-Mechanical Devices
4 Credits.  6 Periods.
Concepts, principles, maintenance, and troubleshooting of mechanical and electro-mechanical devices; mechanical alignment of shafts, pillowblocks, gears, and couplers on mechanical breadboard; transmission devices including lead screws, linkages, worm and worm wheels, gear trains, speed reducers, chain drives, and belt drives; principles of lubrication; operation of dc (direct current), ac (alternating current), and stepping motors; application of tachometers, stepping motors, linear actuators, relays, solenoids, switches, contactors, starters, and fuses; selection and specification of components from manufacturer’s catalogs. Prerequisites: ELE101, or ELT101, or GTC108, or equivalent, or permission of instructor. Corequisites: None. ELE100 or ELT100 suggested but not required. Cross-References: GTC185, HVA185
FAC186
**Electro-Mechanical Devices**
3 Credits. 5 Periods.

FAC210
**Facilities Air Conditioning Systems**
3 Credits. 3 Periods.
Fundamental principles of air conditioning including all-air, all-water (hydronic) and air-water combination systems. Overview of the physical principles, including air distribution systems and heating and cooling load calculation. System components and application theory for boilers, chillers, pumps, fans, and cooling towers. Theory and application of central air conditioning systems, air cleaning and humidification devices, pressure boosting, heat storage, expansion and pressurization equipment. Properties of water, pressure distribution in hydronic systems, flow in pipes, pressure drop/heat loss, pump applications and pressurization of open and closed hydronic systems. Fundamentals of low and high temperature water systems. Prerequisites: (FAC/HVA101, HVA112 and ELC/FAC/ HVA115) or permission of department. Corequisites: FAC/HVA210 or permission of department. Cross-References: HVA210

FAC210LL
**Facilities Air Conditioning Systems Lab**
1 Credits. 3 Periods.
Routine procedures on operational central forced-air conditioning systems and hydronic pumping systems. Components and function of large chillers, cooling towers, hot water boilers, associated piping, pumps and constant volume and variable air volume (VAV) air handlers. Perform pump sizing calculations and measurements. Perform measurements and calculations of pressure and air velocity in ducts. Apply the principles of psychometrics to central air handling systems.

Evaluation of the energy balance of components and systems. Personal and equipment safety. Prerequisites: (FAC/ HVA101, HVA112 and ELC/FAC/HVA115), or permission of department. Corequisites: FAC/HVA210 or permission of department. Cross-References: HVA210LL.

FAC213
**Controls**
3 Credits. 3 Periods.
Control theory and terminology, pneumatics, electrical, and electronic control devices, flow control devices, elementary and advanced control systems. Electric and electronic control systems, programmable logic controls, and facilities management systems. Prerequisites: None. Cross-References: HVA213

FAC214
**Instrumentation**
3 Credits. 3 Periods.
Process and terms used in instrumentation, methods of heat transfer, calculations for heat temperature, and heat transfer. Measuring and calculating pressure, fluid flow, measuring humidity, control action, and instrumentation symbols. Prerequisites: None. Cross-References: HVA214

FAC220
**Controls and Instrumentation**
3 Credits. 3 Periods.
Control theory and terminology, pneumatics, electrical, and electronic control devices, flow control devices, elementary and advanced control systems. Electric and electronic control systems, programmable logic controls, and facilities management systems. Process and terms used in instrumentation, methods of heat transfer, calculations for heat temperature, and heat transfer. Measuring and calculating pressure, fluid flow, measuring humidity, control action, and instrumentation symbols. Prerequisites: FAC/HVA210 or permission of department. Corequisites: FAC/ HVA220LL or permission of department. Cross-References: HVA220

FSC102
**Fire Department Operations**
11 Credits. 19.6 Periods.
Introductory fire science course primarily designed for the fire department recruit. Includes firefighting skills, equipment, and administrative policies, fire department operations, personnel policies, and International Fire Service Accreditation Congress Practical Skills Testing. Prerequisites: (EMT104, FSC105 and FSC130) and permission of instructor. Corequisites: FSC134.

FSC105
**Hazardous Materials/First Responder**
3 Credits. 3 Periods.
Basic methods of recognition and identification based upon the chemical and physical properties of hazardous materials; basic safety procedures when utilizing specific types of protective clothing and equipment; basic tactical information relating to scene management. Confined space operations in accordance with the National Fire Protection Agency. Prerequisites: None.

FSC108
**Fundamentals of Fire Prevention**
3 Credits. 3 Periods.
Fundamentals of fire prevention. Includes techniques, procedures, regulations, and enforcement. Also includes discussion of hazards in ordinary and special occupancies. Field trips and lectures from industry also included. Prerequisites: None.

FSC111
**Emergency Vehicle Driver Operator**
2 Credits. 2 Periods.
Emergency vehicle operators training including the problems facing operators; the personal qualities of emergency vehicle operator candidates; legal responsibilities of operators; and physical forces involved in driving an emergency vehicle. Includes hands-on training in an emergency response vehicle. Prerequisites: None.
FSC113  
Introduction to Fire Suppression  
3 Credits. 3 Periods.  
Characteristics and behavior of fire, fire hazard properties of ordinary materials, extinguishing agents, fire suppression organization and equipment, basic fire fighting tactics, and public relations as affected by fire suppression. Prerequisites: None.

FSC117  
Fire Apparatus  
3 Credits. 3 Periods.  
Principles of care, maintenance and operation of fire apparatus and pumps. Includes pump construction and accessories, pumping techniques, power development, and transmission. Driving, troubleshooting and producing effective fire streams. Prerequisites: None.

FSC118  
Fire Hydraulics  
3 Credits. 3 Periods.  
Review of basic mathematics. Hydraulic laws and formulas as applied to the fire service. Application of formulas and mental calculations to hydraulic problems, water supply variables, and discharge requirements for pumpers. Prerequisites: None.

FSC202  
Supervisory Training for Firefighters  
3 Credits. 3 Periods.  
Administrative methods applied to the fire service, departmental organization, and personnel management. Includes fire alarm signaling systems, fire service planning, and relationships with other city departments. Prerequisites: None.

FSC204  
Firefighting Tactics and Strategy  
3 Credits. 3 Periods.  
Methods of coordinating personnel, equipment, and apparatus on the fireground. Practical methods of controlling and extinguishing structural and other types of fires. Includes simulation exercises. Prerequisites: FSC113, or permission of instructor, or equivalent.

FSC205  
Command Strategies for Major Emergencies  
3 Credits. 3 Periods.  
Effective methods of managing major emergency incidents including multiple alarm structural fires, high rise fires, major brush fires, complex hazardous materials incidents and multi-casualty medical incidents. Includes incidents that require the commitment of resources based on a transitional situation and/or managing the effective interaction between numerous agencies to achieve control. Prerequisites: FSC204.

FSC208  
Firefighter Safety and Building Construction  
3 Credits. 3 Periods.  
Actions necessary to provide for the safety of firefighters operating on the fireground. Effects that fire and heat may have on various types of building construction resulting in the loss of structural integrity. Includes signs and symptoms of structural damage. Prerequisites: FSC113, or permission of instructor, or equivalent.

FSC214  
Human Resource Management in Fire Service  
3 Credits. 3 Periods.  
Management of fire service personnel functions. Includes selection procedures, employee discipline, performance ratings, elements of supervision, Labor relations and related personnel responsibilities. Prerequisites: FSC202 or four years in the fire service.

FOOD AND NUTRITION

FON100  
Introductory Nutrition  
3 Credits. 3 Periods.  
Basic nutrition concepts for health and fitness. Emphasizes current dietary recommendations for maximizing well-being and minimizing risk of chronic disease. Focuses on use of tables, food guides, and guidelines for making healthy food choices. Includes unique nutrition needs for selected stages of the lifecycle, methods for evaluating credibility of nutritional claims, principles of vegetarian nutrition, safe and economic use of supplements, principles of energy balance, basic elements of food safety, diet for exercise and sports, and personal dietary evaluation techniques. Not for predietetics or other preprofessional majors. May not be taken for credit if credit has been earned in FON100AA and/or FON100AC. Prerequisites: None.

FON102  
Menu Planning  
2 Credits. 2 Periods.  
Principles and techniques of menu planning for food service operations where food is served in quantity; includes applications for health care institutions, commercial kitchens, school cafeterias, and industrial facilities. Prerequisites: None. Cross-References: HRM102

FON118  
Commercial Baking Techniques  
3 Credits 5 Periods.  
Principles and techniques for preparation, storage, and serving of bakery products. Includes breads, cakes, pies, pastry, cookies, fillings, and icings. Emphasis on practical experiences in a commercial bakery. Prerequisites: None.

FON119  
Catering - Planning and Production  
1 Credits 3 Periods.  
Focuses on the basic steps of the catering process in a commercial food setting. Includes a review of safety and sanitation principles. Emphasizes practical experiences in book and record keeping, planning, ordering, production, and service set-up and break-down for both in-house and off-premise catered events. Prerequisites: FON117 or FON180.

FON137  
Nutrition Supplements  
2 Credits 2 Periods.  
Discussion of supplements and their effects on metabolic enhancement. The course will be divided into three major sections: anabolic, catabolic, and energy-producing agents. Addresses current supplements on the market in order to advise the general public. Prerequisites: FON100 or permission of instructor.

FON117 or FON180.
### FON144
**Gourmet Foods**
- 3 Credits
- 4 Periods.
  The art and appreciation of gourmet foods, accompanied by preparation and appropriate services. Prerequisites: None. Cross-References: HRM144

### FON179
**Garde Manger**
- 3 Credits
- 5 Periods.
  Prepares students for employment in garde manger pantry positions in restaurants and resorts. Includes costing out and ordering food products; food and safety factors; preparing and garnishing pantry product. Emphasis on classical food presentation. Prerequisites: None.

### FON180
**Principles and Skills for Professional Cooking**
- 3 Credits
- 5 Periods.
  Introductory principles and skills for professional cooking. Introduces organizational structure of kitchen staff in different types of kitchens. Includes basic principles of safety and sanitation, equipment and utensil use, French cooking terms, recipe use, measuring techniques, identification and use of seasoning agents, and basic cooking methods applied to stocks, sauces and soups, vegetables, starches, entrees, and eggs. Emphasis on practical experiences in a commercial kitchen. Prerequisites: None.

### FON182
**American Regional Cuisine**
- 3 Credits
- 5 Periods.
  American regional food preparation applied to restaurants. Review principles of sanitation and safety. Explores history and customs, serving styles, and preparation techniques of foods unique to selected American regions. Emphasis on practical cooking experiences in a restaurant setting. American regions to include, but not limited to: Southern, Cajun/Creole, New England, Mid-West, and Pacific Coast. Prerequisites: None.

### FON183
**International Cuisine**
- 3 Credits
- 5 Periods.
  Gourmet international food preparation applied to restaurants. Review principles of sanitation and safety. Explores history and customs, serving styles, and preparation techniques of foods unique to selected international cultures. Emphasis on practical cooking experiences in a restaurant kitchen. Cultures to include, but not limited to: Italian, German, Oriental, Middle Eastern, and Spanish. Prerequisites: None.

### FON190
**Professional Cooking Practicum**
- 7 Credits
- 19 Periods.
  Preparation of hot and cold foods in a commercial food service operation; experience in volume food production preparing salads, soups, stocks, sauces, entrees, starches, and vegetables; designed to develop knowledge and skills necessary to cook in a variety of commercial kitchens. Prerequisites: FON104, FON180, or departmental approval.

### FON218
**Commercial Baking: Classical Desserts**
- 3 Credits
- 5 Periods.
  Advanced principles and techniques in commercial baking and dessert preparation. Focus on fine pastries with European flair and on desserts served in better hotels, restaurants, and resorts. Preparation ofmacaroons, tarts, puff pastries, specialty cakes, and desserts such as Bavarian creams, mousses, custards, souffles, crepe desserts, and flammeries. Preparation and use of sauces, techniques for using nuts and chocolate, and exploration of new recipes. Prerequisites: None.

### FON230
**Nutrition for Special Populations**
- 3 Credits
- 3 Periods.
  Managing and understanding the nutrition needs of special populations. These populations include people who are diagnosed with heart disease, diabetes, women who are pregnant, children who are suffering from obesity, and senior adults. Prerequisites: FON100 or permission of instructor.

### FON241
**Principles of Human Nutrition**
- 3 Credits
- 3 Periods.
  Scientific principles of human nutrition. Emphasis on health promotion and concepts for conveying accurate nutrition information in a professional setting. Addresses therapeutic nutrition principles for treatment of common health conditions. Includes exploration of food sources of nutrients, basic metabolism of nutrients in the human body, relationship between diet and other lifestyle factors, use of supplements, current recommendations for food selection throughout the life cycle, and use of nutrition tools for planning food intake or assessment of nutritional status. Prerequisites: None.

### FON247
**Weight Management Theory**
- 3 Credits
- 3 Periods.
  Comprehensive study of genetic, physiological, psychological, metabolic, and environmental influences on body weight. In-depth study of the theories of body weight with emphasis on distinguishing between behavioral and biological approaches. Focus on discovering successful healthful long-term weight management strategies. Prerequisites: FON100 or FON241 or permission of instructor.

### GBS103
**Principles of Banking**
- 3 Credits
- 3 Periods.
  History, characteristics and significance of American banking system, includes types of accounts, banking services and the relationship of commercial banks to their depositors. Prerequisites: None.

### GBS110
**Human Relations in Business and Industry**
- 3 Credits
- 3 Periods.
  Exploration of fundamental theories and concepts of human relations in business and industry. Particular emphasis is placed on developing effective interpersonal relationships and leadership skills within an organization. Prerequisites: None.

### GBS131
**Business Calculations**
- 3 Credits
- 3 Periods.
  Review of basic arithmetic and application of mathematics to business problems, includes percentage, interest, discount, and markups. Prerequisites: None.

### GBS151
**Introduction to Business**
- 3 Credits
- 3 Periods.
  Characteristics and activities of current local, national, and international business. An overview of economics, marketing, management and finance. Prerequisites: None.

### GBS161
**Mathematics of Business**
- 3 Credits
- 3 Periods.
  Applications of basic financial mathematics; includes interest, financial statement, stocks and bonds, and international business. Prerequisites: GBS131, or MAT102, or permission of department/division.
GBS205  Legal, Ethical, and Regulatory Issues in Business
3 Credits. 3 Periods.
Legal theories, ethical issues and regulatory climate affecting business policies and decisions. Prerequisites: None.

GBS206  Business Law (UCC)
3 Credits. 3 Periods.
Legal and ethical aspects of contracts, sales, commercial paper, secured transactions, documents of title, letter of credit, bank deposits, and collections. Prerequisites: None.

GBS220  Quantitative Methods in Business
3 Credits. 3 Periods.
Business applications of quantitative optimization methods in operations management decisions. Prerequisites: (Grade of “C” or better in MAT150, or MAT151, or MAT152) or equivalent, or satisfactory score on district placement exam.

GBS221  Business Statistics
3 Credits. 3 Periods.
Business applications of descriptive and inferential statistics, measurement of relationships, and statistical process management. Includes the use of spreadsheet software for business statistical analysis. Prerequisites: Grade of “C” or better in GBS220 or MAT217.

GBS233  Business Communication
3 Credits. 3 Periods.
Internal and external business communications, including verbal and nonverbal techniques. Prerequisites: ENG101 or ENG107 with grade of “C” or better, or permission of department/division.

GBS261  Investments I
3 Credits. 3 Periods.
Evaluation of various investment forms including study of inflation, taxation, government securities, stocks and bonds, real estate and retirement plans. Prerequisites: None

GBS294  Consumer Credit
3 Credits. 3 Periods.
Consumer lending by financial institutions. Prerequisites: None.

GBT106  Industrial Safety
2 Credits. 2 Periods.
Safety, health management and accident prevention in industrial work environment. Role of Occupational Safety and Health Administration (OSHA) act, materials handling, electrical safety, machine safety, first response to fire and medical emergencies, safety signs and color codes, recognition of safety and health hazards accident prevention, and management’s responsibilities. Prerequisites: None. Cross-References: FAC106, MIT106, OSH106

GBT107  Technical Mathematics I
3 Credits. 3 Periods.
Mathematical principles to include basic operations, significant digits, exponents, square roots and order of operations. Solve problems using arithmetic, signed numbers, percentages, fractions, exponents, and square root. Use of hand held calculator. Technology related problems. Recommended for all technology students except electronics. Prerequisites: None. Cross-References: MET107

GBT108  Technical Mathematics II
3 Credits. 3 Periods.
Fundamental algebraic operations. Problem solving involving metric measurement, gears, pulleys, simple mechanism problems. Areas and volume calculations of geometric figures. Essentials of trigonometry for solving right and oblique triangles. Prerequisites: GTC/MET107 or permission of instructor. Cross-References: MET108

GBT181  Introduction to Fluid Power
3 Credits. 6 Periods.
Develops an understanding of the fundamental laws and principles of fluids together with consideration of such fluid devices as valves, cylinders, pumps, sizes of lines, and simple hookups. Includes both hydraulics and pneumatics. Prerequisites: ELE101 or equivalent.

GBT216  Properties of Materials
3 Credits. 3 Periods.
Study of manufacturing properties of materials, the behavior of materials under load, stress and strain and torsion and qualities of materials other than strength. Prerequisites: None.

GLG101  Intro to Geology I: Physical Lecture
3 Credits. 3 Periods.
A study of the kind and arrangement of materials composing the earth’s crust and the geological processes at work on and within the earth’s surface. Prerequisites: None.

GLG102  Introduction to Geology II - Historical Lecture
3 Credits. 3 Periods.
Outlines the origin and history of the earth with emphasis on North America—its dynamic, geographic, and climatic changes; animals and plants of the past; the evolution of life. Prerequisites: None.

GLG103  Introduction to Geology I: Physical Lab
1 Credit. 3 Periods.
May accompany GLG101. Study of common rock-forming minerals, rocks, and maps. Prerequisites: None.

GLG104  Introduction to Geology II - Historical Lab
1 Credit. 3 Periods.
May accompany GLG102. Study of geological structures and rocks, fossils, and geologic maps. May require field trips. Prerequisites: None.

GLG110  Geological Disasters and the Environment
3 Credits. 3 Periods.
Acquaints students with the use and importance of geological studies as they apply to the interactions between people and the earth. Includes geological processes and hazards such as floods, earthquakes, and landslides; use of fossil fuels; mining of raw materials. Prerequisites: None.

GLG111  Geological Disasters and the Environment Lab
1 Credit. 3 Periods.
May accompany GLG110. Basic geological processes and concepts. Emphasis on geology-related environmental problems concerning Arizona. Case histories and field studies. May require field trips. Prerequisites: None.
### HEALTH CORE CURRICULUM

#### HCC109
**CPR for Health Care Provider**

.5 Credit. .5 Period.

Current American Heart Association standards for one and two rescuer cardiopulmonary resuscitation (CPR) and obstructed airway procedures on the adult, infant, and pediatric victim. Use of automatic external defibrillation and resuscitation equipment. Prerequisites: None. Cross-References: EMT109, RES109

#### HCC130AA
**Health Care Today**

.5 Credit. .5 Period.

Overview of current health care professions including career and labor market information. Health care delivery systems, third-party payers, and facility ownership. Health organization structure, patient rights and quality care. Prerequisites: None.

#### HCC130AB
**Workplace Behavior in Health Care**

.5 Credit. .5 Period.

Health care and life values. Definition and importance of values, ethics, and essential behaviors in the workplace. Worker rights and responsibilities. Prerequisites: None.

#### HCC130AC
**Personal Wellness and Safety**

.5 Credit. .5 Period.

Introduces healthful living practices to include nutrition, stress management and exercise. Includes Occupational Safety and Health Administration (OSHA) standard precautions and facility safety. Use of principles of body mechanics in daily living activities. Prerequisites: None.

#### HCC130AD
**Communication and Teamwork in the Health Care Organizations**

.5 Credit. .5 Period.

Emphasis on basic communication skills which facilitate team work in the health care setting. Focus on development of personal communication skills and an understanding of how effective communication skills promote team work. Focus on intercultural communication strategies. Prerequisites: None.

#### HCC130AE
**Legal Issues in Health Care**

.5 Credit. .5 Period.

Basic legal terminology used in the health care setting. Legal concepts related to health care employment, medical documentation, and communication. Introduction to regulatory requirements in health care. Prerequisites: None.

#### HCC130AF
**Decision Making in the Health Care Setting**

.5 Credit. .5 Period.

Principles and application of the decision making model. Description and application of ethics and process improvement and the relationship of both to the decision making model. Prerequisites: None.

### HEALTH SCIENCE

#### HES100
**Healthful Living**

3 Credits. 3 Periods.

Health and wellness and their application to an optimal life style. Explores current topics of interest such as stress management, nutrition, fitness, and environmental health. Evaluates common risk factors associated with modern lifestyles. Prerequisites: None.

#### HES154
**First Aid/Cardiopulmonary Resuscitation**

3 Credits. 3 Periods.

Cardiopulmonary Resuscitation and first aid for the adult, child and infant patients includes Automated External Defibrillator (AED), rescue breathing, obstructed airway, and other first aid procedures. Designed to train citizen responders in skills and procedures required during emergency situation. Prerequisites: None.

#### HES271
**Prevention and Treatment of Athletic Injuries**

3 Credits. 3 Periods.

Prevention and care of athletic injuries, emphasizing use of modern training techniques and support materials. Utilization of preventive taping, strapping, bandaging, cardiopulmonary resuscitation, massage, cryotherapy, hydrotherapy, and practical application of muscle reconditioning. Prerequisites: None.

### HEATING, VENTILATING & AIR CONDITIONING

#### HVA112
**Heating and Air Conditioning**

3 Credits. 3 Periods.

Types and styles of cooling equipment and duct systems. Methods of supplying air to spaces for heating and cooling. Human comfort factors related to heating and cooling. Psychrometric terminology and applications. Operation, control, and metering devices for heat pumps and package air conditioning systems. Basic heating and ventilating equipment including performance measurement of heating and combustion equipment. Procedures used with DX cooling and gas-fired and electric heating equipment. Troubleshooting techniques, local gas and electric codes, and safety precautions. Prerequisites: HVA103, HVA/ELC/FAC105. Corequisites: HVA112LL.

#### HVA112LL
**Heating and Air Conditioning Lab**

1 Credits. 3 Periods.


#### HVA143
**Load Calculation and Duct Design**

3 Credits. 3 Periods.

Heat transmission factors calculations for specific types and combinations of construction materials. Application of design factors for cooling and heating load determination. Methods for residential applications. Design of residential and light commercial ducting systems. Calculation of duct size for constant and variable air flow, system operating characteristics and air measuring devices. Protocols to test, adjust, and balance an air distribution system. Prerequisites: None.
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<th>Course Code</th>
<th>Course Title</th>
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<td>HVA234</td>
<td>HVAC and Refrigeration Installation</td>
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<td>HIS273</td>
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<tr>
<td>HRM110</td>
<td>Introduction to Hospitality and Tourism Management</td>
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### HRM120 Hotel Facility Management
3 Credits. 3 Periods.
Fundamental duties and responsibilities of hotel facility management. Emphasis on detail tasks, including personnel, cleaning, purchasing, equipment, textiles, maintenance, and safety. Examines basic systems for hotel facility management record keeping. Prerequisites: None.

### HRM126 Food Service Cost Systems
2 Credits. 2 Periods.
Basic skills necessary to understand and utilize cost controls. Overview of systems for purchasing, storage, production control, and budgeting. Mechanical and mathematical details emphasized. Accounting process taught with aid of microcomputer. Introduction to standardized accounting software. Prerequisites: None.

### HRM130 Guest Services Management
3 Credits. 3 Periods.
Examines organization and management of the hotel front office and guest service operations. Explores key front office functions and related systems and skills necessary to ensure guest satisfaction and efficient operations. Prerequisites: None.

### HRM140 Food Production Concepts
3 Credits. 3 Periods.
Concepts related to preparation of hot foods, pantry, and bakery items for commercial kitchens. Emphasis on essential components and techniques of food production, food cost control, setting standards, ordering, and inventory. Prerequisites: None.

### HRM220 Hospitality Managerial Accounting
3 Credits. 3 Periods.
Study of financial statement analysis, asset management, ratio analysis, analytical techniques, and investment decision making. Emphasis on planning, budgeting, and management decisions. Prerequisites: ACC211.

### HRM244 Quality Sanitation Management
3 Credits. 3 Periods.
Systems approach to answering public health concerns, reducing sanitation risks, and ensuring satisfaction for guests, staff members, and owners. Definition and implementation of sanitation quality, cost control, and risk reduction in a hospitality operation. Prerequisites: None.

### HRM260 Hospitality Human Resource Management
3 Credits. 3 Periods.
Examines concepts and applications of human resource management in the hospitality industry. Topics include recruitment, selection, training and evaluation. Emphasis on current management methods and productivity in the service environment. Prerequisites: HRM110 or approval of instructor.

### HRM270 Hospitality Marketing
3 Credits. 3 Periods.
Essential skills of defining a service market, developing a market plan, and directing personnel to follow market plan. Emphasis on marketing in the hospitality industry and understanding segmentation, positioning and promotion in that market. Prerequisites: HRM110.

### HRM275 Restaurant Management
3 Credits. 3 Periods.
Overview of restaurant industry with focus on the major segments. Emphasis on developing plans for: marketing, accounting system, staffing, training, menu development and cost controls for restaurant operation. Special emphasis on safety and sanitation, and legal regulations in the restaurant industry. Prerequisites: None.

### HRM280 Hospitality and Tourism Law
3 Credits. 3 Periods.
Examines legal aspects of hotel, restaurant and tourism management. Uses case study approach to develop understanding of the laws and regulations governing guest relationships, contracts, employee relations, civil rights, alcoholic beverages, safety and product liability. Prerequisites: HRM110.

### HRM296WA Cooperative Education
1 Credit. 5 Periods.
Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of instructor. Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the instructor.

### HRM298AA Special Projects
1 Credit. 1 Period.
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or instructor.

### HUMANITIES

### HUM107 Humanities Through the Arts
3 Credits. 3 Periods.
Introduction to humanities including film, drama, music, literature, painting, sculpture, and architecture. Prerequisites: None.

### HUM190AA-AD Honors Forum
1 Credit. 1 Period.
Interdisciplinary studies of selected issues confronting the individual and society. Formal lectures followed by informal discussion with outstanding scholars and social leaders. Supplemented by readings and pre- and post-forum discussion and critique. Varied content from module to module due to changing forum themes and issues. Prerequisites: Admission to the College Honors Program or Permission of the Instructor.

### HUM120 Cultural Viewpoints in the Arts
3 Credits. 3 Periods.
Introduction to the influence of culture and ethnicity on the artist, including factors such as race, religion, gender, class, sexual preference, age, and region. Lecture and discussion on various art forms, including literature, visual arts, music, dance, film, and theater. Prerequisites: None.

### HUM209 Women and Films
3 Credits. 3 Periods.
Analysis of images of women in films from both historical and contemporary perspectives. Prerequisites: None. Cross-References: WST209
HUM213
Hispanic Film
3 Credits. 3 Periods.
Analysis of Hispanic film as art form and as social commentary. Prerequisites: None.

HUM250
Ideas and Values in the Humanities
3 Credits. 3 Periods.
An historical analysis of the interrelationships of art, architecture, literature, music, and philosophy from the early civilizations to the Renaissance, including western and non-western cultures. Prerequisites: ENG101.

HUM251
Ideas and Values in the Humanities
3 Credits. 3 Periods.
An historical analysis of the interrelationships of art, architecture, literature, music, and philosophy from the Renaissance to modern period, including western and non-western cultures. Prerequisites: ENG101.

HUM292
The Art Of Storytelling
3 Credits. 3 Periods.
Explore the art and origin of storytelling. Provide a variety of storytelling techniques, styles and exercises to enhance the delivery of telling stories. Assist in the integration and application of storytelling to the learning environment in the classroom. Prerequisites: None. Cross-References: EDU292, STO292.

INFORMATION TECHNOLOGY SECURITY

ITS100
Information Security Awareness
1 Credits. 2 Periods.
Computer and network security topics, including network communication. Includes security policy, implementation of basic security measures, the importance of backups and the value of protecting intellectual property. Real-life examples and practical projects to reinforce the need for computer security. Prerequisites: None.

ITS110
Information Security Fundamentals
4 Credits. 5 Periods.
Fundamental concepts of information technology security. Topics include authentication methods, access control, cryptography, Public Key Infrastructure (PKI), network attack and defense methods, hardening of systems and network devices, securing remote access and wireless technologies and securing infrastructures and topologies. Emphasis on hands-on labs in both the Windows and Linux environments. Builds on thorough understanding of Transmission Control Protocol/Internet Protocol (TCP/IP) and security concepts and Microsoft (MS) Windows and Linux Administration. Prerequisites: CIS126DA or CIS126DL and CNT150 and MST150DA or MST150XP or permission of instructor.

ITS120
Legal, Ethical and Regulatory Issues
3 Credits. 3 Periods.
Exploration of legal and ethical issues unique to information security. Analysis of professional ethical codes and their application to information security practitioners. Federal and state laws as they relate to information security. Prerequisites: ITS110 or permission of instructor.

ITS130
Operating System Security
3 Credits. 4 Periods.
In-depth examination of operating system security including Transmission Control Protocol/Data Encryption Standard (DES), Triple Data Encryption (3DES), Advanced Encryption Standard (AES), Pretty Good Privacy (PGP), and other encryption technologies (TCP/IP), Internet Protocol Security (IPSec) and Cisco Internetwork Operating Systems (IOS), Microsoft Windows, Linux and Mac OSX Security. Procedures to defend networks against attacks and recovery from network disasters. Web server security. Emphasis on hands-on labs in both the Windows and Linux environments. Builds on thorough understanding of Transmission Control Protocol/Internet Protocol (TCP/IP) and security concepts and MS Windows and Linux Administration. Prerequisites: ITS110, ITS130, and ITS140, or permission of instructor.

ITS140
Network Security
3 Credits. 4 Periods.
Examination of techniques used to defend network security. Design and implementation of devices including firewalls and Intrusion Detection Systems (IDSs) and Virtual Private Networks (VPNs). Risk analysis and security policies methodologies. Emphasis on hands-on labs in both the Windows and Linux environments. Builds on thorough understanding of Transmission Control Protocol/Internet Protocol (TCP/IP) and security concepts and MS Windows and Linux Administration. Prerequisites: (ITS110 and ITS130) or permission of instructor.

ITS150
Building Trusted Networks in the Enterprise
3 Credits. 4 Periods.
Design of a trusted network to secure electronic transactions. Techniques to secure electronic transactions to include cryptography, digital signatures, digital certificates and strong authentication. Computer forensics techniques and legislative issues. Emphasis on hands-on labs in both the Windows and Linux environments. Builds on thorough understanding of Transmission Control Protocol/Internet Protocol (TCP/IP) and security concepts and MS Windows and Linux Administration. Prerequisites: ITS110, ITS130, and ITS140, or permission of instructor.

ITS160
Managing Trusted Networks in the Enterprise
3 Credits. 4 Periods.
Establishment of trusted networks to ensure enterprise security. Techniques for planning and implementation of trusted networks including secure Wireless LANs (WLANs) and secure email. Emphasis on hands-on labs in both Windows and Linux environments. Builds on thorough understanding of Transmission Control Protocol/Internet Protocol (TCP/IP) and security concepts and MS Windows and Linux Administration. Prerequisites: ITS110, ITS130, ITS140 and ITS150 or permission of instructor.

ITS170
Information Security Policy Development
1 Credits. 1 Periods.
Components required to plan, develop and write information security policies. Policy development processes and the relationship between security and policy directions. Emphasis on writing effective information security policies in a governmental or corporate setting. Prerequisites: None.
ITS171
Information Security Risk Management
1 Credits. 1 Periods.
Examination and assessment of risk management in an information technology environment. Identification and valuation of organizational assets. Risk identification to include types of threats and exposures to loss. Risk mitigation techniques, documentation methods and regulatory requirements. Prerequisites: ITS110.

ITS172
Viruses and Other Malicious Software
1 Credits. 2 Periods.
Spyware, adware, viruses, worms and trojans. Available tools for identifying and removing malicious software. Techniques for analyzing the behavior of malicious software. Methods of infection and prevention of infection. Prerequisites: None.

ITS230
Deploying Snort Intrusion Detection Systems (IDS)
3 Credits. 4 Periods.

ITS231
Router Hardening
1 Credits. 2 Periods.
The role of routers in communication networks. Device specific threats and vulnerabilities. Strategies to harden routers to protect networks. Includes standards-based and proprietary protocols. Prerequisites: CNT150 or permission of the instructor.

ITS232
Layer 2 Attacks and Defenses
3 Credits. 4 Periods.
Security issues associated with Layer 2, the data link layer, of the seven-layer Open Systems Interconnection (OSI) model. Countermeasures and security best practices to mitigate Layer 2 attacks applied to Ethernet networking environments. Prerequisites: CNT160 and (ITS110 or CIS270) or permission of instructor.

ITS233
Wireless Network Security
3 Credits. 4 Periods.
Advanced concepts of securing wireless (802.11) communications. Auditing tools, Radio Frequency (RF) jamming and Wired Equivalent Privacy (WEP) decryption tools. Policies for implementing secure Wireless Local Area Networks (WLANs) including baselines, WLAN auditing and threat monitoring and responses. The role of encryption and Virtual Private Networks (VPNs), 802.11i and Wi-Fi Protected Access (WPA) as well as network segmentation and WLAN user authentication. Prerequisites: CNT186 and (ITS110 or CIS270) or permission of instructor.

ITS290
Computer Security Incident Response
3 Credits. 3 Periods.
Study of computer security incidents and how to respond to those incidents. Examination of frameworks for developing response strategies. Development and presentation of an incident response plan. Prerequisites: BPC170 and ITS110 or permission of instructor.

ITS291
Computer Forensics Foundations
4 Credits. 5 Periods.
Development of foundational computer forensic skills. Introduction to preserving, identifying, extracting, interpreting, and documenting computer data as part of a forensically sound analysis. Examination of the physical and logical structure of hard drives. Study of the logical structure of Windows-based file systems and common applications. Introduction to the logical structure of Unix/Linux-based file systems and common applications of commercial forensic tools. Prerequisites: BPC170 and ITS110 or permission of instructor.

ITS292
Advanced Computer Forensics
4 Credits. 5 Periods.
Advanced computer forensics analysis techniques with commercial tools. Introduction to open-source forensic tools. Emphasis on data recovery from complex applications and media types. Study of the logical structure of Unix/Linux-based file systems. Advanced search techniques. Analysis of unallocated space, compound files, and NTFS artifacts. Prerequisites: ITS291 or permission of instructor.

ITS295AA
Special Topics in Information Security
1 Credits. 2 Periods.
Exploration of special topics in Information Security. Includes both theoretical and practical aspects of selected Information Security topics. Prerequisites: Completion of Information Security Technology certificate program or permission of instructor.

ITS295AB
Special Topics in Information Security
2 Credits. 3 Periods.
Advanced level seminar in Information Security. Focuses on both the theoretical and practical aspects of selected Information Security topics. Research methods in specific Information Security disciplines. Prerequisites: Completion of Information Security Technology certificate program or permission of instructor.

ITS295AC
Special Topics in Information Security
3 Credits. 3 Periods.
Advanced level seminar in Information Security. Focuses on both the theoretical and practical aspects of selected Information Security topics. Research methods in specific Information Security disciplines. Prerequisites: Completion of Information Security Technology certificate program or permission of instructor.

MGT101
Techniques of Supervision
3 Credits. 3 Periods.
Overview of the foundations of supervision and how to get things done within an organization through other people. The functions of planning, organizing, staffing, motivating, and controlling presented. Prerequisites: None.

MGT175
Business Organization and Management
3 Credits. 3 Periods.
Covers basic principles of managing quality and performance in organizations. Covers management functions: planning, organizing, leading, and controlling. Emphasizes continual improvement, ethics, and social responsibility. Prerequisites: None.
MGT179
Utilizing the Human Resources Department
3 Credits. 3 Periods.
Provides the opportunity to learn how to appropriately utilize the human resources department within an organization in order to improve job performance. Topics include staffing, training and development, manpower planning, compensation and benefits, federal labor laws and why people seek outside representation. Prerequisites: None.

MGT229
Management and Leadership I
3 Credits. 3 Periods.
Covers management concepts and applications for business, industry, and government organizations. Prerequisites: None.

MGT251
Human Relations in Business
3 Credits. 3 Periods.
Analysis of motivation, leadership, communications, and other human factors. Cultural differences that may create conflict and affect morale individually and within organizations. Prerequisites: None. MGT101, or MGT175, or MGT229 suggested but not required.

MGT253
Owning and Operating a Small Business
3 Credits. 3 Periods.
Starting, organizing, and operating a small business, including location, finance management processes, advertisement and promotion, credit, inventory control and ethics. Prerequisites: None.

MGT276
Personnel/Human Resources Management
3 Credits. 3 Periods.
Human resource planning, staffing, training, compensating, and appraising employees in labor management relationships. Prerequisites: None. MGT101, or MGT175, or MGT229 suggested but not required.

MKT268
Merchandising
3 Credits. 3 Periods.
Surveys structure and operation of retail organizations. Emphasizes merchandising to include price, location, time promotion and quantity. Prerequisites: None. MKT271 suggested but not required.

MKT271
Principles of Marketing
3 Credits. 3 Periods.
An analysis of the marketing process and environment with regard to the product, pricing, distribution, and communication in order to satisfy buyer needs. Prerequisites: None.

MANUFACTURING TECHNOLOGY

MET100AA
Tool Room I: Introduction to Machine Processes
2 Credits. 2 Periods.

MET100AB
Tool Room II: Machine, Processes, and Employment
2 Credits. 2 Periods.
Career selection process and completion of a resume and job application. Job interview under a simulated situation. Ideal work habits, ethics and career opportunities in the manufacturing field. Operator certification check sheet. Prerequisites: MET100AA.

MET102
Machine Processes, Theory and Application
5 Credits. 9 Periods.
Study and application of principles and theory of common metal removal processes including drilling, reaming, boring, milling, turning, and grinding. Cutting tool geometry and materials, cutting speeds and feeds, coolants, and precision measurement. Prerequisites or Corequisites: MET/GTC107 and MET109 or minimum score of 80% on related competency evaluation.

MET103AA
Lathe I: Basic Manual Lathe Operations
2 Credits. 3 Periods.
Basic manual lathe operations and safety. Identification and selection of appropriate materials, tools, and chemicals for material removal process. Application of mathematical concepts in basic manual lathe operations. Process design and blueprint interpretation. Operator certification checklist. Prerequisites: MET100AA and MET100AB.

MET103AB
Lathe II: Secondary Manual Lathe Operations
1 Credit. 2 Periods.

