



**SOUTH MOUNTAIN**  
COMMUNITY COLLEGE

**2015 – 2016 COURSE CATALOG**



## 2015-2016 ACADEMIC CALENDAR

Registration - Consult the fall Class Schedule or [www.southmountaincc.edu](http://www.southmountaincc.edu) for registration and drop/add information.

### Summer Semester – 2015 (Subject to 2015-2016 Catalog)

Classes Begin	Tuesday	May 26
Observance of Independence Day (campus closed)	Thursday	July 2
Summer Semester Ends	Thursday	July 30

### Fall Semester – 2015

Classes Begin	Saturday	August 22
Observance of Labor Day	Monday	September 7
Application for December 2014 Graduation*		
Last Day for Withdrawal without Instructor's Signature+		
Observance of Veterans' Day	Wednesday	November 11
Thanksgiving Holiday	Thursday-Sunday	November 26-29
Last Day Student Initiated Withdrawal Accepted++		
Last Day of Regular Classes	Sunday	December 13
Final Exams**	Monday-Thursday	December 14-17
Mid-Year Recess Begins for Students	Friday	December 18
Fall Semester Ends	Friday	December 18
Winter Break (Campus Closed)		December 25-January 1

### Spring Semester – 2016

Classes Begin	Saturday	January 16
Observance of Martin Luther King, Jr. Birthday	Monday	January 18
Observance of Presidents' Day	Monday	February 15
Application for May 2016 Graduation*		
Last Day for Withdrawal without Instructor's Signature +		
Spring Break	Monday-Sunday	March 14-20
Last Day Student Initiated Withdrawal Accepted ++		
Last Day of Regular Classes	Sunday	May 8
Final Exams**	Monday-Thursday	May 9-12
Commencement	Friday	May 13
Spring Semester Ends	Friday	May 13
Observance of Memorial Day	Monday	May 30



## Welcome to the 2015/2016 South Mountain Community College catalog!

It is with great pleasure that I welcome you to South Mountain Community College (SMCC). As the South Mountain Community College mission statement suggests, we promote student success through academic programs and student support initiatives.

Whether you are just graduating high school, climbing the career ladder, seeking new skills or trying to discover your path, South Mountain Community College is committed to your success.

This catalog was created to be a valuable resource for you. Refer to it often to familiarize yourself with our programs, classes, policies and services.

Since its founding in 1978, SMCC has proudly served the communities of south Phoenix, Ahwatukee, Chandler, Tempe, Guadalupe and Laveen. In 2013, a new partnership was created with the Gila River Indian Community, and we continue to serve the community members on the Reservation with programming that integrates Native traditions and cultural elements.

The faculty and staff at SMCC care deeply about your individual success. As a strengths-based institution, we are dedicated to helping you determine and understand your own personal strengths, and will help you maximize them in the pursuit of your educational and career aspirations. In order to meet your goals, we provide personalized services and engaged, active learning that will help you meet your goals.

Whether you are here with plans to transfer to a four-year institution, prepare for a career or enhance your personal or professional skills, SMCC has something to offer you.

Sincerely,

A handwritten signature in black ink, appearing to read "Shari Olson".

Shari L. Olson, Ph.D.  
President



## TABLE OF CONTENTS

Academic Calendar	ii
President Letter	iii
Table of Contents	v
General Information	001
Graduation Requirements	016
Degrees and Certificates	067
Course Descriptions	119
Campus Personnel	185
Campus Map	198

### **Common Pages**

The Catalog Common Pages are MCCCCD Administrative Regulations and Appendix items specifically relevant to students. These regulations are used in managing the day-to-day operations of MCCCCD 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 MCCCCD website**.

Some regulations include reference to Arizona Revised Statutes from the State of Arizona and are noted as “ARS” followed by a reference number.

You can download the Catalog Common Pages to access the subset of regulations that constitute student policies at <http://tiny.cc/catalogcommonpages>

## ADMINISTRATION

**Dr. Shari Olson**

President

**Dr. Rey Rivera**

Vice President, Academic Affairs

**Dr. Janet Ortega**

Vice President, OE&T

**Dr. Osaro Ighodaro**

VP, Student Development

**Guy Goodman**

Dean, Student Enrollment

**Damita Kaloostian**

Dean, Planning, Research and Development

**Matilda Chavez**

Dean, Academic Innovation

## GENERAL INFORMATION

Courses, programs, and requirements described in this catalog may be suspended, deleted, restricted, supplemented, or changed in any other manner at any time at the sole discretion of the college and the Maricopa Community College District Governing Board. This catalog does not establish a contractual relationship but summarizes total requirements that the student must presently meet before qualifying for a faculty recommendation to the Governing Board to award a degree or certificate.

The Maricopa Community College District reserves the right to change, without notice, any of the materials—information, requirements, and regulations—published in the catalog.

### VISION

South Mountain Community College educates minds, transforms lives, touches hearts, and builds community.

### MISSION

South Mountain Community College provides quality higher education for our diverse community. We create a caring teaching and learning environment that fosters student development and supports productive citizenship in an increasingly global and technological society.

Our purpose is to meet these needs by offering:

- General education courses
- Transfer programs
- Occupational education and career development
- Continuing education
- Developmental studies and English as a second language
- Cultural, civic, and social events
- Academic support and student services

### VALUES

We are inspired and guided by our core values:

**Collaboration:** We are inclusive in our relationships with colleagues, departments and community, and respectful of their ideas.

**Community:** We serve our community by recognizing our inter-dependence, celebrating our history, honoring our diverse cultures, and building our future.

**Excellence:** We model exemplary teaching, learning, service and leadership through continuous improvement, creativity and innovation.

**Integrity:** We are accountable to the communities we serve and are truthful, sincere, transparent and responsible for our actions.

**Wellbeing:** We are a college community that encourages and develops social, physical, career, community and financial wellbeing.

### ACCREDITATION

South Mountain Community College, one of ten Maricopa Community Colleges, is accredited by The Higher Learning Commission of the North Central Association of Colleges and Schools, Commission on Institutions of Higher Education, 230 S. LaSalle Street, Suite 7-500, Chicago, IL 60604-1411, 800.621.7440 or 312.263.0456.





## AREAS/PROGRAMS

## INSTITUTION

### Description

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.

### Agriculture, Food, and Natural Resources

Equine Science	SC
Environmental and Natural Resource Conservation	PC
Environmental and Natural Resource Sustainability	PC
Equine Science	SC
Landscape Aide	MC
Landscape Specialist	MC
Urban Horticulture	MC
Veterinary Technology/Animal Health	MC
Workforce Development: Horticulture	RS
Workforce Development: Landscape Technology	RS

### Architecture and Construction

Air Conditioning/Refrigeration/Facilities	GW
Architecture	MC
Architectural CADD Level III	MC
Architectural Detailing CADD Level III	MC
Architectural Technology	SC
Building Inspection	MC
Construction Trades: Bricklaying and Tilesetting	GW
Construction Trades: Carpentry	GW
Construction Trades: Construction Management	GW
Construction Trades: Millwrighting	GW
Construction Trades: Plastering and Cement Masonry	GW
Construction Trades: Painting and Drywalling	GW
Construction Trades: Pre-Apprenticeship	GW
Construction Trades: Sheet Metal	GW
Construction Trades: Electricity	GW
Construction Trades: Heat and Frost Insulation	GW
Construction Trades: Heavy Equipment Operations	GW
Construction Trades: Ironworking	GW
Construction Trades – Mechanical Trades: Heating, Ventilating and Air Conditioning	GW
Construction Trades – Mechanical Trades: Plumbing	GW
Construction Trades – Mechanical Trades: Pipefitting	GW
Construction Trades – Mechanical Trades: Sheet Metal	GW
Construction Trades: Concrete Form Builder	GW
Construction Trades: Pipe Trades – Pipefitter-Refrigeration	GW
Construction Trades:Plumbing	GW
Construction Trades: General Construction Worker	GW

## AREAS/PROGRAMS

## INSTITUTION

Construction Trades: Steamfitting	GW
Computer Aided Drafting	MC
Computer Aided Design and Drafting CADD Level I	MC
Commercial Drafting CADD Level II	MC
Construction	MC
Construction Drafting CADD Level III	MC
Construction Trades: Heavy Equipment Operations	GW
Construction Management	PC
Home Inspection	MC
Mechanical Drafting	MC
Power Plant Technology	EM
Plan Review	MC
Pre-Contractor Licensing	MC
Residential and Light Commercial Air Conditioning	GW
Residential Drafting CADD Level II	MC
Survey and Civil Drafting - CADD Level II	MC
Workforce Development: Carpentry Level I	RS
Workforce Development: Carpentry Level II	RS
Workforce Development: Furniture Construction/Refinishing Level I	RS
Workforce Development: Furniture Construction/Refinishing Level II	RS

### Art, A/V Technology, and Communication

Adolescent Development	GC, RS
Adult Development and Aging	GC, RS
Alteration Specialist	MC
Apparel Construction	PC
Audio Production Technologies	GC, MC, PC, PV, SC
Beginning Piano Pedagogy	MC
Intermediate Piano Pedagogy	MC
Costume Design and Production	MC
Costuming	PC
Computer Graphic Design	PC
Dance Technology	SC
Disc Jockey Techniques	MC, SC
Digital Media Arts	GC
Family Life Education	GC, RS
Fashion Design	PC
Fashion Design Level I	PC
Fashion Design Level II	PC
Fashion Illustration	PC
Fashion Merchandising	PC
Fashion Merchandising & Design	MC
Graphic Design: Visual Communication	SC
Interior Merchandising	GC, MC, PC, EM
Interior Design	MC, PC, SC
Interior Design: Advanced	MC
Image Consultant	MC
Journalism and New Media Studies	GC, PV, MC, SC

## AREAS/PROGRAMS

Music Business  
Photography  
Parent Education  
Pattern Design Level I  
Pattern Design Level II  
Textile and Apparel: Fashion Computer-Assisted Design (CAD) Technician  
Textile and Apparel: Fashion Illustration Specialist  
Textile and Apparel: Industrial Sewing Technician  
Textile and Apparel: Product Development  
Workforce Development: Graphic Arts Level I  
Workforce Development: Graphic Arts Level II

## INSTITUTION

CG, GC, MC, PC, PV, SC, SM  
GC, PC  
GC, RS  
PC  
PC  
MC  
MC  
MC  
MC  
RS  
RS

### **Business, Management, and Administration**

Accounting  
Accounting – Specialized Para-Professional  
Accounting Paraprofessional  
Administrative Professional  
Administrative Technology  
Administrative Professional  
Automobile Insurance: Customer Service  
Automobile Policy: Customer Service  
Automobile Insurance Claims: Customer Service  
Broadband Telecommunications: Account Services  
Broadband Telecommunications  
Broadband Telecommunications: Field Operation  
Broadband Telecommunications: Technical Support Services  
Bookkeeping  
Business  
Business (Fastrack)  
Business Management  
Business Technology Specialist  
Business Office Assistant  
Computer Applications  
Court Reporting: Judicial  
Credit Counseling: Customer Service  
Customer Service Management  
Entrepreneurial Studies Level I  
Entrepreneurial Studies Level II  
General Business  
General Business Specialized  
Human Resources Management  
Human Services-Assistance: Public Assistance Eligibility  
Human Services-Specialist: Customer Service  
Human Services - Unemployment Insurance: Customer Service  
International Business  
International Trade  
Management  
Middle Management

GC, PC, GW, RS, SM, CG, EM  
PV  
GC  
PV  
GW  
PC, MC  
RS  
RS  
RS  
RS  
RS  
RS  
RS  
SC  
MC, SC  
SC  
SM  
GW  
GC  
PC  
GW  
RS  
EM  
GW, MC, PV, RS, SM  
GW, MC, PV, RS, SC, SM  
CG, GC, MC, PC, RS, SC, SM  
PVC  
PC  
RS  
RS  
RS  
PV  
MC  
PC, MC, GC, PV  
GC, PV

## AREAS/PROGRAMS

## INSTITUTION

Military Leadership	RS
Microcomputer Accounting	PV
Management of Clinical Information Technology	GW
Management of Clinical Information Technology: Health Information Technology Implementation Support	GW
Management of Clinical Information Technology: Health Information Technology Technical Support	GW
Management of Clinical Information Technology: Practice Workflow and Information Management Redesign	GW
Management of Clinical Information Technology: Implementation Management	GW
Management of Clinical Information Technology: Health Information Technology Training	GW
Management of Clinical Information Technology: Clinical Technology Consulting	GW
Motor Vehicle: Customer Service	RS
Office Technology	GW
Organizational Leadership	CG, GC, EM, GW, MC, PV, RS
Organizational Management	CG, GC, EM, GW, MC, RS
Pharmacy: Customer Service	SM, RS
Paralegal Studies	PC
Project Management	MC
Quality Customer Service	RS
Realtime Reporting Scoping	GW
Public Relations	MC, GC
Retail Management	CG, GC, GW, MC, PC, PV, RS, SM
Retail Management and Marketing	SC
Retail Sales Manager	MC
Retail Pharmacy: Customer Service	RS
Small Business	MC
Small Business Entrepreneurship	GC, SM, GW
Small Business Management	EM, SC, GW
Small Business Start-Up	CG, GC, MC, PC, PV, RS, SM
Sports Management	GC, PC, PV, SC
Social Media Marketing	CG, GW, MC, SC, SM
Supervision and Management I	SM
Supervision and Management II	SM
Supervision	GC
Technology Support Analyst	MC
Utilities Customer Service	RS
Water Services: Customer Service	RS

## Education and Training

Adult Learning and Development	RS
Adult Learning and Coaching Development	RS
Child and Family Organizations Management and Administration	GC, RS
Child Development Associate (CDA) Preparation	GC, PVC, SM, EM
Curriculum for Young Children	PC

## AREAS/PROGRAMS

## INSTITUTION

Early Care Specialist	MC
Early Childhood Education and Administration: Birth through Age Five	PC
Early Childhood Classroom Management	PC
Early Childhood Education	PV, GC, EM
Early Childhood Administration and Management	GC, MC, RSC, SM
Early Learning and Development	CG, MC, RS, SM
Family Child Care Management	RS, SM
Foundations of Student Services	EM
Gifted Education	EM
Instructional Assistance	MC, SM
Infant and Toddler Development	RS, SM
Reading Specialist	MC
Teacher Assisting	EM, GW
Workforce Development and Community Re-Entry	RS

### Environmental Technology

Environmental Science Technology	GW
Energy Systems Technology	GC, RS
Geospatial Technologies	MC
Occupational Safety and Health Technology	GW
Safety, Health and Environmental Studies	PV
Wastewater Treatment	GW
Water Resources Technologies	GW
Water Resources Technologies: Hydrologic Studies	GW
Water Treatment	GW

### Finance

Banking and Finance	PC
Bank Account Management: Customer Service	RS
Certified Residential Appraiser	MC
Licensed Real Estate Appraiser	MC
Real Estate	MC, PC
Real Estate: Prelicense	PC, MC, SM
Residential Appraisal Trainee	MC

### Government and Public Administration

Public Administration	RS
Public Administration: Legal Services	RS
Tribal Development	SC