MET104AA
Mill I: Basic Machine Operations
2 Credits. 3 Periods.
Basic vertical mill operations and safety. Selection of correct tools for a specific machining operation. Mathematical calculations and operations essential in machining operations. Design of process flow charts, and material selection. Blueprint interpretation. Operator certification check sheet. Prerequisites: MET100AA and MET100AB.

MET104AB
Tool Room I: Introduction to Machine Processes
1 Credit. 2 Periods.

MET108
Technical Mathematics II
3 Credits. 3 Periods.
Fundamental algebraic operations. Problem solving involving metric measurement, gears, pulleys, simple mechanism problems. Areas and volume calculations of geometric figures. Essentials of trigonometry for solving right and oblique triangles. Prerequisites: GTC/ MET107 or permission of instructor. Cross-References: GTC108
MET109 Machine Trades Print Reading
3 Credits. 3 Periods.
Analysis and interpretation of technical drawings (prints) common to manufacturing and the machine trades. Types of print formats, line types, and view projections. Mathematical calculations for determining dimensions. Symbols and features present on prints. Prerequisites: None.

MET110 Survey of Manufacturing Materials
1 Credits. 1 Periods.
Survey of metallurgy, composites, plastics, ceramics and other materials used in manufacturing. Material properties, classification and structure. Elementary strength of materials, heat treatment, and other materials processing requirements. Emphasis on relating materials and processes to specific hardware. Prerequisites: None.

MET112 Inspection Techniques
3 Credits. 3 Periods.
Set-up and use of inspection tools, equipment, and procedures used in the industry. Use of ancillary equipment. Inspection planning forms and tables. Tool control activities and tool use certification process. Prerequisites: MET109 or permission of department.

MET114 Quality Systems
1 Credits. 1 Periods.
Quality system models and their application to a manufacturing organization. Cost of quality in a manufacturing organization. Prerequisites: None.

MET140 Computer-Aided Drafting for Manufacturing
3 Credits. 3 Periods.
Use of Computer Aided Drafting (CAD) equipment (hardware and software) in manufacturing and engineering drawings. Prerequisites: None.

MET115 Teamwork Dynamics in Manufacturing
2 Credits. 2 Periods.
Theory and practice of how team members and team leaders use listening, negotiating and interpersonal skills for the enhancement of team process. Concepts of team development and team problem-solving techniques. Prerequisites: None.

MET203 Machine Tools
5 Credits. 9 Periods.
Set up and operation of machine tools including engine lathes, drill presses, grinders, and milling machines. Emphasis on safety procedures during machine operation. Completion of operator certification checklist. Prerequisites: MET102, MET/GTC107, and MET109.

MET206 CNC Programming
3 Credits. 6 Periods.
Manual programming using computer generation of program media. Set-up and operation of a three axis machine. Study of management implications and advantages of computer numerical control (CNC). Prerequisites: MET102 or (MET102AA, MET103AA, MET104AA and MET105AA), or machine shop experience or permission of program director. Cross-References: GTC206

MET236 CAD/CAM Computer Numerical Control (CNC) Programming
3 Credits. 6 Periods.

MET260 Tooling and Fixturing
3 Credits. 3 Periods.
Various types of jigs and fixtures and their function as related to Numerically Controlled (NC) machines. Clamping and workholding principles and also use of common jigs and fixture hardware. Prerequisites: MET111 and MET140 or permission of department.

MET264 Manufacturing Process Planning
3 Credits. 3 Periods.
Development of a production plan (routing) from basic pre-production information in the product drawing, expected volume, available equipment, set-up reduction requirements, and other planning requirements. Prerequisites or Corequisites: MET260.

MCO220 Cultural Diversity and the Media
3 Credits. 3 Periods.
Images of the diverse cultures and gender issues within the U.S. media. Exploration of racial and gender roles which shape the media as well as media roles which influence U.S. race relations and racial change. Roles, contributions, and challenges of the minority press in the United States. Prerequisites: ENG101, or ENG107, or equivalent.

MAT082 Basic Arithmetic
3 Credits. 3 Periods.
Primary emphasis placed on fundamental operations with whole numbers, fractions, decimals, integers, and rational numbers; proportions, and percentages. Other topics include representations of data, geometric figures, and measurement. Prerequisites: None.

MAT090 Developmental Algebra
5 Credits. 5 Periods.
Linear behavior; linear equations and inequalities in one and two variables; graphs; systems of equations in two variables; function notation, graphs, and data tables; operations on polynomials; properties of exponents; applications. Prerequisites: Grade of "C" or better in MAT082, or MAT102, or equivalent, or satisfactory score on District Placement exam. Course Note: May receive credit for only one of the following: MAT090, MAT091, MAT092, or MAT093.

MAT091 Algebra/Anxiety Reduction
4 Credits. 4 Periods.
Linear behavior; linear equations and inequalities in one and two variables; graphs; systems of equations in two variables; function notation, graphs, and data tables; operations on polynomials; properties of exponents; applications. Prerequisites: Grade of “C” or better in MAT082, or MAT102, or equivalent or satisfactory score on District placement exam. Course Note: May receive credit for only one of the following: MAT090, MAT091, MAT092, or MAT093.
<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credits</th>
<th>Periods</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT092</td>
<td>Introductory Algebra</td>
<td>3</td>
<td>3</td>
<td>Linear behavior; linear equations and inequalities in one and two variables; graphs; systems of equations in two variables; function notation, graphs, and data tables; operations on polynomials; properties of exponents; applications. Prerequisites: Grade of &quot;C&quot; or better in MAT082, or MAT102, or equivalent, or satisfactory score on District Placement exam. Course Note: May receive credit for only one of the following: MAT090, MAT091, MAT092, or MAT093.</td>
</tr>
<tr>
<td>MAT102</td>
<td>Mathematical Concepts/Applications</td>
<td>3</td>
<td>3</td>
<td>A problem solving approach to mathematics as it applies to life and the world of work. Development, demonstration, and communication of mathematical concepts and formulas that relate to measurement, percentage, statistics, and geometry. Prerequisites: Grade of &quot;C&quot; or better in MAT082, or equivalent, or satisfactory score on District placement exam.</td>
</tr>
<tr>
<td>MAT103AA</td>
<td>Mathematics for Industrial Applications I</td>
<td>2</td>
<td>2</td>
<td>Fundamental operations with whole numbers, common fractions, decimals, percentages, and ratio and proportion. Graphs, measurements, and measurement tools. Fundamentals of algebra to include signed numbers, algebraic operations, linear equations, graphs of linear equations, and systems of equations. Includes applied math problems. Prerequisites: Grade of &quot;C&quot; or better in MAT082, or equivalent, or satisfactory score on District placement exam.</td>
</tr>
<tr>
<td>MAT103AB</td>
<td>Mathematics for Industrial Applications II</td>
<td>2</td>
<td>2</td>
<td>Fundamentals of plane geometry and angular measure. Theorems, axioms, corollaries and definitions applying to triangles, congruent and similar figures, polygons, and circles. Computed measure of geometric figures, area, volume, surface area, and weight. Fundamentals of trigonometry, trigonometric functions, right triangles, law of sines and law of Cosines. Includes applied math problems. Prerequisites: MAT103AA or permission of the instructor.</td>
</tr>
<tr>
<td>MAT108</td>
<td>Tutored Mathematics</td>
<td>2</td>
<td>2</td>
<td>Structured tutorial assistance and math study skills to help students achieve success in a mathematics course in which they are concurrently enrolled. Prerequisites: None.</td>
</tr>
<tr>
<td>MAT120</td>
<td>Intermediate Algebra</td>
<td>5</td>
<td>5</td>
<td>Quadratic, rational, radical, exponential, and logarithmic functions and equations; graphs of quadratic, exponential, and logarithmic functions; equations quadratic in form; operations on rational expressions, radical expressions, and complex numbers; rational exponents; applications. Prerequisites: Grade of &quot;C&quot; or better in MAT090, MAT091, MAT092, MAT093, or equivalent, or a satisfactory score on the District placement exam. Course Note: May receive credit for only one of the following: MAT120, MAT121, or MAT122.</td>
</tr>
<tr>
<td>MAT121</td>
<td>Intermediate Algebra</td>
<td>4</td>
<td>4</td>
<td>Quadratic, rational, radical, exponential, and logarithmic functions and equations; graphs of quadratic, exponential, and logarithmic functions; equations quadratic in form; operations on rational expressions, radical expressions, and complex numbers; rational exponents; applications. Prerequisites: Grade of &quot;C&quot; or better in MAT090, MAT091, MAT092, MAT093, or equivalent, or a satisfactory score on the District placement exam. Course Note: May receive credit for only one of the following: MAT120, MAT121, or MAT122.</td>
</tr>
<tr>
<td>MAT122</td>
<td>College Mathematics</td>
<td>3</td>
<td>3</td>
<td>Working knowledge of college-level mathematics and its applications to real-life problems. Emphasis on understanding mathematical concepts and their applications. Topics include set theory, probability, statistics, finance, and geometry. Prerequisites: Grade of &quot;C&quot; or better in MAT120, or MAT121, or MAT122 or equivalent, or satisfactory score on District placement exam.</td>
</tr>
<tr>
<td>MAT142</td>
<td>College Mathematics</td>
<td>4</td>
<td>4</td>
<td>Analysis and interpretation of the behavior and nature of functions including polynomial, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, modeling and solving real world problems. Additional topics may include matrices, combinatorics, sequences and series, and conics. Prerequisites: Grade of &quot;C&quot; or better in MAT120, or MAT121, or MAT122 or equivalent, or satisfactory score on District placement exam.</td>
</tr>
<tr>
<td>MAT150</td>
<td>College Algebra / Functions</td>
<td>5</td>
<td>5</td>
<td>Analysis and interpretation of the behavior and nature of functions including polynomial, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, modeling and solving real world problems. Additional topics may include matrices, combinatorics, sequences and series, and conics. Prerequisites: Grade of &quot;C&quot; or better in MAT120, or MAT121, or MAT122 or equivalent, or satisfactory score on District placement exam.</td>
</tr>
<tr>
<td>MAT151</td>
<td>College Algebra / Functions</td>
<td>4</td>
<td>4</td>
<td>Analysis and interpretation of the behavior and nature of functions including polynomial, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, modeling and solving real world problems. Additional topics may include matrices, combinatorics, sequences and series, and conics. Prerequisites: Grade of &quot;C&quot; or better in MAT120, or MAT121, or MAT122 or equivalent, or satisfactory score on District placement exam.</td>
</tr>
<tr>
<td>MAT152</td>
<td>College Algebra / Functions</td>
<td>3</td>
<td>3</td>
<td>Analysis and interpretation of the behavior and nature of functions including polynomial, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, modeling and solving real world problems. Additional topics may include matrices, combinatorics, sequences and series, and conics. Prerequisites: Grade of &quot;C&quot; or better in MAT120, or MAT121, or MAT122 or equivalent, or satisfactory score on District placement exam.</td>
</tr>
<tr>
<td>MAT156</td>
<td>Mathematics for Elementary Teachers I</td>
<td>3</td>
<td>3</td>
<td>Focuses on numbers and operations. Algebraic reasoning and problem solving integrated throughout the course. Prerequisites: Grade of &quot;C&quot; or better in MAT142 or MAT150 or MAT151 or MAT152 or equivalent, or satisfactory score on District placement exam.</td>
</tr>
</tbody>
</table>
MAT157
Mathematics for Elementary Teachers II
3 Credits. 3 Periods.
Focuses on measurement, geometry, probability and data analysis. Appropriate technologies, problem solving, reasoning, and proof are integrated throughout the course. Prerequisite: MAT156 or equivalent.

MAT172
Finite Mathematics
3 Credits. 3 Periods.
An introduction to the mathematics required for the study of social and behavioral sciences. Includes combinatorics, probability, descriptive statistics, matrix algebra, linear programming and the mathematics of finance. Includes applications of technology in problem-solving. Prerequisites: Grade of “C” or better in MAT150, or MAT151, or MAT152, or MAT187 or equivalent, or satisfactory score on District placement exam.

MAT182
Plane Trigonometry
3 Credits. 3 Periods.
A study of measures of angles, properties of graphs of trigonometric functions, fundamental identities, addition and half-angle formulas, inverse trigonometric functions, solutions of trigonometric equations, complex numbers and properties of triangle solution. May receive credit for only one of the following: MAT182 or MAT187. Prerequisites: Grade of “C” or better in MAT150, or MAT151, or MAT152, or equivalent, or concurrent registration in MAT150, or MAT151, MAT152, or MAT187 or equivalent, or satisfactory score on District placement exam.

MAT212
Brief Calculus
3 Credits. 3 Periods.
Introduction to the theory, techniques and applications of the differential and integral calculus of functions with problems related to business, life, and the social sciences. Prerequisites: Grade of “C” or better in MAT150, or MAT151, or MAT152, or MAT187 or equivalent, or satisfactory score on District placement exam.

MAT220
Calculus with Analytic Geometry I
5 Credits. 5 Periods.
Limits, continuity, differential and integral calculus of functions of one variable. May receive credit for only one of the following: MAT220 or MAT221. Prerequisites: Grade of “C” or better in (MAT150, or MAT151, or MAT152), and MAT182, or MAT187 or equivalent, or satisfactory score on District placement exam.

MAT230
Calculus with Analytic Geometry II
5 Credits. 5 Periods.
Techniques of integration for both proper and improper integrals with applications to the physical and social sciences, elements of analytic geometry, and the analysis of sequences and series. Prerequisites: Grade of “C” or better in MAT220 or MAT221 or equivalent. Course Note: Student may receive credit for only one of the following: MAT230 or MAT231.

MAT241
Calculus with Analytic Geometry III
4 Credits. 4 Periods.
Multivariate calculus including vectors, vector-valued functions, partial differentiation, multiple integration and an introduction to vector fields. Prerequisites: Grade of “C” or better in MAT230 or MAT231. Course Notes: May receive credit for only one of the following: MAT240 or MAT241.

MAT262
Differential Equations
3 Credits. 3 Periods.
Ordinary differential equations with applications including LaPlace transforms with numerical methods. Prerequisites: Grade of “C” or better in MAT230, or MAT231, or equivalent.

MICROSOFT TECHNOLOGY

MST140
Microsoft Networking Essentials
3 Credits. 4 Periods.
Emphasis on local area network with overview of wide area networks. Includes terminology, hardware and software components, connectivity, network architecture, packet structure, topologies, communication standards and protocols, and security issues. Preparation for Microsoft certification examination. Prerequisites: None. (BPC110 or CIS105, and BPC121AB) suggested but not required.

MST141
Supporting Microsoft Windows Desktop Operating Systems
3 Credits. 4 Periods.
Troubleshooting and repairing end-user problems with applications running on current Windows desktop operating systems. Preparation for Microsoft Certified Desktop Support Technician (MCDST) certification examination. Prerequisites: CIS102 and CIS105, or permission of instructor. Prerequisites or Corequisites: MST150XP.

MST145
Microsoft Client System Administration
3 Credits. 4 Periods.
Knowledge and skills necessary to install, configure, optimize, maintain, and troubleshoot the Microsoft Windows client operating system in a Microsoft networking environment. Preparation for Microsoft certification examination. Prerequisites or Corequisites: MST140 or permission of instructor.

MST150
Microsoft Windows Professional Administration
3 Credits. 4 Periods.
Knowledge and skills necessary to perform day-to-day administration tasks in a Microsoft Windows-based network. Preparation for Microsoft certification examination. Prerequisites: None. CIS190, or CNT140, or MST140 suggested but not required.

MST150DA
Microsoft Windows 2000 Professional
3 Credits. 5 Periods.
Knowledge and skills necessary to perform day-to-day administration tasks of Microsoft Windows 2000 Professional. Preparation for Microsoft certification examination. Prerequisites: None. CIS190, or CNT140, or MST140 suggested but not required.

MST150XP
Microsoft Windows XP Professional
3 Credits. 4 Periods.
Knowledge and skills necessary to perform day-to-day administration tasks of Microsoft Windows XP Professional. Preparation for Microsoft certification examination. Prerequisites: None. CIS190, or CNT140, or MST140 suggested but not required.
<table>
<thead>
<tr>
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<th>Credits</th>
<th>Periods</th>
<th>Prerequisites/Co-requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>MST152</td>
<td>Microsoft Windows Server</td>
<td>4</td>
<td>5</td>
<td>Knowledge and skills necessary to install, configure, customize, optimize, network, integrate, and troubleshoot Windows Server. Preparation for Microsoft certification examination. Prerequisites or Corequisites: Any MST150 course or permission of instructor.</td>
</tr>
<tr>
<td>MST154</td>
<td>Microsoft Windows Network Enterprise</td>
<td>3</td>
<td>4</td>
<td>Knowledge and skills to plan, install, configure, customize, and integrate networks with Windows server operating system in a heterogeneous, multiple-domain environment. Preparation for Microsoft certification examination. Prerequisites: MST150 or permission of instructor. Corequisites: MST152 or permission of instructor.</td>
</tr>
<tr>
<td>MST155</td>
<td>Implementing Windows Network Infrastructure</td>
<td>3</td>
<td>4</td>
<td>Knowledge and skills to install, configure, maintain, and support a Microsoft Windows network infrastructure. Preparation for Microsoft certification examination. Prerequisites or Corequisites: any MST152 course or permission of instructor.</td>
</tr>
<tr>
<td>MST157</td>
<td>Implementing Windows Directory Services</td>
<td>3</td>
<td>4</td>
<td>Knowledge and skills to install, configure, and administer Microsoft Windows Active Directory services. Preparation for Microsoft certification examination. Prerequisites: Any MST152 course or permission of instructor.</td>
</tr>
<tr>
<td>MST170</td>
<td>Visual Basic Desktop Application Development</td>
<td>4</td>
<td>5</td>
<td>Use of Visual Basic programming language to create database applications using Visual Data Access tools, ActiveX Controls, Component Objects, and Structured Query Language (SQL) Server database. Prerequisites: CIS159 or permission of instructor.</td>
</tr>
<tr>
<td>MST171</td>
<td>Microsoft FrontPage</td>
<td>3</td>
<td>4</td>
<td>Knowledge and skills to analyze, design, build, and implement enterprise Web sites using Microsoft FrontPage. Includes use of ActiveX components, databases, and FrontPage server extensions. Prerequisites: (CIS233BA or CIS233DA) and MST170, or permission of instructor.</td>
</tr>
<tr>
<td>MST172</td>
<td>Visual Basic .NET Web Application Development</td>
<td>4</td>
<td>5</td>
<td>Knowledge and skills to develop and implement Web-based applications using ASP.NET, Web forms, and the Microsoft.NET framework with Visual Basic. Preparation for Microsoft Certified Applications Developer (MCAD) certification examination. Prerequisites: (BPC/CIS133DA, or BPC/CIS133AA and BPC/CIS133BA and BPC/CIS133CA) and CIS259, or permission of instructor.</td>
</tr>
<tr>
<td>MST174</td>
<td>Microsoft Visual InterDev</td>
<td>3</td>
<td>4</td>
<td>Web site programming tasks to create enterprise-level Web sites that use Component Object Model (COM) components on both the client and the server. Preparation for Microsoft Certified Solutions Developer (MCSD) examination. Prerequisites: (CIS233BA or CIS233DA) and MST170 or permission of instructor.</td>
</tr>
<tr>
<td>MST232</td>
<td>Managing a Windows Network Environment</td>
<td>3</td>
<td>4</td>
<td>Knowledge and skills necessary to administer Windows network operating systems. Preparation for Microsoft certification examination. Prerequisites: MST140, MST150, and MST152, or permission of instructor.</td>
</tr>
<tr>
<td>MST240</td>
<td>Microsoft Transmission Control Protocol/Internet Protocol (TCP/IP)</td>
<td>3</td>
<td>4</td>
<td>Knowledge and skills necessary to install, configure, use, and support TCP/IP on Microsoft Windows network. Preparation for Microsoft certification examination. Prerequisites: MST152 or permission of instructor.</td>
</tr>
<tr>
<td>MST242</td>
<td>Microsoft Exchange Server</td>
<td>4</td>
<td>5</td>
<td>Knowledge and skills required to plan, implement, and administer Microsoft Exchange Server. Preparation for Microsoft certification examination. Prerequisites: any MST152 course or permission of instructor.</td>
</tr>
<tr>
<td>MST244</td>
<td>Microsoft SQL Administration</td>
<td>3</td>
<td>4</td>
<td>Knowledge and skills required to install, configure, and administer Microsoft SQL server. Preparation for Microsoft certification examination. Prerequisites: any MST152 course or MST170 or permission of instructor.</td>
</tr>
<tr>
<td>MST246</td>
<td>Implementing Microsoft Internet Explorer</td>
<td>2</td>
<td>3</td>
<td>Strong foundation in the architecture and key features of Microsoft Internet Explorer. Set up, configure, use, and deploy Internet Explorer in a network environment, with particular emphasis on intranet use. Prerequisites: Any MST152 course or permission of instructor. Knowledge of HTML suggested but not required.</td>
</tr>
<tr>
<td>MST247</td>
<td>Microsoft Proxy Server</td>
<td>2</td>
<td>3</td>
<td>Knowledge and skills to install, configure, and administer Microsoft Proxy Server. Preparation for Microsoft certification examination. Prerequisites: MST155 or MST240 or permission of instructor.</td>
</tr>
<tr>
<td>MST252</td>
<td>Microsoft Windows Network Upgrade</td>
<td>3</td>
<td>4</td>
<td>Evaluate differences between current version of Microsoft Windows network operating system and upgraded version. Intended for Microsoft network administrators seeking upgrade training. Prerequisites: MST152 or permission of instructor.</td>
</tr>
<tr>
<td>MST253</td>
<td>Designing a Microsoft Windows 2000 Directory Services Infrastructure</td>
<td>3</td>
<td>4</td>
<td>Provides students with the knowledge and skills necessary to plan and implement Microsoft Windows 2000 Directory Services in an enterprise environment. Prerequisites: any MST152 course or permission of instructor.</td>
</tr>
</tbody>
</table>
### MST254
**Microsoft SQL Server Design and Implementation**
- 3 Credits. 4 Periods.
- Knowledge and skills required to design and implement databases using Microsoft SQL server. Preparation for Microsoft certification examination. Prerequisites: CIS259, or any MST152 course, or permission of instructor.

### MST255
**Designing Windows Network Infrastructure**
- 3 Credits. 4 Periods.
- Knowledge and skills to create a networking infrastructure design that supports network applications and the needs of an organization. Preparation for Microsoft certification examination. Prerequisites or Corequisites: MST155 or permission of instructor.

### MST259
**Designing Windows Network Security**
- 3 Credits. 4 Periods.
- Knowledge and skills to analyze business requirements and processes to design a security solution for a Microsoft Windows network. Preparation for Microsoft certification examination. Prerequisites or Corequisites: MST157 or permission of instructor.

### MST270
**Microsoft Solution Architectures**
- 3 Credits. 4 Periods.
- Knowledge and skills to analyze business requirements in a given scenario and define technical solution architectures to optimize business results using Microsoft development tools. Prerequisites: (ACC230 or GBS151) and MST170, or permission of instructor.

### MST298AC
**Special Projects**
- 3 Credits. 3 Periods.
- Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or instructor.

### MHL140
**Survey of Music History**
- 3 Credits. 3 Periods.
- Study of composers, compositions, styles, and periods in music history. Prerequisites: None.

### MHL143
**Music in World Cultures**
- 3 Credits. 3 Periods.
- Non-European musical traditions including the study of music in rituals, musical instruments and the impact of cultures on musical styles. Prerequisites: None.

### MHL145
**American Jazz and Popular Music**
- 3 Credits. 3 Periods.
- The study of cultural and social contributions to the evolution of American Jazz and popular music from the mid-1800’s to present. Prerequisites: None.

### MHL147
**Music of African-American Cultures**
- 3 Credits. 3 Periods.
- African-American music traced from its origin in Africa to the present. Includes spirituals, blues, gospel, jazz, and classical style. Prerequisites: None.

### MHL153
**Rock Music and Culture**
- 3 Credits. 3 Periods.
- History of Rock music and how cultural, social, political, and economic conditions have shaped its evolution. Prerequisites: None.

### MHL155
**Survey of American Music**
- 3 Credits. 3 Periods.
- History of the music of North America from the earliest American Indian music to the present. Introduction to the musical trends, composers, socioeconomic developments and trends, musical forms and styles that influence our modern American musical sense. Prerequisites: None

### MHL156
**Music in Latin America and the Caribbean**
- 3 Credits. 3 Periods.
- To discuss the role of music in Latin and Caribbean cultures and the impact of these cultures on music. To present a historical survey to the evolution and development of musical styles from rumba to reggae.

Among the topics, and to include: origins, gender, race, ethnicity, politics, elements of music, instruments, both sacred and secular music, and significant individuals influencing the evolution of many different genres of music in Latin America and Caribbean cultures. Prerequisites: None.

### MUP225
**Class Guitar I**
- 2 Credits. 3 Periods.
- Emphasis on note-reading and folk-style harmonic accompaniment. Includes finger-style playing. Stresses development of efficient practicing techniques and proper sitting and hand positions. Prerequisites: None.

### MUP226
**Class Guitar II**
- 2 Credits. 3 Periods.
- Note-reading range including second position and parts of higher positions. Classical, popular, Latin and other styles of music. Theory including scales, keys, and chord construction. Technical exercises of both hands. Prerequisites: MUP225 or permission of instructor.

### NUR111
**Nursing Process and Critical Thinking I**
- 4 Credits. 4 Periods.
- Overview of nursing and critical thinking strategies focused on meeting basic human needs within the wellness/illness continuum. Theoretical concepts related to holistic care of well, geriatric, and adult clients with selected alterations in health including psychological/mental health disorders. Emphasis on use of nursing process in the role of the nurse as member of the health care team. Includes concepts of pathophysiology, nutrition, and communication. Requires application of previous knowledge of physical, biological, and social sciences. Prerequisites: Admission to the Practical Nursing or Nursing programs. Corequisites: NUR119 or permission of Nursing Department chairperson.
NUR17
Pharmacology and Medication Administration I
2 Credits. 4 Periods.
Introduction to pharmacology. Includes foundation knowledge and skills instruction. Emphasis on core medication prototypes and skills necessary for safe administration of selected medication categories. Concepts of medication administration by selected routes introduced. Application of previous knowledge of physical, biological, and social sciences. Prerequisites: Admission to the Practical Nursing or Nursing Programs.

NUR19
Nursing Science I
5 Credits. 15 Periods.
Development of clinical competency in the performance of selected nursing skills and procedures. Provides for participation in the care of clients experiencing problems of alteration in health and selected mental health disorders. Provides for clinical practice experiences with individuals and families in a variety of long term care and acute settings. Application of holistic nursing concepts and assessments related to health promotion, disease/illness prevention, and health restoration, as well as concepts of pathophysiology, nutrition, and communication. Prerequisites: Admission into the Practical Nursing or Nursing Programs. Corequisites: NUR111 or permission of Nursing Department chairperson.

NUR127
Pharmacology and Medication Administration II
2 Credits. 4 Periods.
Continues emphasis on core medication prototypes and skills. Emphasis on critical thinking skills for safe practice in medication administration. Introduces concepts of venipuncture and initiation of IV access. Requires application of previous knowledge of physical, biological, social and nursing sciences. Prerequisites: NUR111, NUR117, and (NUR118 or NUR119).

NUR129
Nursing Science II
5 Credits. 15 Periods.
Continuation of application of holistic nursing concepts and assessments related to health promotion, disease/illness prevention and health restoration of individuals and families. Provides continued opportunity for the development of clinical competency in the performance of selected nursing skills, participation in the care of clients with alterations in health. Provides clinical experiences with adult, pediatric, well childbearing clients and childrearing families in a variety of acute care and community settings. Application of nursing concepts in the development of care plans as well as concepts of pathophysiology, nutrition, and communication. Includes participation in client teaching and discharge planning. Prerequisites: NUR111, NUR117, and NUR119. Corequisites: NUR121 or permission of Nursing Department chairperson.

NUR231
Nursing Process and Critical Thinking III
4 Credits. 4 Periods.
Continued emphasis on core medication and related concepts. Emphasis on complex human needs within the wellness/illness continuum. Theoretical concepts related to holistic care of adult and geriatric clients with selected alterations in health. Introduces human growth and developmental principles. Introduction to care of newborn, pediatric, well childbearing clients, and childrearing families. Continuation of the role of the nurse as member of the health care team. Includes concepts of pathophysiology, nutrition, and communication. Application of previous knowledge of physical, biologic, social, and nursing sciences. Prerequisites: NUR111, NUR117, and (NUR118 or NUR119). Corequisites: NUR128 or permission of Nursing Department chairperson.

NUR239
Nursing Science III
5 Credits. 15 Periods.
Application of critical thinking skills through the nursing process to clients and families with acute alterations in health and psychiatric/mental health disorders. Provides for the development of clinical and cultural competency and the continued development of selected nursing skills and procedures within the nursing scope of practice. Holistic care of clients, families, and small groups in a variety of acute and community health care settings. Application of nursing concepts related to health education/promotion for clients, families, and small groups. Integrates concepts of nutrition, communication, health promotion and advanced pathophysiology. Prerequisites: NUR121, NUR127, and NUR129. Corequisites: NUR231 or permission of Nursing Department chairperson.

NUR241
Nursing Process and Critical Thinking IV
4 Credits. 4 Periods.
Continued emphasis on core medication and related concepts. Emphasis on complex human needs within the wellness/illness continuum in a variety of acute care and community settings. Theoretical concepts related to holistic care of adults with selected acute and chronic alterations in health and psychiatric/mental health disorders. Introduction to role of the professional nurse as member of the health care team. Integrates concepts of nutrition, communication, health promotion, and advanced pathophysiology. Application of previous knowledge of physical, biologic, social, and nursing sciences. Prerequisites: NUR231, NUR237, and (NUR238 or NUR239). Corequisites: NUR248 or permission of Nursing Department chairperson.
PHI243 World Religions
3 Credits. 3 Periods.
The development of various religions from the prehistoric to modern times. Political, economic, social and geographic relationships among world religions. Consideration of both Eastern and Western religions. Prerequisites: None. Cross-reference: HIS243, REL243.

PHI245 Introduction to Eastern Philosophy
3 Credits. 3 Periods.
Fundamental theories of Indian and Chinese metaphysics, epistemology, ethics and aesthetics. Prerequisites: None.

PHYSICAL EDUCATION

HES154
First Aid/Cardiopulmonary Resuscitation
3 Credits. 3 Periods.
Cardiopulmonary Resuscitation and first aid for the adult, child and infant patients includes Automated External Defibrillator (AED), rescue breathing, obstructed airway, and other first aid procedures. Designed to train citizen responders in skills and procedures required during emergency situation. Prerequisites: None.

PED101GF
Physical Activities: Cycling
1 Credit. 2 Periods.
Individual, dual, or team sports activities as listed in the schedule of classes. May be repeated for credit. Prerequisites: None.

PED102
Physical Activities
1 Credit. 2 Periods.
Individual, dual, or team sports activities as listed in the schedule of classes. May be repeated for credit. Prerequisites: None.

PED102AF
Physical Activities: Aerobics
1 Credit. 2 Periods.
Individual, dual, or team sports activities as listed in the schedule of classes. May be repeated for credit. Prerequisites: None.
PED102AQ
Water Exercise
1 Credit. 2 Periods.
Individual, dual, or team sports activities as listed in the schedule of classes. May be repeated for credit. Prerequisites: None.

PED102BP
Backpacking
1 Credit. 2 Periods.
Covers basic skills and techniques of backpacking and the application of these to wilderness travel. Includes outdoor survival and evacuation techniques under a variety of environmental conditions. Prerequisites: None.

PED102JX
Physical Activities: Golf
1 Credit. 2 Periods.
Individual, dual, or team sports activities as listed in the schedule of classes. May be repeated for credit. Prerequisites: None.

PED102LX
Physical Activities: Hiking
1 Credit. 2 Periods.
Development of safe and effective hiking skills. Essentials and requirements for safe hiking; proper hiking clothing and attire; impact of hiking on the environment. Prerequisites: None.

PED102QR
Physical Activities: Physical Conditioning
1 Credit. 2 Periods.
Individual, dual, or team sports activities as listed in the schedule of classes. May be repeated for credit. Prerequisites: None.

PED102SL
Physical Activities: Scuba Diving
1.5 Credit. 2.50 Periods.
Individual, dual, or team sports activities as listed in the schedule of classes. May be repeated for credit. Prerequisites: None.

PED102SP
Physical Activities: Self Defense
1 Credit. 2 Periods.
Individual, dual, or team sports activities as listed in the schedule of classes. May be repeated for credit. Prerequisites: None.

PED102SU
Scuba Diving: Advanced
1 Credit. 2 Periods.
Individual, dual, or team sports activities as listed in the schedule of classes. May be repeated for credit. Prerequisites: PED102SL or equivalent (any certification card from a nationally recognized agency). A health form and/or physical may be required.

PED102VR
Tai Chi
1 Credit. 2 Periods.
Teaches the fundamentals of Tai Chi including the moves, rules, and traditional discipline of the sport. Prerequisites: None.

PED102WT
Physical Activities: Volleyball
1 Credit. 2 Periods.
Individual, dual, or team sports activities as listed in the schedule of classes. May be repeated for credit. Prerequisites: None.

PED112
Professional Applications of Fitness Principles
3 Credits 3 Periods
Basic principles of fitness for the prospective fitness professional. Planning and teaching in a fitness program. Topics include exercise risks and safety, weight control, components of fitness, fitness assessment, and exercise programming. Prerequisites: None.

PED113
Weight Training
1.5 Credits 3 Periods
Weight training activity and wellness study to help develop a lifetime of regular exercise, stress management, and proper nutrition. Workout includes warm-up/stretch, aerobic exercise, selected strength exercises, and cool down/stretch. Prerequisites: None.

PED115
Lifetime Fitness
2 Credits. 4 Periods.
Fitness activity and wellness study to help develop a lifetime of regular exercise, stress management, and proper nutrition. Workout includes warm up/stretch, aerobic exercise, selected strength exercises, and cool down/stretch. May be repeated credit. Prerequisites: None.

PED118
Aerobics for Seniors
1.5 Credits. 3 Periods.
Formatted for older adults with music and class tempo appropriate for those over age 55. Includes flexibility exercises, cardiovascular conditioning, and strengthening and toning exercises. Prerequisites: None.

PED125
Exercise Science
3 Credits 3 Periods
Principles of exercise science applied to teaching fitness/aerobics. Major factors related to the function of the human body. Emphasis on anatomy/physiology, exercise physiology, and biomechanics. Prerequisites: None.

PED130
Strength Fitness-Physiological Principles and Training Techniques
3 Credits 3 Periods
Principles and techniques of strength training including strength physiology, performance factors, training recommendations, exercise techniques, and program design and management. Prerequisites: None. Cross-References: WED130

PED132
Cardiovascular Fitness: Physiological Principles and Training Techniques
2 Credits 2 Periods
Covers principles and techniques of aerobic training and the application of these to the development of aerobic training programs. Includes instructional techniques and safety, and stresses injury prevention. Prerequisites: None
PED139
Practical Applications of Personal Training Skills and Techniques

Internship
3 Credits  5.40 Periods
Development of personal training skills including effective communication, client assessment, fitness testing, goal setting, program design, and program implementation. Includes hands on experience with clients in a Fitness Center. Prerequisites: Current CPR certification or permission of instructor. Course Note: Students will have 240 hours of contact with clientele.

PED145
Guidelines for Exercise Testing and Prescription
3 Credits   3 Periods
Follows the current ACSM guidelines for health appraisal, risk assessment, safety of exercise, exercise testing, and exercise prescription. Prerequisites: None.

PED212CR
Instructional Competency Laboratory:
Cardiorespiratory Exercises and Activities
2 Credit.  3 Period.  
Fundamental methods of instructing and leading fitness activities including cardiorespiratory exercises and activities. Core competencies identified by professional certification agencies. Prerequisites: None.

PED212FL
Instructional Competency Laboratory:
Flexibility and Mind-Body Exercises
2 Credit.  3 Period.  
Fundamental methods of instructing and leading fitness activities including flexibility activities. Core competencies identified by professional certification agencies. Prerequisites: None.

PED214
Fitness for Living
1 Credit.  1 Period.  
Lifetime health and skill-related components of fitness to achieve total wellness. Topics include health and skill-related components of fitness; guidelines for health and fitness assessment; exercise safety and precautions; and exercise adherence and program planning. Prerequisites: None.

PED215
Fitness for Life
3 Credits.  3 Periods.
Lifetime health and skill-related components of fitness to achieve total wellness. Topics include health and skill-related components of fitness, guidelines for health and fitness assessment, exercise safety and precautions, nutrition, weight control, cardiovascular risk reduction, psychology of fitness and wellness, consumerism, and overall self-management of personal health and lifestyle habits to achieve the highest potential for well-being. Prerequisites: None.

PED275
Methods of Enhancing Physical Performance
3 Credit.  3 Period.
Theoretical and practical applications of performance enhancement methodologies and practices. Basic sport mechanics and exercise physiology. Training clients for speed, power, agility, balance, and endurance activities to enhance athletic performance. Application of training principles to specific sports and design of training programs. Prerequisites: PED125 or PED130 or permission of instructor.

PED285
Exercise Program Design and Instruction
3 Credits.   3 Periods.
Business aspects of the fitness profession such as program administration, quality assurance, and effective communication skills for the professional personal trainer and/or strength and conditioning coach. Implementation of behavioral strategies, progression of program planning, and development of programs for populations with special physical/medical needs. Designing exercise programs in an internship setting. Prerequisites: PED145 or permission of instructor.

PHS110
Fundamentals of Physical Science
LEC 4 Credits.  3 Periods.
LAB 0 Credits.  3 Periods.
Survey of the principles of physics and chemistry. Prerequisites: Grade of “C” or better in MAT090, or MAT091, or MAT092, or MAT093, or equivalent, or satisfactory score on Math placement exam.

GPH212
Introduction to Meteorology I
3 Credits.  3 Periods.
Atmospheric processes and elements. General and local circulation, heat exchange and atmospheric moisture. Prerequisites: None.

GPH214
Introduction to Meteorology Laboratory I
1 Credit.  3 Periods.
Basic meteorological and climatological measurements. Prerequisites: None. Corequisites: GPH212

PHY101
Introduction to Physics
LEC 4 Credits.  3 Periods.
LAB 0 Credits.  3 Periods.
A survey of physics emphasizing applications of physics to modern life. Prerequisites: Grade of “C” or better in MAT090, or MAT091, or MAT092, or MAT093, or equivalent, or satisfactory score on Math Placement exam. Course Note: Students may receive credit for only one of the following: PHY101 or PHY101AA.

PHY105
Basic Physics
LEC 4 Credits.  3 Periods.
LAB 0 Credits.  3 Periods.
Survey of Newtonian mechanics to help students acquire a problem solving ability in physics generally. Primarily for students with either no physics background or a limited physics background who intend to take PHY115 and PHY116. Prerequisites: MAT152 and MAT182, or MAT187 or permission of instructor.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Periods</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>PHY111</td>
<td>General Physics I</td>
<td>4</td>
<td>3</td>
<td>Includes motion, energy, and properties of matter. Prerequisites: MAT182, or MAT187, or one year high school Trigonometry with a grade of C or better, or permission of Department or Division. Course Note: PHY111 is recommended for preprofessional and suggested for certain other majors. Students may receive credit for only one of the following: PHY111 or PHY111AA.</td>
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<tr>
<td>PHY112</td>
<td>General Physics II</td>
<td>4</td>
<td>3</td>
<td>Includes electricity, electromagnetism, and modern physics. Prerequisites: PHY105 or PHY111.</td>
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<tr>
<td>PHY115</td>
<td>University Physics I</td>
<td>5</td>
<td>4</td>
<td>General physics course using calculus to develop the principles of mechanics and thermodynamics. Recommended for majors in the sciences and mathematics. Required for Engineering majors. Prerequisites: MAT220 or MAT221 or permission of Department or Division. Corequisites: MAT230 or MAT231. One year High School physics or PHY111 and PHY112 is strongly recommended.</td>
</tr>
<tr>
<td>PHY116</td>
<td>University Physics II</td>
<td>5</td>
<td>4</td>
<td>Principles of electricity, magnetism, waves, and optics. Required for Engineering majors. Prerequisites: PHY115 and (MAT230 or MAT231). Corequisites: MAT241.</td>
</tr>
<tr>
<td>PHY121</td>
<td>University Physics I: Mechanics</td>
<td>4</td>
<td>3</td>
<td>Kinematics, Newton’s laws, work, energy, momentum, conservation laws, dynamics of particles, solids, fluids, mechanical waves, and sound. Prerequisites: MAT220, or MAT221, or permission of Department or Division. One year of High School physics or PHY111 and PHY112 suggested but not required.</td>
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<tr>
<td>PHY131</td>
<td>University Physics II: Electricity and Magnetism</td>
<td>4</td>
<td>3</td>
<td>Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Prerequisites: MAT230, or MAT231, or permission of Department or Division.</td>
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<tr>
<td>PHY252</td>
<td>University Physics III: Thermodynamics, Optics, and Wave Phenomena</td>
<td>4</td>
<td>3</td>
<td>Heat, entropy, and laws of thermodynamics; wave propagation; geometrical and physical optics; introduction to special relativity. Prerequisites: PHY131.</td>
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<tr>
<td>POS210</td>
<td>American National Government</td>
<td>3</td>
<td>3</td>
<td>Study of the historical backgrounds, governing principles, and institutions, of the national government of the United States. Prerequisites: None.</td>
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<tr>
<td>POS225</td>
<td>Issues in World Politics</td>
<td>3</td>
<td>3</td>
<td>Contemporary issues and factors in international relations. Stress conditions in civil order, trade, and international institutions. May be repeated for a total of six (6) credit hours. Prerequisites: None.</td>
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<tr>
<td>POS120</td>
<td>State and Local Government</td>
<td>3</td>
<td>3</td>
<td>Survey of state and local government in the United States. Special attention on Arizona State government. Prerequisites: None.</td>
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<tr>
<td>POS220</td>
<td>U.S. and Arizona Constitution</td>
<td>3</td>
<td>3</td>
<td>Examination of the United States Constitution and the constitution and government of the state of Arizona. Prerequisites: None.</td>
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<td>Course Code</td>
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<td>PPT104</td>
<td>Properties of Materials</td>
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<td></td>
<td>Basic properties of solids, liquids and gases.</td>
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<td>Basic properties and classifications of metals.</td>
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<td>Hazards of mixing different materials.</td>
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<td></td>
<td>Causes, effects and prevention of corrosion.</td>
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<td>Correct storage and handling of materials.</td>
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<td></td>
<td>Prerequisites: None.</td>
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<tr>
<td>PPT105</td>
<td>Air Compressor Principles</td>
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<td></td>
<td>Air compressor terminology.</td>
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<td></td>
<td>Principles of gas behavior and inter-cooling.</td>
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<td></td>
<td>Internal and external factors affecting compressor</td>
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<td></td>
<td>operation.</td>
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<td></td>
<td>Operating principles, components, preventive and</td>
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<td></td>
<td>corrective maintenance procedures.</td>
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<td>Compressor troubleshooting procedures. Prerequisites:</td>
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<td></td>
<td>None.</td>
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<td>PPT106</td>
<td>Diesel Engine Systems</td>
<td>1</td>
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<td></td>
<td>Diesel operating principles and diesel engine</td>
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<td></td>
<td>systems.</td>
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<td></td>
<td>Practical knowledge of safety precautions,</td>
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<td>inspection and maintenance of diesel engines.</td>
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<td></td>
<td>Prerequisites: None.</td>
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<td>PPT107</td>
<td>Lubrication</td>
<td>1</td>
<td>1</td>
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<td></td>
<td>Principles, properties, and safe handling</td>
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<td>requirements of lubricants.</td>
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<td></td>
<td>Lubrication of bearings, lubrication systems,</td>
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<td></td>
<td>and system components.</td>
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<td></td>
<td>Oil settling systems.</td>
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<td>Construction, operation, and maintenance of oil</td>
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<td></td>
<td>purifiers.</td>
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<td></td>
<td>Prerequisites: None.</td>
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<td>PPT108</td>
<td>Turbines</td>
<td>1</td>
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<td></td>
<td>Operations, steam properties, energy transfer,</td>
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<td>parts, and types of turbines.</td>
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<td>Components and function.</td>
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<td>Turbine maintenance for oil and hydraulic systems.</td>
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<td>Inspection of casings, nozzles and rotors.</td>
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<td>Turbine alignment and the tightening of joints</td>
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<td></td>
<td>using appropriate tools and equipment. Prerequisites:None.</td>
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<tr>
<td>PPT109</td>
<td>Pipefitting Auxiliaries I</td>
<td>2</td>
<td>2</td>
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<tr>
<td></td>
<td>Principles of operation, maintenance procedures</td>
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<td></td>
<td>and inspection procedures.</td>
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<td></td>
<td>Basic piping systems, fittings, joints, and</td>
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<td></td>
<td>assorted piping materials.</td>
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<td></td>
<td>Prerequisites: None.</td>
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<tr>
<td>PPT110</td>
<td>Valve Maintenance I</td>
<td>2</td>
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<td></td>
<td>Safety, terminology, components, and</td>
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<td>operating principles of valves. Inspection and</td>
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<td>rework of valves. Components of the valve</td>
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<td>packing chamber. Packing and safety procedures.</td>
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<td>Stem packing installation. Quality assurance test</td>
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<td>methods for specific valves. Prerequisites: None.</td>
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<td>PPT112</td>
<td>Principles of Machining</td>
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<td>Safety practices, machining methods, and</td>
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<td></td>
<td>principles of material removal. Types of cutting</td>
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<td></td>
<td>tools, lathe, milling, drill, and bandsaw</td>
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<td></td>
<td>components. Principles of operation of specific</td>
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<td>machines found in the machine shop including</td>
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<td>turning, milling, drilling and cutting machines.</td>
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<tr>
<td></td>
<td>Prerequisites: None.</td>
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<tr>
<td>PPT113</td>
<td>Pumps I</td>
<td>2</td>
<td>2</td>
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<td></td>
<td>Types of pumps, applications and principles of</td>
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<td>operation and safety. Pump components</td>
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<td></td>
<td>identification. Inspection, use and maintenance</td>
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<td>of packing and mechanical seals. Prerequisites:</td>
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<td></td>
<td>None.</td>
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<td>PPT114</td>
<td>Drive and Gear Components</td>
<td>1</td>
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<td>Terminology, identification and inspection of the</td>
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<td>component parts of a drive and gear system.</td>
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<td>Operation, maintenance and inspection of</td>
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<td>couplings, clutches, brakes, belt drives, chain</td>
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<td>drives, shafts and gears.</td>
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<td>Operation and configurations of variable speed</td>
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<td></td>
<td>drives. Prerequisites: None.</td>
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<td>PPT115</td>
<td>Hydraulics and Pneumatics</td>
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<td></td>
<td>Hydraulic and pneumatic safety, physical concepts,</td>
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<td></td>
<td>and fluid laws. Hydraulic and pneumatic system</td>
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<td></td>
<td>components and operation. Troubleshooting</td>
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<td></td>
<td>procedures of hydraulic and pneumatic systems.</td>
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<td></td>
<td>Prerequisites: None.</td>
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<td>PPT116</td>
<td>Introduction to Welding and Metal Fabrication</td>
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<td></td>
<td>Principles of metallurgy and material</td>
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<td>identification. Technical theory and basic skill</td>
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<td>training in oxyacetylene and shielded metal arc</td>
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<td>welding. Welding equipment safety and weld joints</td>
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<td></td>
<td>methods. Prerequisites: None.</td>
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<td>PPT117</td>
<td>Forklift Operations</td>
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<td></td>
<td>Safe and proper operation of forklift. Parts and</td>
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<td></td>
<td>function of forklift, principles of operation,</td>
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<td>and safety precautions. Inspection procedures,</td>
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<td>proper care, and industry standards. On-hands</td>
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<td></td>
<td>operation of a forklift. Prerequisites: None.</td>
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<td>PPT118</td>
<td>Conduct of Maintenance</td>
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<td></td>
<td>Safety and management expectations. Defense in</td>
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<td>Depth strategy and Conduct of Verifications.</td>
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<td>Maintenance procedures. Work control process.</td>
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<td>Performance of work standards and documentation</td>
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<td>including pre-job preparation, pre-job notification,</td>
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<td>job review, job verification and job close out</td>
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<td>specific to nuclear power plant operations.</td>
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<td>Prerequisites: None.</td>
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<td>PPT119</td>
<td>Instrument Air Compressor Maintenance</td>
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<td></td>
<td>Purpose, function, and identification of system</td>
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<td>drawings. Identification of major components.</td>
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<td>Instrument air compressor components and function.</td>
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<td>Air flow operations. Free air unloader components</td>
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<td>and function. Fluids and flow paths. Compressor</td>
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<td></td>
<td>cooling water and lubricating oil. Inspection and</td>
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<td>repair of parts. Troubleshooting. Prerequisites:</td>
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<td></td>
<td>None.</td>
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<td>PPT200</td>
<td>Industry Events</td>
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<td></td>
<td>Information distribution; methods and avenues of</td>
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<td>communication. Material and design problems in</td>
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<td>the nuclear power plant. Procedural deficiencies</td>
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<td>of motor and equipment operation. Operation of</td>
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<td>sensitive equipment. Potential plant vulnerabilities.</td>
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<td>Personnel errors including mis-positioning,</td>
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<td>flooding, testing and procedural violations.</td>
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<td>Prerequisites: None.</td>
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<td>PPT202</td>
<td>Plant Systems and Components I</td>
<td>2</td>
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<td>Plant mission, numbering and drawing systems.</td>
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<td>Components and function of reactor coolant,</td>
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<td>volume control, safety injection, and nuclear</td>
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<td>sampling systems. Function and operation of main</td>
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<td>stream and turbine systems. Main and auxiliary</td>
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<td>feedwater systems. Operation and function of steam</td>
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<td>and heater drain systems. Prerequisites: None.</td>
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PPT203
Plant Systems and Components II
2 Credits. 2 Periods.

PPT204
Measuring and Test Equipment
1 Credits. 1 Periods.
Administrative controls for precision measurement. Use of precision measuring equipment. Emphasis on proper use, accurate reading, and calculations using precision measuring devices. Prerequisites: None.

PPT205
Rigging
2 Credits. 2 Periods.
Safe and proper operation of lifting equipment. Weight calculations. Identification and proper location of rigging equipment. Hand signals and industry standards. Safe rigging practices. Inspection and maintenance procedures. Operation of pendant cranes. Prerequisites: None.

PPT206
Bearings
1 Credits. 1 Periods.
Application, inspection and maintenance of plant bearings. Design and operation of sliding and anti-friction bearings. Function, design and applications of bearing seals. Reasons for bearing failure and related preventative maintenance procedures. Prerequisites: None.

PPT207
Heat Exchangers
1 Credits. 1 Periods.

PPT208
Thermal Insulation
0.50 Credits. 0.50 Periods.
Principles of heat transfer and insulation. Types and temperature ranges for insulation. Safe and proper handling of insulation materials. Practical experience in removing and installing insulation. Prerequisites: None.

PPT209
Pipefitting Auxiliaries II
2 Credits. 2 Periods.

PPT210
Valve Maintenance II
3 Credits. 3 Periods.

PPT211
Couplings
0.50 Credits. 0.50 Periods.
Types, functions, and specific applications of couplings. Coupling removal and inspection procedures. Coupling rework and installation. Prerequisites: None.

PPT212
Control Valves and Actuators
1 Credits. 1 Periods.

PPT213
Pumps II
3 Credits. 3 Periods.
Rotary, reciprocating and centrifugal pump operation. Positive displacement and metering pump operation. Diaphragm pulsafeeder operation. Disassembly, inspection and reassembly of radial and axially split centrifugal pumps. Troubleshooting and lab safety. Prerequisites: None.

PPT214
Machine Alignment
3 Credits. 5 Periods.
Calculations and practical lab exercises using alignment principles. Determination of indicator sag and thermal growth. Obtaining readings for alignment or misalignment. Rim-face method of alignment stressed and practiced. Prerequisites: None.

PPT215
Relief and Safety Valves
1 Credits. 1 Periods.
Concepts of pressure and pressure measurement. Components and operation of rupture discs, relief valves, and safety valves. Maintenance procedures. Prerequisites: None.

PPT217
Refueling Overview
1 Credits. 1 Periods.
Destack and restack operations of the Reactor Vessel. Purpose and location of refueling equipment. Refueling operation including spent fuel, refueling machines and fuel transfer equipment. Safety. New fuel receipt, transfer and moving of spent fuel. Prerequisites: None.

PPT218
Lathe Operations
2 Credits. 4 Periods.
Safe and proper operation of the lathe. Component and accessories and their functions. Cutting tools and methods. Processes of machining including mounting, aligning, knurling, grooving, turning, thread cutting, drilling, reaming, boring, and tapping. Machining techniques using a chuck. Prerequisites: None.

PPT219
Milling Machine Operations
2 Credits. 2 Periods.

PSYCHOLOGY
PSY101
Introduction to Psychology
3 Credits. 3 Periods.
To acquaint the student with basic principles, methods and fields of psychology such as learning, memory, emotion, perception, physiological, developmental, intelligence, social and abnormal. Prerequisites: None.

PSY123
Psychology of Parenting
3 Credits. 3 Periods.
The demonstration and application of psychological principles to the development and guidance of children and adolescents. Prerequisites: None.
PSY215  
Introduction to Sport Psychology  
3 Credits. 3 Periods.  
Application of the physiological, behavioral, social, cognitive, and humanistic perspectives in psychology to sport. Includes topics such as optimal performance, correlation, motivation, co-action effect, self-actualization, psycho-behavioral techniques, self-efficacy, and the general health benefits of sport participation. Prerequisites: PSY101 with a grade of “C” or better or permission of instructor.

PSY218  
Health Psychology  
3 Credits. 3 Periods.  
Behavioral and mental foundations of health, wellness, illness, and disease, and psychological dimensions of medical intervention. Prerequisites: PSY101 with a grade of “C” or better, or permission of instructor.

PSY225  
Psychology and Religion  
3 Credits. 3 Periods.  
Provides an introduction to the history, varieties and theories of the psychology of religion from an empirical, research-based perspective. Specific areas of study include the role of gender, age, socioeconomic status, and personality on religious experience, the effects of religion and prayer on mental and physical health, the development of religious thought and behavior over the lifespan, and the social psychology of new religious movements. In addition, the role of cultural differences on religious attitudes both within the USA and around the world is also addressed. Prerequisites: PSY101 or Permission of Instructor.

PSY230  
Introduction to Statistics  
3 Credits. 3 Periods.  
An introduction to the basic concepts in descriptive and inferential statistics, with emphasis upon application to psychology. Consideration given to the methods of data collection, sampling techniques, graphing of data, and the statistical evaluation of data collected through experimentation. Required of psychology majors. Prerequisites: PSY101 with a grade of “C” or better and MAT092 or equivalent, or permission of instructor.

PSY235  
Psychology of Gender  
3 Credits. 3 Periods.  
To assess historical and psychological perspectives on women and men and to evaluate contemporary viewpoints regarding the psychology of women and men. Prerequisites: PSY101 with a grade of “C” or better or permission of instructor.

PSY240  
Developmental Psychology  
3 Credits. 3 Periods.  
Human development from conception through adulthood. Includes: physical, cognitive, emotional and social capacities that develop at various ages. Recommended for students majoring in nursing, education, pre-med, and psychology. Prerequisites: PSY101 with a grade of “C” or better or permission of the instructor.

PSY250  
Social Psychology  
3 Credits. 3 Periods.  
The scientific study of how people’s thoughts, feelings, and behaviors are influenced by other people and situations. Includes how we think about ourselves and others, persuasion and influence, sexual and romantic attraction, friendship, and helping others, aggression and prejudice. Prerequisites: PSY101 with a grade of “C” or better or permission of the instructor.

PSY260  
Personality Development  
3 Credits. 3 Periods.  
Introduction to theories of personality with emphasis upon application of specific theories towards the understanding of individuals. Prerequisites: PSY101 with a grade of “C” or better or permission of instructor.

PSY266  
Abnormal Psychology  
3 Credits. 3 Periods.  
Distinguishes between normal behavior and psychological disorders. Subjects may include stress disorders, problems with anxiety and depression, unusual and abnormal sexual behavior, schizophrenia and addictive behaviors. Causes and treatments of psychological problems and disorders are discussed. Prerequisites: PSY101 with a grade of “C” or better, or permission of instructor.

PSY290AB  
Research Methods  
4 Credits. 3 Periods.  
Planning, execution, analysis, and written reporting of psychological research. Surveys the literature, procedures, and instruments in representative areas of psychological research. Prerequisites: ENG101 or ENG107 or equivalent. Prerequisites or Corequisites: PSY230 (or equivalent) with a grade of “C” or better, or permission of instructor.

PAD101  
Survey of Public Administration  
3 Credits. 3 Periods.  
The history, present and future of public administration. Covers roles of public administrators, organizational relationships, intergovernmental relations and human resources as well as ethical issues, financial management, communication skills, and productivity issues. Prerequisites: None.

PAD201  
Techniques of Municipal Administration  
3 Credits. 3 Periods.  
City administration management. Covers techniques, practices and responsibilities of city staff including forces of change, administrative techniques and leadership. Prerequisites: PAD101 or PAD103 or permission of instructor.

RPT103  
Radiation Fundamentals  
3 Credits. 3 Periods.  
Overview of physics and chemistry of radiation and radioactive materials. Basic understanding of radiation and its uses and interactions. Prerequisites: MAT092, or satisfactory score on placement exam, or permission of instructor.

RPT113  
Radiation Monitoring  
3 Credits. 3 Periods.  
Monitoring radiation with a focus on theory and operation of radiation monitors and the evaluation of radioactive hazards. Prerequisites: RPT103 or permission of instructor.

RPT223  
Radiation Dosimetry  
3 Credits. 3 Periods.  
Assessing internal and external exposure of personnel to ionizing radiation. Prerequisites or Corequisites: RPT113 or permission of instructor.
RPT233  
Radioactive Materials Handling  
3 Credits. 3 Periods.  
Prepares Radiation Protection Technicians to provide safe, controlled movement, use, storage, transportation and disposal of radioactive materials. Prerequisites: RPT223 or permission of instructor.

RPT243  
Radiological Safety and Response  
3 Credits. 3 Periods.  
Focuses on understanding and emergency responsive skills for radiation protection and disaster preparedness and response in radiological environments. Prerequisites: RPT233 or permission of instructor.

RPT253  
Radiation Protection  
3 Credits. 3 Periods.  
Provides an overview of the principles of radiation protection and the practical application of these principles in radiological environments. Prerequisites: RPT233 or permission of instructor.

RPT290  
Radiation Protection Internship  
5 Credits. 25 Periods.  
Provides an opportunity for hands-on application of radiation protection principles in radiological environments. Prerequisites: RPT233 or permission of instructor.

RDG008  
Phonics  
3 Credits. 3 Periods.  
Teaches the alphabet; recognition of spelling patterns as represented by the written symbols of the English alphabet; and diacritical and type markings. Prerequisites: Reading placement score (ASSET) or permission of instructor.

RDG020  
Reading English as a Second Language I  
3 Credits. 3 Periods.  
Designed for students who are learning English as a second language. Provides students with skills needed to become proficient readers in English. Includes development of reading comprehension skills. Prerequisites: Appropriate ESL placement test score.

RDG030  
Reading English as a Second Language II  
3 Credits. 3 Periods.  
Provides continued instruction for reading English as a second language. Includes development of vocabulary and reading comprehension skills. Prerequisites: Appropriate ESL placement test score or grade of "C" or better in RDG010 or permission of instructor.

RDG040  
Reading English as a Second Language IV  
3 Credits. 3 Periods.  
Developed for students of English as a second language. Includes development of advanced vocabulary, comprehension skills, and cultural awareness. Prerequisites: Appropriate ESL placement test score or grade of "C" or better in RDG030 or permission of instructor.

REL101  
Introduction to Religion  
3 Credits. 3 Periods.  
Focuses on the development of religious ideas and beliefs, and the role of religion in human society. Prerequisites: None.

REL202  
Classics of Asian Religions  
3 Credits. 3 Periods.  
Explores the nature and content of Asian religious traditions, including Hindu, Buddhist, Confucian, and Taoist traditions. Prerequisites: None.

REL210  
Introduction to Judaism  
3 Credits. 3 Periods.  
Introduces the history, scriptures, practices, and impact of Judaism. Prerequisites: None.

REL270  
Introduction to Christianity  
3 Credits. 3 Periods.  
Introduces the nature and content of the Christian tradition and its major historical figures and trends. Prerequisites: None.
**SIGN LANGUAGE**

**SLG101**  
American Sign Language I  
4 Credits. 4 Periods.  

**SLG102**  
American Sign Language II  
4 Credits. 4 Periods.  
Continued development of knowledge and language skills for communicating with deaf people who sign. Includes numbers, fingerspelling, and culture. Emphasis on enhancement of receptive sign skills and continued development of expressive sign skills. Application of rudimentary, syntactical, and grammatical structure stressed with continued development of sign vocabulary. Prerequisites: SLG101, with a grade of “C” or better, or permission of department/division.

**SLG201**  
American Sign Language III  
4 Credits. 4 Periods.  
Linguistics of American Sign Language (A.S.L.) including non-manual behaviors and signing English idioms with conceptual accuracy. Emphasis on practical application of A.S.L. skills, expanded vocabulary, and cross-cultural communication. Prerequisites: SLG102, with a grade of “C” or better, or permission of department/division. Suggested but not required: ENG101 or ENG107 and, (CRE101 or CRE111 or exemption by score on the reading placement test (ASSET)).

**SLG202**  
American Sign Language IV  
4 Credits. 4 Periods.  
Advanced American Sign Language skills including continued vocabulary. Emphasis on conversational techniques in a cross-cultural framework. Continued work on conceptual accurate signing of English idioms and words with multiple meanings. Prerequisites: SLG103 and SLG201 with a grade of “C” or better, or permission of department/division. Suggested but not required: ENG101, SLG200, and CRE101 or CRE111 or exemption by score on the reading placement test (ASSET).

**SOCIETY AND BUSINESS**

**SBU200**  
Society and Business  
3 Credits. 3 Periods.  
The study and scientific inquiry of issues and demands placed on business enterprise by owners, customers, government, employees and society. Included are social, ethical and public issues and analysis of the social impact of business responses. Prerequisites: None.

**SOCIOLOGY**

**SOC101**  
Introduction to Sociology  
3 Credits. 3 Periods.  
Fundamental concepts of social organization, culture, socialization, social institutions and social change. Prerequisites: None.

**SOC140**  
Racial & Ethnic Minorities  
3 Credits. 3 Periods.  
Contemporary/Historical racial and ethnic intergroup relations emphasizing cultural origins, developments, and problems of minority groups in the United States. Prerequisites: None.

**SOC157**  
Sociology of Marriage & Family  
3 Credits. 3 Periods.  
The study of courtship, marriage, and family patterns, their historical development, their adaptation to a changing culture, and their impact on individuals. Prerequisites: None.

**SOC212**  
Gender and Society  
3 Credits. 3 Periods.  
A study of the way culture shapes and defines the positions and roles of both men and women in society. Major emphasis on social conditions which may lead to a broadening of gender roles and a reduction of gender role stereotypes and the implications of these changes. Open to both men and women. Prerequisites: None.

**SOC225**  
Social Problems  
3 Credits. 3 Periods.  
A sociological exploration of selected social problems. Emphasis on current concerns. Prerequisites: SOC101.

**SMALL BUSINESS MANAGEMENT**

**SBS200**  
Small Business Operations  
2 Credits. 2 Periods.  
In-depth analysis of and individual plan development for the “day-to-day” problems encountered in the operation of a small business. Includes the development of an individual business operations plan including finance, purchasing, production scheduling, maintenance, shipping/receiving, personnel management and insurance/risk management requirements. Investigation of daily problems related to inventory control and business expansion. Prerequisites: None.

**SBS202**  
Small Business Bookkeeping and Tax Preparation  
1 Credit. 1 Period.  
Introduces accounting and record-keeping with emphasis on practical use of financial data for the successful management of a small business. Develops an understanding of the accounting cycle and preparation of financial statements. Includes section on tax consequences and preparation for small business owners. Designed for the non-financially oriented owner/manager of a small business. Prerequisites: None.

**SBS203**  
Financing and Cash Management for a Small Business  
1 Credit. 1 Period.  
Planning for and meeting the financial needs of the small business including cash flow planning, identification of financial needs and sources, equity and debt financing, and preparation of loan packages. Participants complete a financial plan for their individual company, with emphasis on cost controls, sales revenue projection, expense allocation, and inventory cost control. Day-to-day operational budgeting also included. Prerequisites: None.

**SBS204**  
Small Business Marketing and Advertising  
2 Credits. 2 Periods.  
Introduction to marketing and advertising strategies and methods including business image, target market analysis, and customer buying behavior profile. Analysis and selection of advertising/business promotion methods and timing. Methods of deciding products and market segment focus included. Design of an individual marketing and advertising/promotion plan. Prerequisites: None.
SBS214
Small Business Customer Relations
1 Credit. 1 Period.
Developing and improving customer relations for the small business. Planning and delivering quality customer service. Includes topics on attitudes of employees, customer perceptions and motivations, handling customer dissatisfaction, and developing customer, supplier, vendor, and distributor loyalty. Prerequisites: None.

SBS220
Internet Marketing for Small Business
2 Credits. 2 Periods.
Focus on “e-Commerce”-doing business on the Internet and planning a web site. Topics include: how the Internet can help growth and success of business; examples of successful marketing on the Internet; availability of Internet services; necessary hardware and software for marketing on the Internet; determining products/services appropriate for Internet marketing; budget constraints and on-going operations of the Internet site. Prerequisites: None.

SOCIAL WORK

SWU102
Introduction to Social Work
3 Credits. 3 Periods.
An introduction to the fields within the area of social work through a study of the disciplines of social case work, social group work, and community organization. Opportunities to experience the various techniques of practice within each discipline. Required for student enrolled in the associate degree program of the social work curriculum. Prerequisites: Eligibility for ENG101 and CRE101.

SWU291
Social Service Delivery Systems
3 Credits. 3 Periods.
Purpose, structures, and delivery systems of human service agencies. Includes 40 hours of volunteer experience in local human service agencies. Prerequisites or Corequisites: SWU102, or SWU271, or permission of the department.

SWU292
Effective Helping in a Diverse World
3 Credits. 3 Periods.
Introduction to professional helper communication skills with respect to cross-cultural practice and diversity issues, in a social work setting. Prerequisites: None. (SOC101 and SWU102) or SWU271 suggested but not required.

SPANISH

SPA101
Elementary Spanish I
4 Credits. 4 Periods.
Basic grammar, pronunciation and vocabulary of the Spanish language. Includes the study of the Spanish-speaking cultures. Practice of listening, speaking, reading, and writing skills. Prerequisites: None.

SPA101AA
Elementary Spanish I
4 Credits. 5 Periods.
Basic grammar, pronunciation and vocabulary of the Spanish language. Includes the study of the Spanish-speaking cultures. Practice of listening, speaking, reading, and writing skills. Prerequisites: None.

SPA102
Elementary Spanish II
4 Credits. 4 Periods.
Continued study of grammar and vocabulary of the Spanish language and study of the Spanish-speaking cultures. Emphasis on speaking, reading, and writing skills. Prerequisites: SPA101 or departmental approval.

SPA102AA
Elementary Spanish II
4 Credits. 5 Periods.
Continued study of grammar and vocabulary of the Spanish language and study of the Spanish-speaking cultures. Emphasis on speaking, reading, and writing skills. Prerequisites: SPA101 or departmental approval.

SPA115
Beginning Spanish Conversation I
3 Credits. 3 Periods.
Basic pronunciation, vocabulary, sentence structures, and cultural awareness necessary to develop speaking and listening skills in Spanish. Prerequisites: None.

SPA115AA
Beginning Spanish Conversation I
3 Credits. 4 Periods.
Conversational Spanish. Basic sentence structure, pronunciation and vocabulary necessary to develop speaking ability in Spanish. Designed for students seeking speaking and listening abilities with little emphasis on grammar. Prerequisites: None.

SPA116
Beginning Spanish Conversation II
3 Credits. 3 Periods.
Continued study of basic pronunciation, vocabulary, sentence structures, and a cultural awareness necessary to develop speaking and listening skills in Spanish. Prerequisites: SPA115 or permission of department or division.

SPA116AA
Beginning Spanish Conversation II
3 Credits. 3 Periods.
Continued study of basic pronunciation, vocabulary, sentence structures, and a cultural awareness necessary to develop speaking and listening skills in Spanish. Prerequisites: SPA115 or permission of department or division.

SPA117
Health Care Spanish I
3 Credits. 3 Periods.
Basic conversational Spanish for health care workers or students. Emphasis on basic sentence structure, pronunciation and vocabulary used in health care settings. Prerequisites: None.

SPA201
Intermediate Spanish I
4 Credits. 4 Periods.
Continued study of essential Spanish grammar and Spanish-speaking cultures. Continued practice and development of reading, writing, and speaking skills in Spanish. Emphasis on fluency and accuracy in spoken Spanish. Prerequisites: SPA102, or SPA111, or permission of department.

SPA202
Intermediate Spanish II
4 Credits. 4 Periods.
Review of grammar, continued development of Spanish language skills with continued study of the Spanish-speaking cultures. Prerequisites: SPA201 or departmental approval.
SLP104
Speech, Language, and Hearing Development
3 Credits. 3 Periods.
Focuses on the processes involved in the normal development of human communication. Emphasis on normative processes involved in speech, language, and hearing development. Examines normal processes of bilingual speech and language development. Prerequisites: None.

SLP205
Introduction to Communication Disorders
3 Credits. 3 Periods.
Provides an overview of normative aspects of human communication including language, hearing, and speech. Focuses on causes, characteristics, and implications of developmental and acquired communication disorders across the lifespan. Prerequisites: SLP104 or ENG213 or permission of instructor.

SLP210
Speech and Hearing Anatomy and Physiology
3 Credits. 3 Periods.
Studies the anatomical systems that underlie human speech including the respiratory system and related nervous system processes. Examines the physical characteristics of sound and the structure and function of the human auditory system. Prerequisites: None.

SLP212
Language Disorders and Rehabilitation
3 Credits. 3 Periods.
Explores nature, causes, and treatment of language disorders across the lifespan, including treatments specific to bilingual populations. Prerequisite: None.

SLP214
Articulation and Phonological Disorders and Rehabilitation
3 Credits. 3 Periods.
Provides an overview of English phonetics. Focuses on speech sound production from a linguistic, physiologic, acoustic, and clinical perspective. Transcription of normal and disordered speech at the entry-level using the International Phonetic Alphabet (IPA). Reviews characteristics and treatment procedures for a variety of speech disorders. Prerequisites: SLP210.

SLP215
Speech and Hearing Disorders and Rehabilitation
3 Credits. 3 Periods.
Focuses on speech sound production from a linguistic, physiologic, acoustic and clinical perspective. Reviews characteristics and treatment procedures for a variety of speech and hearing disorders. Prerequisites: SLP210.

SLP217
Clinical Ethics and Documentation
3 Credits. 3 Periods.
Focuses on issues associated with clients'/patients' rights, professional and ethical behaviors, as specified by American Speech-Language and Hearing Association (ASHA) and other resources. Includes an overview of the educational service system and the health care industry. Reviews documentation required in planning, implementing, and evaluating communicative behaviors. Prerequisites or Corequisites: SLP212, or SLP214, or permission of Instructor.

SLP218
Behavior Management
2 Credits. 2 Periods.
Studies a variety of behavior management techniques including classical conditioning, operant conditioning modeling, motor learning and cognitive learning. Examines how to apply these techniques in working with speech-language disordered clients. Prerequisites or Corequisites: SLP212 or SLP214 or permission of Instructor.

SLP219
Behavior Management Practicum
2 Credits. 2 Periods.
Practical experience in conducting speech-language therapy. Provides opportunities to create lesson plans, implement therapy, record client performance, and maintain appropriate documentation for a variety of speech-language disorders in a variety of therapeutic environments. A minimum of 100 hours in a therapeutic environment required. Prerequisites: SLP212, and SLP214.

SLP235AB
Speech-Language Pathology Practicum
2 Credits. 2 Periods.
Practical experience in conducting speech-language therapy. Provides opportunities to create lesson plans, implement therapy, record client performance, and maintain appropriate documentation for a variety of speech-language disorders in a variety of therapeutic environments. A minimum of 100 hours in a therapeutic environment required. Prerequisites: SLP212, and SLP214.

SLP235AC
Speech-Language Pathology Practicum
2 Credits. 2 Periods.
Practical experience in conducting speech-language therapy. Provides opportunities to create lesson plans, implement therapy, record client performance, and maintain appropriate documentation for a variety of speech-language disorders in a variety of therapeutic environments. A minimum of 100 hours in a therapeutic environment required. Prerequisites: SLP212, and SLP214.

SLP240
Assistive Technology and Augmentative Communication
3 Credits. 3 Periods.
Provides overview about the type of client who may need AT/AAC as well as the professional team involved in that decision. Reviews use of computer hardware and software that has been adapted for disabled individuals as well as low-tech and high-tech assistive technology and augmentative/alternative communication systems. Prerequisites: SLP205, or permission of Instructor.

SLP242
Low Incidence Disabilities
3 Credits. 3 Periods.
Provides overview of disabilities with a focus on treatment techniques for low incidence disabilities, including blindness, low vision, deafness, hearing loss, mental retardation, deaf-blindness, significant developmental delay, complex health issues, serious physical impairment, multiple disability, traumatic brain injury, genetic syndromes, and autism. Prerequisites: SLP104, or SLP205, or permission of Instructor.
STORYTELLING

STO282AC
Volunteerism for Education: A Service Learning Experience
3 Credits. 3 Periods.
Service-learning field experience within educational systems, citizen advocacy groups, and human service organizations/agency. May be repeated for a total of six (6) STO282 credit hours; may not repeat specific agency assignment for more than three (3) credit hours. Standard grading available according to procedures outlined in catalog. Prerequisites: Permission of instructor.

STO286
Using Storytelling in a Variety of Settings
3 Credits. 3 Periods.
The application of storytelling and storytelling activities in the world of health care, business, parks, museums, hospitals, and education. Prerequisites: None.

STO288
Telling Sacred Stories from Around the World
3 Credits. 3 Periods.
Introduction to sacred stories as a genre. Researching, developing, and crafting traditional and personal sacred stories. Finding appropriate applications and venues for telling. Prerequisites: None.

STO289AA
Using Storytelling in Educational Settings
1 Credit. 1 Periods.
The application of storytelling and storytelling activities in educational settings. Prerequisites: None. Cross-References: EDU283AA

STO289AB
Using Storytelling in Business Settings
1 Credit. 1 Periods.
The application of storytelling and storytelling activities in business settings. Prerequisites: None.

STO289AC
Using Storytelling in Healing Settings
1 Credit. 1 Periods.
The application of storytelling and storytelling activities in healing settings. Prerequisites: None

STO292
The Art of Storytelling
3 Credits. 3 Periods.
Explore the art and origin of storytelling. Provide a variety of storytelling techniques, styles and exercises to enhance the delivery of telling stories. Assist in the integration and application of storytelling to the learning environment in the classroom. Prerequisites: None. Cross-References: EDU292, HUM292.

STO293
The Art of Storytelling II
3 Credits. 3 Periods.
Further exploration of the art of storytelling. Provide opportunities for the expansion of storytelling skills and a deeper appreciation of storytelling and its applications. Prerequisites: EDU292 or HUM292 or STO292.

STO297
Creating and Telling Personal Stories
3 Credits. 3 Periods.
Exploration of the art and craft of finding, developing and telling personal stories. Prerequisites: EDU292, or HUM292, or STO292.

THEATRE

THE111
Introduction to Theatre
3 Credits. 3 Periods.
A survey of theatre, including basic elements and principles of production, styles, and/or historical perspectives of theatre, dramatic literature, and criticism. Prerequisites: None.

THE118
Playwriting
3 Credits. 3 Periods.
Practice and study of theories and techniques of writing for the stage; creating characters, dialogue, and plot for monodramas, scenes, and plays. Prerequisites: None.

THEATRE PERFORMANCE/PRODUCTION

THP112
Acting I
3 Credits. 4 Periods.
Fundamental techniques and terminology of acting through physical and vocal expression, improvisation, and monologue and scene work. Emphasis on characterization. Prerequisites: None.

TOTAL QUALITY MANAGEMENT

CSM101
Quality Customer Service
3 Credits. 3 Periods.
Examines the nature of quality customer service and the attitudes, knowledge, and skills needed to work effectively in a quality customer service environment. Foundation skills for quality customer service are taught, applied and practiced. Prerequisites: None.

CSM202
Principles of Process Improvement
3 Credits. 3 Periods.
Examines the concepts and tools of quality/continuous customer service improvement. Includes mapping processes, flow charts, focus groups, customer satisfaction surveys, statistical measurement, problem-solving tools and methods of presenting findings, evaluating, and implementing changes to improve customer service. Prerequisites: None.

CSM203
Teamwork Dynamics
3 Credits. 3 Periods.
Theory and practice of how team members and team leaders use listening, negotiating and interpersonal skills for the enhancement of team process to improve customer service based on employee evaluations and employee feedback. Included are concepts of team development and team problem-solving techniques. Prerequisites: None.