### Health Science

## AREAS/PROGRAMS

## INSTITUTION

Advanced Behavioral Health Sciences	GC, SM
Advanced Emergency Medical Technology (Paramedic)	PC, PV
Basic Behavioral Health	GC, SM
Clinical Research Associate	GW
Computed Tomography	GW
Community Emergency Response Team (CERT): Level I	PC
Clinical Dental Assisting	RS
Community Dental Health Coordination	RS
Developmental Disabilities Specialist	GC
Diagnostic Medical Sonography	GW
Dental Assisting	PC
Dental Hygiene	PC, RS, MC
Dental Office Management	RS
Dental Assisting Technology	RS
Electroneurodiagnostic (END) Technology	GW
Emergency Communications and Deployment	PC
Fast Track Practical Nursing	GW
Healthcare Regulatory Compliance	GW
Health Information: Long Term Care Settings	PC
Health Information Technology	PC
Health Services Management	GW
Health Unit Coordinating/Patient Care Associate	GW
Histologic Technology	PC
Hospital Central Service Technology	GW
Laboratory Assisting	PC
Magnetic Resonance Imaging	GW
Medical Laboratory Sciences	PC
Medical Assisting	PC
Medical Coding: Hospital-Based	PC
Medical Billing and Coding: Physician-Based	PC
Medical Front Office	PC
Medical Radiography	GW
Medical Transcription	GW
Nursing	CG, EM, GC, GW, MC, PC, PV, SC
Nurse Assisting	CG, GW, MC, PC, PV, SC, EM
Nursing Refresher	GW, MC
Phlebotomy	PC, SM
Physical Therapist Assisting	GW
Polysomnographic Technology	GW
Practical Nursing	CG, GC, GW, MC, PC, PV, SC, RS, EM
Radiation Therapy	GW
Recovery Support	SM
Respiratory Care	GW
Speech Language Pathology Assistant	EM
Surgical Technology	GW
Surgical Technology for the Operating Room Nurse	GW

## Hospitality and Tourism

## AREAS/PROGRAMS

## INSTITUTION

Airline Operations: Ground Operations	RS
Airline Operations: Initial Flight Attendant	RS
Airline Operations: Passenger Services	RS
Airline Operations: Reservations	RS
Baking and Pastry	EM, PC
Basic Culinary Studies	EM
Commercial Food Preparation	PC
Commercial Bakery and Pastry Arts	SC
Culinary Arts	SC
Culinary Studies	EM, PC
Culinary Arts Foundations	SC
Culinary Fundamentals	SC, SM
Dietetic Technology	CG, PV
Food Service Administration	PC
Hospitality and Tourism/Golf Management	SC
Hospitality and Tourism/Hotel Management	SC
Hospitality and Tourism/Restaurant Management	SC
Hospitality and Tourism/Spa and Wellness Center Management	SC
Hospitality/Hotel Management	EM
Hospitality and Tourism/Tourism Development and Management	SC
Sustainable Food Systems	MC, RS

### Human Services

Addictions and Substance Use Disorders Level I	RS
Addictions and Substance Use Disorders Level II	RS
Addictions and Substance Use Disorders	RS
Adolescent Studies	PC
Deaf Studies	PC
Exercise Science and Personal Training	CG, GC, MC, PV, SC, SM
Family Development	PC
Family Support	PC
Group Fitness Instructor	MC
Interpreter Preparation	PC
Mortuary Science	MC
Nutrition for Fitness and Wellness	GC, MC, SC
Personal Trainer	GC, MC
Professional Addictions Counseling	RS
Personal Training Specialist	CG, EM, GC, MC, PV, SC, SM
Recreation Management	MC, SC
Teaching, Healing, Meditation for Stress Management	PV
Therapeutic Massage	CG, PC
Yoga Instruction	SC
Yoga Therapy	SC

## AREAS/PROGRAMS

## INSTITUTION

### Information Technology

Advanced Computer Usage and Applications	RS
Advanced Web Designer	MC
Applications in Geospatial Technologies	MC
Adobe Foundations	GC, MC, SM, PV
Adobe Creative Suite in Business: Master Suite Applications Specialist	GC, MC, SM
Adobe Creative Suite in Business: Print and Web Applications Specialist	GC, MC, PV, SC, SM
Adobe Creative Suite in Business: Production Applications Specialist	GC, MC, SM
Business Office Computer Applications	GC
Production Television	SC
Comic and Sequential Art	PC
Computer Applications Technology	EM
Computer Applications: Microsoft Office Specialist/Advanced	MC
Computer Applications: Microsoft Office Specialist/Basic	MC
Computer Hardware and Desktop Support	CG, EM
Computer Hardware and Network Support	SC
Computer Information Systems	GC, GW, PC, PV
Computer Information Systems Technologies	SC
Computer Information Technology	PV
Computer Networking Technology	PV
Computer Programming	MC
Computer Systems Maintenance	PV
Computer Technology	RS
Computer Usage and Applications	RS
Computer and Information Technologies	SM
Computer Applications: Office Specialist/Core Level	CG
Computer Applications: Office Specialist/Expert Level	CG
Computer Business Applications	CG
Digital Arts	MC
Digital Design	RS
Digital Photography	PC
Digital Arts: Digital Illustration	MC
Digital Arts: Digital Photography	MC
Digital Arts: Graphic Design	MC
Digital Arts: Web Design	MC
Database Development	SC
Desktop Publishing	EM
Digital Cinema Arts	GC
Editing	SC
eLearning Design Specialist	RS
Production Film	SC
Game Technology	MC, GC
Hardware and Networking Basics	RS
Healthcare Technology Systems	GC, PV
Information Security	GC
Information Security Technology	GC,
Information Technology	CG
Information Technology: Android/iOS Programming	SM
Information Technology: Programming and Mobile Development	SM



## AREAS/PROGRAMS

AREAS/PROGRAMS	INSTITUTION
Information Technology: Web and Graphic Design	SM, EM
Information Technology: Cisco Networking	SM, MC
Information Technology: Computer Applications Specialist	SM
Information Technology: Microsoft Programming	SM
Information Technology: Network Server	SM
Information Technology: Network Security	SM
Information Technology Support	SM
IT and Power Systems Security	EM
Linux Associate	CG, EM, GC, MC
Linux Networking Administration	EM, GC, MC
Linux Professional	CG, EM, GC, GW, PC, SC, SM, MC, PV
Microsoft Desktop Support Technology	EM, GC, PV
Microsoft Networking Technology	EM, GC, GW, PV
Microsoft Technical Specialist	EM, GC, GW, PV
Microsoft Server Administration	EM, GC, PV
Microsoft Certified Information Technology Professional (MCITP) Administrator	EM, GC, GW
Mobile Apps Programming	EM, PVC, RSC, SM
Multimedia and Business Technology	MC
Media Arts: Computer Art/Illustration	CG, PC
Media Arts: Digital Animation	PC
Media Arts: Digital Imaging	CG, PC
Media Arts: Web Design	PC
Motion Picture/Television Production	SC
Multimedia Technology	MC
Network Administration	SC
Network Administration: CISCO Network Professional	MC, CG, SM
Network Administration: Microsoft Windows Server	CG, GW, MC
Networking: Design and System Support	RS
Networking Administration: Cisco	CG, EM, GC, GW, SM, MC
Networking System Administration	MC
Networking Technology: Cisco	CG, EM, GC, GW
Oracle Database Operations	CG
Programming	RS, EM, SM
Programming and System Analysis	CG, EM, GC, MC, PC, PV, SC, SM
Software Development	SC
Screenwriting	SC
Technical Theatre	PC, SCC
Web Application Development	SM
Web Design	GC, PV, EM, PC, CG, SM
Web Design Technologies	SC
Web Design: User Interface	RS
Web Designer	MC
Web Developer	GC, MC, PC, PV, EM
Web Development	SC
Web Server Administrator	MC

## AREAS/PROGRAMS

## INSTITUTION

### Manufacturing

Automation Technology	MC
Automation Technology Level I	MC
Automation Technology Level II	MC
Automation Technology Level III	MC
CAD Technology	GC
CAD Fundamental	GC
CAD/CAM/CNC I	MC
CAD/CAM/CNC II	MC
CAD/CAM/CNC III	MC
CAD Application	GC
Computer and Networking Technology	GC
Electro/Mechanical Drafting	MC
Electromechanical Manufacturing Technology	MC
Electric Utility Technology	CG
Electric Utility Design Technology	CG
Electrical Technology	GW
Electromechanical Automation Technology	MC
Electronics Engineering Technology	MC
Electronics Technology	MC
Industrial Design Technology	GW
Industrial Design Technology: Design Specialist: SolidWorks	GW
Machining I	MC
Machining II	MC
Manufacturing Engineering Technology	MC
Manufacturing Management	MC
Manufacturing Welding	MC
Micro Circuit Mask Design	MC
Meter Technology	CG
Network Maintenance	GC
Production Technology	GW
Production Technology: CNC Technology	GW
Production Technology: Quality Assurance	GW
Workforce Development: Electrical Level I	RS
Workforce Development: Electrical Level II	RS
Welding	MC

### Marketing, Sales, and Service

Marketing	PC, GC, PV, SC
Salesmanship	MC

### Law, Public Safety, Corrections, and Security

Administration of Justice	EM, GC, PC, PV, RS
Administration of Justice-Comprehensive	PC

## AREAS/PROGRAMS

## INSTITUTION

Administration of Justice-Fundamentals	PC
Administration of Justice Studies	CG, MC, SC, GW
Advanced Corrections	RS
Basic Corrections	RS
Corrections	RS
Correctional Studies	CG
Crime and Accident Scene Photography	PC, SC
Crime Scene Investigation	SC, PC
Crime Scene Technology	SC, PC
Detention Services	RS
Domestic Preparedness and Homeland Security	PC
Driver Operator	CG, GC, EM, MC, PC, PV
Evidence Technology	PC
Evidence Technology	EM
Emergency Medical Technology	CG, GC, MC, PC, PV, SC
Emergency Management	SM
Emergency Response and Operations	CGCC, EM, GC, MC, PC, PV, SC
Fire Academy	GC, SC
Fire Officer Leadership	MC, CG, EM, GC, PC, PV
Fire Science	PV, RS, EM, MC
Firefighter Operations	GC, MC, PC, PV, CG, EM
Fingerprint Classification and Identification	PC, SC
Forensic Investigation	MC
Forensic Science	CG
Forensic Technology	PC
Forensic Science: Crime Lab	SC
Fire Investigation	CG, EM, GC, MC, PC, PV
Global Citizenship	MC
Homeland Security	CG, GW
Hazardous Materials Response	PC
Judicial Studies	MC
Justice Studies	CG, SC
Juvenile Corrections	RSC
Law Enforcement Investigator	GC
Law Enforcement Technology	RS
Law Enforcement	SC
Law Enforcement Training Academy	GC, CG
Legal Studies	MC
Paralegal	RS
Paramedicine	CG, GC, PC, PV, MC
Police Academy Preparation Level I	SC
Police Science	MC, SC
Public Safety Technology	RS
Tribal Court Advocacy	SC
Victimology	MC

### Science, Technology, Engineering and Mathematics

Aircraft Maintenance Technology	CG
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## AREAS/PROGRAMS

## INSTITUTION

Aircraft Maintenance Technology (Part 147)	CG
Airframe Maintenance (Part 147)	CG
Airway Science Technology, Flight Emphasis	CG
Biomedical Research Technology	GW, SM
Biotechnology	MC
Biotechnology and Molecular Biosciences	GC
Certified Flight Instructor Instrument Airplane Rating	CG
Engineering Technology	GC, CGC, EM, SM
Flight Technology	CG
Powerplant Maintenance (Part 147)	CG
Nanotechnology	RS

### Transportation, Distribution, and Logistics

Air Conditioning and Electrical Accessories	GW
Air Conditioning	MC
Automotive Chassis	GC
Automotive Drive Trains	GW
Automotive Electrical Systems	MC
Automotive Engines and Drive Trains	GC
Automotive Engine Performance Diagnosis & Air Conditioning	GC
Automotive Performance Technology	MC
Automotive Suspension, Steering and Brakes	GW
Automotive Technology	GC, GW
Brakes, Alignment, Suspension and Steering	MC
Engine Performance and Diagnosis	GW, MC
Transmissions and Power Trains	MC
Workforce Development: Automotive Technology Level I	RS
Workforce Development: Automotive Technology Level II	RS

### College Acronyms/Name:

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



# GRADUATION REQUIREMENTS

## GENERAL GRADUATION REQUIREMENTS (AR 2.3.9)

All students are required to complete the degree and/or certificate requirements as approved by the MCCCCD 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 Admissions and Records Office/Office of Student Enrollment Services with not fewer than: 60 semester credit units in courses numbered 100 or above for the Associate in Arts degree, Associate in Science 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. 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. 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. 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 areas are excluded.

Shared Programs are programs offered at multiple colleges but not available at all colleges. 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.

3. have filed an application for the degree or certificate with the Admissions and Records Office/Office of Student Enrollment Services 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 MCCCCD college/center.

8. have paid required degree or certificate application fee.

9. See fee schedule for charges.

### **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”

### **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 Applied Science (Career Program Specified).

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

### **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.

### **MCCCDC 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 MCCCDC 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 MCCCDC and the institutions to which MCCCDC 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 F05 (Active)

Continued at a Public Community College S06, F06 (Active)

Transferred to a University S07 (2005 or any subsequent catalog)

EXAMPLE B:

Admitted & Earned Course Credit at a Public Community College or University F02 (Active)

Enrolled But Earned All Ws, Zs, or Fs S03 (Inactive)

Enrolled in Audit Courses Only F03 (Inactive)

Nonattendance S04 (Inactive)

Transferred to a University F04 (2004 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 F02 (Active)

Nonattendance S03, F03, S04 (Inactive)

Readmitted & Earned Course Credit at a Public Community College F04 (Active)

Transferred to a University S05 (2004 or any subsequent catalog)

EXAMPLE B:

Admitted & Earned Course Credit at a Public Community College or University F02 (Active)

Readmitted & Earned Course Credit at a Public Community College Su03 (Active)

Nonattendance S03, F03, S04 (Inactive)

Transferred to a University F04 (2002 or any subsequent catalog)

\*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 Su04 (Active)

Continued at a Public Community College F04, S05 (Active)

Readmitted & Earned Course Credit at a Public Community College S06 (Active)

Nonattendance F05 (Inactive)

Transferred to a University Su06 (2004 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.

NOTE: Time Limit for Transfer Coursework

Students should be aware that the receiving institution may have age and credit limits on certain coursework to be used in transfer. Students should be knowledgeable about the policies on time limits for transfer coursework for the institution to which they plan to transfer.

#### University Transfer and Pathways

Most public university majors are matched with one of the following Maricopa Community Colleges Associate Degree Pathways. Students should consult with an advisor to determine the specific degree requirements for the selected major, or visit the following website: <http://aztransfer.com/>.