TQM101
Quality Customer Service
3 Credits. 3 Periods.
Examines the nature of quality customer service and the attitudes, knowledge, and skills needed to work effectively in a quality customer service environment. Foundation skills for quality customer service are taught, applied and practiced. Prerequisites: None. Cross-References: CSM101.
TQM201
Total Quality Concepts
2 Credits. 2 Periods.
Examines the concepts of quality as they relate to service, products and the employee. Focuses on the history, rationale and basic principles of Total Quality. Recognizes the scope and requirements for a Total Quality development effort. Prerequisites: None.

TQM204
Team Roles and Dynamics
3 Credits. 3 Periods.
Focusses on basic concepts and tools associated with quality improvement to help teams function effectively. Participants use theory and practice to work as a team, plan, and conduct good meetings, manage logistics and details, gather useful data, analyze the data, communicate clearly and persuasively ideas and results with confidence and impact, and implement change. Prerequisites: None.

TQM214
Principles of Process Improvement
2 Credits. 2 Periods.
Examines the concepts and tools of quality/continuous improvement. Includes mapping processes, statistical measurement, problem-solving tools and methods of presenting findings, evaluating, and implementing changes. Prerequisites: None. TQM201 is recommended.

TQM230
Teamwork Dynamics
2 Credits. 2 Periods.
Theory and practice of how team members and team leaders use listening, negotiating and interpersonal skills for the enhancement of team process. Included are concepts of team development and team problem-solving techniques. Prerequisites: None. TQM214 is recommended.

WLD201
Welding II
3 Credits. 6 Periods.
Further study of electric arc and oxyacetylene welding with emphasis on GTAW (heliarc) and GMAW (mig) processes to weld both ferrous and nonferrous metal. Prerequisites: WLD101

WLD206
Advanced Welding- Heliarc and Wire Feed
5 Credits. 8 Periods.
Instruction in theory and practice on tungsten inert gas and wire feed welding. Welding procedures on ferrous and nonferrous metals. Set up and operation of all types of machines used in tig and mig welding. Prerequisites: WLD106 or departmental permission.

WLD208
Advanced Arc Welding- Certification
5 Credits. 8 Periods.
Advanced metallic arc welding emphasizing out-of-position welding in preparation for certification. Includes various test methods. Provides training on machine flame cutting and gouging and arc air cutting and gouging. Prerequisites: WLD106 or permission of instructor.

WST200
Essential Feminist Writing
3 Credits. 3 Periods.
Literary tracing of feminism from 18th century to present. Explores major issues related to women in the 20th century. Prerequisites: ENG101 or permission of instructor.

WST209
Women and Films
3 Credits. 3 Periods.
Analysis of images of women in films from both historical and contemporary perspectives. Prerequisites: None.
Estrella Mountain and all Maricopa Community Colleges are governed by the same policies and procedures which include information about nondiscrimination, compliance with regulations, health concerns, admissions, residency guidelines, financial assistance, academic advising, assessment, articulation, registration, tuition and fees, refunds, attendance, grading, records, and scholastic and disciplinary standards.
MARICOPA COUNTY COMMUNITY COLLEGE DISTRICT

The following are a portion of the Administrative Regulations used in managing the day-to-day operations of the Maricopa County Community College District (MCCCD) and are subject to change. Administrative Regulations are amended, adopted or deleted as necessary and are subject to a formal approval process. Administrative Regulations are referenced as “AR” followed by a regulation number, which corresponds with the regulations on the MCCCD website:

http://www.dist.maricopa.edu/gvpolicy/adminregs/adminregs_toc.htm. Some regulations include reference to Arizona Revised Statues from the State of Arizona and are noted as “A.R.S.” followed by a reference number.

General Statement (AR 2.4.1)
The Maricopa Community Colleges are dedicated to providing a healthy, comfortable and educationally productive environment for students, employees and visitors.

Nondiscrimination Policy (AR 2.4.2)
It is the policy of the Maricopa Community Colleges (consisting of Chandler-Gilbert Community College, the District Office, Estrella Mountain Community College, GateWay Community College, Glendale Community College, Maricopa Skill Center, Southwest Skill Center, Mesa Community College, Paradise Valley Community College, Phoenix College, Rio Salado College, Scottsdale Community College, and South Mountain Community College) to promote equal employment opportunities through a positive continuing program. This means that Maricopa will not discriminate, nor tolerate discrimination, against any applicant or employee because of race, color, religion, gender, sexual orientation, national origin, age, disability, or veteran status. Additionally, it is the policy of the Maricopa Community Colleges to provide an environment for each job applicant and employee that is free from sexual harassment, as well as harassment and intimidation on account of an individual’s race, color, religion, gender, sexual orientation, national origin, age, disability, or veteran status.

This nondiscrimination policy covers all aspects of the employment relationship and admission to, access to, and treatment of students in the Maricopa Community Colleges’ programs and activities including vocational education. This policy also prohibits discrimination on the basis of sexual orientation in the admission and treatment of students in the Maricopa Community Colleges’ programs and activities and in the hiring, treatment, promotion, evaluation, and termination of employees.

Equal Opportunity Statement (AR 2.4.3)
It is the policy of the Maricopa Community Colleges to promote equal employment opportunities through a positive continuing program. This means that Maricopa will not discriminate, nor tolerate discrimination, against any applicant or employee because of race, color, religion, gender, sexual orientation, national origin, age, disability, or veteran status. Additionally, it is the policy of the Maricopa Community Colleges to provide an environment for each job applicant and employee that is free from sexual harassment, as well as harassment and intimidation on account of an individual’s race, color, religion, gender, sexual orientation, national origin, age, disability, or veteran status.

Affirmative Action Statements

Affirmative Action Policy Statement for Individuals with Disabilities
In conformance with the provisions of Section 503 of the Rehabilitation Act of 1973, as amended, and the implementing regulations, 41 CFR 60-741.5 (a), as amended, Maricopa Community College District will not discriminate, or tolerate discrimination, against any applicant or employee because of physical or mental disability in regard to any position for which the known applicant or employee is qualified. Maricopa agrees to take affirmative action to employ, advance in employment and otherwise treat known qualified individuals with disabilities without regard to their physical or mental disability in all human resources selection and decision practices, such as the following: advertising, benefits, compensation, discipline (including probation, suspension, and/or termination for cause or layoff), employee facilities, performance evaluation, recruitment, social/recreational programs, and training. Maricopa will also continue to administer these practices without regard to race, color, religion, gender, sexual orientation, national origin, age, disability, or veteran status. Additionally, all applicants and employees are protected from coercion, intimidation, interference, or discrimination for filing a complaint or assisting in an investigation under the Act.

Affirmative Action Policy Statement for Other Eligible Veterans, Special Disabled Veterans, and Vietnam Era Veterans
In conformance with the Vietnam Era Veterans Readjustment Assistance Act of 1974, the Veterans Employment Opportunities Act of 1998, and the implementing regulations, 41 CFR 60-250(k), Maricopa County Community College District will not discriminate, or tolerate discrimination, against any applicant or employee because he or she is a special disabled veteran or Vietnam era veteran in regard to any position for which the known applicant or employee is qualified. Maricopa agrees to take affirmative action to employ, advance in employment, and otherwise treat known qualified special disabled veterans and Vietnam era veterans without discrimination based upon their disability or veteran status in all human resources section and decision practices, such as the following: advertising, benefits, compensation, discipline (including probation, suspension, and/or termination for cause or layoff), employee facilities, performance evaluation, recruitment, social/recreational programs, and training. Maricopa will continue to administer these practices without regard to race, color, religion, gender, sexual orientation, national origin, age, disability, or veteran status. Additionally, Maricopa agrees to post all suitable job openings at the local office of the State employment service where the job opening occurs.

Notice of Americans with Disabilities Act (ADA)/Section 504 of the Rehabilitation Act/Title IX Coordinator

Vice President of Student Affairs ADA/504/Title IX Coordinator EMCC, 3000 N. Dysart Road, Avondale, Arizona 85323 Telephone (623) 935-8814

Under the ADA and Section 504, the District and its colleges recognize the obligation to provide overall program accessibility throughout its locations for persons with disabilities. The designated ADA/504/Title IX Coordinator at each college will provide information as to the existence and location of services, activities and facilities that are accessible to and usable by persons with disabilities. Requests for accommodation should be addressed to the coordinator. Likewise, under Title IX, there is an obligation to provide services and program accessibility in a gender-neutral manner. Students with disabilities may request catalog information in an alternative format from the college ADA/504 Coordinator.

Póliza de No Descriminación

Es la póliza de los Colegios Comunitarios del Condado de Maricopa (The Maricopa Community Colleges) que consisten del Centro de Apoyo del Distrito, los colegios comunitarios de Chandler-Gilbert, Estrella Mountain, Gateway, Glendale, Mesa, Paradise Valley, Phoenix, Rio Salado, Scottsdale, South Mountain y el Centro de Capacitación de Maricopa, proveer igualdad en las oportunidades de empleo mediante un programa continuo positivo. Esto significa que Maricopa no descriminará o tolerará descriminación en contra de ningún aplicante o empleado debido a su raza, color, religión, sexo, orientación sexual, nacionalidad, edad, incapacitación o por ser veterano incapacitado. Así mismo, es la póliza de los Colegios Comunitarios proveer para cada aplicante y empleado un ambiente libre de acoso sexual como también de acoso e intimidación referente a la raza, color, religión, sexo, orientación sexual, nacionalidad, edad y condición de veterano de cualquier individuo.

Esta póliza de no descriminación cubre todos los aspectos de contratación del empleado, ingreso, acceso a, y tratamiento de alumnos en los Colegios Comunitarios de Maricopa los cuales incluyen también programas de educación vocacional. Esta póliza también prohíbe descriminación en base de orientación sexual en la admisión y tratamiento de estudiantes, en sus programas y actividades y en la contratación, tratamiento, promoción/ascensos, evaluación y despido de empleados.

Declaración de Igualdad de Oportunidad

Es la póliza de los Colegios Comunitarios del Condado de Maricopa proveer igualdad en las oportunidades de empleo mediante un programa continuo positivo. Esto significa que Maricopa no descriminará o tolerará descriminación en contra de ningún aplicante o empleado debido a su raza, color, religión, sexo, orientación sexual, nacionalidad, edad, incapacitación o por ser veterano incapacitado. Agregando, es la póliza de los Colegios Comunitarios proveer para cada aplicante y empleado un ambiente libre de acoso sexual como también de acoso e intimidación referente a la raza, color, religión, sexo, orientación sexual, nacionalidad, edad y condición de veterano de cualquier individuo.

Declaración de Acción Afirmativa para Individuos con Incapacidades

De acuerdo a lo que provee la Sección 503 de la Ley de Rehabilitación de 1973, como enmienda, y las leyes de implementación, 41 CFR 60-741.5 (a), declara que el Distrito de Colegios Comunitarios de Maricopa no descriminarán o tolerarán descriminación en contra de ningún aplicante o empleado debido a su deshabilitación/incapacitación física o mental referente a cualquier posición para la cuál el aplicante o empleado ha calificado. Maricopa promete tomar acción afirmativa para emplear, dar ascenso en empleo y tratar a dichos individuos con incapacidades sin hacer incapié en sus incapacidades físicas o mentales en la selección de recursos humanos y prácticas decisivas como son las siguientes: anuncios, beneficios, compensación, disciplina (incluyendo período de prueba, suspensión, y/o terminación de empleo por causa de paro forzoso), facilidades para empleados, evaluación de trabajo, reclutamiento, programas sociales/recreacionales y entrenamiento. Maricopa continuará llevando a cabo éstas prácticas de no descriminar por razones de raza, color, religión, sexo, orientación sexual, nacionalidad, edad, incapacidad o estado de veterano. Así mismo, todos los aplicantes y empleados están protegidos en contra de coacción, intimidación, interferencia o descriminación por quejas o por ayudar en una investigación cubierta bajo este Acto.

Declaración de Póliza de Acción Afirmativa para Otros Veteranos Elegibles, Veteranos con Incapacitación Especial y Veteranos de la Era Vietnamita

Conforme a la ley de Reajuste y Asistencia para los Veteranos de la Era Vietnamita de 1974, acta de Oportunidades de Empleo para Veteranos de 1998 y reglamentos de implementación, 41 CFR 60-250(k), el Distrito de Colegios Comunitarios del Condado de Maricopa no descriminará ni tolerará descriminación en contra de ningún aplicante o empleado veterano o veterano de la Era Vietnamita con deshabilitación/incapacitación especial referente a cualquier posición la cual dicho aplicante o empleado califique.
Maricopa promete aplicar acción afirmativa para emplear, ascender en empleo y tratar a dichos veteranos incapacitados y de la Era Vietnamita que califiquen sin descriminar base a su desabilidad/incapacitación o condición de veterano en todas las áreas de recursos humanos y decisiones como son las siguientes: anuncios, beneficios, compensación, disciplina (incluyendo periodo de prueba, suspensión, y/o despido por causa o paro forzoso), facilidades para empleados, evaluación de trabajo, reclutamiento, programas sociales/recreacionales y entrenamiento. Maricopa continuará llevando a cabo estas prácticas sin descriminar por razones de raza, color, religión, sexo, orientación sexual, nacionalidad, edad, incapacidad o condición de veterano. Maricopa promete anunciar todas las oportunidades de empleo disponibles en la oficina local del servicio de empleo del Estado donde el empleo esté disponible. Esto incluye empleo de tiempo completo, temporal de más de tres días de duración y empleo de tiempo medio. Finalmente, todos los aplicantes y empleados están protegidos en contras de coacción, intimidación, interferencia o descriminación por quejas o por ayudar en una investigación cubierta sobre este Acto.

Notificación del Acta de Americanos con Impedimentos (ADA)/Sección 504 del Acta de Rehabilitación/Coordinador del Título IX
Vice President of Student Affairs . ADA/504/Coordinador del Título IX
EMCC, 3000 N. Dysart Road, Avondale, Arizona 85323
Teléfono (623) 935-8814

De acuerdo a ADA y a la sección 504, el distrito y sus colegios reconocen la obligación de proveer acceso a programas en todas sus localidades a personas incapacitadas. El coordinador designado de ADA/504/Título IX proveerá información tocante a la existencia y localidad de servicios, actividades y facilidades que son accesibles y de utilidad a personas incapacitadas. Solicitudes para acomodación deben ser dirigidas al coordinador. Del mismo modo, bajo el Título IX, hay obligación de proveer acceso a servicios y programas de una manera imparcial según el género.

Estudiantes incapacitados pueden solicitar información de catálogo en una forma diferente por medio del Coordinador designado por ADA/504 en cada colegio.

MARICOPA COMMUNITY COLLEGES

VISION
A Community of Colleges…Colleges for the Community
… working collectively and responsibly to meet the life-long learning needs of our diverse students and communities.

MISSION
The Maricopa Community Colleges provide access to higher education for diverse students and communities.

VALUES
The Maricopa Community Colleges are committed to:

Community
We value all people – our students, our employees, their families, and the communities in which they live and work. We value our global community of which we are an integral part.

Excellence
We value excellence and encourage our internal and external communities to strive for their academic, professional and personal best.

Honesty and integrity
We value academic and personal honesty and integrity and believe these elements are essential in our learning environment. We strive to treat each other with respect, civility and fairness.

Inclusiveness
We value inclusiveness and respect for one another. We believe that team work is critical, that each team member is important and we depend on each other to accomplish our mission.

Innovation
We value and embrace an innovative and risk-taking approach so that we remain at the forefront of global educational excellence.

Learning
We value lifelong learning opportunities that respond to the needs of our communities and are accessible, affordable, and of the highest quality. We encourage dialogue and the freedom to have an open exchange of ideas for the common good.

Responsibility
We value responsibility and believe that we are each accountable for our personal and professional actions. We are responsible for making our learning experiences significant and meaningful.

Stewardship
We value stewardship and honor the trust placed in us by the community. We are accountable to our communities for the efficient and effective use of resources as we prepare our students for their role as productive world citizens.
COMPLIANCE WITH POLICIES, RULES, REGULATIONS

General Regulations (AR 2.1)

A. Compliance with Policies, Rules, Regulations

Every student is expected to know and comply with all current published policies, rules and regulations as printed in the college catalog, class schedule, and/or student handbook. Copies are available at each college.

Policies, courses, programs, fees and requirements may be suspended, deleted, restricted, supplemented or changed through action of the Governing Board of the Maricopa Community Colleges.

The Maricopa Community Colleges reserve the right to change, without notice, any materials, information, curriculum, requirements and regulations.

Note: The regulations that comprise the student section contain language that appears in various sources such as the Catalog Common Pages and the Student Handbook. All areas became Administrative Regulations with the 1996 adoption of the Governance Model. Changes are made annually either through the Administrative Regulations approval process, or by Board approval for those items that fall under its statutory duty, such as Tuition and Fees. In an effort to prevent duplication, topics in this section may be incorporated by reference, as they are featured in other areas of the manual and are noted accordingly.

The Maricopa Community Colleges Vision, Mission and Values that are featured in the Common Pages are a part of approve Governing Board Policy and are located in the policy section of the manual. As such, the following statement related to Outcomes Assessment that appears in the Common Pages is presented here as a general statement.

B. Outcomes Assessment

The mission of the Maricopa Community Colleges is to create and continuously improve affordable, accessible, and effective learning environments for the lifelong educational needs of the diverse communities we serve. In order to evaluate how successfully Maricopa Community Colleges accomplish this mission, student outcomes will be assessed as part of the continuous improvement process.

Students may be asked to participate in a variety of assessment activities at each college. Assessment results will be used to improve educational programs, services and student learning.

ADMISSION/REGISTRATION/ENROLLMENT

ADMISSION POLICY (AR 2.2.1)

Persons meeting the admissions criteria may attend any Maricopa Community College of their choice. Falsification of any admission materials or official college records may be cause for denial or cancellation of admission. Exceptions to the admissions policies may be requested through the Admissions and Standards Committee.

ADMISSION CLASSIFICATIONS

A. Admission of Regular Students

Admission to the community college in Arizona may be granted to any person who meets at least one of the following criteria:

1. Is a graduate of a high school, which is accredited by a regional accrediting association as defined by the United States Office of Education or approved by a State Department of Education or other appropriate state educational agency.

2. Has a high school certificate of equivalency.

3. Is 18 years of age or older and demonstrates evidence of potential success in the community college.

4. Is a transfer student in good standing from another college or university.

B. Admission of Students Under 18 Years of Age

1. Admission to the community colleges in Arizona shall be granted to any student who is under age 18 and who achieves the following test scores:

   a. Scholastic Aptitude Test (SAT) composite (verbal and math)
      - SAT I - 930 or more, or
      - SAT II - 500 or more, or an
   b. American College Test (ACT) composite of 22 or more.

2. A student shall not be denied admission because of age, lack of a high school diploma or high school certificate of equivalency, grade in school, lack of permission of school officials or lack of concurrent enrollment in a public or private school, if the student has achieved at least the test scores specified in paragraph 1, subparagraphs a or b of this subsection.

3. A student admitted under this subsection is not guaranteed admission to a specific degree program or to all courses offered by the community college.

4. A community college may limit the number of credit hours in which the student may enroll to no fewer than six (6) credit hours.

The colleges reserve the right to enroll students in courses. The final decision for admission to any class for students admitted under section B or C will be determined by the designated college administrator in consultation with the department chairperson.

C. Admission of Students in Special Status

Students not meeting any of the provisions stated above may be admitted on an individual basis with the approval of college officials, so long as the students meet the established requirements of the courses for which they enroll and the college officials determine that such admission is in the best interest of the students.
The status of “Special Admissions” may be granted to a student who:
1. Is beyond the age of compulsory high school attendance and has met the established requirements for the courses for which he or she plans to enroll based on the college assessment examinations, or
2. Is under the age of 18 and has taken the appropriate college assessment tests in order to demonstrate the knowledge of the necessary academic skill level to benefit from the course. Departments may have additional requirements to register for a course. (Signature of parent or guardian is required for students under 18), or
3. Is a participant in a special program sponsored by the admitting college.

The colleges reserve the right to enroll students in courses. The final decision for admission to any class for students admitted under section B or C will be determined by the designated college administrator in consultation with the department chairperson.

D. Specialized Vocational/Training Program
If districts are granted authority for specialized curricula, local district boards shall adopt guidelines to determine admissibility of students for such programs.

E. Western Undergraduate Exchange Program
The Western Undergraduate Exchange (WUE) program is a student exchange program coordinated by the Western Interstate Commission for Higher Education (WICHE), and administered by the Arizona Board of Regents. Through WUE, students who reside in western states (Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming) and meet the eligibility requirements, pay 150 percent of the regular resident tuition plus fees. Students must mark prominently on the Student Information Form that they seek admissions as WUE students. Students may not apply as out-of-state students and expect to receive the WUE tuition rate after admitted. Once admitted as WUE students, students may not petition for in-state residency. Further information may be obtained from the Office of Admissions and Records.

F. Admission of F-1 Nonimmigrant Students
Prospective students should contact the Office of Admissions and Records or designated office for the necessary student information form(s). When completed, the form(s) should be returned to the Office of Admissions and Records or designated office with all requested supporting documents. After the file has been reviewed, a notice will be sent indicating either acceptance or denial of admission.

To be guaranteed consideration for admission, all application materials must be received by July 1 for the fall semester and November 1 for the spring semester.

Prospective students seeking admission based on F-1 nonimmigrant status must provide proof of secondary school with documentation comparable to a United States high school diploma or higher degree. It is recommended that F-1 nonimmigrant students have graduated in the upper 50% of their secondary school (high school or equivalent) in order to ensure success in academic classes at this college.

Applicants for admission to the college must have high school and college (if applicable) transcripts sent directly from the high school or college to the Office of Admissions and Records or designated office. In addition, it is the applicant’s responsibility to have all transcripts translated into English and evaluated by a foreign credential evaluation service if necessary.

1. Admission to Academic Programs

Applicants who wish to enroll in an academic program at the college must present evidence of English language proficiency. If the Test of English as a Foreign Language (TOEFL) is used to satisfy this requirement, the applicant must attain a score of at least 500 (on the traditional TOEFL) or 173 (on the computer-based test) or 61 (on the internet-based TOEFL), known as the iBT. If the International Language Testing System (IELTS) is used to satisfy this requirement, an IELTS overall Band Score of 5.5 or better is required, and a minimum IELTS individual Band Score of 5.0 on each module is recommended. The dean or director of admission and records of the college may accept other proof of English language proficiency for admission purposes, such as the ASSET test, COMPASS or CELSA tests.

Questions about the TOEFL should be directed to the Educational Testing Services at the following address:
TOEFL Services
P.O. Box 6151
Princeton, NJ 08543-6151

2. Admission to the Intensive English Program

An applicant for admission to the Intensive English Program must provide evidence of at least intermediate command of English by way of one or more of the following criteria:

a. At least six years of English language instruction as shown by the applicant’s school transcript(s);

b. A minimum TOEFL score of 400 (on the traditional TOEFL) or 97 (on the computer-based test) or 23 (on the internet-based test, known as the iBT);

c. An original letter of recommendation from a teacher, school principal or headmaster/headmistress, or the director of an English language institute attesting to the applicant’s proficiency at the intermediate level;

d. Other credentials, test scores, interview results, or evidence accepted by the coordinator of the intensive English program or the college’s responsible designee.

Students admitted to the Intensive English Pro-
Students must file a Student Information Form with the Office of Admissions and Records at the college of attendance. There is no charge for this service.

A. Student Status
1. Freshman - A student who has completed fewer than 30 credit hours in 100-level courses and above.
2. Sophomore - A student who has completed 30 credit hours or more in 100-level courses and above.
3. Unclassified - A student who has earned an associate degree or higher.

B. Student Identification Number
Disclosure of the social security number is voluntary (A.R.S. §15-1823). However, students must use social security numbers for reporting information pertaining to potential educational tax credits and for processing federal financial aid applications and Veterans Administration benefits.

C. Declaration of Previous College Attendance
Students who have attended other colleges are required to give the names of those colleges when they apply for admission to one of the Maricopa Community Colleges. If this is not done, enrollment in the college may be canceled. Transfer students who do not meet the minimum grade point averages listed under Scholastic Standards may be admitted on academic probation.

D. Residency for Tuition Purposes (Appendix S-1)
All students are classified for tuition purposes under one of the following residency classifications:
1. Maricopa County resident
2. Out-of-County resident
3. Out-of-State resident (including F-1 non-immigrant students)
4. Unclassified, Out-of-County, Out-of-State (1-6 credit hours system-wide)

Residency for tuition purposes is determined in accordance with state law (A.R.S. §15-1801 et. sec.) and regulations of the Maricopa Community Colleges Governing Board. State law now requires that a person who is not a citizen or legal resident of the United States or who is without lawful immigration status is not entitled to classification as an in-state student pursuant to A.R.S. §15-1802 or entitled to classification as a county resident pursuant to A.R.S. §15-1802.01.* All of the Maricopa Community Colleges are subject to the above statutes and regulations. Students who have questions about their residency should contact the Office of Admissions and Records for clarification.

*La ley ahora requiere que una persona que no sea ciudadano/a o residente legal de los Estados Unidos o que esté sin estado de inmigración legal, no tiene derecho a clasificación como estudiante dentro del estado de acuerdo a la Sección A.R.S. 15-1802 o derecho a clasificación como residente del condado de acuerdo a la Sección A.R.S. 15-1802.01.
Implementation

1. Domicile status must be established before the student registers and pays fees. It is the student’s responsibility to register under the correct domicile status.

2. Enforcement of domicile requirements shall be the responsibility of the Chancellor of the Maricopa Community Colleges. The Chancellor has charged the Director of Admissions and Records or other designee at each college to make the initial domicile classification. In determining a student’s classification, the college may consider all evidence, written or oral, presented by the student and any other information received from any source which is relevant to determining classification. The college may request written sworn statements or sworn testimony of the student.

3. A request for review of the initial classification may be made to a district review committee. The request must be in writing, signed by the student and accompanied by a sworn statement of all facts relevant to the matter. The request must be filed with the admissions officer of the college within ten days of receipt of notification of classification as a non-resident. Failure to properly file a request for review within the prescribed time limit constitutes a waiver of review for the current enrollment period. The decision of the review committee shall be final.

Definitions

“Armed Forces of the United States” means the army, the navy, the air force, the marine corps, the coast guard, the commissioned corps of the United States public health services, the national oceanographic and atmospheric association administration, the national guard, and any military reserve unit of any branch of the armed forces of the United States.

“Continuous attendance” means enrollment at one of Maricopa Community Colleges as a full-time or part-time student for a normal academic year since the beginning of the period for which continuous attendance is claimed. Students need not attend summer sessions or other such intersession beyond the normal academic year in order to maintain continuous attendance.

“County resident” means an individual who has lived in the county for at least fifty (50) days before the first day of classes of the semester.

“Domicile” means a person’s true, fixed, and permanent home and place of habitation. It is the place where he or she intends to remain and to which he or she expects to return when he or she leaves without intending to establish a new domicile elsewhere.

“Emancipated person” means a person who is neither under a legal duty of service to his parent nor entitled to the support of such parent under the laws of this state.

“Full-time student” means one who registers for at least twelve (12) credit hours per semester.

“Part-time student” means one who registers for fewer than twelve (12) credit hours per semester.

“Parent” means a person’s father, or mother, or if one parent has custody, that parent, or if there is no surviving parent or the whereabouts of the parents are unknown, then a guardian of an unemancipated person if there are not circumstances indicating that such guardianship was created primarily for the purpose of conferring the status of an in-state student on such unemancipated person.

Criteria for Determining Residency

In-State Student Status

A. Except as otherwise provided in this article, no person having a domicile elsewhere than in this state is eligible for classification as an in-state student for tuition purposes.

B. A person is not entitled to classification as an in-state student until he or she is domiciled in this state for one year preceding the official starting day of the semester, except that a person whose domicile is in this state is entitled to classification as an in-state student if:

1. The person’s parent’s domicile is in this state and his parent is allowed to claim him or her as an exemption for state and federal tax purposes.

2. The person is an employee of an employer which transferred him or her to this state for employment purposes or he or she is the spouse of such employee.

3. The person is an employee of a school district in this state and is under contract to teach on a full-time basis, or is employed as a full-time non-certified classroom aide, at a school within that school district. For purposes of this paragraph, he or she is eligible for classification as an in-state student only for courses necessary to complete the requirements for certification by the state board of education to teach in a school district in this state. No member of his or her family is eligible for classification as an in-state student if he or she is eligible for classification as an in-state student pursuant to this paragraph.

4. The person’s spouse has established domicile in this state for at least one year and has demonstrated intent and financial independence and is entitled to claim the student as exemption for state and federal tax purposes or the person’s spouse was temporarily out of state for educational purposes, but maintained a domicile in this state. If the person is a non-citizen, the person must be in an eligible visa status pursuant to federal law to classify as an in-state student for tuition purposes.

C. The domicile of an unemancipated person is that of such person’s parent.
D. An unemancipated person who remains in this state when such person’s parent, who had been domiciled in this state, removes from this state is entitled to classification as an in-state student until attainment of the degree for which currently enrolled, as long as such person maintains continuous attendance.

E. A person who is a member of the Armed Forces of the United States and who is stationed in this state pursuant to military orders or who is the spouse or a dependent child of a person who is a member of the armed forces of the United States and who is stationed in this state pursuant to military orders is entitled to classification as an in-state student. The student does not lose in-state student classification while in continuous attendance toward the degree for which he or she is currently enrolled.

F. A person who is a member of the armed forces of the United States or the spouse or a dependent of a member of the armed forces of the United States is entitled to classification as an in-state student if the member of the armed forces has claimed this state as the person’s state of home record for at least twelve consecutive months before the member of the armed forces, spouse or dependent enters in a university under the jurisdiction of the Arizona Board of Regents or a community college under jurisdiction of a community college district governing board. For purposes of this subsection, the requirement that a person be domiciled in this state for one year before enrollment to qualify for in-state student classification does not apply.

G. A person who is honorably discharged from the armed forces of the United States shall be granted immediate classification as an in-state student on honorable discharge from the armed forces and, while in continuous attendance toward the degree for which currently enrolled, does not lose in-state student classification if the person has met all of the following requirements:

1. Declared Arizona as the person’s legal residence with the person’s branch of service at least one year prior to discharge from the armed forces.
2. Demonstrated objective evidence of intent to be a resident of Arizona which, for the purposes of this section, include at least one of the following:
   a. An Arizona driver license.
   b. Arizona motor vehicle registration.
   c. Employment history in Arizona.
   d. Arizona voter registration.
   e. Transfer of major banking services to Arizona.
   f. Change of permanent address on all pertinent records.
   g. Other materials of whatever kind or source relevant to domicile or residency status.
3. Filed an Arizona income tax return with the department of revenue during the previous tax year.

H. A person who is a member of an Indian tribe recognized by the United States Department of the Interior whose reservation land lies in the state and extends into another state and who is a resident of the reservation is entitled to classification as an in-state student.

Alien In-State Student Status

A. An alien shall be classified as an in-state student if the alien can establish that on or before the official starting date of the semester the alien meets one of the following situations:

1. Has been domiciled in the state for at least one year immediately preceding the official starting date of the semester.
2. Is domiciled in this state and:
   a) The domicile of the alien’s parent is in this state, and
   b) The parent is entitled to claim the alien as an exemption for federal and state tax purposes.
3. The alien is domiciled in this state and the alien is:
   a) An employee of an employer which transferred the alien to this state for employment purposes, or
   b) The spouse of such an employee.
4. Qualifies as an in-state refugee student by virtue of having been granted refugee status in accordance with all applicable laws of the United States and having met all other requirements for domicile in this state.

B. In establishing domicile, the alien must not hold a visa that prohibits establishing domicile in this state. After meeting other residency requirements, students holding valid, unexpired visas in the following categories may be classified as in-state students:

A Foreign Government Official
E Treaty Trader
G Principal Resident Representative of Recognized Foreign Member Government to International Staff
K Fiancé or Child of Fiancé of U.S. Citizen
L Intracompany Transferee
N Parent or Child Acceded Special Immigrant Status
O Workers of “Extraordinary” Ability in Sciences, Arts, Education, Business, or Athletics
P “Internationally Recognized” Entertainers & Athletes, “Reciprocal Exchange” or “Culturally Unique” Artists & Entertainers
Q Cultural Exchange Visitors
V Spouses and Dependent Children of Lawful Permanent Residents
I-688 Employment Authorization
students who hold visas as listed in section B above, or who were issued a visa of a type other than those listed in section B above and have submitted an I-485 to Citizenship and Immigration Services (CIS) may establish domicile by complying with paragraphs A1, A2, or A3 above. In establishing domicile, the alien must be in a status that does not prohibit establishing domicile in this state for at least one year immediately preceding the official starting date of the semester.

In the event a student who is not a United States citizen intends to establish domicile under paragraphs A.2.a. (dependent of parent — parent domiciled in Arizona), the student’s parent, in order to establish domicile, must hold a valid, unexpired visa in one of the categories listed in paragraph B. above.

To be eligible to establish domicile, the parent must hold a valid visa of a type as listed in paragraph B., or D.

An alien is entitled to classification as an in-state refugee student if such person has been granted refugee status in accordance with all applicable laws of the United States and has met all other requirements for domicile.

Presumptions Relating to Student Status
Unless there is evidence to the contrary, the registering authority of the community college or university at which a student is registering will presume that:

A. No emancipated person has established a domicile in this state while attending any educational institution in this state as a full-time student, as such status is defined by the community college district governing board or the Arizona Board of Regents, in the absence of a clear demonstration to the contrary.

B. Once established, a domicile is not lost by mere absence unaccompanied by intention to establish a new domicile.

C. A person who has been domiciled in this state immediately before becoming a member of the Armed Forces of the United States shall not lose in-state status by reason of such person’s presence in any other state or country while a member of the Armed Forces of the United States.

Proof of Residency
When a student’s residency is questioned, the following proof will be required:

A. In-State Residency
1. An affidavit signed by the student must be filed with the person responsible for verifying residency.

2. Any of the following may be used in determining a student’s domicile in Arizona:
   a) Income tax report
   b) Voter registration

B. County Residency
1. An affidavit signed by the student must be filed with the person responsible for verifying domicile to prove continuous residency in a county for fifty (50) days, and

2. Any of the following may be used to determine a student’s county residency:
   a) Notarized statements of landlord and/or employer
   b) County voter registration
   c) Source of financial support
   d) Place of graduation from high school
   e) Ownership of real property
   f) Bank accounts
   g) Other relevant information

CONCURRENT ENROLLMENT IN ARIZONA PUBLIC INSTITUTIONS OF HIGHER EDUCATION (A.R.S. §15-1807) (Appendix S-1)
It is unlawful for any non-resident student to register concurrently in two or more public institutions of higher education in this state including any university, college or community college for a combined student credit hour enrollment of more than six (6) credit hours without payment of non-resident tuition at one of such institutions.

Any non-resident student desiring to enroll concurrently in two or more public institutions of higher education in this state including any university or community college for a combined total of more than six (6) credit hours who is not subject to non-resident tuition at any of such institutions shall pay the non-resident tuition at the institution of his choice in an amount equivalent to non-resident tuition at such institution for the combined total of credit hours for which the non-resident student is concurrently enrolled.

OTHER ADMISSION INFORMATION (AR 2.2.3)

A. Veterans
By Arizona statute, any failing grades from any Arizona university or community college that were received prior to military service will not be used to determine admission to the community college for the honorably discharged veterans with two years’ service in the Armed Forces of the United States. Students admitted or re-admitted to the
community college under this statute are subject to progres-
sion, retention, graduation and other academic regula-
tions and standards.
(Also see Withdrawal - Appendix S-7)

B. Ability to Benefit - Classifications
Federal guidelines require that students without a high
school diploma or certificate of equivalency who are ap-
plying for financial aid must demonstrate the ability to
benefit. Evaluation during the admission process results
in the student being admitted to the college with the sta-
tus of REGULAR, REGULAR WITH PROVISIONAL RE-
QUIREMENTS or SPECIAL.

“REGULAR” status, for the purpose of 2.2.3 B, is granted
to an individual admitted to the college who is a high school
graduate or has a GED certificate. A student without a high
school diploma or GED certification and beyond the
age of compulsory high school attendance may be a
regular status student if the student has been assessed to
benefit from college instruction by receiving qualifying
scores on approved assessment instruments. All regular
status students must be pursuing a degree/certificate or
be in an eligible program.

“REGULAR WITH PROVISIONAL REQUIREMENTS”
status, for the purpose of 2.2.3 B, is granted to a student
admitted to the college who is not a high school graduate,
does not have a GED certificate, and is beyond the age of
compulsory high school attendance but has been assessed
to benefit from college instruction requiring development-
tal/remedial coursework and is pursuing a degree/certi-
ficate or be in an eligible program.

“SPECIAL” status, for the purpose of 2.2.3 B, is granted
to a student admitted to the college for concurrent enroll-
ment or pursuing one or more courses of special interest
and who meets all the requirements for admission.

C. Transcripts
The Maricopa Community Colleges reserve the right to
require transcripts for clarification or admission to spe-
cific programs, for verification of course requisites, for
determination of academic standing and eligibility, and
for participation in official athletic events. When an offi-
cial transcript is required, the transcript must be sent di-
rectly to the college Office of Admissions and Records. It
is the student’s responsibility to ensure that transcripts
have been received and are complete. Students entering
as high school graduates may be required to submit high
school transcripts. Students entering as GED recipients
may be required to present a copy of the high school
equivalency certificate or official report of qualifying GED
scores.

D. Educational Assessment
All students are encouraged to undergo an educational
assessment to determine course placement. Prospective
students who do not possess a high school diploma or
GED equivalence certificate are required to complete an
educational assessment to determine their ability to ben-
efit from college instruction. See Student Course Place-
ment Process (AR 2.2.7).

CREDIT FOR PRIOR LEARNING (AR 2.2.4)
The Maricopa Community Colleges recognize that learning
takes place in a variety of situations and circumstances. Many
students have significant, demonstrable learning from experi-
cences outside the traditional academic environment. There-
fore, prior learning, not life experience, is the basis for the award
of college credit.

Students may be awarded no more than 30 credit hours, unless
required by a specific program of study, within the Maricopa
Community Colleges using one or more of the following as-
essment methods recommended by the Council for Adult and
Experiential Learning (CAEL) and the American Council on
Education (ACE):
• Articulated Programs
• Credit By Evaluation
• College-Level Equivalency Examinations.

Credit awarded for prior learning does not count as hours in
residence for graduation requirements. Exceptions may be
granted at some MCCD colleges for their unique programs of
study. No more than 20 semester credit hours may be applied to
AGEC. Credit received through Prior Learning Assessment is
transferable within the Maricopa Community Colleges but is
not necessarily transferable to other colleges and universities.
Therefore, students are strongly advised to meet with a pro-
gram advisor or contact the college or university they plan to
attend.

For further information on Prior Learning Assessment, contact
the Office of Admissions and Records.

A. Credit by Evaluation
The Maricopa Community Colleges offer credit by evalua-
tion. The American Council on Education (ACE) evalu-
ates military training and experiences as well as non-colle-
giate sponsored training programs and recommends credit
awards based on this evaluation.