Associate in Arts (AA) 60-63 credits	AGEC-A 35-38 Credits	Core Areas Awareness Areas
	Awareness Areas 0 credits	Cultural Diversity in the United States [C] and Global Awareness [G] or Historical Awareness [H]
	(Courses may satisfy a Core area as well as one or two Awareness areas simultaneously.)	
Associate in Arts, Elementary Education (AAEE) 60-63 credits	AGEC-A 35-38 Credits	Core Areas Awareness Areas
	Elementary Education Requirements 25 Credits	Education Foundations Restricted Electives
Associate in Arts, Fine Arts (AAFA) 60-64 credits	AGEC-A 35 Credits	Core Areas Awareness Areas
	MCCCD Requirements 0-6 Credits	Communication, Reading
	Fine Arts Requirements 25-29 Credits	Art (28 Credits) Dance (29 Credits) Theatre (25-29 Credits)
Associate in Business, General Requirements (ABUS-GR) 62-63 credits All Business Majors except CIS	AGEC-B 35 Credits	Core Areas Awareness Areas
	Common Lower Division Requirements 27 Credits	Communication, Reading
	General Electives	Select courses to complete a minimum of 60 credits but no more than a total of 64 semester credits

Associate in Business, General Requirements (ABUS-SR) 62-63 credits CIS Majors	AGEC-B 35 Credits	Core Areas Awareness Areas
	Common Lower Division Requirements 27 Credits	Communication, Reading
	General Electives	Select courses to complete a minimum of 60 credits but no more than a total of 64 semester credits

Associate in Science (AS) 60-64 credits	AGEC-S 36-38 Credits	Core Areas Awareness Areas
	MCCCD Requirements 0-6 Credits	Communication, Reading
	General Electives	Select courses to complete a minimum of 60 credits but no more than a total of 64 semester credits

#### Additional Programs for University Transfer

Associate in General Studies (AGS) 60 credits	General Education Core Areas 16 Credits
	General Education Distribution 28-29 Credits
	Electives 15-16 Credits

Associate in Applied Science (AAS) 60 credits	General Education Core Areas 16 Credits
	General Education Distribution 28-29 Credits
	Electives Credits vary
	Required Courses Credits vary

#### Arizona General Education Curriculum (AGEC) AGEC-A, AGEC-B, AGEC-S

##### Description

The Maricopa County Community College District Arizona General Education Curriculum (MCCCD AGECE) 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. Generally, the MCCCD AGECE transfers as a block without loss of credit.

In most cases, all courses used to satisfy the MCCC CD AGEC will apply to graduation requirements of the university major for which the AGEC was designed.

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 MCCC CD Associate in Arts, the AGEC B is a component of the MCCC CD Associate in Business, and the AGEC S is a component of the MCCC CD Associate in Science.

#### Purpose of the AGECS

There are three types of MCCC CD 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 website: <http://www.aztransfer.com>.

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, B, S:

- Requires 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;
- A minimum of 60 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. On an exception basis, P-grades may be allowed in the AGEC for credit transferred if documentation collected by the community college indicates that the P-grade issued was the only option for the student and the P-grade is a “C” or better. The P-grade exception does not apply to credits awarded by AGEC granting/receiving institutions;
- Credit received through prior learning assessment or credit by evaluation is transferable within the Maricopa Community Colleges but is not necessarily transferable to other colleges and universities. No more than 20 semester credit hours may be applied toward AGEC;
- Uses 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 (AZ- CAS) 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 MCCCDC and the institutions to which MCCCDC 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 (XXXXDEC), or general elective credit (Elective) at all Arizona public universities according to the Arizona CEG (Course Equivalency Guide). The course evaluation and/or general education designation as listed in AZ- CAS 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 MCCCDC colleges;
- Include both courses and their modular equivalents, either the course or the modular equivalents will satisfy the AGECE;
- 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 AGECE A, AGECE B, or AGECE S with a minimum 2.5 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.

**AGECE Requirements**

The 35-38 semester credits required for each of the three AGECEs follow. View specific course information via the following website: <https://asa.maricopa.edu/departments/center-for-curriculum-transfer-articulation> by clicking on the AGECE link.

The AGECE A, B, S, and AGECE Matrix identify the courses in alpha-order by prefix as well as the different Core Areas and Awareness Areas where the course will apply.

Credits

	<b>Credits</b>
A. Core Areas:	35
1. First-Year Composition (FYC)	6
2. Literacy and Critical Inquiry [L]	0-3
AGECE A & AGECE B: Select a course that satisfies the [L] requirement (3).	
AGECE S: Recommend selecting a course that satisfies (L and SB) or (L and HU), or (L and COM), or (L and CRE101) requirements simultaneously.	
3. Mathematical Studies [MA/CS]	4-6
The Mathematics [MA] requirement differs for AGECE A, AGECE B, and AGECE S. To complete the Mathematical Studies requirement for AGECE A and AGECE B, select one course to satisfy Mathematics [MA], and a second course from Computer/ Statistics/Quantitative Applications [CS]. AGECE S does not require the [CS] area.	

AGECE A requires:

- a. Mathematics [MA] (3 credits) AND (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.)
- b. Computer/Statistics/Quantitative Applications [CS] (3 credits)

AGEC B requires:

- a. Mathematics [MA] (3 credits) AND Requires a course in brief calculus (MAT212) or a higher-level mathematics course (MAT220 or MAT221 or any course for which these courses are prerequisites). Humanities, Arts and Design [HU] 6 AGEC A and AGEC B: Students are encouraged to choose courses from more than one discipline for a total of six semester credits.

AGEC S requires:

- a. Mathematics [MA] (3 credits) AND Requires a calculus course (MAT220 or MAT221) or any mathematics course for which MAT220 or MAT221 are prerequisites.

4. Humanities, Arts and Design [HU]

6

AGEC A and AGEC B: Students are encouraged to choose courses from more than one discipline for a total of six semester credits.

AGEC S: Recommend selecting a course that satisfies both [L] and [SB] or [L] and [HU] requirements simultaneously.

5. Social Behavioral Sciences [SB]

6

AGEC A and AGEC B: Students are encouraged to choose courses from more than one discipline for a total of six semester credits.

AGEC S: Recommend selecting a course that satisfies both [L] and [SB] or [L] and [HU] requirements simultaneously.

6. Natural Sciences [SQ/SG]

8

To complete the Natural Sciences requirement:

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.

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 MCCC 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)

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]

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 AGECS, students will select a course that satisfies both

Literacy and Social Behavioral Sciences or Literacy and Humanities, Arts and Design 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

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.

#### Computer/Statistics/Quantitative Applications [CS]

AGEC A and 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, Arts and Design [HU]

Courses must be completed with a grade of “C” or better in the Humanities, Arts and Design Core area. Students are encouraged to choose coursework from more than one discipline. The Humanities, Arts and Design 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 Behavioral Sciences [SB]

Courses must be completed with a grade of “C” or better in the Social Behavioral Sciences Core area. Students are encouraged to choose course work from more than one discipline.

The Social 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)

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, Bot- any, 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 inter- dependence 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 “his- tory” 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.

### **Associate in Arts (AA)**

#### 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) MCCCDC 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. Generally, the degree will transfer as a block without loss of credit to Arizona’s public universities and other institutions with district-wide articulation agreements.

In most cases, courses used to satisfy the MCCCDC 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: [www.aztransfer.com](http://www.aztransfer.com).

#### Academic Policies that Govern the Associate in Arts Degree

- Completion of the Associate in Arts and the AGECA 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; Cred- it 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. On an exception basis, P-grades may be allowed in the AGEC for credit transferred if documentation collected by the community college indicates that the P-grade issued was the only option for the student and the P-grade is a “C” or better. The P-grade exception does not apply to credits awarded by AGEC granting/receiving institutions;
- Credit received through prior learning assessment or credit by evaluation is transferable within the Maricopa Community Colleges but is not necessarily transferable to other colleges and universities. No more than 20 semester credit hours may be applied toward AGEC.
  - 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 course cannot be used to satisfy more than one Core Area
  - General Education Courses can satisfy multiple areas with- in the degree simultaneously (AGEC-A Core Area, AGEC Awareness Area, MCCCCD 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. View specific course information via the following website: <https://asa.maricopa.edu/departments/center-for-curriculum-transfer-articulation> by clicking on the statewide AGEC link.
  - Maricopa courses and external courses evaluated as Maricopa equivalents or departmental electives (for example, HIS- ELC, MATELC), that are numbered 100 level or higher, and completed with a grade of “C” or higher, may be applied in the elective area, regardless of potential transferability to other institutions. It is recommended, however, that students planning to transfer to a baccalaureate-granting institution meet elective requirements with courses that are transferable and applicable to their intended university degree. 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.
  - Courses completed at one of the Maricopa Community Colleges to satisfy Common Courses must be transferable as elective or better to the universities that have the shared majors listed on a Common Course Matrix. A shared major is a university degree program that has similar academic preparation to one or more degree programs at other Arizona public universities as listed on the Common Course Matrices. For appropriate course selection, students should consult with an advisor.

# GRADUATION

## Degree Requirements

The 60-64 semester credits required for the Associate in Arts follow. View specific course information via the following web- site: <https://asa.maricopa.edu/departments/center-for-curriculum-transfer-articulation> by clicking on the statewide AGECE link. The AGECE A, B, S, and AGECE Matrix identify the courses in alpha-order by prefix as well as the Core Areas and Awareness Areas where the course will apply.

### I. MCCC General Education

The MCCC General Education includes two areas: MCCC AGECE-A and MCCC Additional Requirements.

#### MCCC AGECE-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, Arts and Design [HU] 6

Students are encouraged to choose course work from more than one discipline for a total of six semester credits.

- e. Social 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 CD 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 CD Additional Requirements because courses can satisfy a Core Area and MCCC CD 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  
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 [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 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: [www.aztransfer.com/](http://www.aztransfer.com/).

Maricopa courses and external courses evaluated as Maricopa equivalents or departmental electives (for example, HIS-ELC, MATELC), that are numbered 100 level or higher, and completed with a grade of "C" or higher, may be applied in the elective area, regardless of potential transferability to other institutions. It is recommended, however, that students planning to transfer to a baccalaureate-granting institution meet elective requirements with courses that are transferable and applicable to their intended university degree. 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 - Elementary Education (AAEE)**

#### Description

The MCCC 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. MCCC General Education

Arizona General Education Curriculum for Arts (AGEC-A)

Additional MCCC Requirements

#### II. Elementary Education Requirements

Education Foundations

Restricted Electives

#### Purpose of the Degree

The AAEE is designed for the student who plans to transfer to an Elementary Education, Early Childhood, Multicultural/ Multilingual, or Special Education program at an Arizona public higher education institution and/or who plans to become a classroom instructional aide.

Generally, the degree transfers as a block without loss of credit to Arizona's public universities. In most cases, courses applied to the MCCC Associate in Arts in Elementary Education also apply to graduation requirements of the university major for which the AAEE was designed.

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

- Completion of the Associate in Arts and the AGECE-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; 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. A grade of "C" equals 2.0 on a 4.0 grading scale or equivalent. On an exception basis, P-grades may be allowed in the AGECE for credit transferred if documentation collected by the community college indicates that the P-grade issued was the only option for the student and the P-grade is a "C" or better. The P-grade exception does not apply to credits awarded by AGECE granting/receiving institutions.
- Credit received through prior learning assessment or credit by evaluation is transferable within the Maricopa Community Colleges but is not necessarily transferable to other colleges and universities. No more than 20 semester credit hours may be applied toward AGECE.

- Is governed by the following policies to enable students to satisfy AGEC-A requirements without exceeding the 35 semester credits:
- 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 more Awareness Areas simultaneously.
  - » Courses can satisfy an Elementary Education Requirement and one or more Awareness Areas simultaneously.
  - » A course cannot satisfy more than one Core Area Requirement.
  - » 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. View specific course information via the following website: <https://asa.maricopa.edu/departments/center-for-curriculum-transfer-articulation> by clicking on the statewide AGEC link.
- Maricopa courses and external courses evaluated as Maricopa equivalents or departmental electives (for example, HIS- ELC, MATELC), that are numbered 100 level or higher, and completed with a grade of "C" or higher, may be applied in the elective area, regardless of potential transferability to other institutions. It is recommended, however, that students planning to transfer to a baccalaureate-granting institution meet elective requirements with courses that are transferable and applicable to their intended university degree. 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 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.
- Courses completed at one of the Maricopa Community Colleges to satisfy Common Courses must be transferable as elective or better to the universities that have the shared majors listed on a Common Course Matrix. A shared major is a university degree program that has similar academic preparation to one or more degree programs at other Arizona public universities as listed on the Common Course Matrices. For appropriate course selection, students should consult with an advisor.

## I. MCCC General Education Requirements

A. MCCC CD AGEC - A	
1. Core Areas	35-38
a. First-Year Composition [FYC] ENG101/102 OR ENG107/108	6
b. Mathematics Studies [MA] and Computer/Statistics/Quantitative Applications [CS] 1) MAT142 [MA] College Mathematics, or higher 2) (NOTE: MAT256, MAT257, MAT182, and MAT206 are excluded) AND 2) CIS105 [CS] Survey of Computer Information Systems, OR BPC110 [CS] Computer Usage and Applications	6
c. Literacy and Critical Inquiry [L] Select the following: COM225 Public Speaking	3
d. Humanities, Arts and Design [HU] 1) Select (3) semester credits from the following courses: ARH100 Introduction to Art ARH101 Prehistoric through Gothic Art ARH102 Renaissance through Contemporary Art THE111 Introduction to Theatre DAH100 Introduction to Dance DAH201 World Dance Studies MHL140 Survey of Music History MHL143 Music in World Cultures AND 2) Select (3) semester credits from the following courses: EDU/ENH291 Children’s Literature ENH110 Introduction to Literature ENH241 American Literature Before 1860 ENH242 American Literature After 1860 HUM250 or HUM251 Ideas and Values in the Humanities	6
e. Social Behavioral Sciences [SB] 1) Select 3 semester credits from the following courses: HIS103 United States History to 1865 POS110 American National Government GCU/POS227 United States and Arizona Social Studies AND 2) Select 3 semester credits from the following courses: ECH/CFS176 Child Development CFS205 Human Development HIS104 United States History 1865 to Present PSY101 Introduction to Psychology GCU121 World Geography I: Eastern Hemisphere GCU122 World Geography II: Western Hemisphere ECN211 Macroeconomic Principles ECN212 Microeconomic Principles	6



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 SG and 4 semester credits of SQ 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-Select 4 semester credits of SQ or SG from BIO AND
- 2) Physical Sciences OR Earth/Space Sciences - Select 4 semester hours of SQ or SG credits from the following prefixes: AGS, ASM, AST, CHM, GPH, GLG, PHS, PHY.

Note: Students are advised to check with the university they plan to attend as requirements for lab sciences may vary.

Awareness Areas 0

The MCCC CD 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.

2. MCCC CD Additional Requirements 0-3

- a. Oral Communication  
Satisfied by COM225 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 20

Complete the following courses to satisfy the Education Foundations requirements:

220. EDU220 Introduction to Serving English Language Learners (ELL)
221. EDU221 Introduction to Education
222. EDU222 Introduction to the Exceptional Learner
- EDU230 Cultural Diversity in Education
256. MAT256 Investigating Quantity: Number, Operations, & Numeration Systems
257. MAT257 Investigating Geometry, Probability, and Statistics

B. Restricted Electives 5

A total of 5 semester credits are required to satisfy the Restricted 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.

Content Area Electives

Select 5 credits from the following:

- Any ARH, ART, CIS, BPC, ENG, ENH, GPH, HIS, MHL,  
MTC, POS, THE, THF, THP prefixed course(s) Any EDU prefixed course(s) (except EDU250)

Any MAT (courses numbered higher than 142 (except MAT256 and MAT257) Any Foreign Language course(s)  
Any Natural Science course(s)  
CFS/ECH176 Child Development  
CFS205 Human Development  
EED215 Early Learning: Health, Safety, Nutrition and Fitness  
AAA/CPD115 Creating College Success

AAEE TOTAL CREDITS:

60-63

NOTE: The following courses meet the state teacher certification requirement for United States and Arizona Constitutions:

United States—HIS103, POS110, POS220, POS222, or GCU/ POS227

Arizona—POS220, POS221, or GCU/POS227

### **Associate in Arts, Fine Arts (AAFA) - 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 may 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: [www.aztransfer.com](http://www.aztransfer.com).