The number of credits listed in the ACE guide are recom-
mendations only. A college is not required to grant a stu-
dent the number of credits recommended. The credits are
included on a student’s transcript.

1. Educational Experiences in the Armed Services
The Maricopa Community Colleges may award credit
for military experiences based on the ACE Guide to
the Evaluation of Educational Experiences in the
Armed Services. A student may receive college credit if:

a. training parallels a discipline area offered through
the Maricopa Community Colleges, and
b. credit meets a program requirement or is used as
elective credit.
Upon request, individuals who have successfully completed Basic Training, four (4) credit hours in Physical Education will be awarded as indicated in the ACE Guide and the Community College of the Air Force Catalog. Official documentation of military training is required.

2. **College Credit Recommendation Service (CREDIT)**
ACE evaluates training programs offered by business, industry, and government and publishes its credit recommendations in *The National Guide to Educational Credit for Training Programs*. If a student has received training which appears in the guide, he or she may receive college credit if:

a. training parallels a discipline area offered through the Maricopa Community Colleges, and
b. credit meets a program requirement or is used as elective credit.

3. **Departmental Credit By Evaluation**
Students may apply for Departmental Credit By Evaluation in certain courses by obtaining the appropriate form in the Office of Admissions and Records, and completing applicable paperwork and other requirements of the college, including payment of required fee. See fee schedule for appropriate fee. Fees are not refundable if a student fails to obtain credit.

Students may not request:

a. the evaluation of a course a second time;

b. the evaluation of a course while currently enrolled in the course;

c. to establish credit in a previously completed course;

and

d. to establish credit for a lower level of a course in which credit has been received. Exceptions may be granted at some MCCCDC colleges for their unique programs of study.

Certain departments have additional requirements which must be met before credit may be granted through departmental credit by evaluation. When credit is granted as outlined above, a notation of “credit by evaluation,” and the number of credits will appear on the student’s transcript. Credit awarded through Credit by Evaluation will be posted to a student’s transcript upon completion of one or more credit hours (other than by prior learning) at the college granting the credit. These credits are not used in computing the grade point average. Credit by evaluation is transferable within the Maricopa Community Colleges, but is not necessarily transferable to other colleges and universities.

B. **College-Level Equivalency Examinations**
ACE has published credit recommendations for a number of national standardized examinations such as the ones listed below in the *Guide to Educational Credit By Examination*.

The Maricopa Community Colleges use these recommendations as guidelines to award credit for equivalent Maricopa Community Colleges coursework as well as elective credit. Scores must be sent directly to the Office of Admissions and Records from the specific testing company(s) before credit is awarded. All equivalency is subject to future review and possible catalog change.

1. **Advanced Placement Examinations**
Students who have taken an advance placement course of the College Entrance Examination Board (CEEB) in their secondary school who have taken an Advanced Placement Examination of the CEEB may receive course credit with a score of 3, 4 or 5. Scores must be received directly from CEEB before credit is awarded.

<table>
<thead>
<tr>
<th>Exam</th>
<th>Score</th>
<th>Credit Hours/Equivalency</th>
</tr>
</thead>
<tbody>
<tr>
<td>English-Language and Composition</td>
<td>4 or 5</td>
<td>6 credit hrs/ENG101, ENG100, AA AC, AD, eligible for Honors ENG102</td>
</tr>
<tr>
<td>English Literature and Composition</td>
<td>4 or 5</td>
<td>6 credit hrs/ENG101 ENG110 eligible for Honors ENG102</td>
</tr>
</tbody>
</table>

**Math AP Recommendation:**

<table>
<thead>
<tr>
<th>Exam</th>
<th>Score</th>
<th>Credit for Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math-Calculus AB</td>
<td>3, 4 or 5</td>
<td>MAT220 or MAT221</td>
</tr>
<tr>
<td>Math-Calculus BC</td>
<td>3</td>
<td>MAT220 or MAT221</td>
</tr>
<tr>
<td>Math-Calculus BC</td>
<td>4 or 5</td>
<td>MAT220 or MAT221, and MAT230 or MAT231 upon completion of MAT241</td>
</tr>
<tr>
<td>Computer Science A and AB</td>
<td>4 or 5</td>
<td>CSC100</td>
</tr>
</tbody>
</table>

2. **College Level Examination Program**
The Maricopa Community Colleges may award credit to individuals who have received a score of 500 or more for the 1986 version of the College Level Examination Program (CLEP) General Examinations (610 on the 1978 version) and who meet or exceed the American Council on Education (ACE) recommended scores for awarding credit on the CLEP subject examinations. The ACE credit-granting score recommendation will be 50 (on the 20-80 scale) for all CLEP computer-based exams beginning July 1, 2001.

Credit received through CLEP is transferable within the Maricopa Community Colleges, but is not necessarily transferable to other colleges and universities.

Rio Salado College and Paradise Valley Community College are national CLEP test sites. For more information on registering for CLEP examinations, contact Rio Salado College or Paradise Valley Community Colleges.

**English Composition:**
Students pursuing credit for ENG 101 must take the English Composition with Essay. The Maricopa Community Colleges do not award credit for ENG 102 through CLEP examination.
### Foreign Languages:
Credit earned through CLEP examination for French, German, and Spanish meets the language proficiency requirements of the Maricopa Community Colleges.

For CLEP examinations taken prior to July 1, 2001, the Maricopa Community Colleges will grant credit based on the scaled scores indicated below:

<table>
<thead>
<tr>
<th>Course</th>
<th>Spanish</th>
<th>French</th>
<th>German</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>102</td>
<td>50-54</td>
<td>49-53</td>
<td>46-50</td>
<td>8 (101, 102)</td>
</tr>
<tr>
<td>201</td>
<td>55-61</td>
<td>54-62</td>
<td>51-59</td>
<td>12 (101, 102, 201)</td>
</tr>
<tr>
<td>202</td>
<td>62-80</td>
<td>63-80</td>
<td>60-80</td>
<td>16 (101, 102, 201, 202)</td>
</tr>
</tbody>
</table>

At the discretion of the individual college, an oral exam at the 202 level may be administered.

### 3. Defense Activity for Non-traditional Education Support Examination Program

The Maricopa Community Colleges may award credit for the Defense Activity for Non-traditional Education Support (DANTES) Examination Program to individuals who meet or exceed the ACE recommended scores for awarding credit on the DANTES subject examinations. The Maricopa Community Colleges do not award credit for ENG 102 through DANTES examination. Credit received through DANTES is transferable within the Maricopa Community Colleges, but is not necessarily transferable to other colleges and universities.

The Assessment Center at Rio Salado College is a national test site. For additional information on registering for DANTES examinations, call (480) 517-8560.

### 4. American College Testing Proficiency Examination Program

The Maricopa Community Colleges may award credit for the American College Testing Proficiency Examination Program (ACT-PEP) based on the scores earned.

### 5. Departmental Credit By Examination

Students may apply for Departmental Credit By Examination in certain courses by obtaining the appropriate form in the Office of Admissions and Records, paying the required fee, and completing the examination and other requirements of the college. See fee schedule for appropriate fees.

Students may not request:
- a. to challenge a course a second time;
- b. to challenge a course while currently enrolled in the course;
- c. to establish credit in a previously completed course; and
- d. to establish credit for a lower level of a course in which credit has been received. Exceptions may be granted at some MCCCDD colleges for their unique programs of study.

Certain departments may have additional requirements which must be met before credit may be granted through departmental credit by examination.

Only grades of A, B, C, D, or P earned as a result of this examination will be recorded on the student’s transcript. Fees are not refundable after the examination has been administered, regardless of results.

When credit is granted as outlined above, a notation of “credit by examination,” a grade and the number of credits will appear on the student’s transcript. The grade is used in computing the grade point average. Credit awarded through Departmental Credit By Examination will be posted to a student’s transcript upon completion of one or more credit hours (other than by prior learning) at the college granting the credit.
<table>
<thead>
<tr>
<th>Examination General</th>
<th>Score</th>
<th>Sem. Hrs.</th>
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*This general studies requirement in natural sciences (SQ and SG) and Literacy and Critical Inquiry (L) are not satisfied by CLEP.
## ADVANCED PLACEMENT CREDIT

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## INTERNATIONAL BACCALAUREATE DIPLOMA/CERTIFICATE CREDIT

### 6. International Baccalaureate Diploma/Certificate

Students who present an International Baccalaureate Diploma/Certificate may qualify for college credit. Maricopa Colleges grant credit for college-level courses only. Credit is awarded according to the “International Baccalaureate Diploma/Certificate Credit” table.

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C. Health Care Integrated Educational System (HCIES)
Credit for Prior Learning National/Regional Credential Recognition

Students who have recognized credentials related to healthcare may request an evaluation for course competency equivalence on a case-by-case basis through the Integrated Competency Assessment Network (ICAN). For more information contact the ICAN office at (480) 731-8924 or by email at ican@domail.maricopa.edu. Website: http://healthcare.maricopa.edu/healthcarecourses.php. When national or regional credentials are determined to be equivalent to the competencies demonstrated in corresponding courses, the recognition of external credentials will fulfill graduation credit requirements for the identified courses through Credit by Evaluation.

Credit by Examination and Credit by Skills Demonstration Assessment

Health care students may apply for credit for prior learning in certain courses. Specific information and required forms can be found on http://healthcare.maricopa.edu/healthcarecourses.php. Credit by Examination in the HCIES is determined through the use of HCIES Competency Assessment Tests (CATs) and/or Skills Demonstration Assessment under the direction of the HCIES Integrated Competency Assessment Network (ICAN). Students may apply for HCIES Health Care Pathway/Program Advanced Placement in certain courses by obtaining the appropriate form(s) in the Office of Admissions and Records, paying the required fee(s), and successfully completing the examination and/or skills demonstration and other requirements of the college. Fees are not refundable if a student fails to obtain credit. Students may not request:
a. to challenge a course a second time;
b. to challenge a course while currently enrolled in the course;
c. to establish credit in a previously completed course; or
d. to establish credit for a lower level of a course in which credit has been received.

Certain health care pathways/programs have additional requirements which must be met before credit may be granted through HCIES credit by examination and credit by skills demonstration assessment.

Grades of A, B, C, D or P, earned as a result of examination or skills assessment will be recorded on the student’s transcript. Fees are not refundable after the examination/skills demonstration has been administered, regardless of results. A grade of P/Z is not used in computing the grade point average. When credit is granted as outlined above, a notation of “CREDIT BY EXAMINATION,” “CREDIT BY EVALUATION,” or “CREDIT BY SKILLS DEMONSTRATION” and the number of credits will appear on the student’s transcript. If a grade is assigned, it will be used in computing the grade point average.

D. Transfer Credit

Students who have had official transcripts sent directly to the Office of Admissions and Records from regionally accredited institutions of higher education may be granted credit for college-level courses in which a C (2.0 on a 4.0 scale) or higher grade has been received; but credits accepted in transfer do not necessarily apply to all certificate or degree programs. Regionally accredited institutions of higher education are those that are fully accredited by New England Association of Schools and Colleges, Middle States Association of Colleges and Schools, North Central Association of Colleges and Schools, Northwest Association of Schools and Colleges, Southern Association of Colleges and Schools, and/or the Western Association of Schools and Colleges.

Credits from institutions with candidate status from one of the above regional accrediting associations will be reviewed for transferability by a college committee.

Credits from foreign institutions will be reviewed for acceptance. It is the student’s responsibility to have all such transcripts translated into English and evaluated by an International Student Evaluation Service before submitting them to the college.

E. Servicemen’s Opportunity College

The Maricopa Community Colleges recognize the unique educational problems confronting many active duty military personnel in attaining their educational goals. The colleges have, therefore, established themselves as Servicemen’s Opportunity Colleges. This means that the colleges recognize the peculiar needs of military personnel in that they provide courses on the various military bases located in Maricopa County and provide opportunities to complete courses through non-traditional means when education is interrupted by military obligations. Maricopa Community Colleges maintain liberal entrance requirements, offer maximum credit for educational experiences obtained in the Military Services, and follow residency statutes applicable to the special needs of servicemen. Maricopa Community Colleges follow the recommendations established by the American Council on Education. If, for any reason, Maricopa Community Colleges’ status as a Servicemen’s Opportunity College District is discontinued, it will nonetheless maintain its commitment to students previously enrolled. In addition, the option to enter into a “contract for a degree” allows the community college, as the college of record, to grant a degree upon completion of twelve (12) credit hours at the college and the satisfaction of graduation requirements.
F. Transfer Articulation Guidelines (Appendix S-2)

Transfer Articulation with Secondary Institutions, the Maricopa Skills Center, and the Southwest Skill Center
Students who have participated in programs articulated with Maricopa Community Colleges District programs may be granted credit for prior learning as provided for in the respective articulation agreements. No fees will be assessed for credits for prior learning granted through articulation. Articulated program credit is transferable within MCCCD, but is not necessarily transferable to other colleges or universities. For proper placement in an articulated program, students should obtain a program of study from an academic advisor. Once the course requirements are completed, students must provide the valid documentation of articulated credits to the Office of Admissions and Records to place credits on their academic record.

Transfer Articulation from Arizona Public Community College Districts and Universities into the Maricopa Community Colleges
Any course that meets general education requirements at any Arizona public community college district or university will be accepted in transfer to meet comparable general education requirements at any of the Maricopa Community Colleges provided the courses were completed with a grade of C or better. Acceptance of courses other than general education requirements is determined by individual Maricopa Community Colleges.

A student transcript with the completed block of courses included in the Arizona General Education Curriculum (AGEC-A, AGE-C-B, or AGE-S) will transfer as a block and fulfill the requirements for the corresponding AGEC at the Maricopa Community Colleges.

Maricopa Community Colleges Transfer Associate Degrees
The Maricopa Community Colleges offers three transfer Associate degrees: Associate in Arts (AA), Associate in Business (ABUS), and Associate in Science (AS). Each degree articulates with specific majors offered by Arizona’s public universities. In addition, the degrees are recognized and transfer based on articulation agreements with several other baccalaureate degree-granting institutions.

The three transfer Associate degrees transfer as a “block” and include groups or blocks of courses, e.g., the Arizona General Education Curriculum (AGEC), and the Common Lower-Division Courses. Completed blocks are treated as whole; the components are not examined separately to determine transferability. All credits are accepted and applied toward the designated/appropriate baccalaureate degree.

The Maricopa Community Colleges also offer Associate in Transfer Partnership (ATP) Degrees for specific majors at identified public and universities. These degrees may not be available at all of the Maricopa Community Colleges. Maricopa’s Associate degrees are accessible on the web at: http://www.dist.maricopa.edu/academic/curric/curricularcts.php - Select Tab labeled Curriculum Procedures Handbook-Programs, Select Academic Programs, Select AGEC Course Matrix

Transfer Articulation from the Maricopa Community Colleges to Baccalaureate Degree-Granting Institutions
The Maricopa Community Colleges have transfer articulation agreements with private, public and international baccalaureate degree-granting institutions that have achieved full accreditation or candidacy status with a regional accreditation commission such as the North Central Association of Colleges and Schools. Maricopa Community Colleges transfer articulation agreements are on behalf of the district as a whole and not with individual colleges within the district. Courses taken at any of the Maricopa Community Colleges are equally transferable by institutions wishing to enter into an articulation agreement. Additionally, the articulation agreements require that all Associate Degrees awarded by Maricopa will transfer to participating institutions as a block. As mentioned above, these blocks transfer as a whole.

Transfer Options for Maricopa Community Colleges Associate in Applied Science Degrees
The Maricopa Community Colleges Associate in Applied Science (AAS) degrees are recommended for students who want to gain a depth of technical expertise leading to employment through the completion of an occupational program. Some students may want to pursue a baccalaureate degree as well. The AAS degrees transfer as a “block” to the Bachelor of Applied Science at Arizona State University (East and West), and Northern Arizona University.

Course Acceptability and Applicability
Transfer articulation to Arizona’s public baccalaureate degree-granting institutions is communicated in terms of “acceptability” and “applicability” of community college courses and programs.

To determine “acceptability” of Maricopa Community Colleges courses, refer to the Course Equivalency Guide (CEG) on the Arizona Courses Applicability System (AZCAS). The AZCAS CEG is online at http://www.az.transfer.org/cas/. Effective Fall 2000, the course evaluation and/or the general education designation as listed in AZCAS is valid for the term in which credits are earned and appear on the transcript. A course evaluation and/or university general education designation may be subject to change. Given that curriculum is dynamic at both the Maricopa Community Colleges and the institutions to which Maricopa Community College students transfer, students have the option to petition for equivalencies and/or general education designations.

To determine “applicability” of Maricopa Community Colleges courses and transfer associate degrees to university-specific degree requirements, refer to the Maricopa Community Colleges’ Associate in Transfer Partnership degrees, the AZCAS Transfer Planning Aids, or the university transfer guides, described on the following page.
University Transfer Guides
Each of Arizona’s public universities have developed University Transfer Guides to show how Maricopa Community College courses apply to specific baccalaureate degree requirements. The transfer guides are useful both for students pursuing Associate in Transfer Partnership Degrees, as well as for students who want to transfer to Arizona’s public universities to pursue degrees for which the Maricopa Community Colleges do not have Associate in Transfer Partnership Degrees. University Transfer Guides are accessible at the following web sites:

**Arizona State University Main or Arizona State University East**
http://www.asu.edu/provost/articulation/

**Arizona State University West**
http://www.west.asu.edu/tranguid/

**Northern Arizona University**
http://www4.nau.edu/aio/articulation/tginfo.htm

**University of Arizona**
http://transferguides.arizona.edu

**Arizona Course Applicability System (AZCAS) Transfer Planning Guides**
A student may enter community college or university coursework into AZCAS to create a Transfer Planning Guide. The guide evaluates progress toward completing a community college transfer certificate, transfer degree, and/or an Arizona public university degree and assists students in selecting additional course work that meets the academic program requirements. The transfer planning guides are accessible at the following web site: http://www.az.transfer.org/cas/

**STUDENT COURSE PLACEMENT PROCESS (AR 2.2.7)**
The Maricopa Community Colleges are committed to providing students with opportunities for successful academic experiences. Student academic achievement is directly related to the proper initial course placement. Students are strongly urged to enroll in the courses indicated by their course placement tests. Initial course placement should be discussed with an advisor or counselor who is skilled in assessing the student’s needs and factors that affect student success.

A. Testing for Course Placement
1. Students will be required to complete a course placement test under any one of the following conditions:
   - The student is taking a college course for credit or does not have previous college credit English, reading and/or math course, or any college course for which English, reading or math is a prerequisite.
   - The student is taking a math course and does not have current valid district approved course placement scores on file or does not have previous college credit in English, reading and math.
   - The student is pursuing a degree and does not have current valid district approved course placement scores on file or does not have previous college credit in English, reading and math.
   - The student does not have a high school diploma or GED, and is applying for federal financial aid.
   - The student for whom English is not the primary language and is taking his or her first English as a Second Language class is required to take a test of English proficiency.
   - College may determine additional conditions under which students would be required to complete course placement testing. Contact the college for additional conditions.

2. Students will be strongly encouraged to complete a course placement test under any one of the following conditions:
   - The student is taking a math course and has a college-level prerequisite on file that is more than five (5) years old.
   - The student is taking a college course for which English, reading or math is a prerequisite, and such credit is more than five (5) years old.

3. Students MAY be exempt from a course placement test if at least one of the following conditions apply:
   - The student has currently valid district approved course placement scores on file.
   - The student has earned an associate or higher degree.
   - The student has earned college credits from a regionally accredited college in English, reading, and math with a grade of C or higher, and such credit is no more than five (5) years old.
   - The student has currently valid district approved course placement scores on file.

   **Note:** Being exempt from taking a course placement test does not exempt the student from fulfilling the minimum graduation requirements.

B. Course Placement
2. Students will be advised for specific course enrollment based on highest test or retest scores.
   - Students with test scores that fall into the range described as a “decision zone” must receive advisement to select appropriate course(s).
   - Students will be permitted one re-test in English, reading or by math level after at least a 24-hour waiting period. An additional re-test is permitted one year from the date of student’s original or re-test at any course placement testing site.
Academic advising assists students in the formation of educational plans and goals. This is an ongoing process of clarification, evaluation, re-clarification, and re-evaluation. The ultimate responsibility for making decisions about life goals and educational plans rests with the student. The academic advisor helps to identify and assess alternatives and consequences. The academic advisor also serves as a resource for accurate information. The advisor is knowledgeable about institutional policies, procedures, programs and resources and assists students in making use of printed and online materials. Advisors are in a position to help students identify their learning-related needs. Feedback received from advisors could be beneficial and should be used in policy-making decisions at all levels of the institutional administration.

With the help of an academic advisor, students will:
- gain an understanding of their academic abilities and interests.
- be reinforced in their successes.
- be provided information regarding the nature and purpose of higher education.
- be referred to counselors and other resources to explore their interests, skills, abilities, and values.
- define and refine educational goals and objectives and understand the consequences of alternative courses of action.
- consider alternative careers through counselors, workshops, seminars, and other resources.
- make course, certificate, and/or degree selections.
- understand and utilize placement test results.
- be encouraged to be active participants in their educational planning and college life.
- be informed of support services that are available and how to make an appointment, if appropriate.
- be aware of transfer articulation arrangements.
- be informed about research results and general perceptions of student experiences at the institution.
- receive accurate printed materials on academic majors, minors, and other degree and program requirements.
- be encouraged to use the technology which supports the academic advising process.

REGISTRATION (AR 2.2.8)
Students must register according to the dates indicated and in the manner described in the college class schedule. To be eligible for registration, students must have completed the appropriate steps listed under the Admissions section. The college may allow early or priority registration. Tuition and fees must be paid or payment arrangements made by the due date to secure class enrollment. Students may not attend a class for which they are not registered.

EMISSIONS CONTROL COMPLIANCE (AR 2.4.6)
Pursuant to A.R.S. §15-1444 C. no vehicle shall be allowed to park in any college parking lot unless it complies with A.R.S. §49-542 (the vehicle emissions inspection program). At the time of course registration, every out-of-county and out-of-state students will be required to sign an affidavit stating that the student’s vehicle meets the requirements of A.R.S. §49-542. Vehicles which are not in compliance are subject to being towed at the owner’s expense.

TRANSCRIPTS FOR TRANSFER (AR 2.3.10)
The transcript is issued upon written request only. Those students who want to transfer to other institutions of higher education, including other Maricopa Community Colleges, must request their transcripts be sent from the Office of Admissions and Records. However, transcripts may be shared within the Maricopa Community College District without the written request of the student in compliance with FERPA.

Official transcripts will not be issued to students having outstanding debts to any of the Maricopa Community Colleges. The release of transcripts is governed by the guidance of the Family Education Rights and Privacy Act of 1974 (see Records Policy section). There is no charge for unofficial transcripts, or for official transcripts sent between Maricopa Community Colleges. See the Tuition and Fees Schedule for charges for other official transcripts.
**TUITION AND FEES (AR 2.2.9)**

Tuition and fees are public monies within the jurisdiction and responsibility of the Maricopa Community Colleges Governing Board under the laws and regulations of the State of Arizona and must be administered by the Governing Board. The Governing Board reserves the right to change tuition and fee charges when necessary without notice.

All students are classified for tuition purposes under one of the following residency classifications:

1. Maricopa County resident
2. Out-of-County resident
3. Out-of-State resident (including F-1 non-immigrant students)
4. Unclassified, Out-of-County, Out-of-State (1-6 credit hours system-wide)

Residency for tuition purposes is determined in accordance with state law (A.R.S. §15-1801 et. sec.) and regulations of the Maricopa Community Colleges Governing Board. State law now requires that a person who is not a citizen or legal resident of the United States or who is without lawful immigration status is not entitled to classification as an in-state student pursuant to A.R.S. §15-1802 or entitled to classification as a county resident pursuant to A.R.S. §15-1802.01.* All of the Maricopa Community Colleges are subject to the above statutes and regulations. Students who have questions about their residency should contact the Office of Admissions and Records for clarification.

*La ley ahora require que una persona que no sea ciudadano/a o residente legal de los Estados Unidos o que esté sin estado de inmigración legal, no tiene derecho a clasificación como estudiante dentro del estado de acuerdo a la Sección A.R.S. 15-1802 o derecho a clasificación como residente del condado de acuerdo a la Sección A.R.S. 15-1802.01.

Students attending more than one Maricopa Community College will be assessed fees for their enrollment at each of the Maricopa Community colleges/centers. (Students who are considered to be out-of-state residents for tuition and fees purposes should refer to the Concurrent Enrollment in Arizona Public Institutions of Higher Education policy under the Residency section of this publication.)

**A. Time of Payment**

All tuition, fees, assessments and deposits must be paid at the time of registration or by the specified deadline date and in accordance with the fee schedule approved by the Maricopa Community Colleges Governing Board.

**B. Tuition and Fees Schedule (Appendix S-4)**

(effective July 1, 2007 for Fall, Spring and Summer Sessions)

The following is a tuition and fees schedule for 2007-2008 and is provided for reference. **These tuition and fees are subject to change.** Consult the college’s Office of Admissions and Records for fees in effect at the time you intend to register.

### Student Status

<table>
<thead>
<tr>
<th>Status</th>
<th>Resident Rate</th>
<th>Out-of-State Surcharge</th>
<th>Total Tuition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. County Resident</td>
<td>per credit hour</td>
<td>per credit hour</td>
<td>$63.50 plus Fees: $1.50</td>
</tr>
<tr>
<td>2. County Resident</td>
<td>per credit hour</td>
<td>per credit hour</td>
<td>$63.50 plus Fees: $1.50</td>
</tr>
<tr>
<td>3. Out-of-State Resident</td>
<td>per credit hour</td>
<td>per credit hour</td>
<td>$63.50 plus Fees: $1.50</td>
</tr>
<tr>
<td>4. Out-of-State Resident</td>
<td>per credit hour</td>
<td>per credit hour</td>
<td>$63.50 plus Fees: $1.50</td>
</tr>
<tr>
<td>5. Unclassified Student</td>
<td>per credit hour</td>
<td>per credit hour</td>
<td>$63.50 plus Fees: $1.50</td>
</tr>
<tr>
<td>6. Out-of-State Students participating in Western Undergraduate Exchange Program</td>
<td>per credit hour</td>
<td>per credit hour</td>
<td>$63.50 plus Fees: $1.50</td>
</tr>
<tr>
<td>7. Courses offered out of Arizona, including distance learning, to non-resident out-of-state student</td>
<td>per credit hour</td>
<td>per credit hour</td>
<td>$63.50 plus Fees: $1.50</td>
</tr>
</tbody>
</table>

**Corporation Rate**

- Out-of-State: $100.00
- Total Tuition per credit hour: $100.00

**Skill Center Tuition Rates**

- Nursing Asst & Practical Nursing Programs: $65.00
- $125.00

**Credit by Examination & Credit by Evaluation**

- Regular Rate: $63.50
- Contract Testing Rate: $31.75

Students from the following counties are considered out-of-county and should check with their local County Board of Supervisors about out-of-county tuition and fee payments:

- Apache
- Greenlee
- Santa Cruz

Students from any other county in Arizona are considered in-county due to a reciprocal arrangement with that county.

*According to A.R.S., 15-1802F, “A person who is a member of an Indian tribe recognized by the US Department of the Interior whose reservation lies in this state and extends into another state and who is a resident of the reservation is entitled to classification as an in-state student.” Therefore, unclassified and out-of-state surcharges do not apply to such students.

**According to ARS 15-1429, community college districts are excluded from counting as FTSE those students who reside out of the state but are taking an AZ community college district distance learning course or a classroom based credit course.**
The following are fees in addition to applicable tuition and fees:

**Check Returned from Bank** ........................................... $15.00

**Child Care Fees: (per clock hour)**

GCC .......................... $2.25
- Drop in ......................... $2.50
- For each 15 minutes of late pick-up .......... 6.00
- Registration per semester - Students .... 15.00
GWCC – Students ............... 2.00
- Staff & Faculty .................. 3.00
- For each minute of late pick-up ............. 1.00
- Registration per semester ............... 10.00
MCC – Students ................ 2.50
- Drop in ......................... 3.00
- Faculty & Staff .................. 3.00
- Registration per semester – Students ... 20.00
- Registration per semester – Staff & Faculty ... 25.00
- For each 15 minutes of late pick-up ........ 5.00
- For every week payment is late ........... 5.00
PVCC – .......................... 3.00
- Registration per semester ............... 15.00
- Supply Fees ..................... 10.00
- For each 15 minutes of late pick-up ....... 5.00
SCC – Students .................. 3.50
- Staff & Faculty .................. 4.50
- Overtime Fee - Student ............... 3.75
- Overtime Fee - Faculty & Staff .......... 4.75
- Registration per semester – Students ... 25.00
- Registration per semester – Staff & Faculty ... 40.00
- Contract Changes (2+) ................... 5.00
- For each 15 minutes of late pick-up ........ 5.00
- For every week payment is late ........... 5.00
SMC – Students .................. 1.75
- From 9 am to 12 pm Preschool per week ... 26.25
- Staff & Faculty .................. 2.25
- From 9 am to 12 pm per week ............ 33.75
- Registration per semester ............... 10.00
- For each 15 minutes of late pick-up ....... 5.00
All other colleges .................. 1.75
College Level Examination Program (CLEP) -Paradise Valley .................. 15.00
Course Materials Fee .................. actual cost
Dental Hygiene Skills Enhancement- Rio Salado .................. 4 hour block: 160.00
.......................... 8 hour block: 320.00
Distance Learning Fees .................. actual cost
Electronic Health Record Student Access Fee .... actual cost
Emergency Medical Technology (EMT) actual cost, not .......
to exceed .................. 400.00
Excessive Laboratory Breakage .................. actual cost
Field Studies .................. actual cost
Field Trips & Out-of-County/County Tours .................. actual cost
Fitness Center .................. 20.00
GED- First Test - ........................................... $  50.00
Test repeat (per section) .................. $10.00
Administration Fee .................. $15.00
Graduation Fees:
Application/Recording/Issuance Fee (Degrees/Certificates
- 25 or more credits) non refundable .................. 0.00
Commencement Fee (One time fee refundable up to 2 weeks
prior to graduation) .................. 25.00
HCIES Skills Demonstration
Assessment Fee .................. actual cost
HESI-PN (Health Educ System) .................. actual cost
Library Fines - lost materials (List price) + ........... $  5.00
NET - Nursing Entrance Test .................. actual cost
Nursing - Nursing 181, 281 .................. 30.00
Nursing 169, 189, 269, 289 .................. 25.00
Nursing 167, 267 .................. 25.00
Nursing 157 .................. 25.00
NCE214OP Tutored NCLEX Review .................. 25.00
Parking Fines:
(All fines are doubled if not paid within 15 working days.)
Fee are subject to change upon adoption of the schedule for the new fiscal year. For current fee amounts, please contact
College Safety or visit: http://www.dist.maricopa.edu/gv
policy/adminregs/students/2_10.htm)
-Displaying an altered or substituted permit ........... 50.00
-Failure to register a vehicle and display a parking permit ...
.......................... 30.00
-Falsifying information on vehicle registration application ...
.......................... 50.00
-Improperly displaying a parking permit (ie., not affixed to
window) .................. 15.00
-Obstructing a properly parked/moving vehicle ........ 15.00
-Parking in an unauthorized parking area ................ 25.00
-Parking by a college employee or student in a visitor area ...
.......................... 15.00
-Parking in a Fire Lane .................. 50.00
-Parking on or blocking a pedestrian path ............... 15.00
-Parking outside stall lines .................. 15.00
-Parking beyond posted time limit ............... 15.00
-Removing a barricade or failure to obey vehicle control ...
device .................. 25.00
-Violating disabled parking stall or access ........... 50.00
PED Special Course Charge .................. actual cost
Private Music Lessons:
Music Majors:
-First 1/2 hr per wk/per semester .................. 0.00
-Each additional 1/2 hr per wk/per semester ....... 102.00
-First 1/2 hr per wk/per semester ............... 320.00
Non-Music Majors:
- Each additional 1/2 hr per wk/per semester ........ 320.00
Registration Processing Fee -
( - assessed on a per student, per semester, per college
basis) Refundable only if the student drops all credit classes
at a particular college during the 100% refund period ... 15.00
*Skill Centers Material Fee - See Schedule
- Specific clothing & headwear issued to students - prorated
for course of program less than 21 days ............ 250.00
D. Discounted Fees and Waivers

1. Citizens 62 years of age and older shall be issued ID cards that allow them the privilege of attending events at no cost and that allow them to use the library facilities.
2. Employees, Dependents and Mandated Groups: The Maricopa Community Colleges waives tuition and student activity fees for employees and their dependents, and for legislative mandated groups. Special fees and fees for Non-Credit/Special Interest Community Services courses are not waived.
3. Tuition and Registration Fee Waiver for members of the Pima-Maricopa Indian Community: Tuition and fee waivers shall be funded through Auxiliary Fund Monies for college credit courses for the enrolled members of the Pima-Maricopa Indian Community who live on the Pima-Maricopa Reservation. All other guidelines and procedures established for the purpose of administering waivers, affidavits and exemptions are outlines in the Maricopa Community Colleges tuition waiver manual.

REFUND POLICY (AR 2.2.10)

A. Refund Policy for Credit Classes

Students who officially withdraw from credit classes (in fall, spring, or summer) within the withdrawal deadlines listed below will receive a 100% refund for tuition, class and registration processing fees. Deadlines that fall on a weekend or a college holiday will advance to the next college workday except for classes fewer than 10 calendar days in length or a specified by the college. Calendar days include weekdays and weekends. Refer to individual colleges for withdrawal and refund processes.

Length of Class

<table>
<thead>
<tr>
<th>Official Withdrawal Deadlines for 100% Refund*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior to class start date</td>
</tr>
<tr>
<td>1 calendar day including class start date</td>
</tr>
<tr>
<td>2 calendar day including class start date</td>
</tr>
<tr>
<td>3 calendar day including class start date</td>
</tr>
<tr>
<td>4 calendar day including class start date</td>
</tr>
<tr>
<td>5 calendar day including class start date</td>
</tr>
<tr>
<td>6 calendar day including class start date</td>
</tr>
<tr>
<td>7 calendar day including class start date</td>
</tr>
</tbody>
</table>

*Course fee and registration processing fees will be refunded only if the students qualifies for a 100% refund.

Debts owed to any MCCCD college must be satisfied before any refunds are paid to student.

Refunds for students receiving federal financial assistance are subject to federal guidelines.

B. Refund Policy for Non-Credit Classes

Unless otherwise specified, students must drop non-credit classes prior to the course start date to be eligible for a 100% refund.

Requests for exceptions to the refund policy must be filed within one year from the semester in which the course was taken.
C. Canceled Classes
   When a class is canceled by the college, a 100% refund will be made.

D. Other Refunds
   Students withdrawing from a college or from courses for one of the following reasons must submit a written request for a refund to the Office of Admissions and Records or designated college official:
   - A student with a serious illness, verifiable by a doctor’s written statement that the illness prevents the student from attending all classes for the semester. The doctor’s statement must be on file with the college before a refund can be given.
   - Serious illness or death of an immediate family member that prevents the student from attending all classes for the semester. Immediate family members include spouse/partner, father, mother, grandfather, grandmother, child, foster child, grandchild, stepparent, sibling, stepparent, stepfather, stepmother, or spouse’s/partner’s father, mother, grandfather, grandmother, or in-laws in any one incident. Appropriate documentation must be provided before a refund can be given.
   - Death of a student. Appropriate documentation must be provided before a refund can be given.

Requests for a total withdrawal from a college or courses for one of the above reasons may result in a partial proportioned refund of tuition, provided courses have not been completed.

A student in the Armed Forces or the Arizona National Guard who is called to active duty and assigned to a duty station, verifiable by a copy of the orders, will be allowed to withdraw and receive a 100% refund of tuition, provided courses have not been completed.

STUDENT FINANCIAL ASSISTANCE
   (AR 2.2.11 & Appendix S-5)

The Maricopa Community Colleges provide students financial assistance to enable access to higher education. Student financial assistance shall be awarded on the basis of demonstrated financial need except where funds are specified for recognition of special talents and achievements. According to state law, a person who is not a citizen of the United States, who is without lawful immigration status, and who is enrolled at any community college under the jurisdiction of an Arizona community college District is not entitled to tuition waivers, fee waivers, grants, scholarship assistance, financial aid, tuition assistance or any other type of financial assistance that is subsidized or paid in whole or in part with state monies.*

*De acuerdo a la ley estatal, una persona que no sea ciudadano/a de los Estados Unidos, que esté sin estado legal de inmigración, y que esté inscrito/a en cualquier colegio de la comunidad bajo la jurisdicción de un Distrito de colegio comunitario de Arizona, no tiene derecho a renuncia de matrícula, renuncia de cuotas, dádivas, asistencia a becas, ayuda financiera, ayuda a matrícula, o cualquier otro tipo de ayuda financiera que reciba subsidio o sea pagado por completo o en parte con fondos estatales.

How to Apply for Federal Financial Aid
   New students must complete the Free Application for Federal Student Aid (FAFSA) or FAFSA on the web at http://www.fafsa.ed.gov/. Caution: Other websites may charge a fee. Each academic year, continuing students must reapply by completing a FAFSA, Renewal FAFSA, or FAFSA on the web. Scholarships require separate applications. Specific information regarding financial assistance, including application deadlines or priority dates, may be obtained from the college Office of Student Financial Aid.

Types of Aid
   Grants, loans, student employment, and scholarship funds may be available from federal, state, and/or private sources. The Maricopa Community Colleges Foundation offers a variety of scholarship opportunities. Scholarship opportunities are available year round. However, most scholarships are posted mid-January and most deadlines are the last week of March. Options are available at www.maricopa/resdev/scholarships/apply.php or by call 480-731-8400.

Distribution of Aid
   Criteria by which aid is distributed among eligible financial aid applicants are available on request at the college Office of Student Financial Aid.

Rights and Responsibilities
   Students should read all information provided in the process of applying for federal financial aid in order to gain a greater knowledge of all the rights as well as responsibilities involved in receiving that assistance.

Satisfactory Academic Progress
   Specific requirements for academic progress for financial aid recipients are applied differently than scholastic standards. In addition to scholastic standards which are explained elsewhere in this catalog, financial aid recipients are also subject to the following Standards of Satisfactory Academic Progress. Specific information is available at the college Office of Student Financial Aid.

Standards of Satisfactory Academic Progress (SAP) for Financial Aid Eligibility
   Federal regulations (CFR 668.32(f) and 668.34) require a student to move toward the completion of a degree or certificate within an eligible program when receiving financial aid. Specific requirements for academic progress for financial aid recipients are applied differently than Scholastic Standards. Federal regulations state that Academic Progress Standards must include a review of all periods of enrollment, regardless of whether or not aid was received. The student must meet the following minimum standards in order to receive financial aid.
I. Evaluation of Financial Aid Eligibility
A. Standards of Satisfactory Academic Progress (SAP) are applied at least once per year, beginning on or about June 1st to determine the eligibility for the following academic year.