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

- Completion of the Associate in Arts, Fine Arts - Art degree and the AGECE-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; 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. On an exception basis, P-grades may be allowed in the AGECE for credit transferred if documentation collected by the community college indicates that the P-grade issued was the only option for the student and the P-grade is a "C" or better. The P-grade exception does not apply to credits awarded by AGECE granting/receiving institutions.
- Credit received through prior learning assessment or credit by evaluation is transferable within the Maricopa Community Colleges but is not necessarily transferable to other colleges and universities. No more than 20 semester credit hours may be applied toward AGECE.
- The General Education Requirements for AGECE-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 with- in the degree simultaneously (AGEC-A Core Area, AGE Awareness Area, MCCCCD 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 AGE-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. View specific course information via the following website: <https://asa.maricopa.edu/departments/center-for-curriculum-transfer-articulation> by clicking on the statewide AGE-A link.
- Maricopa courses and external courses evaluated as Maricopa equivalents or departmental electives (for example, HIS- ELC, MATELC), that are numbered 100 level or higher, and completed with a grade of "C" or higher, may be applied in the elective area, regardless of potential transferability to other institutions. It is recommended, however, that students planning to transfer to a baccalaureate-granting institution meet elective requirements with courses that are transferable and applicable to their intended university degree. 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 AGE-A or Associate in Arts, Fine - Arts Degree.
- Courses and their modular equivalents will satisfy AGE-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.
- Courses completed at one of the Maricopa Community Colleges to satisfy Common Courses must be transferable as elective or better to the universities that have the shared majors listed on a Common Course Matrix. A shared major is a university degree program that has similar academic preparation to one or more degree programs at other Arizona public universities as listed on the Common Course Matrices. For appropriate course selection, students should consult with an advisor.

## Degree Requirements

The 63 semester credits required for the Associate in Arts, Fine Arts - Art degree follow. View specific course information via the following website: <https://asa.maricopa.edu/departments/center-for-curriculum-transfer-articulation> by clicking on the statewide AGE-A link. The AGE-A, B, S, and the AGE-A Matrix identify the courses in alpha-order by prefix as well as the Core Areas and Awareness Areas where the course will apply.

### I. MCCCCD General Education

The MCCCCD General Education includes two areas: MCCCCD AGE-A and MCCCCD Additional Requirements.

#### MCCCCD AGE-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, Arts and Design [HU] 6

Students are encouraged to choose course work from more than one discipline for a total of six semester credits. Select the following:

ARH101 Prehistoric Gothic Art 3

e. Social 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

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 [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.

CRE101 [L] OR equivalent as indicated by assessment

## II. Fine Arts Requirements - Art 28

A minimum of 28 credits are required to satisfy the Fine Arts Requirements - Art

Foundations	16
ADA/ART112 Two-Dimensional Design	3
ADA/ART115 Three-Dimensional Design	3
ARH102 Renaissance Through Contemporary Art	3
ART111 Drawing I	3
ART113 Color	3
ART255AB The Portfolio	3
Restricted Electives	12
ART116 Life Drawing	3
ART122 Drawing and Composition II	3
ART131 Photography I	3
ART151 Sculpture I	3
ART161 Ceramics I	3
ART165 Watercolor Painting I	3
ART167 Painting	3
ART250 Introduction to Printmaking	3

AAFA-ART TOTAL CREDITS: 63

### **Associate in Arts, Fine Arts (AAFA) - 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) MCCCDC 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 MCCCDC Associate in Arts, Fine Arts - Dance degree may 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: [www.aztransfer.com](http://www.aztransfer.com).

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

- Completion of the Associate in Arts, Fine Arts - Dance degree and the AGECA 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; 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. On an exception basis, P-grades may be allowed in the AGECA for credit transferred if documentation collected by the community college indicates that the P-grade issued was the only option for the student and the P-grade is a "C" or better. The P-grade exception does not apply to credits awarded by AGECA granting/receiving institutions;

- Credit received through prior learning assessment or credit by evaluation is transferable within the Maricopa Community Colleges but is not necessarily transferable to other colleges and universities. No more than 20 semester credit hours may be applied toward AGEC.
- 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 with- in the degree simultaneously (AGEC-A Core Area, AGEC Awareness Area, MCCCCD 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. View specific course information via the following website: <https://asa.maricopa.edu/departments/center-for-curriculum-transfer-articulation> by clicking on the statewide AGEC link.
- Maricopa courses and external courses evaluated as Marico- pa equivalents or departmental electives (for example, HIS- ELC, MATELC), that are numbered 100 level or higher, and completed with a grade of "C" or higher, may be applied in the elective area, regardless of potential transferability to other institutions. It is recommended, however, that students planning to transfer to a baccalaureate-granting institution meet elective requirements with courses that are transferable and applicable to their intended university degree. 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.
- Courses completed at one of the Maricopa Community Colleges to satisfy Common Courses must be transferable as elective or better to the universities that have the shared majors listed on a Common Course Matrix. A shared major is a university degree program that has similar academic preparation to one or more degree programs at other Arizona public universities as listed on the Common Course Matrices. For appropriate course selection, students should consult with an advisor

### Degree Requirements

The 64 semester credits required for the Associate in Arts, Fine Arts - Dance degree follow. View specific course information via the following website: <https://asa.maricopa.edu/departments/center-for-curriculum-transfer-articulation> by clicking on the statewide AGEC link. The AGEC A, B, S, and AGEC Matrix identify the courses in alpha-order by prefix as well as the Core Areas and Awareness Areas where the course will apply.

### I. MCCCCD General Education

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

#### MCCCCD AGEC-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 or college algebra or pre calculus or any other mathematics course for which college algebra is a pre-requisite.

AND

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

- d. Humanities, Arts and Design [HU] 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:

DAH100 Introduction to Dance 3

DAH201 World Dance Studies 3

- e. Social 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.

Select from the following options to complete four credits:

BIO160 Introduction to Human Anatomy and Physiology 4

BIO201 Human Anatomy and Physiology 4

## 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
- 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 [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 AGECE-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.

- CRE101 [L] OR
- equivalent as indicated by assessment

III. Fine Arts Requirements - Dance 29

A minimum of 29 credits are required to satisfy the Fine Arts Requirements - Art

Part I 12

Select the following:

- DAN150 Dance Performance I 1
- DAN210 Dance Production I 3
- DAN221 Rhythmic Awareness I 3
- DAN264 Choreography I 3
- DAN280 Dance Practicum 2

Part II 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:

- DAN131 Ballet I (1) 1-2
- DAN134 Ballet II (1) 1-2
- DAN231 Ballet III (1) 1-2
- DAN231AA Ballet III: Intensive (2) 2-4
- DAN234 Ballet IV (1) 1-2
- DAN234AA Ballet IV: Intensive (2) 2-4
- DAN237 Ballet Pointe I 1
- DAN132 Modern Dance I (1) 1-2
- DAN135 Modern Dance II (1) 1-2
- DAN232 Modern Dance III (1) 1-2
- DAN232AA Modern Dance III: Intensive (2) 2-4
- DAN235 Modern Dance IV (1) 1-2
- DAN235AA Modern Dance IV: Intensive (2) 2-4
- DAN133 Jazz Dance I 1
- DAN136 Jazz Dance II 1
- DAN233 Jazz Dance III 1
- DAN233AA Jazz Dance III: Intensive 2
- DAN236 Jazz Dance IV 1
- DAN236AA Jazz Dance IV: Intensive 2
- DAN290++ Dance Conservatory I (any module) 3
- DAN291++ Dance Conservatory II (any module) 3
- DAN292++ Dance Conservatory III (any module) 3
- Part III: Restricted Electives 9



Students can choose to complete a combination of up to three credits in Part III and the remaining credits in Part IV; or students can opt to complete all Elective credits in Part IV. No more than three credits may be selected from the following DAN prefixed courses:

DAN102++	Hip Hop (any module)	1
DAN202++	Hip Hop (any module)	1
DAN103++	Break Dancing (any module)	1
DAN203++	Break Dancing (any module)	1
DAN104++	Ballroom (any module)	1
DAN204++	Ballroom (any module)	1
DAN105++	Swing (any module)	1
DAN205++	Swing (any module)	1
DAN106++	Latin (any module)	1
DAN206++	Latin (any module)	1
DAN107++	Country (any module)	1
DAN207++	Country (any module)	1
DAN108++	Tango (any module)	1
DAN208++	Tango (any module)	1
DAN115++	Contemporary Dance (any module)	1
DAN120++	World Dance (any module)	1
DAN125++	Social Dance (any module)	1
DAN129	Musical Theatre Dance I	1
DAN130	Musical Theatre Dance II	1
DAN229	Musical Theatre Dance III	1
DAN230	Musical Theatre Dance IV	1
DAN133	Jazz Dance I	1
DAN136	Jazz Dance II	1
DAN233	Jazz Dance III	1
DAN233AA	Jazz Dance III: Intensive	2
DAN236	Jazz Dance IV	1
DAN236AA	Jazz Dance IV: Intensive	2
DAN140	Tap Dance I	1
DAN141	Dance Workshop	1
DAN145	Tap Dance II	1
DAN146	Tap Dance Ensemble	1
DAN240	Tap Dance III	1
DAN245	Tap Dance IV	1
DAN150	Dance Performance I	1
DAN155	Dance Performance II	1
DAN250	Dance Performance III	1
DAN255	Dance Performance IV	1
DAN164	Improvisation	1
DAN131	Ballet I	1
DAN134	Ballet II	1
DAN231	Ballet III	1
DAN231AA	Ballet III: Intensive	(2) 2-4

DAN234 Ballet IV	1
DAN234AA Ballet IV: Intensive	(2) 2-4
DAN237 Ballet Pointe I	1
DAN132 Modern Dance I	1
DAN135 Modern Dance II	1
DAN232 Modern Dance III (1)	1-2
DAN232AA Modern Dance III: Intensive	2
DAN235 Modern Dance IV (1)	1-2
DAN235AA Modern Dance IV: Intensive	2
DAN290++ Dance Conservatory I (any module)	1-3
DAN291++ Dance Conservatory II (any module)	1-3
DAN292++ Dance Conservatory III (any module)	1-3
*DAN298++ Special Projects (any module)	1-3
Part IV: Restricted Electives: Dance Theory Electives:	6-9
DAH classes cannot be used as both a Humanities core requirement and as a Dance Theory Elective (Part IV).	
DAH100 Introduction to Dance	3
DAH110 Dance in Film	3
DAH190 Discovering Dance Careers	1
DAH201 World Dance Studies	3
DAH210 History of Ballet and Modern Dance	3
DAH250 Dance in Popular Culture	3
DAH255 Hip Hop Arts, Aesthetic and Culture	3
DAN265 Choreography II	3
DAN138 Dance Seminar I	1
DAN170 Dance Kinesiology	3
DAN201++ Special Topics: Dance (any module)	1-3
DAN211 Dance Production II	3
DAN222 Rhythmic Awareness II	3
DAN238 Dance Seminar II	1
DAN241 Dance Notation I	3
DAN272 Dance Technology	3
DAN275 Choreography for Film and Video	3
DAN282++ Service Learning Experience in Dance (any module)	1-3
DAN293 Teaching Dance in Elementary Education	3
DAN294 Teaching Dance in Secondary Education	3
DAN295 Teaching and Management of Studio Dance	3
*DAN296++ Cooperative Education (any module)	1-4
*DAN298++ Special Projects (any module)	1-3
* Selection of DAN296 or 298 courses to satisfy degree requirements should be done in consultation with a program advisor or faculty member as Special Projects courses do not currently transfer to any of the three Arizona state public universities.	

AAFA-DANCE TOTAL CREDITS: 64

**Associate in Arts, Fine Arts (AAFA) - 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 may 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: [www.aztransfer.com](http://www.aztransfer.com).

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

- Completion of the Associate in Arts, Fine Arts - Theatre and 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; 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. On an exception basis, P-grades may be allowed in the AGEC for credit transferred if documentation collected by the community college indicates that the P-grade issued was the only option for the student and the P-grade is a “C” or better. The P-grade exception does not apply to credits awarded by AGEC granting/receiving institutions.
- Credit received through prior learning assessment or credit by evaluation is transferable within the Maricopa Community Colleges but is not necessarily transferable to other colleges and universities. No more than 20 semester credit hours may be applied toward AGEC.
- 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. View specific course information via the following website: <https://asa.maricopa.edu/departments/center-for-curriculum-transfer-articulation> by clicking on the statewide AGEC link.
- Maricopa courses and external courses evaluated as Maricopa equivalents or departmental electives (for example, HIS-ELC, MATELC), that are numbered 100 level or higher, and completed with a grade of “C” or higher, may be applied in the elective area, regardless of potential transferability to other institutions. It

is recommended, however, that students planning to transfer to a baccalaureate-granting institution meet elective requirements with courses that are transferable and applicable to their intended university degree. 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.
- Courses completed at one of the Maricopa Community Colleges to satisfy Common Courses must be transferable as elective or better to the universities that have the shared majors listed on a Common Course Matrix. A shared major is a university degree program that has similar academic preparation to one or more degree programs at other Arizona public universities as listed on the Common Course Matrices. For appropriate course selection, students should consult with an advisor.

### Degree Requirements

The 60-64 semester credits required for the Associate in Arts, Fine Arts - Theatre follow. View specific course information via the following website: <https://asa.maricopa.edu/departments/center-for-curriculum-transfer-articulation> by clicking on the state-wide AGEC link. The AGEC A, B, S, and AGEC Matrix identify the courses in alpha-order by prefix as well as the Core Areas and Awareness Areas where the course will apply.

#### I. MCCC CD General Education

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

#### MCCC CD AGEC-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 or college algebra or pre calculus or any other mathematics course for which college algebra is a pre-requisite.
- AND

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

- |                                     |   |
|-------------------------------------|---|
| d. Humanities, Arts and Design [HU] | 6 |
|-------------------------------------|---|

Students are encouraged to choose course work from more than one discipline for a total of six semester credits.

Select from the following:

- |                                   |   |
|-----------------------------------|---|
| HUM/THE205 Introduction to Cinema | 3 |
|-----------------------------------|---|

- |                                    |   |
|------------------------------------|---|
| e. Social 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. MCCCCD 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 MCCCCD Additional Requirements because courses can satisfy a Core Area and MCCCCD 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
- 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 [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.

CRE101 [L] OR equivalent as indicated by assessment

II. Fine Arts Requirements - Theatre

25-29

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

Foundations

16-17

Select the following:

- THE111 Introduction to Theatre 3
- THP112 Acting I 3
- THF115 Makeup for Stage and Screen 3
- THP201AA Theatre Production I OR
- THP201AB Theatre Production II 2
- THP213 Introduction to Technical Theatre 3
- THP217 Introduction to Design Scenography 3

Restricted Electives

9-12

Students may take a variety of courses, or they may choose to emphasize a particular aspect of theatre, such as acting, technical theatre, cinema, theatre education, directing, movement, musical theatre, etc. Students should consult with their campus theatre advisor for the restricted electives recommended to attain each area of emphasis. Select from the following options to complete a minimum of 9 semester credits:

HUM/THE206 Introduction to Television Arts	3
HUM/THF210 Contemporary Cinema	3
THE118 Playwriting	3
THF120AA Audition Techniques for Stage and Screen: Prepared Monologue	1
THF120AB Audition Techniques for Stage and Screen: Cold Readings	1
THP130 Stage Combat	3
THP131 Stage Movement	3
THP151 Theatre for Youth	3
THF209 Acting for the Camera	3
THP211 Creative Drama	3
THP212 Acting II	3
THP214 Directing Techniques	3
THP216 Beginning Stage Lighting	3
THP219 Introduction to Puppetry	3
THF219 Advanced Acting for the Camera	3
THP226 Theatrical Design: Costuming	3
COM/THP241 Oral Interpretation of Literature	3
THP262 Entertainment Industry Design Drafting	
THP267 Painting Techniques for Film, TV & Theatre	3
THP268 Opportunities in Production	
THP269 Technical Theatre Portfolio Development	
MUP/THE270 Musical Theatre Workshop	
COM/THP271 Voice and Diction	
THP281 Production and Acting I	
THP298AA-AC Special Projects	
AAFA-THEATRE TOTAL CREDITS:	60-64

#### Associate in Science (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) MCCCCD 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. Generally, the degree will transfer as a block without loss of credit to Arizona's public universities and other institutions with district-wide articulation agreements.

In most cases, courses used to satisfy the MCCCCD 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: [www.aztransfer.com](http://www.aztransfer.com).

##### Academic Policies that Govern the Associate in Science Degree

- Completion of the Associate in Science and the AGECS 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; 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. On an exception basis, P-grades may be allowed in the AGEC for credit transferred if documentation collected by the community college indicates that the P-grade issued was the only option for the student and the P-grade is a “C” or better. The P-grade exception does not apply to credits awarded by AGEC granting/receiving institutions,

- Credit received through prior learning assessment or credit by evaluation is transferable within the Maricopa Community Colleges but is not necessarily transferable to other colleges and universities. No more than 20 semester credit hours may be applied toward AGEC.
- 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 courses cannot be used to satisfy more than one Core Area in the AGEC A and B.
  - » o A courses 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 with- in the degree simultaneously (AGEC-S Core Area, AGEC Awareness Area, MCCCCD 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-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. View specific course information via the following website: <https://asa.maricopa.edu/departments/center-for-curriculum-transfer-articulation> by clicking on the statewide AGEC link.
- Maricopa courses and external courses evaluated as Maricopa equivalents or departmental electives (for example, HIS- ELC, MATELC), that are numbered 100 level or higher, and completed with a grade of “C” or higher, may be applied in the elective area, regardless of potential transferability to other institutions. It is recommended, however, that students planning to transfer to a baccalaureate-granting institution meet elective requirements with courses that are transferable and applicable to their intended university degree. 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.
- Courses completed at one of the Maricopa Community Colleges to satisfy Common Courses must be transferable as elective or better to the universities that have the shared majors listed on a Common Course Matrix. A shared major is a university degree program that has similar academic preparation to one or more degree programs at other Arizona public universities as listed on the Common Course Matrices. For appropriate course selection, students should consult with an advisor.

## Degree Requirements

The 60-64 semester credits required for the Associate in Science follow. View specific course information via the following website: <https://asa.maricopa.edu/departments/center-for-curriculum-transfer-articulation> by clicking on the statewide AGEC link. The AGEC A, B, S, and AGEC Matrix identify the courses in alpha-order by prefix as well as the Core Areas and Awareness Areas where the course will apply.

### I. MCCCCD General Education

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

#### MCCC AGEC S

1. Core Areas: 36-38
  - a. First-Year Composition (FYC) 6
  - b. Literacy and Critical Inquiry [L] 0-3  
Recommend selecting a course that satisfies L (Literacy and Critical Inquiry) and SB (Social Behavioral Sciences) OR L (Literacy and Critical Inquiry) and HU (Humanities, Arts and Design) or L (Literacy and Critical Inquiry) and COM or L (Literacy and Critical Inquiry) and CRE101 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.
  - d. Humanities, Arts and Design [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 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 6-8  
(subject based on major)  
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.

#### 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. 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-six to thirty-eight semester credits required in order to complete the MCCC 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 [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 AGECA Core Requirements or if the 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: [www.aztransfer.com](http://www.aztransfer.com).

Maricopa courses and external courses evaluated as Maricopa equivalents or departmental electives (for example, HIS-ELC, MATELC), that are numbered 100 level or higher, and completed with a grade of "C" or higher, may be applied in the elective area, regardless of potential transferability to other institutions. It is recommended, however, that students planning to transfer to a baccalaureate-granting institution meet elective requirements with courses that are transferable and applicable to their intended university degree. For appropriate course selection, students should consult with an advisor. 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 (ABus) - General Requirements (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 the 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 Computer Information Systems should follow the ABus GR pathway. Computer Information Systems majors should

follow the Associate in Business Special Requirements pathway.

Generally, the degree transfers as a block without loss of credit to Arizona's public universities and other institutions with district-wide articulation agreements. In most cases, courses used to satisfy the MCCC Associate in Business General Requirements will apply to university graduation requirements of the university major for which the ABUS GR was designed.

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

- A minimum of 62-63 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. On an exception basis, P-grades may be allowed in the AGECE for credit transferred if documentation collected by the community college indicates that the P-grade issued was the only option for the student and the P-grade is a "C" or better. The P-grade exception does not apply to credits awarded by AGECE granting/receiving institutions;
- Credit received through prior learning assessment or credit by evaluation is transferable within the Maricopa Community Colleges but is not necessarily transferable to other colleges and universities. No more than 20 semester credit hours may be applied toward AGECE.
- Uses the following policies to help students complete the required Core and Awareness Areas in AGECE 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 (AGECE B Core Area, AGECE B Awareness Area, and/ or Common Lower Division Program Requirements)
- 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 MCCC and the institutions to which MCCC 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. View specific course information via the following website: <https://asa.maricopa.edu/departments/center-for-curriculum-transfer-articulation>

- Click on the AGECE link
- Select Maricopa Community College District or any of the Maricopa Community Colleges
- Click on the appropriate AGECE A, B, S, or AGECE Matrix

The lists identify the courses in alpha-order by prefix as well as the different Core Areas and Awareness Areas where the course will apply.

I. MCCCDC General Education Credits A. MCCCDC AGECE 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] (3 credits) |  |
| CIS105 [CS] Survey of Computer Information Systems.                 |  |

- |                                     |   |
|-------------------------------------|---|
| d. Humanities, Arts and Design [HU] | 6 |
|-------------------------------------|---|

Students are encouraged to choose course work from more than one discipline for a total of six semester credits.

- |                                    |   |
|------------------------------------|---|
| e. Social 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. Note: Students transferring to ASU in Accountancy should take two of the following courses in meeting the general education requirements: a transfer course in Sociology; Psychology; COM230 or COM225. If students do not take these prior to transfer, they may need to take additional hours to meet ASU graduation requirements.

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:	6-7
ACC111 & ACC230 & ACC240 OR	
*ACC211 & ACC212	
*MCCCD ACC111 and ACC112 together are equivalent to ACC211.	
ECN211 [SB] Macroeconomic Principles	3
ECN212 [SB] Microeconomic Principles	3
GBS205 Legal, Ethical, Regulatory Issues in Business	3
GBS221 [CS] Business Statistics	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	
Business Elective: 3 Select from the following options:	
CIS114DE Excel Spreadsheet	
CIS133DA Internet/Web Development Level I	
CIS162AD C#: Level I	
GBS151 Introduction to Business	
GBS233 [L] Business Communication	
**GBS220 Quantitative Methods in Business	
GBS110 Human Relations in Business and Industry OR	
MGT251 Human Relations in Business	
IBS101 Introduction to International Business	
MGT253 Owning and Operating a Small Business	
REA179 Real Estate Principles I	
REA180 Real Estate Principles II	
MKT271 Principles of Marketing	
PAD100 21st Century Public Policy and Service	
SBU200 Society and Business	

\*\*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. Maricopa courses and external courses evaluated as Maricopa equivalents or departmental electives (for example, HIS- ELC, MATELC), that are numbered 100 level or higher, and completed with a grade of "C" or higher, may be applied in the elective area, regardless of potential transferability to other institutions. It is recommended, however, that students planning to transfer to a baccalaureate-granting institution meet elective requirements with courses that are transferable and applicable to their intended university degree. For appropriate course selection, students should consult with an advisor.

ABUS GR DEGREE TOTAL CREDITS: 62-63

Associate in Business (ABus) - Special Requirements (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. The Associate in Business General Requirements (ABus GR) is designed for all other business majors. Additional information on academic majors at the Arizona public universities can be accessed via the following web site: [www.aztransfer.com/](http://www.aztransfer.com/).

Generally, the degree transfers as a block without loss of credit to Arizona's public universities and other institutions with district-wide articulation agreements. In most cases, courses used to satisfy the MCCCDC Associate in Business Special Requirements may apply to university graduation requirements of the university major for which the ABus SR was designed.

## Academic Policies that Govern the Associate in Business Special Requirements Degree:

- A minimum of 62-63 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. On an exception basis, P-grades may be allowed in the AGEC for credit transferred if documentation collected by the community college indicates that the P-grade issued was the only option for the student and the P-grade is a "C" or better. The P-grade exception does not apply to credits awarded by AGEC granting/receiving institutions;
- Credit received through prior learning assessment or credit by evaluation is transferable within the Maricopa Community Colleges but is not necessarily transferable to other colleges and universities. No more than 20 semester credit hours may be applied toward AGEC.
- 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)
- 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 (AZ- CAS) 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 MCCCDC and the institutions to which MCCCDC 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. View specific course information via the following website: <https://asa.maricopa.edu/departments/center-for-curriculum-transfer-articulation>.

- Click on the AGECE link.
- Select Maricopa Community College District or any of the Maricopa Community Colleges
- Click on the appropriate AGECE A, B, S, or AGECE Matrix

The lists identify the courses in alpha-order by prefix as well as the different Core Areas and Awareness Areas where the course will apply.

### I. MCCCCD General Education Credits

#### A. MCCCCD AGECE 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] (3 credits)

CIS105 [CS] Survey of Computer Information Systems.

- |                                     |   |
|-------------------------------------|---|
| d. Humanities, Arts and Design [HU] | 6 |
|-------------------------------------|---|

Students are encouraged to choose course work from more than one discipline for a total of six semester credits.

- |                                    |   |
|------------------------------------|---|
| e. Social 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. Note: Students transferring to ASU in Accountancy should take two of the following courses in meeting the general education requirements: a transfer course in Sociology; Psychology; COM230 or COM225. If students do not take these prior to transfer, they may need to take additional hours to meet ASU graduation requirements.

#### 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: 6-7

ACC111 & ACC230 & ACC240

OR

\*ACC211 & ACC212

\*MCCCD ACC111 and ACC112 together are equivalent to ACC211.

Programming I: 3

CIS162AD C#: Level I

Programming II: 3

CIS250 Management of Information Systems

GBS205 Legal, Ethical, and Regulatory Issues in Business

GBS221 [CS] Business Statistics

ECN211 [SB] Macroeconomic Principles

ECN212 [SB] Microeconomic Principles

Quantitative Methods: 3

GBS220 Quantitative Methods in Business OR

\*MAT217 Mathematical Analysis for Business OR

\*MAT218 Mathematical Analysis for Business

### 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.

Maricopa courses and external courses evaluated as Maricopa equivalents or departmental electives (for example, HIS- ELC, MATELC), that are numbered 100 level or higher, and completed with a grade of "C" or higher, may be applied in the elective area, regardless of potential transferability to other institutions. It is recommended, however, that students planning to transfer to a baccalaureate-granting institution meet elective requirements with courses that are transferable and applicable to their intended university degree. For appropriate course selection, students should consult with an advisor.

ABUS SR TOTAL CREDITS: 62-63

### **Associate in General Studies (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.

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)  
MAT Mathematics 112/120/121/122/122AA/122AB/122AC/126/140/141/142/150/151/151AA/151AB/151AC/151AD/152/156/172/182/187/206/212/213/220/221/230/231/240/241/261/262/276/277/equivalent course/Satisfactory completion of a higher-level Mathematics course.

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  
ADA Advertising Arts 169/170/170AA/170AB/173/173AA/173AB/173AC/175/175AA/175AB/177/177AA/177AB/any 180 modules/183/183AA/183AB/183AC/283/283AA/283AB/283AC/289/289AA/289AB/289AC AGB  
Agribusiness 139  
AJS Administration of Justice Studies 205  
AMS Automated Manufacturing System 150  
ARC Architecture 243/244/245  
ART Art 100/169/170/170AA/170AB/173/173AA/173AB/ 173AC/175/175AA/175AB/177/177AA/177AB/179/ 179AA/179AB/ any 180 module/183/183AA/183AB/ 183AC/283/283AA/283AB/283AC/289/289AA/289AB/289AC BIO Biology 283  
BPC Business-Personal Computers Any BPC Course(s)CFS Child/Family Studies 180  
CIS Computer Information Systems Any CIS Course(s) (EXCEPT 162, 162AC, 169, 183AA, 217AM, 259, 262)  
CSC Computer Science Any CSC Course(s) (EXCEPT 200, 200AA, 200AB, 210, 210AA, 210AB) CTR Court Reporting 101/102  
DFT Drafting Technology any 105 module/251/any 254 module/256AA



ECH Early Childhood Education 238  
EEE Electrical Engineering 120  
ELE Electronic 131/181/241/243/245/281  
ELT Electronic Technology 131/241/243  
ENG English 100AE  
FON Food & Nutrition 100  
GBS General Business 221  
GPH Physical Geography 220  
HRM Hotel Restaurant Management 126  
JAS Justice & Government Agencies Admin 225  
JRN Journalism 133  
LAS Paralegal Studies 229  
MAT Mathematics 206  
MET Manufacturing Technology 264  
MTC Music Theory/Composition 180/191  
NET Networking Technology 181  
OAS Office Automation Systems 111AA/111AB/113/119/130DK  
PSY Psychology 230  
SBS Small Business 211  
SWU Social Work 225  
TVL Travel Agent Technology 203  
VPT Video Production Technology 106

General Education Distribution Areas (28-29 credits)

Humanities, Arts and Design (9 credits)

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

AHU Arabic Humanities 245  
AIS American Indian Studies 213  
AJS Administration of Justice Studies 123  
ARH Art Humanities Any ARH Course(s)  
ASB Anthropology 211/214/220/222/223/253  
CCS Chicana and Chicano Studies 101  
CNS Construction 101  
COM Communication 241  
DAH Dance Humanities 100/201/250  
EDU Education 291/292/294  
ENG English 200/213/218  
ENH English Humanities Any ENH Course(s) (EXCEPT 250) FRE French 265  
HCR Health Care Related 210  
HIS History 101/102/103/108/111/113/114/203/212/251/252/243/253/254/275  
HUM Humanities Any HUM course(s) (EXCEPT 120, 203, 207,225)  
INT Interior Design 115/120/225  
LAT Latin 201/202  
MHL Music: History/Literature 140/143/145/146/153/155/241/242/295  
PHI Philosophy Any PHI Course(s)  
REL Religious Studies Any REL Course(s)  
SLC Studies in Language & Culture 201  
SPA Spanish 241/242/265/266  
SPH Spanish Humanities 241, 245

SSH Sustainability/Social Sciences and Humanities 111  
STO Storytelling 292/294  
THE Theater 111/205/206/210/220  
THF Theatre and Film 205/210  
THP Theater/Performance/Production 241  
WST Women's Studies 209/284/285/290

Social Behavioral Sciences (9 credits)

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

AFR African American Studies 202  
AIS American Indian Studies 101/140/141/160  
AJS Administration of Justice Studies 101/119/200/225/258/259/270  
ASB Anthropology 101/102/202/211/222/223/226/230/ 235/252  
ASM Anthropology 104/275  
CFS Child/Family Studies 112/157/159/176/205/235/259  
COM Communication 100/100AA&100AB&100AC/110/110AA&110AB&110AC/163/230/250/263  
ECH Early Childhood Education 176  
ECN Economics Any ECN Course(s)  
EDU Education 221/222  
EED Early Education 200/205/222  
EMT Emergency Medical Technology 258  
ENG English 213  
FOR Forensic Science 275  
FSC Fire Science Technology 258  
FUS Future Studies 101  
GCU Cultural Geography 102/121/122/141/221/227  
HES Health Science 100  
HIS History any HIS Course(s) (EXCEPT 111, 170, 251, 252, 253, 254) HON Honors 201  
IBS International Business 109  
MCO Mass Communications 120  
PAD Public Administration 200  
POS Political Science Any POS course(s)  
PSY Psychology 101/123/132/156/157/215/218/225/235/240/241/243/250/260/266/277/280/292 REC Recreation  
120  
SBU Society and Business 200  
SLC Studies in Language and Culture 201  
SOC Sociology Any SOC course(s) (EXCEPT 143, 157, 215, 245, 253, 265, 270)  
SSH Sustainability/Social Sciences and Humanities 111 SWU Social Work 102/171/258/292  
WED Wellness Education 110  
WST Women's Studies 100/161  
YAQ Yaqui Indian History and Culture 100

Natural Sciences (7-8 credits)

Two lecture courses and one corresponding laboratory course 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.