B. The evaluation period will be based on attendance in the immediate prior Spring, Fall, Summer term (example: for 2007-2008 academic year, academic progress will be evaluated on Spring 2007, Fall 2006, and Summer 2006).

C. Credits evaluated will include credits attempted at the evaluating school and courses funded through consortium agreement.

D. Students who do not meet the SAP will be notified. The student may follow the appeal process or the reinstatement procedures as outlined in V and VI.

II. Eligibility
A. Students must meet the following criteria:
1. Students who have attempted at least 6 credit hours in the last evaluation period must complete with a passing grade 2/3 of all credits attempted within that evaluation period, OR
2. Students who have NOT attempted at least 6 credit hours in the last evaluation period must complete with passing grades 2/3 of ALL credits attempted.

AND

B. All students must meet the following minimum credit hour/cumulative GPA requirement

<table>
<thead>
<tr>
<th>Credits Attempted*</th>
<th>Min GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-15</td>
<td>1.60</td>
</tr>
<tr>
<td>16-30</td>
<td>1.75</td>
</tr>
<tr>
<td>31-45</td>
<td>1.90</td>
</tr>
<tr>
<td>46 +</td>
<td>2.00</td>
</tr>
</tbody>
</table>

*for which grade points are computed.

Note: Grades of F, I, N, W, X, Y, Z, and courses not yet graded are considered attempted but not meeting progress standards for the purposes of financial aid

III. Maximum Time Frame Eligibility
A. Students who have attempted more than 150% of the credits required for their program of study are not considered to be making Satisfactory Academic Progress and, therefore, are ineligible for financial aid funds.

B. All evaluated transfer credits will be included when determining Maximum Time Frame Eligibility.

C. A student with a Bachelor’s degree or higher will be considered to have exhausted Maximum Time Frame Eligibility. An exception to this rule occurs if the student is enrolled in a state-approved teacher certification program.

D. A student may appeal as outlined in V.

E. Reinstatement procedures as outlined in VI are not applicable to Maximum Time Frame Eligibility.

IV. Repeated, Audited, Consortium, Remedial Courses, Summer Sessions
A. Financial aid may be used to cover the cost of repeated courses.

B. Audited courses, non-credit courses, credit by examination, and any credit for prior learning option (as outlined in the catalog) are excluded when determining eligibility for financial aid.

C. Courses funded through a consortium agreement are included in determining academic progress.

D. All attempted remedial credits will be included when evaluating SAP. (A maximum of 30 remedial credit hours, excluding ESL courses, may be funded.)

E. Enrollment in any or all summer sessions within the same calendar year will be considered one term.

V. Appeal Process
A student who has lost financial aid eligibility due to extenuating circumstances may appeal.

A. Extenuating circumstances that may be considered include: personal illness or accident, serious illness or death within immediate family, or other circumstances beyond the reasonable control of the student.

B. All appeals must be in writing to the Financial Aid Office where the student is applying for aid and include appropriate documentation.

C. Examples of documentation could include an obituary notice, divorce decree, or a letter from a physician, attorney, social services agency, parole officer, etc.

D. The condition or situation must be resolved which will allow the student the ability to complete course work successfully or an appeal will not be granted.

E. The outcome of an appeal may include approval, a probationary period, or denial.

F. A student will be notified in writing of the results of the appeal, and of any restrictions or conditions pertaining to their appeal.

VI. Reinstatement of Financial Aid Eligibility
A. A student who has lost financial aid eligibility may be reinstated after the student has taken (without federal funds) at least six credit hours in a semester, passed all attempted credit hours, and meets minimum cumulative GPA requirements.

B. If the student attempts more than six hours, the student will be evaluated on all attempted credit hours within that term.

C. Classes taken at other colleges will not be taken into consideration for reinstatement purposes.
D. It is the student’s responsibility to notify the Office of Student Financial Aid when this condition has been met. For more information, please contact the Office of Student Financial Aid.

Refunds and Repayments

In accordance with federal regulations (CFR 668.22), a student may be required to repay federal financial aid funds if they completely withdraw, are withdrawn, or fail to earn a passing grade from all classes during a semester. Further information is available at the college Office of Student Financial Aid. This could affect a student’s ability to receive Financial Aid in the future at any school. For a student receiving Financial Aid, also see Appendix S-7 for Withdrawal procedures.

Award Amount and level of Enrollment

Award amount is determined, in part, on the level of enrollment. Federal student aid recipients are advised to register at the same time for all classes they intend to take during a semester to maximize award. Some federal aid may not be awarded for classes added at a later date. Contact the college Office of Student Financial Aid for more information.

VETERANS SERVICES (AR 2.9)

The Maricopa Community Colleges’ veterans services offices act as liaisons with the Department of Veterans Affairs. Each program must be approved by the State of Arizona Department of Veterans’ Services. Students may be eligible to receive educational benefits if they are registered in courses that apply to the student’s approved program. Application forms, counseling, advisement and tutoring are available for students who are eligible for veteran’s educational benefits. Students applying for veteran’s educational benefits should allow eight to ten weeks before receiving benefits. The amount of benefits awarded is determined by the Department of Veterans Affairs, and is based on the number of credit hours or clock hours for which a student is enrolled and the length of the enrollment period for each course.

Veteran’s benefits available:
- Chapter 30 - Montgomery GI Bill
- Chapter 31 - Vocational Rehabilitation (separately served through the local VA office)
- Chapter 32 - VEAP Program
- Chapter 35 - Survivors and dependents of deceased/100% disabled veterans
- Chapter 1606 - Montgomery GI Bill, Selected Reserve

It is the student’s responsibility to notify the office that serves veterans at their campus regarding any change in enrollment, address, program of study, enrollment at another institution, or any other change that may impact their veteran’s educational benefits.

Those students receiving benefits must follow the VA academic progress policy to continue to receive benefits.

Academic Progress Policy for Students Receiving Veteran’s Educational Benefits

<table>
<thead>
<tr>
<th>Credit Hours for Which Grade Points are Computed at Resident Maricopa Community College (A, B, C, D, F, and Y)</th>
<th>Minimum Grade Point Average Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-15</td>
<td>1.60</td>
</tr>
<tr>
<td>16-30</td>
<td>1.75</td>
</tr>
<tr>
<td>31-45</td>
<td>1.90</td>
</tr>
<tr>
<td>46+</td>
<td>2.00</td>
</tr>
</tbody>
</table>

Department of Veterans Affairs regulations require that all persons using any type of veteran educational assistance program be making satisfactory academic progress toward achievement of their educational objective (program of study). A student who does not meet the minimum standards (see above) will be placed on probation for a maximum of two (2) consecutive semesters. At this point, if satisfactory academic progress has not been demonstrated, veteran educational benefits will be terminated. Benefits may be resumed when the student raises the cumulative grade point average to the required minimum standards or demonstrates the ability to meet these standards through the approval of a written appeal. For appeal procedures, contact the office that serves veterans at your campus.

For additional details and information regarding veteran’s educational benefits, contact the office that serves veterans at your campus.

SCHOLASTIC STANDARDS

ACADEMIC LOAD (AR 2.3.1)

The following guidelines are for institutional purposes. Rules regarding academic load for financial aid eligibility, veteran benefits and athletic eligibility may be defined differently.

Students carrying at least twelve (12) credit hours will be considered full-time students for the fall and spring semesters. Three-quarter-time is 9 - 11.9 credit hours. Half-time is 6 - 8.9 credit hours. Fewer than six (6) credit hours is considered less than half-time. Academic load for summer and special terms may be defined differently. Contact the Office of Admissions and Records for clarification.

Courses may vary in length, and begin and end throughout the year. A credit hour indicates the value of an academic credit. Standards for the awarding of credit hours may be time based or competency based. To obtain credit, a student must be properly registered and must pay fees for the course. The fall and spring semesters are typically sixteen (16) weeks in length. Summer sessions are typically five or eight weeks in length.

Students desiring to take more than eighteen (18) credit hours must obtain approval from the designated college official.
Ordinarily, only students with a grade point average of 3.0 or higher for the preceding semester or first semester students who were in the upper quarter of their high school graduating class are permitted to carry more than eighteen (18) credit hours.

Students participating in extra-curricular or co-curricular activities or receiving financial assistance may be required to maintain a specified minimum academic load.

Students who are working, have considerable extra-curricular or co-curricular activities, or have been reinstated from academic suspension/probation should plan their academic load accordingly.

SCHEDULE CHANGES

Students may change their schedule by following the designated procedures at their college of enrollment. It is the student’s responsibility to notify the college if he/she will no longer be attending class (see withdrawal policy).

ATTENDANCE (AR 2.3.2)

Only persons who are registered for a class at any of the Maricopa Community Colleges may attend that class.

Attendance requirements are determined by the course instructor. Students who do not meet the attendance requirement as determined by the course instructor may be withdrawn.

Students who fail to attend the first scheduled class meeting, or to contact the instructor regarding absence before the first scheduled class meeting may, at the option of the instructor, be withdrawn.

At the beginning of each course, each faculty member will provide students with written attendance requirements. It is the student’s responsibility to consult with the instructor regarding official or unofficial absences. Absences begin to accumulate with the first scheduled class meeting.

Students bear the responsibility of notifying the Office of Admissions and Records when they discontinue studies in a course or at the college. Please refer to the Withdrawal Procedures.

A. Official Absences

Official absences are those which occur when students are involved in an official activity of the college (e.g., field trips, tournaments, athletic events) and present an official absence excuse form. Absences for such events shall not count against the number of absences allowed by an instructor or department. Students who must miss a class for an official reason must obtain an official absence verification card from the appropriate vice president or designee and present it to the appropriate instructor(s) before the absence. Prior arrangements must be made with each instructor for make-up work. If prior arrangements have been made, the student will not be penalized.

Other official absences include jury duty and subpoenas. Appropriate documentation will be required. Prior arrangements must be made with each instructor for make-up work.

If prior arrangements have been made, the student will not be penalized.

In the event of the death of an immediate family member, absences for periods of up to one week will not be counted against the number of absences allowed by an instructor or department. Students should contact instructor(s) as soon as possible to arrange for make-up work. Appropriate documentation will be required (for example, a copy of the obituary or funeral program). In specialized programs that require clinical rotations, this regulation may not apply.

B. Religious Holidays

Students shall have the right to observe major religious holidays without penalty or reprisal by any administrator, faculty member or employee of the Maricopa Community Colleges. Absences for such holidays shall not count against the number of absences allowed by an instructor or department. At least one week before the holiday, students shall submit to their instructor(s) a written statement which includes both the date of the holiday and the reason why class attendance is impossible. Prior arrangements must be made with each instructor for make-up work. If prior arrangements have been made, the student will not be penalized.

GRADING (AR 2.3.3)

A. Policy

It is the policy of the Maricopa Community Colleges that a grade will be assigned at the conclusion of the course. Official grades are available on designated college websites.

Grade Key:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
<th>Grade Points per Credit Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>Above Average</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>Average</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>Passing</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>Failure</td>
<td>0</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete</td>
<td>Not computed in grade point average</td>
</tr>
<tr>
<td>IP</td>
<td>Course In Progress</td>
<td>Not computed in grade point average</td>
</tr>
<tr>
<td>N</td>
<td>Audit</td>
<td>Not computed in grade point average</td>
</tr>
<tr>
<td>P*</td>
<td>Credit</td>
<td>Not computed in grade point average</td>
</tr>
<tr>
<td>W</td>
<td>Withdrawn, passing (effective Fall 2000)</td>
<td>Not computed in grade point average</td>
</tr>
<tr>
<td>Y</td>
<td>Withdrawn, failing</td>
<td>0</td>
</tr>
<tr>
<td>Z</td>
<td>No Credit</td>
<td>Not computed in grade point average</td>
</tr>
</tbody>
</table>

* A “P” is judged to be equivalent to a grade of C or higher.
B. Incomplete Grade

Students who are doing acceptable work may request an incomplete grade “I” if they are unable to complete the course requirements by the end of the term because of illness or other extenuating circumstances. If the request is approved by the instructor, he or she shall define, in a written contract, how the course will be completed. The contract will be filed with the Office of Admissions and Records.

Students must complete the requirements within the time period agreed to - maximum time allowed is seven (7) months from the last date of class in which the grade of incomplete was assigned. Students who do not complete the requirements within seven (7) months will have their grade recorded in accordance with the written contract. Students should NOT reregister for the course to complete the contract.

C. Repeating a Course/Improving a Grade

To improve a previously earned grade, students may repeat the course up to three times after the initial attempt to improve a grade. (A “W” or “Y” is not considered an attempt.) Students planning to enroll in a course for the third time should seek advisement prior to enrolling. All enrollments in a course will appear on the transcript and will be included in calculating the grade point average. The student may request in writing that the course(s) with the lower grade(s) be excluded during the grade point average calculation. The written request must be submitted to the Office of Admission and Records at the Maricopa Community College where the course with the lower grade was taken. Check individual courses and programs for exceptions.

D. Credit/No Credit Courses (P/Z)

Some courses may be taken under a credit/no credit grading system. These courses carry grades of P (credit, equivalent to a grade of C or higher) or Z (no credit) and are not computed in the student’s grade point average. Credits earned with a grade of P may be counted toward graduation with the exception of AGEC (Arizona General Education Curriculum).

The prescribed time limits are for full semester classes. Time limits for classes which meet fewer than sixteen (16) weeks are adjusted accordingly. See “Important Deadlines for Students.”

In courses with credit/no credit (P/Z) grading, the student may request standard grading (A, B, C, D, F), within fourteen (14) days including the date of the first class meeting. The instructor must immediately notify the Office of Admissions and Records.

In courses with standard grading (A, B, C, D, F), the instructor determines if the credit/no credit option is available. If the option is available, the student must obtain the permission of the instructor.

E. Audit Courses

Auditors are those who enroll in a course for the sole purpose of obtaining information; they receive no credit, grades, homework, or tests. If an auditor wishes to earn credit, he or she must change from audit status to credit status within the first week. If a student wishes to audit a course for which he or she is enrolled for credit, the change must be made within the first five (5) weeks of a semester. Auditors are subject to the same attendance policies as other students and must meet the same prerequisite requirements or obtain approval of the instructor. See the fee schedule for charges. Financial aid is not available for audited courses.

The prescribed time limits are for full semester classes. Time limits for classes which meet fewer than sixteen (16) weeks are adjusted accordingly. See “Important Deadlines for Students.”

Advisory note: Some institutions outside the Maricopa Community Colleges may translate the Z grade as failing.
### F. IMPORTANT DEADLINES FOR STUDENTS

Deadlines are based on calendar days and begin with the first day of class. Deadlines that fall on a weekend or holiday advance to the next college workday.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Deadline for Students to Withdraw with Guaranteed Grade of W</th>
<th>Deadline for Students to Withdraw From a Course (Instructor Signature Required)</th>
<th>Deadline for Students to Request Complete Withdrawal</th>
<th>Deadline to Change Type of Grading (A-F to P/I, or P/I to A/F)</th>
<th>Deadline to Change from Audit Grade to Credit Grade</th>
<th>Deadline to Change from Credit Grade to Audit Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Week or less (1 to 7 days)</td>
<td>1st Day of Class</td>
<td>1st Day of Class or Prior to the Last Day of Class</td>
<td>1st Day of Class or Prior to the Last Day of Class</td>
<td>1st Day of Class</td>
<td>1st Day of Class</td>
<td>1st Day of Class</td>
</tr>
<tr>
<td>Two Weeks (8 to 14 days)</td>
<td>3rd Calendar Day</td>
<td>8th Calendar Day</td>
<td>6th Calendar Day</td>
<td>1st Day of Class</td>
<td>1st Day of Class</td>
<td>3rd Calendar Day</td>
</tr>
<tr>
<td>Three Weeks (15 to 21 Days)</td>
<td>6th Calendar Day</td>
<td>12th Calendar Day</td>
<td>12th Calendar Day</td>
<td>2nd Calendar Day</td>
<td>1st Day of Class</td>
<td>5th Calendar Day</td>
</tr>
<tr>
<td>Four Weeks (22 to 28 days)</td>
<td>9th Calendar Day</td>
<td>17th Calendar Day</td>
<td>17th Calendar Day</td>
<td>3rd Calendar Day</td>
<td>2nd Calendar Day</td>
<td>7th Calendar Day</td>
</tr>
<tr>
<td>Five Weeks (29 to 35 days)</td>
<td>12th Calendar Day</td>
<td>23rd Calendar Day</td>
<td>23rd Calendar Day</td>
<td>4th Calendar Day</td>
<td>2nd Calendar Day</td>
<td>9th Calendar Day</td>
</tr>
<tr>
<td>Six Weeks (36 to 42 days)</td>
<td>14th Calendar Day</td>
<td>29th Calendar Day</td>
<td>29th Calendar Day</td>
<td>5th Calendar Day</td>
<td>3rd Calendar Day</td>
<td>11th Calendar Day</td>
</tr>
<tr>
<td>Seven Weeks (43 to 49 days)</td>
<td>17th Calendar Day</td>
<td>35th Calendar Day</td>
<td>35th Calendar Day</td>
<td>5th Calendar Day</td>
<td>3rd Calendar Day</td>
<td>12th Calendar Day</td>
</tr>
<tr>
<td>Eight Weeks (50 to 56 days)</td>
<td>20th Calendar Day</td>
<td>41st Calendar Day</td>
<td>41st Calendar Day</td>
<td>6th Calendar Day</td>
<td>3rd Calendar Day</td>
<td>15th Calendar Day</td>
</tr>
<tr>
<td>Nine Weeks (57 to 63 days)</td>
<td>23rd Calendar Day</td>
<td>46th Calendar Day</td>
<td>46th Calendar Day</td>
<td>7th Calendar Day</td>
<td>4th Calendar Day</td>
<td>17th Calendar Day</td>
</tr>
<tr>
<td>Ten Weeks (64 to 70 days)</td>
<td>26th Calendar Day</td>
<td>52nd Calendar Day</td>
<td>52nd Calendar Day</td>
<td>8th Calendar Day</td>
<td>4th Calendar Day</td>
<td>19th Calendar Day</td>
</tr>
<tr>
<td>Eleven Weeks (71 to 77 days)</td>
<td>29th Calendar Day</td>
<td>58th Calendar Day</td>
<td>58th Calendar Day</td>
<td>8th Calendar Day</td>
<td>5th Calendar Day</td>
<td>21st Calendar Day</td>
</tr>
<tr>
<td>Twelve Weeks (78 to 84 days)</td>
<td>32nd Calendar Day</td>
<td>63rd Calendar Day</td>
<td>63rd Calendar Day</td>
<td>10th Calendar Day</td>
<td>5th Calendar Day</td>
<td>23rd Calendar Day</td>
</tr>
<tr>
<td>Thirteen Weeks (85 to 91 days)</td>
<td>35th Calendar Day</td>
<td>70th Calendar Day</td>
<td>70th Calendar Day</td>
<td>10th Calendar Day</td>
<td>5th Calendar Day</td>
<td>25th Calendar Day</td>
</tr>
<tr>
<td>Fourteen Weeks (92 to 98 days)</td>
<td>38th Calendar Day</td>
<td>76th Calendar Day</td>
<td>76th Calendar Day</td>
<td>11th Calendar Day</td>
<td>6th Calendar Day</td>
<td>27th Calendar Day</td>
</tr>
<tr>
<td>Fifteen Weeks (99 to 105 days)</td>
<td>41st Calendar Day</td>
<td>82nd Calendar Day</td>
<td>82nd Calendar Day</td>
<td>12th Calendar Day</td>
<td>6th Calendar Day</td>
<td>28th Calendar Day</td>
</tr>
<tr>
<td>Sixteen Weeks or more (106 or more days)</td>
<td>End of the seventh week</td>
<td>Two weeks before the last class period</td>
<td>Within 14 days including the first class period</td>
<td>Within first week of class</td>
<td>Within first five weeks</td>
<td>Within first five weeks</td>
</tr>
</tbody>
</table>
A. Probation
A student will be placed on academic probation under the following conditions:

1. If, after completion of twelve (12) or more credit hours, the student’s cumulative grade point average is less than:

<table>
<thead>
<tr>
<th>Credit Hours for Which Grade Points are Computed at Resident Maricopa Community College (A, B, C, D, F, and Y)</th>
<th>Minimum Grade Point Average Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-15</td>
<td>1.60</td>
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<td>16-30</td>
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<tr>
<td>31-45</td>
<td>1.90</td>
</tr>
<tr>
<td>46+</td>
<td>2.00</td>
</tr>
</tbody>
</table>

(Students should also be aware that graduation requires a cumulative minimum grade point average of 2.00).

2. If, in transferring from any accredited institution of higher education, the student’s cumulative grade point average from other colleges and universities does not meet the requirements listed above.

Students on academic probation may take no more than twelve (12) credit hours per semester unless approved by the Admissions and Standards Committee.

B. Continued Probation
A student on academic probation who fails to raise the cumulative grade point average to the required minimum standards (see above) will be placed on continued probation and may be limited to taking six (6) credit hours.

Regulations regarding continued probation do not apply to the summer session. Credit hours earned in summer sessions will be included in the cumulative grade point average.

C. Admission of Suspended Students
Transfer students who do not meet the minimum grade point average listed under Scholastic Standards may be admitted on academic probation.

INSTRUCTIONAL GRIEVANCE PROCESS (AR 2.3.5 & Appendix S-6)

A student who feels that he or she has been treated unfairly or unjustly by a faculty member with regard to academic process such as grading, testing or assignments, has the right to appeal according to the approved procedures. The appeal process for grades expires one year from the date the grade was issued.

Steps for students to take:

1. Discuss the issue with the faculty member involved. This conference should be requested by the student within fifteen (15) working days from the time the student knew or reasonably should have known about the unfair or unjust treatment.

2. If, within ten (10) working days of the request for the conference with the faculty member, the problem is not resolved or the faculty member has been unable to meet with the student, the student may continue the process by filing a written complaint with the department/division chair person and appropriate administrative officer at the college/-center. This written complaint must be filed within ten (10) working days following the previous deadline. The written complaint will be given to the faculty member five (5) days before any official meetings are convened.

3. Upon receipt of a written complaint, the department/division chair or appropriate college administrative officer will work with the parties in an attempt to resolve the conflict. The faculty member may ask that the college faculty senate president be in attendance. Every attempt will be made to maintain confidentiality during this process.

A faculty member will not be required to respond to a complaint which is not in writing and which, when appropriate, did not have specific documentation including dates, times, materials, etc. The written complaint will be made available to the faculty member.

4. If the grievance is not resolved at this level within ten working days, the student should forward to vice president of academic affairs or designee, a copy of the original written complaint with an explanation regarding action taken at each prior level. The vice president of academic affairs or designee will meet with the student, faculty member, the college faculty senate president if requested by the faculty member, and department/division chairperson and attempt to resolve the issues. This level will be the final step in any grievance process regarding grades.

5. If the grievance, other than those concerning grades, is not resolved by the vice president of academic affairs or designee, it may be forwarded in writing by the student to the college president for final resolution. The college president or designee will expedite a timely examination of the issues and will issue a final written determination in the grievance process.
NON-INSTRUCTIONAL COMPLAINT RESOLUTION PROCESS (outside the classroom)

A student who feels that he or she has been treated unfairly or unjustly by any employee with regard to a non-instructional process such as a student or administrative services has the right to file a formal and written complaint according to the approved procedures.

Steps for students to take:
1. Discuss the issue with the employee involved. The student should request this conference within fifteen (15) working days from the time the student knew or reasonably should have known about the unfair or unjust treatment.

2. If, within ten (10) working days of the request for the conference with the employee, the problem is not resolved or the employee has been unable to meet with the student, the student may continue to process by filing a written complaint with the appropriate supervisor of the employee where authority exists to take corrective action. This written complaint will be given to the employee five (5) working days before any official meeting are convened.

3. Upon receipt of a written complaint, the appropriate supervisor will work with the parties in an attempt to resolve the conflict. Every attempt will be made to maintain confidentiality during this process. An employee will not be required to respond to a complaint which is not in writing and which, when appropriate, does not have specific documentation including dates, times, actions, supporting documents, etc. The written complaint will be made available to the employee.

4. If the complaint is not resolved at this level within ten (10) working days, the student should forward to the or the appropriate college/-center vice president or designee, a copy of the original written complaint with an explanation regarding action taken at each prior level. The vice president or designee will meet with the student, the employee, and the relevant supervisor and attempt to resolve the issues.

5. If the vice president or or designee do not resolve the complaint, the student may forward it in writing to the college president for final resolution. The college president or designee will issue a final written determination in the complain process.

WITHDRAWAL (AR 2.3.6)

To withdraw from a course or courses from the college, students must follow approved procedures. The Office of Admissions and Records provides information about the withdrawal process.

The official date of withdrawal is the last date of attendance as determined by the student’s withdrawal or as reported by the instructor. The official date of withdrawal determines refunds. Never attending is not a guarantee for a refund or an excuse of the debt incurred through registration. Please see the refund policy.

The prescribed time limits are for full semester classes. Time limits for classes which meet fewer than sixteen (16) weeks are adjusted accordingly. See “Important Deadlines for Students.” Failure to file an official withdrawal form may result in failing grades and responsibility for course tuition and fees.

WITHDRAWAL PROCEDURES (Appendix S-7)

A. Withdrawal from Specific Courses

Student may be officially withdrawn from specific courses in the following ways:

1. Through the 7th week, a student may initiate an official withdrawal from any course by submitting a course withdrawal form with the required signatures to the Office of Admissions and Records in accordance with the published deadlines. A grade of W (withdrawn, passing - not computed in the grade point average) or Y (withdrawn, failing - computed in the GPA as a failing grade) will be assigned.

2. After the 7th week, a student may initiate a withdrawal. The faculty member will sign the form and assign a grade of W or Y. The form is then to be returned to the Office of Admissions and Records. (See the college academic calendar for student deadline date.)

3. A faculty member has the option of withdrawing a student who has accumulated unofficial absences in excess of the number of times a class meets per week. Students withdrawn for excessive absences may be reinstated only with the approval of the faculty member. A grade of W will be assigned through the 7th week. After the 7th week, a grade of W or Y will be assigned. Faculty members electing to withdraw students must file the withdrawal form, including the last date of attendance, with the Office of Admissions and Records. Failure to file an official withdrawal form may result in failing grades.
B. Complete Withdrawal from College

Students electing to withdraw from the college must contact the Office of Admissions and Records no later than two weeks before the end of the last class meeting and may be required to file a written request.

A grade of W will be assigned in all courses for students who withdraw by the end of the 7th week of classes. Withdrawals completed after this time will result in a grade of W (withdrawn, passing - not computed in the grade point average) or Y (withdrawn, failing - computed in the GPA as a failing grade) will be assigned.

C. Withdrawal of Financial Aid Students

In accordance with federal regulations (CFR 668.22), a student may be required to repay federal financial aid funds if they completely withdraw or are withdrawn, or fail to earn a passing grade from all classes during a semester. Further information is available at the college Office of Student Financial Aid. This could affect a student’s ability to receive Financial Aid in the future at any school.

ACADEMIC RENEWAL (AR 2.3.7)

Students who are returning after a separation of five (5) years or more from the Maricopa Community College District, may petition for academic renewal. The request must be in writing and submitted to the Office of Admissions and Records at the college where the grades were earned.

Academic renewal at one of the Maricopa Community Colleges does not guarantee that colleges outside the Maricopa Colleges will accept this action. Acceptance of academic renewal is at the discretion of the receiving institution.

A. Prior to petitioning for academic renewal, the student must demonstrate renewed academic performance by earning a minimum of twelve (12) credit hours and a cumulative grade point average of 2.5 or higher within Maricopa Colleges after reenrollment.

B. Upon approval, all courses taken prior to reenrollment with a grade of “A,” “B,” “C,” “D,” “F,” and “Y” will be annotated as academic renewal on the student’s permanent record. All course work affected by academic renewal will not be computed in the grade point average. Courses with grades “A,” “B,” or “C” will have the associated credit hours counted in the total credit hours earned. Such credit will not be computed in the grade point average.

C. All course work will remain on the student’s permanent academic record, ensuring a true and accurate academic history.

D. The academic renewal policy may be used only once at each college and cannot be revoked once approved.

E. Students who have been granted Academic Renewal must also meet the Financial Aid Standards of Academic Progress if they wish to receive financial aid.

HONORS PROGRAM (AR 2.3.8)

Each of the Maricopa Community Colleges has an honors program. Interested students should contact the college honors coordinator for information about the program and available scholarships, including the Chancellor’s, Foundation’s, and President’s Scholarships.

PRESIDENT'S HONOR LIST

The President’s Honor List for each college consists of all students who complete twelve (12) or more credit hours in residence in courses numbered 100 or higher in a given semester with a college semester grade point average of 3.75 or higher.

GENERAL GRADUATION REQUIREMENTS (AR 2.3.9)

Note: Also see “Catalog Under Which a Student Graduates (AR 2.2.5) - Page 272

All students are required to complete the degree and/or certificate requirements as approved by the Maricopa Community Colleges Governing Board. The college reserves the right to make necessary course and program changes in order to meet current educational standards. In addition, students must:

1. be credited in the Office of Admissions and Records with not fewer than: 60 semester credit units in courses numbered 100 or above for the Associate in Arts degree, Associate in Science degree, Associate in Transfer Partnership degree, and Associate in General Studies degree; 60 semester credit units for the Associate in Applied Science degree; 62 semester credits for the Associate in Business degrees. For specific certificate programs, be credited with not fewer than the minimum total of credit units required for the certificate program. Students not continuously enrolled, as outlined in the Catalog Under Which a Student Graduates policy, must satisfy current graduation requirements.

2. have earned a minimum of 12 semester credit units toward the degree or certificate at the district college granting the degree or certificate. In cases where the certificate requires fewer than 12 credit units, a minimum of six credit unit must be completed at the college awarding the certificate.

3. have filed an application for the degree or certificate with the Office of Admissions and Records on the date determined by the college/center.
Students must apply for graduation from the college where they have successfully completed Block 4 of the Associate in Applied Science in Nursing.

4. have a minimum cumulative grade point average of 2.00 at the college granting the degree.

5. have a minimum cumulative grade point average of 2.00 in all courses used to fulfill degree requirements. Some specific programs have higher grade requirements. It is the student’s responsibility to be aware of these program requirements.

6. have removed, thirty (30) days after the anticipated graduation date, all deficiencies on the record to use those courses toward program completion.

7. have removed any indebtedness to any MCCCD college/center.

8. have paid required degree or certificate application fee. See fee schedule for charges.

Graduation Grade Point Average
Students must meet all requirements for graduation. Graduation requires a minimum grade point average of 2.00. Some specific programs have higher grade requirements. It is the student’s responsibility to be aware of these program requirements. For more information, see the General Graduation Requirements section.

Graduation with Honors
All courses used to fulfill graduation requirements, including courses from other accredited institutions, will be entered in the grade point average calculation for honors designations.

Students who have the following grade point averages will graduate with the following distinctions:

- 3.50 to 3.69 “with distinction”
- 3.70 to 3.89 “with high distinction”
- 3.90 to 4.0 “with highest distinction”

Graduation – Honors Program
Students who meet all the requirements of the Honors Program at the district college granting the degree will be designated as Honors Program Graduates.

CERTIFICATES/DEGREES
The Maricopa Community Colleges offer Certificates of Completion as well as Associate Degrees, one of which is conferred on each student who has completed a program of study. These certificates and degrees are as follows:

(1) Certificate of Completion (Career Program Specified)
(2) Academic Certificate
(3) General Education Certificate
(4) Associate in Arts
(5) Associate in Science
(6) Associate in Business
(7) Associate in General Studies
(8) Associate in Transfer Partnership
(9) Associate in Applied Science (Career Program Specified)

All candidates for a degree and/or certificate must complete the General Graduation Requirements as approved by the Maricopa Community Colleges Governing Board.

All students are urged to meet with a faculty advisor, program advisor or counselor as soon as possible to determine which program meets their needs and to plan their course of study.

GRADUATE GUARANTEE POLICY
The Governing Board believes so strongly in the quality of its colleges’ occupational training programs that it guarantees graduate competence.

1. Graduation from an Associate in Applied Science (AAS) is designed to prepare a person for entry-level employment in a specific career field. A graduate’s ability to perform approved program competencies will be judged by employers. Should the employer of a graduate who has earned an AAS Degree find the employee lacking in the technical skills normally expected of an entry-level employee in the specific career field for which that graduate prepared, the District will provide the graduate with up to the equivalent of twelve (12) credit hours of retraining for no additional tuition.

2. Because technical occupations change rapidly, initial employment in an AAS Degree-related field must occur within one year of graduation from the AAS Degree program in question.

Retraining needs to occur as cost effectively as possible. The graduate’s employer must present a list of the graduate’s skill deficiencies to the appropriate vice president or designee at the graduate’s alma mater. All retraining will be completed in a reasonable time as agreed to by the employer, the student, and the college.
Licensure Disclaimer
Maricopa Community Colleges courses and programs prepare students for entry into a variety of professions. Many of these professions require that a person hold an occupational license or certificate in order to work in a particular field. Typically, a person must meet certain legal requirements before obtaining such a license or certificate. These requirements are established by county, state or federal agencies, and often are based on a person’s character, or whether the person has been convicted of a criminal offense. It is possible for a student who has obtained a degree or certificate from a community college to be denied the right to work in a particular profession after completing the degree or certificate because of concerns over the student’s character or criminal background. Any student preparing to enter a field for which a professional license or certificate is required is strongly advised to consult with the appropriate government agency that issues such credentials. That agency can provide the student complete information about any requirements the law imposes for working in a particular occupation.

MCCCD General Education Statement
The general education core of the program of study for an associate degree or a certificate helps students develop a greater understanding of themselves, of their relationship with others, and of the richly diverse world in which they live. The general education experience provides students with opportunities to explore broad areas of commonly held knowledge and prepares them to contribute to society through personal, social, and professional interactions with others. General education fosters students’ personal development by opening them to new directions, perspectives, and processes.

Through its general education requirements, the Maricopa County Community College District is committed to helping students develop qualities and skills that will serve them throughout their lives. General education opportunities encourage students to:

- Build self-awareness, self-respect, and self-confidence
- Recognize and respect the beliefs, traditions, abilities, and customs of all people and all cultures
- Consider the local, global, and environmental impacts of personal, professional, and social decisions and actions
- Access, evaluate, analyze, synthesize, and use information wisely
- Communicate effectively personally, socially, and professionally
- Think critically, make informed decisions, solve problems, and implement decisions
- Consider the ethical implications of their choices
- Value the learning process throughout their lives
- Integrate and connect ideas and events in a historical perspective, and see relationships among the past, the present, and the future
- Develop a personal sense of aesthetics
- Use technological resources appropriately and productively
- Work cooperatively and respectfully with others to serve their communities

The general education experience at MCCCD is composed of specific elements across the curriculum designed to provide the learner with essential knowledge and skills:

- Communication
- Arts and Humanities
- Numeracy
- Scientific Inquiry in the Natural and Social Sciences
- Information Literacy
- Problem-Solving and Critical Thinking
- Cultural Diversity

General Education Designations (example: [FYC], [SB], [HU], etc.)
Effective Fall 2000 the course evaluation and/or general education designation as listed in the Arizona CEG (Course Equivalency Guide) within the Arizona Course Applicability System (AZCAS) is valid for the term in which the student is awarded credit on the transcript. A course evaluation and/or general education designation may be subject to change. Given that curriculum is dynamic at both MCCCD and the institutions to which MCCCD students transfer, students have the option to petition for general education evaluations and/or general education designations.

The college reserves the right to make necessary course and program changes in order to meet current educational standards.

Catalog Under Which a Student Graduates (AR 2.2.5)

Students maintaining continuous enrollment at any public Arizona community college or university may graduate according to the requirements of the catalog in effect at the time of initial enrollment or according to the requirements of any single catalog in effect during subsequent terms of continuous enrollment. Students may maintain continuous enrollment whether attending a single public community college or university in Arizona or transferring among public institutions in Arizona while pursuing their degrees.
1. A semester in which a student earns course credit will be counted toward continuous enrollment. Non-credit courses, audited courses, failed courses, or courses from which the student withdraws do not count toward the determination of continuous enrollment for catalog purposes.

**EXAMPLE A:**

Admitted & Earned Course Credit at a Public Community College or University Fall '93 (Active)

Continued at a Public Community College Spring '94, Fall '94 (Active)

Transferred to a University Spring '95 (1993 or Any Subsequent Catalog)

**EXAMPLE B:**

Admitted & Earned Course Credit at a Public Community College or University Fall '92 (Active)

Enrolled But Earned All Ws, Zs, or Fs Spring '93 (Inactive)

Enrolled in Audit Courses Only Fall '93 (Inactive)

Nonattendance Spring '94 (Inactive)

Transferred to a University Fall '94 (1994 or Any Subsequent Catalog)

2. Students who do not meet the minimum enrollment standard stipulated in No. 1 during three consecutive semesters (fall/spring) and the intervening summer term* at any public Arizona community college or university are no longer considered continuously enrolled, and must meet requirements of the public Arizona community college or university catalog in effect at the time they are readmitted or of any single catalog in effect during subsequent terms of continuous enrollment after readmission.

**EXAMPLE A:**

Admitted & Earned Course Credit at a Public Community College or University Fall '92 (Active)

Nonattendance Spring '93, Fall '93, Spring '94 (Inactive)

Readmitted & Earned Course Credit at a Public Community College Fall '94 (Active)

Transferred to a University Spring '95 (1994 or Any Subsequent Catalog)

**EXAMPLE B:**

Admitted & Earned Course Credit at a Public Community College or University Fall '92 (Active)

Nonattendance Spring '93 (Inactive)

Readmitted & Earned Course Credit at a Public Community College Summer '93 (Active)

Nonattendance Fall '93, Spring '94 (Inactive)

Transferred to a University Fall '94 (1992 or Any Subsequent Catalog)

3. Students admitted or readmitted to a public Arizona community college or university during a summer term must follow the requirements of the catalog in effect the following fall semester or of any single catalog in effect during subsequent terms of continuous enrollment.

**EXAMPLE:**

Admitted & Earned Course Credit at a Public Community College or University Summer '94 (Active)

Continued at a Public Community College Fall '94, Spring '95 (Active)

Nonattendance Fall '95 (Inactive)

Readmitted & Earned Course Credit at a Public Community College Spring '96 (Active)

Transferred to a University Summer '96 (1994 or Any Subsequent Catalog)

4. Students transferring among Arizona public higher education institutions must meet the admission requirements, residency requirements, and all curricular and academic requirements of the degree-granting institution.