AGS Agricultural Science 164  
ASB Anthropology 231

ASM Anthropology 104/265  
 AST Astronomy 101/102/111/112/113/114  
 BIO Biology 100/101/102/105/107/108/109/111/145/149AF/149AH/149AK/149AL/149AM/149AN/156/160/  
 181/182/201/202/205/241/245  
 CHM Chemistry 107&107LL/130&130LL/130AA/150/150AA/151/151AA/151LL/152AA/152&152LL/  
 154&154LL/230&230LL  
 ENV Environmental Sciences 101  
 FON Food and Nutrition 241&241LL  
 FOR Forensic Science 105/106  
 GLG Geology Any GLG course(s)  
 GPH Physical Geography 111/112&113/211/ 212&214/213&215  
 PHS Physical Science 110/120  
 PHY Physics 101/101AA/111/111AA/112/115/116/ 121/131  
 PSY Psychology 275/290AB/290AC

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

AIS American Indian Studies 213 BIO Biology 294  
 COM Communication /222/225/241 CRE Critical Reading 101  
 CUL Culinary Arts 223  
 ENG English 111/200/215/216/217/218  
 ENH English Humanities 254/255  
 GBS General Business 233  
 GPH Physical Geography 211, 267  
 HUM Humanities 225/250/251  
 IFS Information Studies 101  
 JRN Journalism 201/215/234  
 MCO Mass Communications 220  
 PHI Philosophy 103/106/218  
 POS Political Science 115  
 PSY Psychology 290AB/290AC  
 REL Religious Studies 203/205/207/210  
 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.

AGS DEGREE TOTAL CREDITS:

60

### **Associate in Applied Science (AAS)**

#### Purpose of the 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 colleges. 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 areas are excluded;
- Students 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;

#### 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)

MAT Mathematics 103AA&103AB/112/120/121/ 122/ 122AA/122AB/122AC/126/140/141/142/150/151/ 151AA/

151AB/151AC/151AD/152/156/172/182/187/ 206/212/213/220/221/230/231/240/241/261/262/276/ 277/equivalent

course/Satisfactory completion of a higher-level mathematics course

#### General Education Distribution Areas (9-10 credits)

Humanities, Arts and Design (2-3 credits)

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

AHU Arabic Humanities 245

AIS American Indian Studies 213

AJS Administration of Justice Studies 123

ARH Art Humanities Any ARH Course(s)  
 ASB Anthropology 211/214/220/222/223/253  
 CCS Chicana and Chicano Studies 101  
 CNS Construction 101  
 COM Communication 241  
 DAH Dance Humanities 100/201/250  
 EDU Education 291/292/294  
 ENG English 200/213/218  
 ENH English Humanities Any ENH Course(s) (EXCEPT 250)  
 FRE French 265  
 HCR Health Care Related 210  
 HIS History 101/102/103/108/111/113/114/203/212/243/251/252/275  
 HUM Humanities Any HUM course(s) (EXCEPT 120, 203, 207, 225)  
 INT Interior Design 115/120/225  
 LAT Latin 201/202  
 MHL Music: History/Literature 140/143/145/146/153/155/241/242/295  
 PHI Philosophy Any PHI Course(s)  
 REL Religious Studies Any REL Course(s)  
 SLC Studies in Language and Culture 201  
 SPA Spanish 241/242/265/266  
 SPH Spanish Humanities 241, 245  
 SSH Sustainability/Social Sciences and Humanities 111  
 STO Storytelling 292/294  
 THE Theater 111/205/206/210/220  
 THF Theatre and Film 205/210  
 THP Theater/Performance/Production 241  
 WST Women's Studies 209/284/285/290

Social Behavioral Sciences (3 credits)

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

AFR African American Studies 202/  
 AIS American Indian Studies 101/140/141/160  
 AJS Administration of Justice Studies 101/200/225/258/259/270  
 ASB Anthropology 100/102/202/211/222/223/226/230/235/252  
 ASM Anthropology 104/275  
 CFS Child/Family Studies 112/157/159/176/205/235/259  
 COM Communications 100/100AA &100AB&100AC/110/110AA&110AB&110AC/163/230/250/263  
 ECH Early Childhood Education 176  
 ECN Economics Any ECN course(s)  
 EDU Education 221/222  
 EED Early Education 200/205/222  
 EMT Emergency Medical Technology 258  
 ENG English 213  
 FOR Forensic Science 275  
 FSC Fire Science 258  
 FUS Future Studies 101  
 GCU Cultural Geography 102/121/122/141/221/227  
 HES Health Science 100  
 HIS History Any HIS course(s) (EXCEPT 111, 170, 251, 252, 253, 254)

IBS International Business 109  
 MCO Mass Communications 120  
 PAD Public Administration 200  
 POS Political Science Any POS course(s)  
 PSY Psychology 101/123/132/156/157/215/218/225/235/240/241/243/250/260/266/277/280/292  
 REC Recreation 120  
 SBU Society and Business 200  
 SLC Studies in Language and Culture 201  
 SOC Sociology Any SOC course(s) (EXCEPT 143, 157, 215, 245, 253, 265, 270)  
 SSH Sustainability/Social Sciences and Humanities 111  
 SWU Social Work 102/171/258/292  
 WED Wellness Education 110  
 WST Women's Studies 100/161  
 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  
 BIO Biology 100/101/102/105/107/108/109/111/145/149AN/156/160/181/182/201/202/205/241/245  
 CHM Chemistry 107 & 107LL/130 & 130LL/130AA/150AA/150&151LL/151AA/151&151LL/152AA/ 152&152LL/154  
 & 154LL/230 & 230LL  
 ENV Environmental Sciences 101  
 FON Food and Nutrition 241 & 241LL  
 FOR Forensic Science 105/106  
 GLG Geology Any GLG course(s)  
 GPH Physical Geography 111/112 & 113/211/212&214/213&215  
 HON Honors 201  
 PHS Physical Science 110/120  
 PHY Physics 101/101AA/111/111AA/112/115/116/121/131  
 PSY Psychology 275/290AB/290AC

#### Academic Certificate (AC)

##### Purpose of the Academic Certificate (area of emphasis)

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, Arts and Design, Social 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.





# DEGREES AND CERTIFICATES

## Accounting

### Associate in Applied Science - Credits: 60-65 (3149)

Description: The Associate in Applied Science (AAS) in Accounting program is one of several options for students seeking to gain skills and knowledge in the field of accounting. Possible entry-level jobs for this program include accounting clerk, accounts payable/receivable clerk, claims clerk, credit clerk, full-charge bookkeeper, accounting intern, or comparable positions. A Certificate of Completion (CCL) is also available.

#### Program Notes:

Students must earn a grade of C or better in all courses required within the program.

+ indicates course has prerequisites and/or co-requisites.

++ indicates any module/suffixed courses.

Consultation with an Academic Advisor is recommended for course selection.

Program Prerequisites: Credits:	0-3
+CRE101 College Critical Reading (3) OR Equivalent as indicated by assessment (0).	0-3
Required Courses: Credits	29-32
ACC111 Accounting Principles I (3) AND + ACC230 Uses of Accounting Information I (3) AND + ACC240 Uses of Accounting Information II (3) OR ACC111 Accounting Principles I (3) AND + ACC112 Accounting Principles II (3) AND + ACC212 Managerial Accounting (3) OR ACC211 Financial Accounting (3) AND + ACC212 Managerial Accounting (3)	6-9
ACC105 Payroll, Sales and Property Taxes + ACC115 Computerized Accounting	3 2
ACC121 Income Tax Preparation (3) OR + ACC221 Tax Accounting (3)	3
CIS114DE Excel Spreadsheet	3
CIS105 Survey of Computer Information Systems	3
GBS151 Introduction to Business	3
GBS205 Legal, Ethical and Regulatory Issues in Business	3
+ GBS233 Business Communication	3
Restricted Electives: Credits: 9 ACC+++++ Any ACC Accounting course(s) except courses used to satisfy Required Courses area	9
CIS117DM Microsoft Access: Database Mgmt	3
GBS110 Human Relations in Business and Industry (3) OR MGT251 Human Relations in Business (3)	3
GBS131 Business Calculations	3
GBS207 Business Law (General Corporate)	3
+ GBS220 Quantitative Methods in Business	3
General Education Requirement Credits:	22-24
General Education Core: Credits:	12-14
First-Year Composition: Credits:	6

+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: Credits: Any approved General Education course in the Oral Communication area.	3
Critical Reading: Credits: Met by CRE101, College Critical Reading OR E equivalent as indicated by assessment in Program Prerequisites area.	0 0
Mathematics: Credits: +MAT120 Intermediate Algebra (5) OR +MAT121 Intermediate Algebra (4) OR +MAT122 Intermediate Algebra (3) OR Satisfactory completion of a higher level mathematics course.	3-5 3-5
General Education Distribution: Credits:	10
Humanities and Fine Arts: Credits: Any approved General Education course in the Humanities and Fine Arts area.	3 3
Social and Behavioral Sciences: Credits: ECN211 Macroeconomic Principles (3) OR ECN212 Microeconomic Principles (3) OR SBU200 Society and Business (3)	3 3
Natural Sciences: Credits: Any approved General Education course in the Natural Sciences area.	4 4

## Accounting

### Certificate of Completion - Credits: 23-26 (5665)

Description: The Certificate of Completion (CCL) in Accounting program is designed for students seeking to gain skills and knowledge in the field of accounting. Possible entry-level jobs for this program include accounting clerk, accounts payable/receivable clerk, claims clerk, credit clerk, full-charge bookkeeper, accounting intern, or comparable positions. An Associate in Applied Science (AAS) is also available.

#### Program Notes:

+ indicates course has prerequisites and/or co requisites.

Students must earn a grade of "C" or better in all courses required within the program.

Consultation with an Academic Advisor is recommended for course selection.

Program Prerequisites: None

Required Courses: Credits	23-26
ACC111 Accounting Principles I (3) AND + ACC230 Uses of Accounting Information I (3) AND + ACC240 Uses of Accounting Information II (3) OR ACC111 Accounting Principles I (3) AND + ACC112 Accounting Principles II (3) AND + ACC212 Managerial Accounting (3) OR ACC211 Financial Accounting (3) AND + ACC212 Managerial Accounting (3)	6-9
ACC105 Payroll, Sales and Property Taxes + ACC115 Computerized Accounting	3 2

CIS114DE Excel Spreadsheet	3
CIS105 Survey of Computer Information Systems	3
GBS151 Introduction to Business	3
GBS205 Legal, Ethical and Regulatory Issues in Business	3

**Adobe Creative Suite in Business: Master Suite Applications Specialist:  
Certificate of Completion - Credits: 33-39 (5778)**

Description: The Certificate of Completion (CCL) in Adobe Creative Suite in Business: Master Suite Applications program helps develop proficiency with all the software included in the Adobe Creative Suite. This software can provide useful tools for those interested in dynamic and interactive web site design, print media, and video production. Two additional specialized CCLs are available that allow students to specialize in whichever of the smaller professional packages available from Adobe that is most appropriate for their needs.

**Program Notes:**

+ indicates course has prerequisite

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

Instruction on the use of other supporting programs included with the Adobe Creative Suite will be incorporated into the required courses where these applications are topically relevant.

Program Prerequisites: Credits: 0-6

Program prerequisites may be waived by Program Director depending on student’s background and experience.

BPC 110 Computer Usage and Applications (3) OR CIS 105 Survey of Computer Information Systems (3)	3
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CIS 133DA Internet/Web Development Level I	3
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Required Courses: Credits: 30

CIS120DF Computer Graphics: Adobe Photoshop	3
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CIS120DB Computer Graphics: Adobe Illustrator	3
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CIS120DC Flash: Digital Animation	3
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+CIS233DC Internet Web Development: Dreamweaver	3
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CIS120DG Fireworks: Web	3
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+CIS138DA Desktop Design and Publishing Using Adobe InDesign	3
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CIS120DP Adobe Acrobat Pro: Portable Document Format (PDF) Files	3
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CIS120DA Introduction to Digital Video Production: Adobe Premiere	3
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CIS120DL Digital Video Compositing: After Effects	3
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CIS120DO Adobe Audition: Audio Editing	3
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Restricted Electives: Credits: 3

+CIS220DC Flash: Advanced Animation and ActionScripts	3
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+CIS220DF Advanced PhotoShop 3	
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**Adobe Creative Suite in Business: Print and Web Applications Specialist  
Certificate of Completion - Credits: 24-30 (5780)**

Description: The Certificate of Completion (CCL) in Adobe Creative Suite in Business: Print and Web Applications Specialist program is designed to develop proficiency with one of the professional Creative Suite software packages offered by Adobe. Developing skill with the software in this package provides useful tools for those interested in designing print and web content. In addition to a second CCL focused on the Production Applications in the Creative Suite family, there is also Adobe Creative Suite in Business: Master Suite Applications Specialist CCL available for students looking for a curriculum that covers the complete software collection.

**Program Notes:**

+ indicates course has prerequisite

Students must earn a grade of “C” or better in all courses required within the program. Instruction on the use of other supporting programs included with the Adobe Creative Suite will be incorporated into the required courses where these applications are topically relevant.

Program Prerequisites: 0-6  
 Program prerequisites may be waived by Program Director depending on student’s background and experience.

BPC110 Computer Usage and Applications (3) OR	
CIS105 Survey of Computer Information Systems (3)	3
CIS133DA Internet/Web Development Level I	3

Required Courses: Credits: 21

CIS120DF	Adobe Photoshop Level I: Digital Imaging	3
CIS120DB	Computer Graphics: Adobe Illustrator	3
CIS120DC	Flash: Digital Animation	3
+CIS233DC	Internet Web Development: Dreamweaver	3
CIS120DG	Fireworks: Web Graphics	3
+CIS138DA	Desktop Design and Publishing Using Adobe InDesign	3
CIS120DP	Adobe Acrobat Pro: Portable Document Format (PDF) Files	3

Restricted Electives: Credits:		3
+CIS220DC	Flash: Advanced Animation and ActionScripts	3
+CIS220DF	Advanced PhotoShop	3

Free Electives: None

**Adobe Creative Suite in Business: Production Applications Specialist Certificate of Completion - Credits: 18 (5782)**

Description: The Certificate of Completion (CCL) in Adobe Creative Suite in Business: Production Applications Specialist program is designed to develop proficiency with one of the professional Creative Suite software packages offered by Adobe. Developing skill with the software in this package provides useful tools for those interested in effective incorporation of video, audio and special effects in web pages and other applications. In addition to a second CCL focused on the Design and Web package in the Creative Suite family, there is also Adobe Creative Suite in Business: Master Suite Applications CCL available for students looking for a curriculum that covers the complete software collection

Program Notes:

+ indicates course has prerequisites and/or co requisites.

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

Instruction on the use of other supporting programs included with the Adobe Creative suite will be incorporated into the required courses where these applications are topically relevant.

Program Prerequisites: None

Required Courses: Credits:		18
CIS120DF	Adobe Photoshop Level I: Digital Imaging	3
CIS120DB	Computer Graphics: Adobe Illustrator	3
CIS120DC	Flash: Digital Animation	3
CIS120DA	Introduction to Digital Video Editing: Adobe Premiere	3
CIS120DL	Digital Video Compositing: After Effects	3
CIS120DO	Adobe Audition: Audio Editing	3

**Adobe Foundations Certificate of Completion - Credits: 9 (5807)**

Description The Certificate of Completion (CCL) in Adobe Foundations program helps develop proficiency with three of Adobe’s foundational graphics programs: Photoshop, Illustrator, and Flash. The courses in this CCL are the common subset of those required for the other Adobe Creative Suite CCLs. Thus all the courses in the Adobe Foundations CCL may be applied towards the requirements of any of these more comprehensive certificates.

Program Notes:

Students must earn a grade of C or better required for all courses within this program.

Required Courses: Credits:	9
CIS120DF Adobe Photoshop Level I: Digital Imaging	3
CIS120DB Computer Graphics: Adobe Illustrator	3
CIS120DC Flash: Digital Animation	3

**Advanced Behavioral Health Sciences**

**Associate in Applied Science - Credits: 68-74 (3067)**

Description: The Associate in Applied Science (AAS) in Advanced Behavioral Health Sciences/Recovery program is designed to prepare students for careers as behavioral health technicians, case managers, parent aides, family advocates, respite care workers, and paraprofessional counselors. The program includes courses designed to provide students with the skills necessary to deliver basic, specialized, and comprehensive behavioral health services. The core focus of the program is practical training and service learning experiences.

Program Notes:

+ indicates course has prerequisites and/or co requisites.

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

Student must select one of the following tracks in the Restricted Electives area:

Track 1: Violence & Abuse Prevention Track

Track 2: Grief & Bereavement Recovery Track

Track 3: General Integrated Track

Track 4: Employment Support Track

Program Prerequisites: None

Required Courses: Credits	37
BHS101 Intro to Ethical Counseling Issues	3
BHS105 Introduction to Human Relations	2
BHS115 Group Dynamics	3
BHS/SWU130 Addictions and Substance Use Disorders	3
+ BHS151 Communication Skills in Counseling I	3
+ BHS156 Supervised Practice I	3
+ BHS204 Counseling in Multicultural Setting	3
+ BHS205 Therapeutic Intervention Models	3
+ BHS215 Group Process	3
+ BHS260 Case Report Writing	1
+ BHS263 Applied Case Report Writing	1
+ BHS290 Child and Family Advocacy	3
PSY101 Introduction to Psychology	3
+ PSY240 Developmental Psychology (3) OR	
+ PSY266 Abnormal Psychology (3)	3

Restricted Electives: Credits: 9-10

Note: Student must select one of the following four (4) Tracks.

Track 1: Violence and Abuse Prevention Credits:	10
AJS101 Introduction to Criminal Justice	3
+ BHS266 Violence and Abuse Counseling	3
BHS268 Grief and Bereavement Issues	2

Track 2: Grief & Bereavement Recovery Track Credits:	10
BHS168 Hospice Volunteer Training	2
BHS268 Grief and Bereavement Issues	2
+ BHS269 Grief Counseling Techniques	3
+ BHS281 Introduction to Art Therapy	3

Track 3: General Integrated Track Credits: 10  
 Select a total of 10 credits from the following courses:

+ BHS264 Understanding Trauma	3
BHS265 Violence and Abuse Matters	2
+ BHS266 Violence and Abuse Counseling	3
+ BHS267 Introduction to Play Therapy	3
BHS268 Grief and Bereavement Issues	2
+ BHS269 Grief Counseling Techniques	3
+ BHS270 Introduction to Dance and Movement Therapy	3
+ BHS272 Managing Difficult Children	3
+ BHS281 Introduction to Art Therapy	3
+ BHS285 Facilitating Art Therapy Groups	3
STO289AC Using Storytelling in Healing Settings	1
Track 4: Employment Support Track Credits:	9
ESS101 Introduction to Employment Support	3
+ ESS103 Employment Support Systems Practices	3
ESS110 Americans with Disabilities Act Overview	2
CPD125 Employee Development: Problem Solving/Decision Making	1
General Education Requirement: Credits:	22-27
General Education Core: Credits:	12-17
First Year Composition: Credits:	6
+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: Credits:	3
COM100 Introduction to Human Communication (3) OR	
COM100AA Introduction to Human Communication Part I (1) AND	
COM100AB Introduction to Human Communication Part II (1) AND	
COM100AC Introduction to Human Communication Part III (1) OR	
COM110 Interpersonal Communication (3) OR	
COM230 Small Group Communication (3)	3
Critical Reading: Credits:	0-3
+ CRE101 College Critical Reading (3) OR	
Equivalent as indicated by assessment.	
Mathematics: Credits:	3-5
Any approved general education course from the Mathematics area.	3-5
General Education Distribution: Credits:	10
Humanities and Fine Arts: Credits:	3
Any approved general education course in the Humanities and Fine Arts area.	3
Social and Behavioral Sciences: Credits:	3
Any approved general education course in the Social and Behavioral Sciences area not included as a Required Course.	3
Natural Sciences: Credits:	4
Any approved general education course in the Natural Sciences area.	4

### Advanced Behavioral Health Sciences

**Certificate of Completion - Credits: 46-47 (5521)**

Description: The Certificate of Completion (CCL) in Advanced Behavioral Health Sciences program is designed to prepare students for careers as behavioral health technicians, case managers, parent aides, family advocates, respite care workers, and paraprofessional counselors. The program includes courses designed to provide students with the skills necessary to deliver basic, specialized, and comprehensive behavioral health services. The core focus of the program is practical training and service learning experiences.

Program Notes:

+ indicates course has prerequisites and/or co-requisites.

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

Program Prerequisites: None

Required Courses: Credits:	37
BHS101 Introduction to Ethical Counseling Issues	3
+ BHS105 Introduction to Human Relations	2
BHS115 Group Dynamics	3
BHS/SWU130 Addictions and Substance Use Disorders	3
+ BHS151 Communication Skills in Counseling I	3
+ BHS156 Supervised Practice I	3
+ BHS204 Counseling in Multicultural Setting	3
+ BHS205 Therapeutic Intervention Models	3
+ BHS215 Group Process	3
+ BHS260 Case Report Writing	1
+ BHS263 Applied Case Report Writing	1
+ BHS290 Child and Family Advocacy	3
PSY101 Introduction to Psychology	3
+ PSY240 Developmental Psychology (3) OR	
+ PSY266 Abnormal Psychology (3)	3

Restricted Electives: Credits: 9-10

Note: Students must select one of the following four Tracks.

Track 1: Violence and Abuse Prevention Credits:	10
AJS101 Introduction to Criminal Justice	3
BHS265 Violence and Abuse Matters	2
+ BHS266 Violence and Abuse Counseling	3
BHS268 Grief and Bereavement Issues	2

Track 2: Grief & Bereavement Recovery Track Credits:	10
BHS168 Hospice Volunteer Training	2
+ BHS268 Grief and Bereavement Issues	2
+ BHS269 Grief Counseling Techniques	3
+ BHS281 Introduction to Art Therapy	3

Track 3: General Integrated Track Credits:	10
Select a total of 10 credits from the following courses:	
+ BHS264 Understanding Trauma	3
BHS265 Violence and Abuse Matters	2
+ BHS266 Violence and Abuse Counseling	3
+ BHS267 Introduction to Play Therapy	3
BHS268 Grief and Bereavement Issues	2
+ BHS269 Grief Counseling Techniques	3
+ BHS270 Introduction to Dance and Movement Therapy	3
+ BHS272 Managing Difficult Children	3
+ BHS281 Introduction to Art Therapy	3
+ BHS285 Facilitating Art Therapy Groups	3
STO289AC Using Storytelling in Healing Settings	1

Track 4: Employment Support Track Credits:	9
CPD125 Employee Development: Problem Solving/Decision Making	1
ESS101 Introduction to Employment Support	3
+ ESS103 Employment Support Systems Practices	3
ESS110 Americans with Disabilities Act Overview	2

### **Android/iOS Programming**

#### **Certificate of Completion - Credits 12 (5834) NEW**

Description: The Certificate of Completion (CCL) in Information Technology: Android/iOS Programming provides students with entry-level programming skills and knowledge in developing software for both Android and iOS devices. It includes programming in both Java and Objective-C or Swift languages.

Program Notes: Students must earn a grade of C or better in all courses within the program.

Students should consult with a Department Advisor in arranging their schedules.

+ indicates course has prerequisites and/or corequisites.

Program Prerequisites: Credits:	0-3
CIS105 Survey of Computer Information Systems (3) OR Permission of division chair or department coordinator	0-3

Required Courses: Credits:	12
+ CIS163AA Java Programming: Level I	3
+ CIS165 Introduction to IOS Application Development	3
+ CIS165DA Android Mobile Device Programming	3
+ CIS263AA Java Programming: Level II	3

Restricted Electives: Credits:	0
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### **Basic Behavioral Health**

#### **Certificate of Completion - Credits: 19 (5522)**

Description: The Certificate of Completion (CCL) in Basic Behavioral Health is designed to prepare students for careers as behavioral health technicians, case managers, parent aides, family advocates, respite care workers, and paraprofessional counselors. The program includes courses designed to provide students with the skills necessary to deliver basic behavioral health services. The core focus of the program is practical training and service learning experiences.

Program Notes:

+ indicates course has prerequisites and/or co-requisites

Students must earn a grade of "C" or better in all courses within the program.

Program Prerequisites: None

Required Courses: Credits:	19
BHS101 Approach to Paraprofessional Counseling	3
BHS105 Introduction to Human Relations	2
+ BHS151 Communication Skills in Counseling I	3
+ BHS204 Counseling in a Multicultural Setting	3
+ BHS205 Therapeutic Intervention Models	3
+ BHS260 Case Report Writing	1
+ BHS290 Child and Family Advocacy	3
CWE198AA Career Work Experience	1

### **Business Management**

#### **Associate in Applied Science - Credits: 66-67 (3054)**

Description: The Associate in Applied Science (AAS) in Business Management program is to provide students with a basic inventory of skills and competencies that will meet their needs when they become practitioners in the field. Recognizing that many persons already involved in business and industry desire to improve their skills, the program also seeks to offer alternative for the increase of knowledge and the improvement of skills by current practitioners in the field.

Program Notes:



+ indicates course has prerequisites and/or co-requisites. Students must earn a grade of “C” or better for each course listed in the Required Courses area.

Program Prerequisites: None

Required Courses Credits:	30-31
ACC107 Bookkeeping Theory and Practice (4) OR	
ACC111 Accounting Principles I (3)	3-4
CIS105 Survey of Computer Information Systems	3
GBS131 Business Calculations	3
GBS151 Introduction to Business	3
GBS205 Legal, Ethical, and Regulatory Issues in Business	3
+ GBS233 Business Communication	3
MGT229 Management and Leadership I	3
+ MGT230 Management and Leadership II	3
MGT251 Human Relations in Business	3
MKT271 Principles of Marketing (3) OR	
MGT276 Personnel/Human Resources Management (3)	3
Restricted Electives: Credits:	12
Note: Students should select from the following courses in consultation with a Department Advisor:	
MGT135 Global Procurement and Supply Management	3
MGT253 Owning & Operating a Small Business	3
MGT275 Office Management & Procedures	3
MGT277 Labor Relations	3
MKT263 Advertising Principles	3
MKT267 Principles of Salesmanship	3
+ MGT296WA Cooperative Education (1) OR	
+ MGT296WB Cooperative Education (2) OR	
+ MGT296WC Cooperative Education (3)	1-3
General Studies Requirements: Credits	24-25
General Education Core Credits:	15
First-Year Composition: Credits:	6
+ENG101 First-Year Composition (3) AND	
+ENG102 First-Year Composition (3)	6
Oral Communication: Credits:	3
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: Credits:	3
CRE101 College Critical Reading (3) OR	
CRE111 Critical Reading for Business & Industry (3) OR equivalent by assessment.	3
Mathematics: Credits:	3
MAT112 Mathematical Concepts/Applications (3) OR	
Equivalent by assessment OR satisfactory completion of a higher level math course	3
General Education Distribution Credits:	9-10
Humanities and Fine Arts: Credits:	2-3
Any approved general education course in the Humanities and Fine Arts area	2-3

Social and Behavioral Sciences: Credits:	3
Any approved general education course in the Social and Behavioral Sciences area	3

Natural Sciences: Credits:	4
Any approved general education course in the Natural Sciences area	4

**Child Development Associate (CDA) Preparation  
Certificate of Completion – Credits: 16 (5710)**

Description: The Certificate of Completion (CCL) in Child Development Associate Preparation is designed to provide documented training in preparation for application to become a Child Development Associate. This program is intended for individuals interested in early childhood education who intend to pursue the national credential of CDA from the Council for Professional Recognition. Students completing the described CCL coursework must apply independently to the Council for final evaluation and validation.

Program Prerequisites: None

Required Courses: Credits	16
CFS/ECH176 Child Development (3) OR CFS235 Developing Child: Theory into Practice, Prenatal - Age 8(3)	3

EED200 Foundations of Early Childhood Education	3
EED212 Guidance, Management and the Environment	3
EED215 Early Learning: Health, Safety, Nutrition and Fitness	3

EED220 Child, Family, Community and Culture (3) OR

**Cisco Networking  
Associate in Applied Science - Credits: 63-71 (3095)**

Description: The Associate in Applied Science (AAS) in Information Technology: Cisco Networking program focuses on the skills needed to prepare for industry-recognized certifications with an emphasis on certifications at the professional-level. 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); troubleshoot problems with various common hardware and software configurations; perform administrative tasks in a network. Courses in the program also focus on the skills needed to prepare for various Cisco certifications including the Cisco Certified Networking Associate (CCNA) and Cisco Certified Network Professional Certifications (CCNP). A Certificate of Completion (CCL) is also available.

Program Notes:

Students must earn a grade of “C” or better in all courses within the program.  
Students should select from the following courses in consultation with a Department Advisor.  
+ indicates course has prerequisites and/or co-requisites.  
++ indicates any module/suffixed courses.