**University Department Time Limit for Coursework**

In areas of study in which the subject matter changes rapidly, material in courses taken long before graduation may become obsolete or irrelevant. Coursework that is more than eight years old is applicable to completion of degree requirements at the discretion of the student’s major department. Departments may accept such coursework, reject it, or request that the student revalidate its substance. The eight-year limit on coursework applies except when program accreditation agencies limit the life of coursework to less than eight years. Departments may also require students to satisfy current major requirements rather than major requirements in earlier catalogs, when completing earlier requirements is no longer possible or educationally sound.

The college reserves the right to make necessary course and program changes in order to meet current educational standards.

### SEXUAL HARASSMENT POLICY

**(AR 2.4.4 & 5.1.8-17)**

The policy of the Maricopa Community Colleges is to provide an educational, employment, and business environment free of unwelcome sexual advances, requests for sexual favors, and other verbal and/or physical conduct or communications constituting sexual harassment as defined and otherwise prohibited by local, state, and federal law.
Sexual harassment by and between employees, students, employees and students, and campus visitors and students or employees is prohibited by this policy.

Violations of this policy may result in disciplinary action up to and including termination of employees, sanctions up to and including suspension or expulsion of students, and appropriate sanctions against campus visitors.

This policy is subject to constitutionally protected speech rights and principles of academic freedom. Questions about this policy may be directed to the Maricopa Community Colleges Equal Employment Opportunity/ Affirmative Action (EEO/AA) Office.

Examples of Policy Violations (AR 5.1.9)
It shall be a violation of Maricopa Community College’ Sexual Harassment Policy for any employee, student or campus visitor to:

A. Make unwelcome sexual advances to another employee, student or campus visitor;

B. Make unwelcome requests for sexual favors, whether or not accompanied by promises or threats with regard to the employment or academic relationship;

C. Engage in verbal or physical conduct of a sexual nature with another employee, student or campus visitor, that may threaten or insinuate, either explicitly or implicitly, that the individual’s submission to, or rejection of, the sexual advances will in any way:
   1. Influence any personnel decision regarding that person’s employment, evaluation, wages, advancement, assigned duties, shifts or any other condition of employment or career development; or
   2. Influence his or her grades, participation in or access to academic programs, class standing or other educational opportunities;

D. Engage in verbal or physical conduct of a sexual nature that:
   1. Has the purpose or effect of substantially interfering with an employee’s ability to do his or her job; or with a student’s ability to learn or participate in a class; or
   2. Which creates an intimidating, hostile or offensive work or academic environment;

E. Commit any act of sexual assault or public sexual indecency against any employee or student whether on Maricopa Community Colleges property or in connection with any Maricopa Community Colleges-sponsored activity;

F. Continue to express sexual interest in another employee, student or campus visitor after being informed or on notice that the interest is unwelcome (reciprocal attraction is not considered sexual harassment);

G. Engage in other sexually harassing conduct in the workplace or academic environment, whether physical or verbal, including, but not limited to, commentary about an individual’s body (or body parts), sexually degrading words to describe an individual, sexually offensive comments, sexually suggestive language or jokes, innuendoes, and sexually suggestive objects, books, magazines, computer software, photographs, cartoons or pictures.

Additional Policy Violations (AR 5.1.10)
Supervisors, managers, administrators and faculty who disregard or fail to report allegations of sexual harassment (whether reported by the person who is the subject of the sexual harassment or a witness) are in violation of this policy.

Responsibility for Policy Enforcement (AR 5.1.11)
Every Maricopa Community Colleges employee and student must avoid offensive or inappropriate sexual and/or sexually harassing behavior at work or in the academic environment.

Employees and students are encouraged (but not required) to inform perceived offenders of this policy that the commentary/conduct is offensive and unwelcome.

Amorous Relationships (AR 5.1.12)
An amorous relationship that might be appropriate in other circumstances may be inappropriate if one of the individuals in the relationship has a professional responsibility toward, or is in a position of authority with respect to, the other, such as in the context of instruction, counseling, advisement or supervision. An element of power is often present in such a context and it is incumbent upon those with authority not to abuse that power.

Complaints (AR 5.1.13)

A. Employees
Employees who experience sexual harassment at work (by a supervisor, co-employee, student or visitor) are urged to report such conduct to the direct attention of their supervisor, their college president or to the Maricopa Community Colleges Equal Employment Opportunity/Affirmative Action Office(480-731-8885). If the complaint involves the employee’s supervisor or someone in the direct line of supervision, or if the employee for any reason is uncomfortable in dealing with his or her immediate supervisor, the employee may go directly to the Maricopa Community Colleges EEO/AA Office.

B. Students
Students who experience sexual harassment in the academic environment (by a faculty member, administrator, campus visitor or other student) are urged to report such conduct to the vice president of student affairs or designee at each individual campus. A student may also contact the Maricopa Community Colleges EEO/AA Office to obtain the name and phone number of the college official designated to respond to sexual harassment complaints.
C. General - Applicable to Both Employees and Students
Complaints will be investigated according to procedures established by the Maricopa Community Colleges EEO/AA Office. Copies of these procedures may be obtained in the college president’s office, vice president of student affairs and the Maricopa Community Colleges EEO/AA Office.

The college/center/MCCCD will investigate all complaints as professionally and expeditiously as possible.

Where investigation confirms the allegations, appropriate responsive action will be taken by the college/center/MCCCD.

Confidentiality (AR 5.1.14)
Records will be maintained in a confidential manner to the extent permitted by law and insofar as they do not interfere with Maricopa Community Colleges’ legal obligation to investigate and resolve issues of sexual harassment.

Violations of Law (AR 5.1.15)
An employee or student may be accountable for sexual harassment under applicable local, state, and/or federal law, as well as under Maricopa Community Colleges policy. Disciplinary action by Maricopa Community Colleges may proceed while criminal proceedings are pending and will not be subject to challenge on the grounds that criminal charges involving the same incident have been dismissed or reduced.

False Statements Prohibited (AR 5.1.16)
Any individual who knowingly provides false information pursuant to filing a discrimination charge or during the investigation of a discrimination charge, will be subject to appropriate disciplinary action, up to and including, employment termination or academic dismissal.

Retaliation Prohibited (AR 5.1.17)
Retaliation against an employee or student for filing a sexual harassment complaint, or participating in the investigation of a complaint, is strictly prohibited. Maricopa Community Colleges will take appropriate disciplinary action, up to and including employment termination or academic dismissal if retaliation occurs.

PETITION SIGNATURE SOLICITATION (AR 2.4.8)
A. This regulation shall govern access to college premises by representatives who wish to solicit signatures on petitions for the purpose of submission of a ballot proposition to voters, or nomination of a candidate for elective office, in a city-, county-, or state-wide election.

B. Each college president shall designate general hours of accessibility for solicitation and a location on college premises where all representatives on behalf of any candidate or ballot proposition may solicit signatures. The location shall be in a common area where the solicitation will not serve as an obstruction to student activities or otherwise disrupt the college environment.

C. All solicitation must take place in designated areas. Standard space may include one or two tables and chairs. Campus restrictions regarding amplification will apply. Representatives may not distribute or make available to students, employees, or college visitors any tangible item, except for informational literature about the proposed candidate or ballot initiative.

D. Representatives shall notify the designated official at each college or center of their intent to be present on college premises no fewer than three working days prior to soliciting signatures. Upon obtaining authorization, representatives shall be provided a written version of this regulation.

SOLICITATION (AR 2.4.9)
A. Definitions
A “solicitor” is any non-Maricopa Community Colleges- affiliated entity that would, on the premises of any Maricopa Community College or Center, purport to sell or promote any product, service, or idea, but does not include such an entity that would enter the premises for the purposes of promoting, opposing, or soliciting petition signatures in connection with any political candidate or initiative, or referendum ballot.

A “special event” is a college-sponsored event conducted on college premises for the benefit of students that is based on a particular theme, and for which the college has deemed it essential to invite the participation of solicitors whose products, services or ideas are pertinent to the special event’s theme.

B. Requirements
1. A solicitor must notify the designated official at each college or center of their intent to solicit on college or center premises. A solicitor who would purport to sell any product or service is responsible for obtaining any necessary tax licenses and must submit to the designated official a certificate of commercial liability insurance and pay to the college or center, in consideration for the opportunity for solicitation, a fee in the amount of $50 per day or $125 per full week.

2. Campus restrictions regarding location, time, date, and use of amplification may apply. All requests for space shall be granted on a first-come, first-served basis only upon completion of the requirements contained in this regulation.

3. All solicitation must take place at tables in designated areas. Standard space will be one or two tables and chairs. Solicitors may be limited to no more than fifty (50) hours of solicitation activity per semester at each college or center.
By requesting the opportunity for solicitation on the premises of a college or center, a solicitor warrants that it may lawfully sell or promote its product, service or idea and that such activity does not violate any law, and does not violate any trademark, copyright, or similar proprietary interest. The activity of any solicitor may not violate any existing Maricopa contract.

The president of every college or center shall establish for such location restrictions governing the activities of solicitors. Such restrictions shall supplement, but shall not replace or waive, this regulation.

A college may waive the fee prescribed in this regulation for any solicitor’s participation in a special event if the college determines that such participation will be of particular educational benefit to the interests of that college’s students; the participation is sponsored by a club, organization, or academic division; and the participation is approved by the college’s Student Life and Leadership department. A college may waive both the fee and the insurance certificate requirements prescribed in this regulation for a student purporting to sell or promote a product or service at a special event, provided that:

a. Such product or service presents low risk of harm to a potential user;

b. The product or service is not food or food-related and;

c. The student is soliciting solely on his or her own behalf and not pursuant to any sales agreement, commission agreement, or similar affiliation or contractual relationship with another entity.

4. Any solicitor who violates this regulation may be deemed a trespasser on college or center premises, and therefore subject to appropriate prosecution within the discretion of the College Safety department and other responsible officials at the college or center. The Maricopa County Community College District, its colleges and centers, assume no responsibility - financial or otherwise - for the acts or omissions of any vendor whose presence on college premises pursuant to this regulation is approved by any college official.

CHILDREN ON CAMPUS (AR 2.4.10)

Children (younger than 18) may not attend any class unless they are officially registered for the class.

Children will not be allowed on campus unless participating in an authorized college program or under the supervision of an adult.

CRIME AWARENESS AND CAMPUS SECURITY ACT (AR 2.4.11)

Federal legislation requires the college to maintain data on the types and number of crimes on college property as well as policies dealing with campus security. To obtain additional information on this subject, contact the college Safety and Security Department.

WORKPLACE VIOLENCE PREVENTION (AR 2.4.12)

It is the policy of the Maricopa Community Colleges to promote a safe environment for its employees, students, and visitors. The Maricopa Community Colleges are committed to working with its employees to maintain an environment free from violence, threats of violence, harassment, intimidation, and other disruptive behavior.

Violence, threats, harassment, intimidation, and other disruptive behavior in our facilities will not be tolerated, and it is the responsibility of all members of the Maricopa Community Colleges to report any occurrence of such conduct. Every employee, student and visitor on Maricopa Community College District property is encouraged to report threats or acts of physical violence of which he/she is aware. All reports will be taken seriously and will be dealt with appropriately. Such behavior can include oral or written statements, gestures, or expressions that communicate a direct or indirect threat of physical harm.

This policy applies to employees and students, as well as independent contractors and other non-employees doing business with the Maricopa Community Colleges. Individuals who commit such acts may be removed from the premises and may be subject to disciplinary action, criminal penalties, or both. The Chancellor is hereby instructed to enact all administrative regulations necessary to implement this policy.

STUDENT RIGHT TO KNOW (AR 2.4.13)

Under the terms of the Student Right To Know Act, the college must maintain and report statistics on the number of students receiving athletically related student aid reported by race and sex, the graduation rate for athletes participating in specific sports reported by race and sex, the graduation rate for students in general, reported by race and sex and other similar statistics. To obtain copies of these reports, contact the Office of Admissions and Records.
The owner of a copyright in a particular work has the exclusive right to copy, display, perform, distribute, and create a derivative version of the work. Generally, then this means that you may not duplicate, show or perform a copyrighted work unless it is expressly allowed under the Copyright Act or you have the prior permission of the copyright holder.

A copyright exists in a work at the time it becomes fixed in some tangible medium of expression. Neither registration of the copyright with the federal government nor a copyright notice on the work itself is required for copyright protection.

What is copyright infringement?
Generally, copyright infringement occurs when you copy, display, perform, distribute or create a derivative version of a copyrightable work either without the permission of the copyright holder or when such activity is not otherwise allowed under an exception provided by federal copyright law. The penalties for infringement include significant damages—potentially in excess of $100,000 for each work infringed.

How does copyright law affect information I obtain off the Internet?
Copyright law covers works in both traditional and new media, including digital media. Copyrightable materials are often available on the Internet without any indication of their copyrighted status. As a rule of thumb, you should assume that everything you find on the Internet is copyrighted, unless otherwise labeled. Even popular activities, such as file swapping or copying software, or pictures from the Internet, may be copyright infringement and should be avoided.

The Digital Millennium Copyright Act, which Congress enacted in 2000, affords greater protection for copyright holders of digital works. Generally, then, even if a work appears solely in a digital form, it is likely subject to copyright law protections.

New technology has made many creative works widely available through the Internet. For example, the technology known as Peer to Peer (P2P) allows for the transmission of music, videos, movies, software, video games and other materials—most of which is subject to copyright protection.

Remember that a copyright exists in a work at the time it becomes fixed in some tangible medium of expression. That means that an image you have downloaded from the Internet, as well as a video or musical performance is almost certainly subject to copyright protection.
When you download these works, transfer them to a disk or other medium, or send them to a friend, you are infringing on the rights of the copyright holder. Trafficking in such material without the permission of the copyright holder, then, violates copyright law. This includes unauthorized music file sharing over the Internet.

According to a statement recently issued by representatives of the motion picture, recording and songwriting industries, uploading and downloading copyrighted works over the Internet is theft: “It is no different from walking into the campus bookstore and in a clandestine manner walking out with a textbook without paying for it.”

Why is it important for a student to be aware of copyright law?

Copyright infringement is expressly prohibited by the U.S. Copyright Act. Anyone who infringes another’s copyright in a creative work is subject to liability, and could be required to pay large sums in damages.

In addition, as the law clearly prohibits copyright infringement, using any college resources—such as photocopiers, desktop and laptop computers, printers, central computing facilities, local-area or college-wide networks, Internet access, or electronic mail—for the purpose of infringing a copyright in any work may be grounds for student discipline. According to Maricopa Community College District administrative regulation, “students are expected to comply with the provisions of the Copyright Act of 1976 pertaining to photocopying of printed materials, copying of computer software and videotaping.”

Moreover, under the Maricopa Community Colleges Computing Resource Standards, a student is prohibited from the “use of software, graphics, photographs, or any other tangible form of expression that would violate or infringe any copyright or similar legally-recognized protection of intellectual property rights.” The Standards also prohibit “transmitting, storing, or receiving data, or otherwise using computing resources in a manner that would constitute a violation of state or federal law . . . .”

A student who violates these policies, then, can be disciplined at any of the Maricopa Community Colleges. This discipline could include suspension or even expulsion.

Does copyright law allow me to download files from a college web site?

Thanks to recent changes to copyright law colleges and universities are allowed to transmit copyrighted images, recordings, and other materials over the Internet in connection with distance learning offerings. These changes allow for the performance of non-dramatic literary works or musical works, as well as the display of “reasonable and limited portions” of any work in an amount comparable to that typically displayed in a live classroom setting. Use of the works must, however, be “an integral part” of the distance-learning class session, and available solely to students enrolled in the class. In addition, the transmission of the copyrighted works must be under the direction or actual supervision of a faculty member.

Even though the college does not hold the copyright to these works, or even have the express permission of the copyright holder, they may be delivered over the Internet to students in distance learning classes.

The fact that the law authorizes such use of copyrighted materials, though, does not allow a student in these classes to freely download, copy, or re-transmit the works. They are intended solely for use by the institution in connection with distance instruction; any other use would likely constitute a violation of copyright law.

To learn more about copyright, go to: http://www.dist.maricopa.edu/legal/ and click on “Intellectual Property.” While you’re there, you should read the Maricopa Community Colleges’ Copyright Guidelines. You should also review the complete text of the Computer Resource Standards which can be found under the “Information Technology” link. The Standards also appear in college catalogs and student handbooks.

TAPPING OF FACULTY LECTURES (AR3.4)

The Maricopa Community Colleges acknowledge that faculty members are, by law, afforded copyright protection in their classroom lectures and, therefore, may limit the circumstances under which students may tape (audio/visual) their classes.

Each faculty member shall inform his/her students within the first week of classes to his/her policy with regard to taping. Failure to do so will accord students the right to tape lectures.

Students with disabilities that render them unable to take adequate lecture notes are entitled to reasonable accommodation to remedy this inability. Accommodation may require a faculty member to exempt a student from his/her taping policy.
TECHNOLOGY RESOURCE STANDARDS (AR 4.4)

Introduction
The Maricopa County Community Colleges District (MCCCD) provides its students and employees access to information resources and technologies. Maricopa recognizes that the free exchange of opinions and ideas is essential to academic freedom, and the advancement of educational, research, service, operational and management purposes, is furthered by making these resources accessible to its employees and students.

At Maricopa, technological resources are shared by its users; misuse of these resources by some users infringes upon the opportunities of all the rest. As Maricopa is a public institution of higher education, however, the proper use of those resources is all the more important. Maricopa requires users to observe Constitutional and other legal mandates whose aims are to safeguard and appropriately utilize technology resources that are acquired and maintained with public funds.

General Responsibilities
Technology resources (including, but not limited to, desktop and laptop systems, printers, central computing facilities, District-wide or college-wide networks, local-area networks, access to the Internet, electronic mail and similar electronic information) of the Maricopa County Community Colleges District are available only to authorized users, and any use of those resources is subject to these Standards. All users of Maricopa’s technology resources are presumed to have read and understood the Standards. While the Standards govern use of technology resources District-wide, an individual community college or center may establish guidelines for technology resource usage that supplement, but do not replace or waive these Standards.

Acceptable Use
Use of Maricopa’s technology resources, including websites created by employees and students, is limited to educational, research, service, operational, and management purposes of the Maricopa County Community Colleges District and its member institutions. Likewise, images and links to external sites posted on or transmitted via Maricopa’s technology resources are limited to the same purposes.

It is not Maricopa’s practice to monitor the content of electronic mail transmissions, files, images, links or other data stored on or transmitted through Maricopa’s technology resources. The maintenance, operation and security of Maricopa’s technology resources, however, require that network administrators and other authorized personnel have access to those resources and, on occasion, review the content of data and communications stored on or transmitted through those resources. A review may be performed exclusively by persons expressly authorized for such purpose and only for cause. To the extent possible in the electronic environment and in a public setting, a user’s privacy will be honored.

Nevertheless, that privacy is subject to Arizona’s public records laws and other applicable state and federal laws, as well as policies of Maricopa’s Governing Board all of which may supersede a user’s interests in maintaining privacy in information contained in Maricopa’s technology resources.

Frequently, access to Maricopa’s technology resources can be obtained only through use of a password known exclusively to the user. It is the user’s responsibility to keep a password confidential. While Maricopa takes reasonable measures to ensure network security, it cannot be held accountable for unauthorized access to its technology resources by other users, both within and outside the Maricopa community. Moreover, it cannot guarantee users protection against loss due to system failure, fire, etc.

Much of the data contained in Maricopa records that are accessible through use of technology resources is confidential under state and federal law. That a user may have the technical capability to access confidential records does not necessarily mean that such access is authorized. A user of Maricopa’s technology resources is prohibited from the unauthorized access to, or dissemination of, confidential records.

Violation of any provision of the Standards could result in immediate termination of a user’s access to Maricopa’s technology resources, as well as appropriate disciplinary action. A violation of the Standards should be reported immediately to the appropriate administrator.

Prohibited Conduct
The following is prohibited conduct in the use of Maricopa’s technology resources:

1. Posting to the network, downloading or transporting any material that would constitute a violation of Maricopa County Community College District contracts.
2. Unauthorized attempts to monitor another user’s password protected data or electronic communication, or delete another user’s password protected data, electronic communications or software, without that person’s permission.
3. Installing or running on any system a program that is intended to or is likely to result in eventual damage to a file or computer system.
4. Performing acts that would unfairly monopolize computing resources to the exclusion of other users, including (but not limited to) unauthorized installation of server system software.
5. Hosting a website that violates the .EDU domain request.
6. Use of technology resources for non-Maricopa commercial purposes, including to advertise personal services, whether or not for financial gain.
7. Use of software, graphics, photographs, or any other tangible form of expression that would violate or infringe any copyright or similar legally-recognized protection of intellectual property rights.

8. Activities that would constitute a violation of any policy of Maricopa’s Governing Board, including, but not limited to, Maricopa’s non-discrimination policy and its policy against sexual harassment.

9. Transmitting, storing, or receiving data, or otherwise using technology resources in a manner that would constitute a violation of state or federal law, or MCCCD policy or administrative regulation including, but not limited to, obscenity, defamation, threats, harassment, and theft.

10. Attempting to gain unauthorized access to a remote network or remote computer system.

11. Exploiting any technology resources system by attempting to prevent or circumvent access, or using unauthorized data protection schemes.

12. Performing any act that would disrupt normal operations of computers, workstations, terminals, peripherals, or networks.

13. Using technology resources in such a way as to wrongfully hide the identity of the user or pose as another person.

14. Allowing any unauthorized access to Maricopa’s technology resources.

Disclaimer
The home page of a website must display, or link to, the following disclaimer in a conspicuous manner: All information published online by MCCCD is subject to change without notice. MCCCD is not responsible for errors or damages of any kind resulting from access to its Internet resources or use of the information contained therein. Every effort has been made to ensure the accuracy of information presented as factual; however, errors may exist. Users are directed to countercheck facts when considering their use in other applications. MCCCD is not responsible for the content or functionality of any technology resource not owned by the institution.

The statements, comments, or opinions expressed by users through use of Maricopa’s technology resources are those of their respective authors, who are solely responsible for them, and do not necessarily represent the views of the Maricopa County Community College District.

Complaints and Violations
Complaints or allegations of a violation of these standards will be processed through Maricopa’s articulated grievance procedures or resolution of controversy.

Upon determination of a violation of these standards, Maricopa may unilaterally delete any violative content and terminate the user’s access to Maricopa’s technology resources. It is the user’s responsibility to demonstrate and/or establish the relevance of content in the event that a content complaint is made official. Users retain the right to appeal through Maricopa’s grievance procedures or resolution of controversy.

HAZING PREVENTION REGULATION (AR 2.6)
The Maricopa County Community College District (MCCCD) strives to exceed the changing expectations of our many communities for effective, innovative, student-centered, flexible and lifelong educational opportunities. Our employees are committed to respecting diversity, continuous quality improvement and the efficient use of resources. We are a learning organization guided by our shared values of: education, students, employees, excellence, diversity, honesty and integrity, freedom, fairness, responsibility and public trust.

Central to the vitality and dignity of our community of learners is an environment that produces broadly educated responsible citizens, who are prepared to serve and lead in a free society. Academic instruction, co-curricular activities and community involvement come together to meet this goal. All members of the Maricopa Community Colleges’ community, through the best of their abilities, must be provided the opportunity to contribute in a safe, orderly, civil and positive learning environment. One factor that inhibits the achievement of the above stated purpose is the practice of hazing.

1. Hazing by any student, employee or other person affiliated with the Maricopa Community Colleges is prohibited.

2. “Hazing” is defined as any intentional, knowing or reckless act committed by a student or other person in any MCCCD college or affiliated educational setting, whether individually or in concert with other persons, against another student, and in which both of the following apply:

   a. The act was committed in connection with an initiation into, an affiliation with or the maintenance of membership in any club/organization that is affiliated with Maricopa Community Colleges; and,

   b. The act contributes to a substantial risk of potential physical injury, mental harm or personal degradation, or causes physical injury, mental harm or personal degradation.

3. Any solicitation to engage in hazing is prohibited.

4. Aiding and abetting another person who is engaged in hazing is prohibited.

5. Victim consent is not a defense for violation of the Maricopa Community Colleges Hazing Prevention Regulation.
6. All students, faculty and staff must take reasonable measures within the scope of their individual authority to prevent violations of the Maricopa Community Colleges Hazing Prevention Regulation.

7. Hazing activities and situations include, but are not limited to, the following:
   a. Pre-pledging, illegal pledging or underground activities.
   b. Acts of mental and physical abuse, including, but not limited to: paddling, slapping, kicking, pushing, yelling, biting, duck-walking, line-ups, tuck-ins, belittling, excessive exercise, beating or physical abuse of any kind, and the potentially forced consumption of any food or beverage that contributes to or causes physical injury, mental harm or personal degradation.
   c. Sleep deprivation (activities that deprive prospective and/or current students and/or members of the opportunity of a minimum of six hours sufficient sleep each day).
   d. Encouraging or forcing use of alcohol or drugs.
   e. Any type of student club/organization scavenger hunt, quest, road trip or activity that would physically or psychologically endanger prospective and/or current students and/or members or others.
   f. Stroking or physically touching in an indecent or inappropriate manner. See Sexual Harassment policy 5.1.8
   g. Student club/organization activities that subject prospective and/or current students and/or members or others to public nuisance or spectacle.
   h. Aiding or abetting theft, fraud, embezzlement of funds, destruction of public, personal or private property, or academic misconduct.
   i. Being required to wear odd or look-alike apparel that contributes to or causes physical injury, mental harm or personal degradation.
   j. Personal services that contribute to or cause physical injury, mental harm or personal degradation.

8. Alleged violations of this regulation by students or student organizations can be reported to the vice president of student affairs’ office for investigation by any member of the college community. The vice president of student affairs’ office will investigate the complaint in accordance with college and Maricopa Community Colleges policies, and local and state laws.

   Alleged violations of the Maricopa Community Colleges hazing prevention regulation or interference with an investigation under this regulation by students or student organizations are subject to sanctions under the student disciplinary code.

9. Alleged violations of the Maricopa Community Colleges hazing prevention regulation by any faculty or staff member can be reported to the vice president of student affairs’ office for investigation by any member of the college community. The vice president of student affairs’ will investigate the complaint in accordance with college and Maricopa Community Colleges policies, and local and state laws.

   Any Maricopa Community Colleges faculty or staff member who knowingly permitted, authorized or condoned the alleged hazing activity is subject to disciplinary action in accordance with college and Maricopa Community Colleges policies, and local and state laws.

10. If the vice president of student affairs’ office receives a report or complaint of an alleged hazing activity involving physical injury, threats of physical injury, intimidation, harassment or property damage, or any other conduct that appears to violate Arizona state law, the college will report such conduct to the appropriate college safety office. The said college safety office will investigate, respond to and report on the alleged hazing activity in accordance with all college, district, local, state and federal guidelines, policies and laws.

11. Should the proceedings outlined above substantiate an occurrence of hazing activity—where students or student organizations knowingly permitted, authorized or condoned the hazing activity—the college can recommend the following sanctions against student clubs/organizations:

   a. **Censure**: Censure can include the required completion of a program designed with the intent of eliminating the hazing activity. The programs will be devised with the cooperation of all involved parties and monitored by the vice president of student affairs’ Office.

   b. **Probation**: The student club(s)/organization(s) will be placed on probation for a specified period of time. Conditions of probation will be determined by the vice president of student affairs’ office and outlined in writing to the student club(s)/organization(s). The probationary term will be monitored by the vice president of student affairs’ office.
A. Substance Abuse/Misuse Statement

ABUSE-FREE ENVIRONMENT (AR 2.4.7)

Drug abuse and misuse has become a national issue and is receiving national attention, particularly in the academic community. The insidious effects of the abuse of these agents are also felt by all walks of life and economic levels. Therefore, as an education providing institution, we are responsible to provide knowledge and guidelines about prevention, control, and treatment of the abuse/misuse of alcohol, illegal and legal drug uses and misuses.

This policy statement has been constructed on the belief that higher education has a responsibility to face safety and health factors of substance abuse/misuse issues forthrightly and innovatively. We believe that the community college needs to adapt programs applicable to their community as well as to our individual student’s needs. The policy statements should be comprehensive, understood by those expected to comply, realistic and enforceable, consistently applied, and cover foreseeable dangers.

Construction of this statement has been founded on concerns of individual safety, educational quality, and legal liability. It is recognized that each individual is responsible for his/her actions and must be afforded an opportunity to develop knowledge, skills and talent, and be willing to share community responsibilities. The Maricopa Community College District has an equal “duty to care” responsibility and a commitment to substance abuse/misuse education for all students and employees.

The Maricopa Community College District shall:

1. Visibly demonstrate a performance of the Maricopa Community College District “duty to care”.

2. Comply with requirements for federal funds.

3. Describe what the college does about substance abuse/misuse (alcohol, drugs, anabolic steroids).

4. Inform/educate members of the academic community of adverse effects of these substances.

5. Inform/educate the academic community about the policies concerning substance misuse and abuse.


7. Provide individual and group counseling

8. Provide assistance and guidance to obtain treatment and rehabilitation of any identified problem.

To achieve these objectives, the program must provide an environment capable of:

1. Developing and implementing substance misuse/abuse prevention programs.

2. Providing educational training and prevention programs for the college and community it serves.

3. Providing timely and accurate information dissemination.

4. Establishing supportive counseling programs as needed.

5. Establishing a strong on-going evaluation of services.

6. Providing assistance to obtain treatment and rehabilitation of substance abuse/misuse.

7. Clarifying the college regulations for control of alcohol and drug use.

8. Providing procedures that the college will follow to correct and stabilize emergency situations.

Each college will identify key people to provide emergency services and to contact and work with outside agencies.

c. Suspension: The student club(s)/organization(s) will be suspended. The terms of the suspension can be defined in the sanction, including criteria the student club(s)/organization(s) must meet within a specified time to be considered for admission or renewal of college recognition status.

d. Revocation: The student club(s)/organization(s) will have its status revoked, with the loss of all college associations, recognitions and privileges. The national or international office of an organization, if so affiliated, will be requested to revoke the charter of an organization.

12. The Maricopa Community Colleges hazing prevention regulation is not intended to prohibit or sanction the following conduct:

a. Customary athletic events, contests or competitions that are sponsored by any of the Maricopa Community Colleges.

b. Any activity or conduct that furthers the goals of a legitimate educational curriculum, a legitimate co-curricular experience or a legitimate military training program.

13. For the purposes of the Maricopa Community Colleges hazing prevention regulation: “Organization” is defined as an athletic team, association, order, society, corps, cooperative, club or other similar group that is affiliated with Maricopa Community Colleges, whose membership consists primarily of students enrolled at Maricopa Community Colleges and that may also be classroom-related or co-curricular in nature.
The Maricopa Community College District is committed to establishing a preventative substance abuse program at each college designed to affect positively the problems of irresponsible use of alcohol and the use and abuse of illegal substances. A main focus of the program will be on education of the campus community and assistance to individuals.

The Maricopa Community College District fully supports disciplinary action for misconduct and the enforcement of state laws governing the use of alcohol and the use, abuse, possession or distribution of controlled substances or illegal drugs.

B. Student Program to Prevent Illicit Use of Drugs and Abuse of Alcohol

1. Introduction and Purpose
   The recent adoption by Congress of the Drug-Free Schools and Communities Act amendments of 1989 (Public Law 101-226) requires federal contractors and grantees to certify that they will provide a drug-free school. As a recipient of federal grants, the District must adopt a program toward accomplishing this goal. While federal legislation has been the impetus for creation of the program, the administration and Governing Board recognize that substance abuse is a problem of national proportions that also affect students at Maricopa Community Colleges. Based upon that concern, it is intended that this program on prevention of alcohol and drug abuse on college campuses will go beyond the strict dictates of the law and will serve as a comprehensive educational and resource tool.

   The Maricopa Community Colleges are committed to maintaining learning environments that enhance the full benefits of a student’s educational experience. The Maricopa Community College District will make every effort to provide students with optimal conditions for learning that are free of the problems associated with the unauthorized use and abuse of alcohol and drugs. Part of the educational mission of Maricopa Community Colleges, in conjunction with this program, is to educate students about positive self-development, the benefits of a healthy lifestyle and the health risks associated with substance abuse.

   The purpose of this program is to:
   a. Ensure that the Maricopa Community Colleges working and learning environment for students and the public is safe, orderly and free of illegal activity.
   c. Provide students with access to appropriate treatment and rehabilitation assistance for problems associated with substance use or abuse.

2. Standards of Conduct
   In the student handbooks of the Maricopa Community Colleges under codes of conduct, the following are examples of behavior that is prohibited by law and/or college rules and policies:
   a. Drinking or possession of alcoholic beverages on the college campus.
   b. Misuse of narcotics or drugs.
   c. Provide students with access to appropriate treatment and rehabilitation assistance for problems associated with substance use or abuse.

3. Sanctions for Violation of Standards of Conduct
   Disciplinary actions include, but are not limited to:
   a. Warning,
   b. Loss of privileges,
   c. Suspension, or
   d. Expulsion.

4. Legal Consequences of Alcohol and Other Drugs
   a. Laws Governing Alcohol
      The State of Arizona sets twenty-one as the “legal drinking age”. An underage person who buys, receives, possesses or consumes alcoholic beverages is guilty of a misdemeanor and may be subject to a fine and imprisonment for up to six months.

      The Uniform Act Regulating Traffic on Highways prohibits driving while under the influence of intoxicating liquor or drugs (DUI). Drivers charged with DUI who refuse to be tested face suspension of their licenses or permits to drive for twelve months. A driver whose test results show a blood or breath alcohol concentration of 0.08 or more will have his/her license or permit to drive suspended or denied for not less than ninety consecutive days. The punishment for DWI ranges from not less that twenty-four consecutive hours in jail and a fine of not less that $250 for a first offense to a minimum of six months in jail and revocation of the driver’s license for three years upon a third offense.

      a. Federal Penalties and Sanctions for Illegal Possession of a Controlled Substance
         First conviction: Up to one year imprisonment and fined at least $1,000 but not more than $100,000, or both.
         After one prior drug conviction: At least fifteen days in prison, not to exceed two years and fined at least $2,500 but not more than $250,000, or both.
         After two or more prior drug convictions: At least ninety days in prison, not to exceed three years and fined at least $5,000 but not more than $250,000, or both.
Special sentencing provisions for possession of crack cocaine:
Mandatory at least five years in prison, not to exceed twenty years and fined up to $250,000, or both, if:
1) First conviction and the amount of crack possessed exceeds five grams.
2) Second conviction and the amount of crack possessed exceeds three grams.
3) Third or subsequent crack conviction and the amount of crack possessed exceeds one gram.

Forfeiture of personal and real property used to possess or to facilitate possession of a controlled substance if that offense is punishable by more than one year imprisonment. (See special sentencing provisions re: crack)

Forfeiture of vehicles, boats, aircraft or any other conveyance used to transport or conceal a controlled substance.

Civil fine of up to $10,000 (pending adoption of final regulations).

Denial of Federal benefits, such as student loans, grants, contracts, and professional and commercial licenses, up to one year for first offense, up to five years for second and subsequent offenses.

Ineligible to receive or purchase a firearm.

Miscellaneous: Revocation of certain Federal licenses and benefits, e.g. pilot licenses, public housing tenancy, etc., are vested within the authorities of individual Federal agencies.

Note: These are only Federal penalties and sanctions.

c. State Penalties and Sanctions

Title Thirteen, Chapter 34 of the Arizona Revised Statutes lists drug offenses and their penalties. Following is list of drugs that are frequently misused with a description of the potential penalties attached to a conviction.

1) Marijuana: A first offense for possession or use of marijuana in an amount of less that one pound constitutes a class 6 felony and carries a possible prison term of one and one-half years and a fine of not less than seven hundred fifty dollars.
   The sale of marijuana in an amount of less that one pound carries a prison sentence of four years and a fine of at least seven hundred fifty dollars.

2) LSD: Possession, use and sale of LSD are felonies carrying sentences from four to five years and fines of not less that one thousand dollars.

3) Heroin and Cocaine: Possession, use and sale of heroin are felonies carrying sentences from four to seven years and a fine of not less that two thousand dollars.

C. Alcoholic Beverages - Usage Regulation (AR 4.13)

1. No alcoholic beverage is allowed on or in the premises owned (by the State) and/or leased/rented by the Maricopa Community Colleges for District-approved educational purposes, except as provided herein.

2. No purchase of alcoholic beverages is allowed from any funds under the jurisdiction of the Governing Board of the District.

3. Lawful occupants of residential housing under the jurisdiction of the Governing Board, if over the age of 21 years and not otherwise lawfully barred from such practice, may possess and consume alcoholic beverages in the privacy of their respective leased housing facility. Guests of such occupants over the age of 21 years shall have the same privilege. No alcohol is permitted in public areas (nor common areas of a dormitory) at any time.

4. The personal or individual purchase of alcoholic beverages by individuals attending District approved functions held in places serving alcoholic beverages is a personal and individual responsibility. Administrative discretion shall be exercised in the approval of the location of such activities, as such decision pertains to the nature of the group involved.

D. Other Health Concerns

General Guidelines Concerning AIDS

Neither a diagnosis of AIDS nor a positive HIV antibody test will be part of the initial admission decision for those applying to attend any of the Maricopa Community Colleges. The Maricopa Community Colleges will not require screening of students for antibody to HIV.

Students with AIDS or a positive HIV antibody test will not be restricted from access to student unions, theaters, cafeterias, snack bars, gyms, swimming pools, recreational facilities, restrooms, or other common areas, as there is not current medical justification for doing so.

Where academically and logistically feasible, students who have medical conditions, including AIDS, may seek accommodation in order to remain enrolled. Medical documentation will be needed to support requests for accommodation through the Office of Disabled Resources and Services or the Vice President of Student Affairs.

The Maricopa Community Colleges acknowledge the importance of privacy considerations with regard to persons with AIDS. The number of people who are aware of the existence and/or identity of students who have AIDS or a positive HIV antibody test should be kept to a minimum.
When a student confides in a faculty member, knowledge of the condition should be transmitted to the appropriate vice president or designee who will make the determination if the information should be further disseminated. It should be remembered that mere exposure to the person in a classroom does not constitute a need to know the diagnosis. It is, therefore, unnecessary to document in a student’s file the fact that he or she has AIDS unless the information is to be used for accommodation reasons. Sharing confidential information without consent may create legal liability.

Students are encouraged to contact the Office of Disabled Resources and Services and/or the vice president of student affairs or designee for the types of services available in the district or community on matters regarding AIDS or the HIV virus.

**DISABILITY RESOURCES & SERVICES - ELIGIBILITY FOR ACCOMMODATIONS & REQUIRED DISABILITY DOCUMENTATION (AR 28)**

**PURPOSE**— to specify the disability documentation requirements that will qualify (i.e., support current and essential needs) Maricopa County Community College District students for reasonable and appropriate accommodations through each college’s disability services office or designated professional. This regulation is implemented in accordance with the American’s with Disabilities Act.

**GENERAL ELIGIBILITY REQUIREMENTS**

Each applicant with a disability must meet MCCCD admissions requirements, or be enrolled as an MCCCD student, and must provide disability resource services (drs) with required documentation verifying the nature and extent of the disability prior to receiving any accommodation. The disability services office coordinator/program advisor is responsible for evaluating documentation and determining accommodation eligibility.

**SPECIFIC ELIGIBILITY REQUIREMENTS**

**PHYSICAL DISABILITIES — REQUIRED DOCUMENTATION**

The student must submit a written, current diagnostic report of any physical disabilities that are based on appropriate diagnostic evaluations administered by trained and qualified (i.e., certified and/or licensed) professionals (e.g., medical doctors, ophthalmologists, neuropsychologists, audiologists). Disability diagnosis categories include:

1. Orthopedic Disability
2. Blind or Visual Impairment
3. Deaf or Hard-of-Hearing
4. Traumatic Brain Injury
5. Other Health-Related/Systemic Disabilities

**The Written Diagnostic Report Must Include:**

a) A clear disability diagnosis, including a clinical history that establishes the date of diagnosis, last contact with the student, and any secondary conditions that might be present.

b) The procedures used to diagnose the disability.

c) A description of any medical and/or behavioral symptoms associated with the disability.

d) A discussion of medications, dosage, frequency, and any adverse side effects attributable to their use that the student has experienced.

e) A clear statement specifying functional manifestations (i.e., substantial limitations to one or more major life activities and degree of severity) due to the disability and/or medications for which the student may require accommodations.

f) A recommendation for accommodation, including rationale. If the accommodation recommendations are specific to limitations in learning (e.g., reading, mathematics, written expression), an appropriate psycho-educational or neuropsychological evaluation must be administered to document ability/achievement discrepancies.

**Specific Learning Disabilities-Required Documentation**

The student shall submit a written diagnostic report of specific learning disabilities that is based on current appropriate, comprehensive, psycho educational evaluations using adult normed instruments.

The assessment or evaluation which leads to the diagnosis must be administered by a trained and qualified (i.e., certified and/or licensed) professional (e.g., psychologist, school psychologist, neuropsychologist, or educational diagnostician) who has had direct experience with adolescents and adults with learning disabilities.

**An Appropriate Psycho Educational Evaluation Must Include Comprehensive Measures In Each Of The Following Areas:**

1. **Aptitude** (the evaluation must contain a complete intellectual assessment, with all sub-tests and standard scores reported).

2. **Academic achievement** (the evaluation must contain a comprehensive achievement battery with all sub-tests and standard scores reported) the test battery should include current levels of functioning in the relevant areas, such as reading (decoding and comprehension), mathematics, and oral and written expression.
Attention Deficit Hyperactivity Disorder (ADHD) / Attention Deficit Disorder (ADD) — Required Documentation

The student shall submit a current diagnosis of attention deficit hyperactivity disorder (ADHD)/attention deficit disorder (ADD) that is based on appropriate diagnostic evaluations administered by trained and qualified (i.e., certified or licensed) professionals (e.g., psychiatrists, psychologists, or neuropsychologists).

The Diagnostic Report Must Include:

1. A diagnostic interview addressing relevant historical information, past and current academic achievement, age at initial diagnosis, discussion of medication, and history and effectiveness of accommodations in past educational settings.
2. The procedures used to diagnose the disability (including a list of all instruments used in the assessment).
3. Discussion of the testing results and behavior, including the symptoms that meet the criteria diagnosis. If the student was evaluated while on medication, the effect this may have had on performance must be noted.
4. DSM-IV diagnosis (including all five axes)
5. A diagnostic summary statement that includes the following information:
   a) A clear statement that ADHD/ADD does or does not exist, including a rule-out of alternative explanations for behaviors. Terms such as “appears,” “suggests,” or “has problems with” used in the diagnostic summary statement do not support a conclusive diagnosis.
   b) A clear statement specifying the substantial limitations to one or more major life activities and the degree of severity. If the limitations are in learning (e.g., reading, mathematics, and written expression), an appropriate psycho-educational evaluation must be administered to document ability/achievement discrepancies.
   c) A recommendation regarding medications or medical evaluation(s).
   d) A recommendation for accommodations, including rationale.

Psychological Disabilities — Required Documentation

If the diagnostic report is more than one year old, a letter from a qualified professional that provides an update of the diagnosis with a description of the individual’s current level of functioning during the past year, and a rationale for the requested accommodations must be submitted.

The Diagnostic Report Must Include The Following:

1. A clinical interview, relevant historical information, age at initial diagnosis, duration and severity of the disorder.
2. Discussion of medications review of past and current academic achievement, and history of disability accommodations and their effectiveness.
3. The procedures used to diagnose the disability (include a list of all instruments used in the assessment and test scores as applicable).
A. Definitions

1. **Academic Misconduct (AR 2.3.11)**

   a. Academic Misconduct - includes misconduct associated with the classroom, laboratory or clinical learning process. Some examples of academic misconduct are cheating, plagiarism, and excessive absences.

   b. Cheating - includes, but is not limited to, (a) use of any unauthorized assistance in taking quizzes, tests, assessment tests or examinations; (b) dependence upon the aid of sources beyond those authorized by the faculty member in writing papers, preparing reports, solving problems, or carrying out other assignments; or (c) the acquisition, without permission, of tests or other academic material belonging to a member of the college faculty or staff.

   c. Plagiarism - includes, but is not limited to, the use of paraphrase or direct quotation of the published or unpublished work of another person without full and clear acknowledgment. It also includes the unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials. Information gathered from the internet and not properly identified is also considered plagiarism.

B. Sanctions

Any student found by a faculty member to have committed academic misconduct maybe subject to the following sanctions: (Note: sanctions 1, 2, 3, and 4 may be imposed by a faculty member. The faculty member may recommend to the department chairperson and the vice president of academic affairs or designee that sanctions 5, 6, or 7 be imposed. College suspension or expulsion will be imposed only by the vice president of academic affairs or designee.)

1. **Warning** - A notice in writing to the student that the student has violated the academic code.

2. **Grade Adjustment** - Lowering of a score on a test, or assignment.

3. **Discretionary Sanctions** - Additional academic assignments determined by the faculty member.

4. **Course Failure** - Failure of a student in the course where academic misconduct occurs.

5. **Disciplinary Probation** - Disciplinary probation is for a designated period of time and includes the probability of more severe sanctions if the student commits additional acts of academic misconduct.

6. **College Suspension** - Separation of the student from the college for a definite period of time, after which the student is eligible to return. Conditions for readmission may be specified. (A suspension from one Maricopa Community College will apply to all other colleges/centers in the District.)

7. **College Expulsion** - Permanent separation of the student from the college. (Expulsion from one Maricopa Community College will apply to all colleges/centers in the District.)
C. Appeal of Sanctions for Academic Misconduct
Students can appeal sanctions imposed for academic misconduct by following the instructional grievance process (AR 2.3.5).

### DISCIPLINARY STANDARDS

#### A. Disciplinary Probation and Suspension (AR 2.5.1)
According to the laws of the State of Arizona, jurisdiction and control over the Maricopa Community Colleges are vested in the District Governing Board. The Governing Board and its agents—the chancellor, administration and faculty—are granted broad legal authority to regulate student life subject to basic standards of reasonableness.

In developing responsible student conduct, the Maricopa Community Colleges prefer mediation, guidance, admonition and example. However, when these means fail to resolve problems of student conduct and responsibility, appropriate disciplinary procedures will be followed.

Misconduct for which students are subject to disciplinary action falls into the general areas of:

1. Cheating on an examination, assessment tests, laboratory work, written work (plagiarism); falsifying, forging or altering college records.

2. Actions or verbal statements which threaten the personal safety of any faculty, staff, students, or others lawfully assembled on the campus, or any conduct which is harmful, obstructive, disruptive to, or interferes with the educational process or institutional functions.

3. Violation of Arizona statutes, and/or college regulations and policies.

4. Use of college computer resources such as internet in violation of TECHNOLOGY RESOURCE STANDARDS (AR 4.4) which may result in notification of law enforcement authorities.

#### B. Disciplinary Removal from Class
A faculty member may remove a student from class meetings for disciplinary reasons. If faculty member removes a student for more than one class period, the faculty member shall notify the department/division chair and the appropriate vice president or designee in writing of the problem, action taken by the faculty member’s recommendation. If a resolution of the problem is not reached, between the faculty member and the student, the student, may be removed permanently pursuant to due process procedures.

### STUDENT CONDUCT CODE (AR 2.5.2)

#### Purpose
The purpose of this code is to help ensure a healthy, comfortable and educationally productive environment for students, employees and visitors.

#### Article I: Definitions
The following are definitions of terms or phrases contained within this code:

A. “Accused student” means any student accused of violating this Student Conduct Code.

B. “Appellate boards” means any person or persons authorized by the college president to consider an appeal from a Student Conduct Board’s determination that a student has violated this Student Conduct Code or from the sanctions imposed by the Student Conduct Administrator. The college president may act as the appellate board.

C. “College” means a Maricopa Community College or center.

D. “College premises” means all land, buildings, facilities and other property in the possession of or owned, used or controlled by the college or District.

E. “College official” means any person employed by the college or District, performing assigned administrative or professional responsibilities pursuant to this Student Conduct Code. The college president shall designate the college or center official to be responsible for the administration of the Student Conduct Code.

F. “Complainant” means any person who submits a charge alleging that a student violated this Student Conduct Code. When a student believes that s/he has been a victim of another student’s misconduct, the student who believes s/he has been a victim will have the same rights under this Student Conduct Code as are provided to the complainant, even if another member of the college community submitted the charge itself.

G. “Day” means calendar day at a time when college is in session, and shall exclude weekends and holidays.

H. “Disruptive behavior” means conduct that materially and substantially interferes with or obstructs the teaching or learning process in the context of a classroom or educational setting.

I. “District” means the Maricopa County Community College District.

J. “Faculty member” means any person hired by the college or District to conduct classroom or teaching activities or who is otherwise considered by the college to be a member of faculty.

K. “May” is used in the permissive sense.
Article II: Judicial Authority

A. The college official responsible for administration of the Student Conduct Code shall determine the composition of Student Conduct Board and determine which Student Conduct Administrator, Student Conduct Board, and appellate board shall be authorized to hear each case.

B. The college official responsible for administration of the Student Conduct Code shall develop procedures for the administration of the judicial program and rules for the conduct of hearings that are consistent with provisions of this Student Conduct Code.

C. Decisions made by a Student Conduct Board and/or Student Conduct Administrator shall be final, pending the normal appeal process.

Article III: Prohibited Conduct

A. Jurisdiction of the College

The Student Conduct Code shall apply to conduct that occurs on college or District premises, or at college- or District-sponsored activities that adversely affects the college community and/or the pursuit of its objectives. Each student shall be responsible for his/her conduct from the time of admission through the actual awarding of a degree, certificate, or similar indicator of completion of a course of study, even though conduct may occur before classes begin or after classes end, as well as during the academic year and during periods between terms of actual enrollment (and even if their conduct is not discovered until after a degree is awarded). The Student Conduct Code shall apply to a student’s conduct even if the student withdraws from school while a disciplinary matter is pending.

B. Temporary Removal of Student

Disruptive behavior includes conduct that distracts or intimidates others in a manner that interferes with instructional activities, fails to adhere to a faculty member’s appropriate classroom rules or instructions, or interferes with the normal operations of the college. Students who engage in disruptive behavior or threatening behavior may be directed by the faculty member to leave the classroom or by the college official responsible for administration of the Student Conduct Code to leave the college premises. If the student refuses to leave after being requested to do so, college safety may be summoned. For involuntary removal from more than one class period, the faculty member should invoke the procedures prescribed in the Student Conduct Code.

C. Conduct - rules and regulations

Any student found to have committed the following misconduct is subject to the disciplinary sanctions outlined in Article IV:

i. Acts of dishonesty, including but not limited to the following:
   a. Furnishing false information to any college official, or office.
   b. Forgery, alteration or misuse of any college document, record or instrument of identification.
   c. Tampering with the election of any college-recognized student organization.
2. Obstruction of teaching, research, administration, disciplinary proceedings or other college activities, including its public service functions on campus, in clinical settings or other authorized non-college activities, when the conduct occurs on college premises a faculty member may remove a student from a class meeting for disciplinary reasons. If a faculty member removes a student for more than one class period, the faculty member shall notify the college official responsible for administration of the Student Conduct Code in writing of the problem, action taken by the faculty member, and the faculty member’s recommendation. If a resolution of the problem is not reached, the student may be removed permanently pursuant to appropriate due process procedures.

3. Physical abuse, verbal abuse, threats, intimidation, harassment, coercion and/or conduct which threatens or endangers the health or safety of any person and/or disruptive behavior as defined in article II.B. Above.

4. Attempted or actual theft of and/or damage to property of the college or property of a member of the college community or other personal or public property.

5. Failure to comply with direction of college officials or law enforcement officers in the performance of their duties and/or failure to identify oneself to these persons when requested to do so.

6. Unauthorized possession, duplication or use of keys to any college premises, or unauthorized entry to or use of college premises.

7. Violation of any college or District policy, rule or regulation published in hard copy such as a college catalog, handbook, etc. or available electronically on the college’s or District’s website.

8. Violation of federal, state or local law.

9. Use, possession, manufacturing or distribution of illegal or other controlled substances except as expressly permitted by law.

10. Illegal use, possession, manufacturing or distribution of alcoholic beverages or public intoxication.

11. Illegal or unauthorized possession of firearms, explosives, other weapons, or dangerous chemicals on college premises, or use of any such item, even if legally possessed, in a manner that harms, threatens, or causes fear to others, or property damage.

12. Participation in a demonstration, riot or activity that disrupts the normal operations of the college and infringes on the rights of other members of the college community; leading or inciting others to disrupt scheduled and/or normal activities within any college building or area.

13. Obstruction of the free flow of pedestrian or vehicular traffic on college premises or at college sponsored or supervised functions.

14. Conduct that is disorderly, lewd or indecent; breach of the peace; or aiding, abetting or procuring another person to breach the peace on college premises or at functions sponsored by or participated in by the college or members of the academic community. Disorderly conduct includes but is not limited to: any unauthorized use of electronic or other devices or to make an audio or video record of any person while on college or District premises without his/her prior knowledge, or without his/her effective consent or when such a recording is likely to cause injury or distress. This includes, but is not limited to, secretly taking pictures of another person in a gym, locker room, or restroom.

15. Attempted or actual theft or other abuse of technology facilities or resources, including but not limited to:
   a. Unauthorized entry into a file, to use, read or change the contents or for any other purpose
   b. Unauthorized transfer of a file
   c. Unauthorized use of another individual’s identification and/or password
   d. Use of technology facilities or resources to interfere with the work of another student, faculty member or college official
   e. Use of technology facilities or resources to send obscene or abusive messages
   f. Use of technology facilities or resources to interfere with normal operation of the college technology system or network
   g. Use of technology facilities or resources in violation of copyright laws
   h. Any violation of the District’s technology resource standards
   i. Use of technology facilities or resources to illegally download files
16. Abuse of the student conduct system, including but not limited to:
   a. Falsification, distortion or misrepresentation of information before a Student Conduct Board.
   b. Disruption or interference with the orderly conduct of a Student Conduct Board proceeding.
   c. Invoking a Student Conduct Code proceeding with malicious intent or under false pretenses.
   d. Attempting to discourage an individual’s proper participation in, or use of, the Student Conduct system
   e. Attempting to influence the impartiality of the member of a judicial body prior to, and/or during the course of, the Student Conduct Board proceeding
   f. Harassment, either verbal or physical, and/or intimidation of a member of a Student Conduct Board prior to, during and/or after a Student Conduct Board proceeding
   g. Failure to comply with the sanctions imposed under this Student Conduct Code
   h. Influence or attempting to influence another person to commit an abuse of the Student Conduct Code system
   i. Failure to obey the notice from a Student Conduct Board or college official to appear for a meeting or hearing as part of the Student Conduct system

17. Engaging in irresponsible social conduct.

18. Attempt to bribe a college or District employee.

19. Stalking behavior, which occurs if a student intentionally or knowingly maintains visual or physical proximity toward another person on two or more occasions over a period of time and such conduct would cause a reasonable person to fear for his or her safety.

D. Violation of Law and College Discipline
1. Disciplinary proceedings may be instituted against a student charged with conduct that potentially violates both the criminal law and this Student Conduct Code (that is, if both possible violations result from the same factual situation) without regard to pending civil or criminal litigation. Proceedings under this Student Conduct Code may be carried out prior to, simultaneously with, or following civil or criminal proceedings off campus at the discretion of the college official responsible for administration of the Student Conduct Code. Determinations made or sanctions imposed under this Student Conduct Code shall not be subject to change because criminal charges arising out of the same facts giving rise to violation of college rules were dismissed, reduced, or resolved in favor of or against the criminal law defendant.

2. When a student is charged by federal, state or local authorities with a violation of law, the college will not request or agree to special consideration for that individual because of his or her status as a student. If the alleged offense is also being processed under this Student Conduct Code, however, the college may advise off campus authorities of the existence of this Student Conduct Code and of how such matters will be handled internally within the college community. The college will cooperate fully with the law enforcement and other agencies in the enforcement of criminal law on campus and in the conditions imposed by criminal courts for the rehabilitation of student violators. Individual students and faculty members, acting within their personal capacities, remain free to interact with governmental representatives as they deem appropriate.

Article IV: Student Conduct Code Procedures
A. Charges and Student Conduct Board Hearings
   1. Any member of the college community may file charges against a student for violations of this Student Conduct Code. A charge shall be prepared in writing and directed to the Student Conduct Administrator. Any charge should be submitted as soon as possible after the event takes place, preferably within thirty (30) days following the incident.

   2. The Student Conduct Administrator may conduct an investigation to determine if the charges have merit and/or if they can be disposed of administratively by mutual consent of the parties involved on a basis acceptable to the Student Conduct Administrator. Such disposition shall be final and there shall be no subsequent proceedings. If the charges are not admitted and/or cannot be disposed of by mutual consent, the Student Conduct Administrator may later serve in the same manner as the Student Conduct Board or a member thereof.
If the student admits violating institutional rules, but sanctions are not agreed to, subsequent process, including a hearing if necessary, shall be limited to determining the appropriate sanction(s).

3. All charges shall be presented to the accused student in written form. A time shall be set for a Student Conduct Board hearing, not less than five (5) nor more than fifteen (15) days after the student has been notified. Maximum time limits for scheduling of Student Conduct Board hearings may be extended at the discretion of the Student Conduct Administrator.

4. Hearings shall be conducted by a Student Conduct Board according to the following guidelines, except as provided by Article IV A.7 below:

a. Student Conduct Board hearings normally shall be conducted in private.

b. The complainant, accused student and their advisors, if any, shall be allowed to attend the entire portion of the Student Conduct Board hearing at which information is received (excluding deliberations). Admission of any person to the hearing shall be at the discretion of the Student Conduct Board and/or its Student Conduct Administrator.

c. In Student Conduct Board hearings involving more than one accused student, the Student Conduct Administrator, in his or her discretion, may permit the Student Conduct Board hearing concerning each student to be conducted either separately or jointly.

d. The complainant and the accused shall have the right to be assisted by any advisor they choose, at their own expense. The advisor must be a member of the college community and may not be an attorney. Both the complainant and the accused are responsible for presenting their own information and, therefore, advisors are not permitted to speak or participate directly in any Student Conduct Board hearing concerning each student to be conducted either separately or jointly.

e. The complainant, the accused student, and the Student Conduct Board may arrange for witnesses to present pertinent information to the Student Conduct Board. The college will try to arrange the attendance of possible witnesses who are members of the college community, if reasonably possible, and who are identified by the complainant and/or accused student at least two days prior to the Student Conduct Board hearing.

f. Pertinent records, exhibits, and written statements may be accepted as information for consideration by a Student Conduct Board at the discretion of the chairperson.

g. All procedural questions are subject to the final decision of the chairperson of the Student Conduct Board.

h. After the portion of the Student Conduct Board hearing concludes in which all pertinent information has been received, the Student Conduct Board shall determine (by majority vote if the Student Conduct Board consists of more than one person) whether the accused student violated the section of this Student Conduct Code which the student is charged with violating.

i. The Student Conduct Board’s determination shall be made on the basis of whether it is more likely than not that the accused student violated this Student Conduct Code.

5. There shall be a single verbatim record, such as a tape recording, of all Student Conduct Board hearings before a Student Conduct Board (not including deliberations). The record shall be the property of the District.

6. No student may be found to have violated this Student Conduct Code because the student failed to appear before a Student Conduct Board. In all cases, the evidence and support of the charges shall be presented and considered.

7. The Student Conduct Board may accommodate concerns for the personal safety, well-being, and/or fears of confrontation of the complainant, accused student, and/or other witness during the hearing by providing separate facilities, by using a visual screen, and/or by permitting participation by telephone, videophone,
closed circuit television, video conferencing, videotape, audio tape, written statement, or other means, where and as determined in the sole judgment of the college official responsible for administration of the Student Conduct Code.

B. Sanctions

1. The following sanctions may be imposed upon any student found to have violated the Student Conduct Code:

   a. Warning - a written notice to the student that the student is violating or has violated institutional rules or regulations.

   b. Probation - a written reprimand for violation of specified rules or regulations. Probation is for a designated period of time and includes the probability of more severe disciplinary sanctions if the student is found to violate any institutional rules or regulation(s) during the probationary period.

   c. Loss of Privileges - denial of specified privileges for a designated period of time.

   d. Restitution - compensation for loss, damage or injury. This may take the form of appropriate service and/or monetary or material replacement.

   e. Discretionary Sanctions - work assignments, essays, service to the college, or other related discretionary assignments. (Such assignments must have the prior approval of the student conduct administrator).

   f. College Suspension - separation of the student from all the colleges in the District for a definite period of time, after which the student is eligible to return. Conditions for re-admission may be specified.

   g. College Expulsion - permanent separation of the student from all the colleges in the District.

2. More than one of the sanctions listed above may be imposed for any single violation.

3. Other than college expulsion, disciplinary sanction shall not be made part of the student’s academic record, but shall become part of the student’s disciplinary record. Upon graduation, the student’s disciplinary record maybe expunged of disciplinary actions upon the student’s application to the student conduct administrator. Cases involving the imposition of sanctions other than suspension or expulsion shall be expunged from the student’s confidential record five (5) years after final disposition of the case.

In situations involving both an accused student(s) (or group or organization) and a student(s) claiming to be the victim of another student’s conduct, the records of the process and of the sanctions imposed, if any, shall be considered to be the education records of both the accused student(s) and the student(s) claiming to be the victim because the educational career and chances of success in the college community of each may be impacted.

4. The following sanctions may be imposed upon groups or organizations:

   a. Those sanctions listed above in Section B 1. a through d.

   b. Loss of selected rights and privileges for a specified period of time.

   c. Deactivation -loss of all privileges, including college recognition for a designated period of time.

5. In each case in which a Student Conduct Board determines that a student and/or group or organization has violated the Student Conduct Code, the sanction(s) shall be determined and imposed by the Student Conduct Administrator. In cases in which persons other than, or in addition to, the Student Conduct Administrator have been authorized to serve as the Student Conduct Board, the recommendation of the Student Conduct Board shall be considered by the Student Conduct Administrator in determining and imposing sanctions. The Student Conduct Administrator is not limited to sanctions recommended by members of the Student Conduct Board. Following the Student Conduct Board hearing, the Student Conduct Board and the Student Conduct Administrator shall advise the accused student, group and/or organization (and a complaining student who believes s/he was the victim of another student’s conduct) in writing of its determination and of the sanction(s) imposed, if any.

C. Emergency Suspension

If a student’s actions pose an immediate threat or danger to any member of the college community or the educational processes, a college official responsible for administering the Student Conduct Code may immediately suspend or alter the rights of a student pending a Student Conduct Board hearing. Scheduling the hearing shall not preclude resolution of the matter through mediation or any other dispute resolution process. The decision will be based on whether the continued presence of the student on the college campus reasonably poses a threat to the physical or emotional condition and well-being of any individual, including the student, or for reasons relating to the safety and welfare of any college property, or any college function.
In imposing an emergency suspension, the college official responsible for administration of the Student Conduct Code may direct that the student immediately leave the college premises and may further direct the student not to return until contacted by that official. An accused student shall be in violation of this policy regardless of whether the person who is the object of the threat observes or receives it, as long as a reasonable person would interpret the communication, conduct or gesture as a serious expression of intent to harm.

D. Appeals

1. A decision reached by the Student Conduct Board judicial body or a sanction imposed by the Student Conduct Administrator may be appealed by accused students or complainants to an Appellate Board within five (5) days of receipt of the decision. Such appeals shall be in writing and shall be delivered to the Student Conduct Administrator.

2. Except as required to explain on the basis of new information, an appeal shall be limited to the review of the verbatim record of the Student Conduct Board hearing and supporting documents for one or more of the following purposes:

   a. To determine whether the Student Conduct Board hearing was conducted fairly in light of the charges and information presented, and in conformity with prescribed procedures giving the complainant a reasonable opportunity to prepare and present information that the Student Conduct Code was violated, and giving the accused student a reasonable opportunity to prepare and to present a response to those allegations. Deviations from designated procedures will not be a basis for sustaining an appeal unless significant prejudice results.

   b. To determine whether the decision reached regarding the accused student was based on substantial information, that is, whether there were facts in the case that, if believed by the fact finder, were sufficient to establish that a violation of the Student Conduct Code occurred.

   c. To determine whether the sanction(s) imposed was appropriate to the violation of the Student Conduct Code which the student was found to have committed.

   d. To consider new information, sufficient to alter a decision or other relevant facts not brought out in the original hearing, because such information and/or facts were not known to the person appealing at the time of the original Student Conduct Board hearing.

3. If an appeal is upheld by the appellate board, the matter shall be returned to the original Student Conduct Board and Student Conduct Administrator for reopening of the Student Conduct Board hearing to allow reconsideration of the original determination and/or sanction(s). If an appeal is not upheld, the matter shall be considered final and binding upon all concerned.

Article V: Interpretation and Revision

Any question of interpretation regarding the Student Conduct Code shall be referred to the college official responsible for administration of the Student Conduct Code for final determination.

STUDENT RECORDS (2.5.3)

A. Definitions

For the purposes of this policy, the Maricopa County Community College District has used the following definition of terms.

1. College - includes all colleges, educational centers, skill centers and District office.

2. Educational Records - any record (in handwriting, print, tapes, film, or other media) maintained by the college or an agent of the college which is directly related to a student, except:

   a. A personal record kept by a staff member, if it is kept in the personal possession of the individual who made the record, and information contained in the record has never been revealed or made available to any other person except the maker’s temporary substitute

   b. An employment record of an individual whose employment is not contingent on the fact that s/he is a student, provided the record is used only in relation to the individual’s employment

   c. Records maintained by the colleges security unit, if the record is maintained solely for law enforcement purposes, is revealed only to law enforcement agencies of the same jurisdiction and the security unit does not have access to education records maintained by the community college

   d. Alumni records which contain information about a student after he or she is no longer an attendant of the community college and the records do not relate to the person as a student

B. Annual Notification

Students will be notified of their further rights annually by publication in the college catalog and/or the student handbook:
## Rights of Access to Educational Records

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. These rights are:

1. **The right to inspect and review the student’s education records within 45 days of the day the college receives a request for access.**

   Students should submit to the college admissions and records department written requests that identify the record(s) they wish to inspect. The college official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the college official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

2. **The right to request the amendment of the student’s education records that the student believes to be inaccurate or misleading.**

   Students may ask the college to amend a record that they believe is inaccurate or misleading. They should write the college official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading.

   If the college decides not to amend the record as requested by the student, the college will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment.

   Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. **The right to consent to disclosures of personally identifiable information contained in the student’s education records, except to the extent that FERPA authorizes disclosure without consent.**

   One exception, which permits disclosure without consent, is disclosure to school officials with legitimate educational interests. A school official is defined as a person employed by the college or District in an administrative, supervisory, academic, or support staff position (including law enforcement unit and health staff); a person or company with whom the college or District has contracted (such as an attorney, auditor, or collection agent); a person serving on the Governing Board; or a person assisting another school official in performing his or her tasks.

   A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.

Upon request, the college discloses education records without consent to officials of another school in which a student seeks or intends to enroll.

4. **The right to file a complaint with the US Department of Education concerning alleged failures by the college to comply with the requirements of FERPA.**

The name and address of the Office that administers FERPA is:

Family Policy Compliance Office
US Department of Education
400 Maryland Ave., S.W.
Washington, DC 20202-4605

## C. Student Directory

A Maricopa community college may release directory information about any student who has not specifically requested the withholding of such information. Students who do not want directory information released may so indicate during the admissions process or notify the Office of Admissions and Records.

At any Maricopa community college, directory information is defined as a student’s name, address, telephone number, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, part-time or full-time status, most recent previous educational agency or institution attended by the student, college within the Maricopa Community Colleges where the student has been enrolled, photograph of student, and electronic mail address.

## D. Use of Educational Records for Advisement Purposes

All colleges within the Maricopa Community Colleges have access to the computerized degree audit program. During the advisement process, each student may have his or her academic record reviewed for coursework taken at any of the District’s colleges or centers.

The institution retains the right to exercise discretion in determining the release of directory information.

## E. Disclosure to Parents

In accordance with federal law, college officials may disclose educational records to parents of minors or to parents of a student who have established the student’s status as a dependent according to the Internal Revenue Code of 1986, section 152, without the written consent of the student.
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Collen Clark
Years of Service 2007-2012

Scott Crowley
Years of Service 2004-2008

Linda Rosenthal, President
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Jerry D Walker
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GLOSSARY OF TERMS

Add/Drop Period
A period of time before classes begin when schedule changes are made. A penalty may be charged for changes made after the start of classes.

Admission
Acceptance into a college after the student has filed a completed Student Information Form with the Admissions and Records Office and has been admitted according to admissions criteria. Students who have been admitted are eligible to register for courses.

Advisor
A counselor, faculty, or other designated staff member who has received training to provide students with academic information that will direct them to the appropriate classes to achieve their goals and enhance their success.

AGEC
A 35-semester-credit general education program of study that fulfills lower-division general education requirements for students planning to transfer to any Arizona public community college or university and transfers as a block without loss of credit.

Assessment
Also known as placement or Assessment of Skills for Successful Entry and Transfer (ASSET) testing. Assessment is a way of evaluating students’ present skills in English, reading and math so students may choose courses that match their skills. Assessment is based on scores on the ASSET course placement tests. Scores are used as a guide for proper course placement, which leads to greater success.

Associate Degree
Degree awarded by community colleges after a student completes a specified number of course requirements and credit hours, generally a minimum of 60 semester credits. May be an Associate in Arts (AA), Associate in Transfer Partnership (ATP), Associate in Business (ABus) or Associate in Science (AS) designed primarily for transfer to complete a baccalaureate degree; an Associate in Applied Science (AAS), designed primarily to enhance workplace skills and knowledge; or an Associate in General Studies (AGS), designed to fulfill students’ goals of higher education.

Associate in Transfer Partnership (ATP)
The Associate in Transfer Partnership (ATP) is designed for students transferring to public and private colleges and universities. This degree is specifically developed for students who have an identified major and have selected the baccalaureate degree granting institution to which they intend to transfer.

Audit
An option for class registration in which the student pays to attend class but does not want to receive credit. Students sometimes choose to audit courses in which they do not wish to complete required assignments.

Bachelor’s Degree
A degree awarded by a four-year college or university. Generally requires completion of 120 semester credits. Also referred to as a baccalaureate degree (e.g., BA or BS).

College Orientation
A session during which new students are introduced to academic programs, facilities, and services provided by a college.

Commencement
Also known as graduation. A ceremony during which colleges award certificates of completion and degrees to graduating students.
Continuous Enrollment
The process of registering for and completing courses during consecutive semesters, which may include summer sessions. Determines catalog year for graduation.

Corequisite
Specified conditions, requirements, or courses that must be completed at the same time as another course.

Counselor
A professionally trained staff member who helps students with educational, career, or personal concerns.

Course
A specific subject studied within a limited period of time, such as a semester, and taught by a faculty member. Also called course offering or class.

Course Fee
A charge for services, supplies, and/or materials for a course, in addition to tuition and registration fees for the course.

Course Number
A three-digit code that identifies a specific course and indicates its level and sequence (e.g., 101 in ENG 101).

Course Prefix
A three-letter code that identifies the subject area of a course (e.g., ENG in ENG101 indicating a course in English).

Course Title
The name of a specific course that indicates subject and content (e.g., Freshman English, title for English 101).

Credit Hour
The numerical unit of college credits earned for the satisfactory completion of a specific course. Also referred to as semester hours or units (e.g., 3 credit hours).

Curriculum
A planned sequence of courses aimed at an academic or occupational goal; also referred to as a program of study.

Customer
One that purchases and/or consumes a product or service; defining and meeting customer needs drives the development of any successful product or service.

Division
A group of faculty who teach classes in related subjects, such as Communication, English, and Social Science in the Liberal Arts Division.

Electives
Non-required courses that students may select to complete their program of study.

Extracurricular Activities
Also known as co-curricular. Activities, clubs, or organizations students may participate in above and beyond their academic courses.

Faculty
Instructors.

Final Exams
Tests or exercises given at the end of a term that are often comprehensive; that is, they may include all material covered during the semester. The schedule of final exam dates and times for each term is included in the Schedule of Classes.
Fiscal Office
Also known as the Cashier’s Office. Students may pay tuition and fees, course fees, and other encumbrances owed the college at the Fiscal Office.

Grade Point
The numerical value of grade multiplied by the credit hours for a course (A=4 points; B=3 points; C=2 points; D=1 point). If, for example, a student earns an A in English 101 (3 credit hours), then the student earns 12 points: \( A = 4 \text{ points} \times 3 \text{ (credit hours)} = 12 \text{ points} \).

Grade Point Average
Generally called GPA, grade point average is determined by dividing the total number of grade points earned by the total number of credit hours attempted. For example, 45 grade points divided by 15 credit hours earned = 3.0 GPA.

Load
Also called academic load. The total number of credit hours taken in a term. Twelve credit hours is considered a full-time load.

Lower Division
Normally freshman- and sophomore-level (100 and 200) courses offered by a college. Community colleges offer ONLY lower division courses. Four-year institutions offer lower division courses and upper division courses, which are junior-level and senior-level (300 and 400) courses.

Major
An area of concentrated study often for a specific degree or occupation, such as English, nursing, or engineering.

Official Absence
Absence from class approved by the Dean of Student Services for students who are participants in an official college activity. Students must present approved absence documentation to their instructors before the official absence and make arrangements to complete the work they will miss.

Pass/Fail
An option for class registration in which students choose to receive a grade of Pass or Fail in lieu of a letter grade (A, B, C, D, F). Students can earn credits towards graduation by passing these courses but the grades will not count in their GPAs. It is best to check with an advisor to make sure that Pass/Fail grades will transfer to another college or university.

Period
Time spent in class and/or lab each week. One period is equivalent to 50 minutes per week for a one-credit course that meets during a 16-week semester.

Placement Test
See assessment.

Prerequisite
Specified conditions, requirements, or classes that must be completed before enrolling in a class. For example, ENG102 has a prerequisite of ENG101.

Probation
A warning that a student is not in good academic standing. May be accompanied by restricted credit hour enrollment.

Recess
Holidays and the periods of time between academic semesters when classes are not in session.

Registration
Actual enrollment of a student into specific courses after the student has been admitted to the college and has received academic advisement.
**Required Course**
A course that a student must complete to meet certain goals or to complete a certain curriculum.

**Schedule of Classes**
A college publication that lists all courses offered during a semester, including dates and times of class meetings, names of instructors, buildings and rooms, credit hours, and other important registration information.

**Scholastic Suspension**
Not being allowed to enroll in the college for one semester. This is caused by not maintaining the minimum required GPA for two consecutive semesters.

**Section Number**
A four-digit code used to identify each class section of each course offered. Each class has a different section number. Section numbers are listed in the Schedule of Classes.

**Semester**
Traditionally half an academic year, 16 weeks in length. Fall semester begins in August and spring semester begins in January.

**Service Learning**
Combines community service with classroom instruction, focusing on critical thinking, value clarification and social responsibility. The key components of Service Learning are linkage to course competencies or objectives, a relevant experience and a meaningful contribution to the community.

**Service Strategy**
A distinctive formula for delivering service that clearly states a customer benefit that is valuable to the customer and that establishes an effective competitive position.

**Subject Codes**
See Course Prefix and Course Number.

**Syllabus**
One or more pages of course requirements that instructors give to students on the first day of class. The syllabus may include detailed information about a course, such as an instructor’s grading system, attendance policies, and testing and assignment dates.

**Transcript**
An official record of a student’s college coursework that is maintained by the college registrar. Courses taken, grades, GPA, and graduation information are included on a transcript.

**Transfer Credit**
Course credit that is accepted from or by another college or university to meet requirements in a major or as general education.

**Trial Schedule**
A form on which students list their course selections in order to determine which combination of courses and class times works best during a particular term.

**Tuition and Fees**
The cost per semester credit unit that students must pay for their college courses. Tuition and fees are determined by the Maricopa County Community College Governing Board.

**Withdrawal**
Officially dropping any or all courses during a semester. Students withdrawing from one or more courses must notify the Admissions and Records Office in writing and request that they be officially withdrawn. Refunds are based on the refund schedule set forth in the catalog. After a specified date, students must have instructor approval before withdrawing from a course.
Estrella Mountain Community College is conveniently located one mile north of Interstate 10 (exit #129) on Dysart Road in Avondale. There is ample parking for day, evening and weekend sessions.
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ACADEMIC CALENDAR

SUMMER 2007

First 5-Week Day and 8-Week Evening Sessions Begin .................. May 29
First 5-Week Day Session Ends .................................................. June 28
Second 5-Week Day Session Begins ............................................. July 2
Independence Day Observed ...................................................... July 4
8-Week Evening Session Ends .................................................... July 19
Second 5-Week Day Session Ends ............................................. August 2

FALL 2007

Registration ............................................................ March 19 - August 17
Classes Begin ........................................................................... August 18
Late Registration .................................................. August 18 - August 24
Labor Day Observed ....................................................... September 3
Last Day for Withdrawal without Instructor Signature ............. October 5
Veteran’s Day Observed ....................................................... November 12
Thanksgiving Break ...................................................... November 22-25
Last Day Withdrawal Accepted ........................................ November 26
Final Exams .............................................................. December 10 -13
Mid-Year Recess Begins ..................................................... December 14

SPRING 2008

Registration .............................................................. To Be Announced
Classes Begin .............................................................. January 12
Observance of M.L. King Birthday ..................................... January 21
Late Registration ...................................................... January 13 - January 18
President’s Day Observed ................................................ February 18
Last Day for Withdrawal without Instructor Signature ........ February 29
Spring Break ............................................................ March 10-16
Last Day Withdrawal Accepted ........................................ April 21
Final Exams ............................................................... May 5-8
Commencement ............................................................. May 9