Program Prerequisites: Credits	0-3
CIS105 Survey of Computer Information Systems OR permission of Program Director	3

Required Courses: Credits:	41
CNT140AA Introduction to Networks	4
+ CNT150AA Cisco - Routing and Switching Essentials	4
+ CNT160AA Scaling Networks	4
+ CNT170AA Cisco - Connecting Networks	4

Select any 200-level CNT courses to complete 16 credits:	
+ CNT2++++ Any 200-level CNT Cisco Network Technology courses	16

CIS126DL Linux Operating System	3
MST150++ Microsoft Windows (any suffixed course)	3
+ BPC170 Computer Maintenance: A+ Exam Prep Level I	3

General Education Requirements: Credits:	22-27
General Education CORE: Credits:	12-17
First-Year Composition: Credits:	6
Any approved General Education course in the First-Year Composition Area	6
Oral Communication: Credits:	3
Any approved General Education course in the Oral Communication Area	3
Critical Reading: Credits:	0-3
Any approved General Education course in the Critical Reading Area OR Equivalent as indicated by assessment	0-3
Mathematics: Credits:	3-5
MAT120 Intermediate Algebra (5) OR	
MAT121 Intermediate Algebra (4) OR	
MAT122 Intermediate Algebra (3) OR	
MAT151 Intermediate Algebra (4)	3-5
General Education Distribution Credits:	10
Humanities & Fine Arts: Credits:	3
Any approved General Education course in the Humanities and Fine Arts Area	3
Social and Behavioral Sciences: Credits:	3
Any approved General Education course in the Social and Behavioral Sciences Area	3
Natural Sciences: Credits:	4
Any approved General Education course in the Natural Sciences Area	4

### **Cisco Networking**

#### **Certificate of Completion - Credits: 41 (5526)**

Description: The Certificate of Completion (CCL) in Information Technology: Cisco Networking program focuses on the skills needed to prepare for industry-recognized certifications with an emphasis on certifications at the professional-level. 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); troubleshoot problems with various common hardware and software configurations; perform administrative tasks in a network. Courses in the program also focus on the skills needed to prepare for various Cisco certifications including the Cisco Certified Networking Associate (CCNA) and Cisco Certified Network Professional Certifications (CCNP). Associate in Applied Science (AAS) is also available.

#### Program Notes:

Students must earn a grade of "C" or better in all courses within the program.

Students should select from the following courses in consultation with a Department Advisor.

+ indicates course has prerequisites and/or co-requisites.

++ indicates any module/suffixed courses.

Program Prerequisites: Credits:	3
CIS105 Survey of Computer Information Systems (3) OR	
Permission of Program Director	3
Required Courses Credits:	41
CNT140AA Introduction to Networks	4
+ CNT150AA Cisco - Routing and Switching Essentials	4
+ CNT160AA Scaling Networks	4
+ CNT170AA Cisco - Connecting Networks	4

Select any 200-level CNT courses to complete 16 credits:

+ CNT2++++ Any 200-level CNT Cisco Network Technology courses	16
CIS126DL Linux Operating System	3
MST150++ Microsoft Windows (any suffixed course)	3
+ BPC170 Computer Maintenance: A+ Exam Prep Level I	3

### Computer and Information Technologies

#### Associate in Applied Science - Credits: 60-64 (3167)

Description: The Associate in Applied Science (AAS) degree in Computer and Information Technologies is designed to provide training for positions in the Information Technology field as computer and information technology support specialists. This degree is intended to provide the student with flexibility in designing a program of study that is relevant to the rapidly changing needs of business and industry while allowing the student to match their own talents, interests, and goals. This degree is also intended for students who desire to transfer to university Bachelor of Applied Science degree programs which accept Associate of Applied Science degree block-transfer.

#### Program Notes:

Students must earn a grade of "C" or better in all courses within the program.

+ indicates course has prerequisites and/or co requisites.

++ indicates any module

Program Prerequisites: None

Required Courses: Credits:	9-10
CIS105 Survey of Computer Info. Systems	3
+CIS190 Introduction to Local Area Networks (3) OR	
CNT140AA Introduction to Networks (4) OR	
MST150++ Microsoft Windows (Any MST150++module) (3)	3-4
GBS151 Introduction to Business	3

Restricted Electives: Credits: 26-27

Students should select from the Restricted Electives courses in consultation with a Department Advisor. Students must complete a minimum of 12 credit hours of 200-level Restricted Elective coursework in the BPC, CIS, CNT, and/or MST prefixes.

Courses completed 5 or more years prior to graduation do not meet the restricted elective requirement and will not be included in the hours required for degree completion.

ART100 Introduction to Computer Graphic Art	1
ART111 Drawing I	3
ART112 Two-Dimensional Design (1) OR	
+ART122 Drawing and Composition II(3)	1-3
ART142 Introduction to Digital Photography	3
BPC110 Computer Usage and Applications	3
BPC121AB Microsoft Command Line Operations	1
+BPC170 Computer Maintenance I: A+ Essentials Prep	3
+BPC270 Computer Maintenance II: A+ Technician Prep	3
CIS114DE Excel Spreadsheet	3
CIS117AM Database Management: Microsoft Access- Level I (1) AND	
+CIS117BM Database Management: Microsoft Access- Level II (1) AND	
+CIS117CM Database Management: Microsoft Access- Level III (1) OR	
CIS117DM Microsoft Access: Database Management (3)	1-3
CIS118DB Desktop Presentation: PowerPoint	3
+CIS119DO Introduction to Oracle: SQL	3
CIS120AF Computer Graphics: Adobe Photoshop: Level I	1
+CIS120BF Computer Graphics: Adobe Photoshop: Level II	1
+CIS120CF Computer Graphics: Adobe Photoshop: Level III	1
CIS120AK Introduction to Digital Video Editing	1
CIS120D+ Computer Graphics (any CIS120 D modules)	3
CIS121AB Microsoft Command Line Operations	1
CIS121AE Windows Operating System: Level I	1
CIS122AB OS/400 Operating System	1

+CIS126BL	Linux Operating System II1	
+CIS126CL	Linux Operating System III	1
CIS133AA	Internet/Web Development Level I-A	1
+CIS133BA	Internet/Web Development Level I-B	1
+CIS133CA	Internet/Web Development Level I-C	1
CIS133DA	Internet/Web Development Level I	3
+CIS214DE	Advanced Excel Spreadsheet: Level II	3
+CIS217AM	Advanced Microsoft Access: Database Management	3
+CIS220DF	Advanced Photoshop	3
CIS126AL	Linux Operating System I (1) OR	
CIS126DL	Linux Operating System (3)	1-3
+CIS15+Programming (any CIS15+)		3
+CIS15+++	Programming (any CIS15+++ module)	3
+CIS16+Programming (any CIS16+)		3
+CIS16+++	Programming (any CIS16+++ module)	3
+CIS220DC	Flash: Advanced Animation and ActionScript	3
+CIS225Business Systems Analysis and Design (3) OR		
+CIS225AB	Object-Oriented Analysis and Design (3)	3
+CIS233DA	Internet/Web Development Level II	3
+CIS235	e-Commerce	3
+CIS238	Advanced UNIX System Administration (3) OR	
+CIS238DL	Linux System Administration (3)	3
+CIS243D+	Internet/Web Development	
(any CIS243D+ module)		3
+CIS259Visual Basic Programming II		3
+CIS262AD	C# Level II	3
+CIS263AA	Java Programming: Level II	3
CNT+++++	Cisco (any CNT+++ module)	3-4
+MST140	Microsoft Networking Essentials	3
MST150++	Microsoft Windows (any MST150++ module)	3
+MST152++	Microsoft Windows (any MST152++ module)	4
+MST157++	Microsoft Windows (any MST157+ module)	4
+MST2++	Microsoft (any MST2++)	3-4
General Education: Credits:		25-27
General Education Core: Credits:		15-17
First-Year Composition: Credits:		6
Any approved General Education course in the First-Year Composition Area		6
Oral Communication: Credits:		3
Any approved General Education course in the Oral Communication Area		3
Critical Reading: Credits:		3
Any approved General Education course in the Critical Reading Area		3
Mathematics: Credits:		3-5
Any approved General Education course in the Mathematics Area		
General Education Distribution Credits:		10
Humanities & Fine Art: Credits:		3
Any approved General Education course in the Humanities and Fine Arts Area		3
Social and Behavioral Sciences: Credits:		3
Any approved General Education course in the Social and Behavioral Sciences Area		3
Natural Sciences: Credits:		4

Any approved General Education course in the Natural Sciences Area

4

### Computer Applications Specialist

#### Associate in Applied Science - Credits: 61-65 (3098)

Computer Applications Specialist: Certificate of Completion Credits: 36-38 (5201) Description: The Certificate of Completion (CCL) in Information Technology: Computer Applications Specialist is designed to enhance the information technology skills gained through the Certificate in Information Technology, focusing on advanced Microsoft software skills - including application implementation, development, and operating systems - necessary for entry-level software technician support positions. An Associate in Applied Science (AAS) is also available.

#### Program Notes:

+ indicates course has prerequisites and/or co requisites.

Students must earn a grade of "C" or better in all courses within the program.

Program Prerequisites: None

Required Courses: Credits:		21-22
CIS114DE	Excel Spreadsheet	3
CIS117DM	Microsoft Access: Database Management	3
CIS118DB	Desktop Presentation: PowerPoint	3
CIS105	Survey of Computer Information Systems	3
+CIS190	Introduction to Local Area Networks (3) OR	
CNT140AA	Introduction to Networks (4)	3-4
GBS151	Introduction to Business	3
MST150++	Microsoft Windows (any MST150++module)	3

Restricted Electives: Credits:		15-16
CIS120AK	Introduction to Digital Video Editing	1
CIS120DC	Adobe Flash Level I: Digital Animation	3
CIS120DF	Adobe Photoshop Level I: Digital Imaging	3
CIS120DH	Computer Graphics: Microsoft Visio	3
CIS121AB	Microsoft Command Line Operations	1
CIS121AE	Windows Operating System: Level I	1
CIS133DA	Internet/Web Development Level I	3
+CIS138DA	Desktop Design and Publishing Using Adobe InDesign	3
+BPC170	Computer Maintenance I: A+ Essentials Prep	3
CIS126DL	Linux Operating System	3
+CIS159	Visual Basic Programming I (3) OR	
+CIS162AD	C#: Level I (3) OR	
+CIS163AA	Java Programming: Level I (3)	3
+CIS169	Introduction to Visual Basic for Applications	3
+CIS214DE	Advanced Excel Spreadsheet: Level II	3
+CIS217AM	Advanced Microsoft Access: Database Management	3
+CIS220DF	Adobe Photoshop Level II: Advanced Digital Imaging	3
+CIS238DL	Linux System Administration	3
+MST157DA	Active Directory Windows Server Configuration	4

### Creative Writing

#### Academic Certificate - Credits: 24 (6224)

Description: The Academic Certificate (AC) in Creative Writing is designed to provide students and professional writers with access to a community of writers and creative writing activities, instruction and guidance from established authors, and ongoing support in improving their writing skills and marketing their work. As students take courses in the program, they will build a portfolio of original work that may be used to seek admittance to a bachelor's or master's level creative writing program or that may include work to be submitted for publication. The program offers classes, workshops, and other activities such as readings and contests, which are accessible to writers of all levels regardless of academic or professional standing. The program serves many students, especially women, minorities, seniors, and working adults, who are under-represented in traditional creative writing programs because of cultural, dialect or language differences, scheduling difficulties, financial need, or lack of academic experience. Completion of the certificate does not lead to a particular degree program, but may aid students in their pursuit of a career in the writing professions and in their continued enjoyment of writing for personal growth.

Program Notes:

Students must earn a grade of "C" or better for all courses required within the program.

+ indicates course has prerequisites and/or co-requisites.

++ indicates any module.

Admission Criteria: Students wishing to enroll in the Creative Writing program must complete a formal application; contact Program Director.

Program Prerequisites: None

Required Courses: Credits: 21

ENG210 may be substituted for CRW150 with permission of Program Director.

CRW150 Introduction to Creative Writing (3) OR  
CRW155 Bilingual Creative Writing (3) 3

CRW200 must be repeated for a total of two (2) credits.

+ CRW200 Readings for Writers (1) 2

+ CRW201 Portfolio 1

Students must complete six (6) credits from Series I and nine (9) credits from Series II in consultation with a Program Director.

Series I: Credits: 6

Students must complete two (2) of the following courses for a total of six (6) credits.

CRW120 Introduction to Writing Children's Literature 3

CRW160 Introduction to Writing Poetry 3

CRW170 Introduction to Writing Fiction 3

CRW172 Introduction to Comic Book Writing 3

CRW180 Introduction to Writing Nonfiction 3

CRW190 Introduction to Screenwriting 3

THE118 Playwriting 3

Series II: Credits: 9

Students must complete three (3) of the following courses for a total of nine (9) credits.

+ CRW202 The Writer as Witness 3

+ CRW203 Dialogue 3

+ CRW204 Journaling 3

+ CRW220 Intermediate Writing Children's Literature 3

CRW251 Topics in Creative Writing 3

+ CRW260 Intermediate Poetry Writing 3

+ CRW261 Topics in Writing: Poetry 3

+ CRW270 Intermediate Fiction Writing 3

+ CRW271 Topics in Writing: Fiction 3

+ CRW272 Planning and Structuring the Novel 3

+ CRW273 Writing the Novel 3

+ CRW274 Revising the Novel 3

+ CRW275 Writing the Mystery Story 3

+ CRW281 Topics in Writing: Non-Fiction 3

+ CRW290 Intermediate Screenwriting 3

+ CRW291 Topics in Writing: Plays 3

Restricted Electives: Credits: 3

+ CRW+++++ Any CRW Creative Writing prefixed course not listed under  
Required Courses area. 1-3

ENG235 Magazine Article Writing 3

ENG/THE260 Film Analysis 3

+ ENH+++++ Any ENH English Humanities prefixed course 3

**Early Learning and Development****Associate in Applied Science - Credits: 63-68 (3124)**

## Description:

The Associate in Applied Science (AAS) in Early Learning and Development program is designed to prepare individuals to enter the workforce as Early Childhood Professionals and to assist individuals employed in the field to upgrade and expand their skills. The program emphasizes the roles of early care and education professionals, families and the wider society as they together meet the contemporary needs of young children. Course work includes the principles of developmental science, professionalism in early childhood work, philosophies and methods of early learning, and the impact of standards on practice. To apply planning, management and evaluation skills, students will observe, participate, and intern in state licensed early childhood programs.

## Program Notes:

Students must earn a grade of "C" or better in all courses within the program.

+ indicates course has prerequisites and/or co-requisites.

++ indicates any module/suffixed courses.

Program Prerequisites: None

Required Courses: Credits	32
ECH128 Early Learning: Play and the Arts	3
EED200 Foundations of Early Childhood Education	3
EED212 Guidance, Management and the Environment	3
EED215 Early Learning: Health, Safety, Nutrition and Fitness	3
EED220 Child, Family, Community and Culture	3
EED222 Introduction to the Exceptional Young Child: Birth to Age Eight	3
EED245 Early Learning: Language Acquisition and Literacy Development	3
+ EED255 Portfolio Development and Writing for the Profession	3
+ EED260 Early Childhood Infant/Toddler Internship	1
+ EED261 Early Childhood Preschool Internship	1
+ EED278 Early Learning: Curriculum and Instruction - Birth/Preschool	3
+ EED280 Standards, Observation and Assessment of Typical/Atypical Behaviors of Young Children Birth to Age Eight	3
Restricted Electives: Credits	9
Block One: Infant and Toddler Development:	
ITD200 The Physical Child: Birth to Age Three	3
ITD210 Early Attachments, Relationships and Families: Birth to Age Three	3
ITD220 Cognition and Communication: Birth to Age Three	3
Block Two: Family Child Care Management:	
CFS163 Family Child Care: Introduction to Business Management	3
CFS164 Family Child Care: Curriculum and Environment	3
CFS207 Organization and Community Leadership in Child and Family Organizations	3
Block Three: Early Childhood Business Management:	
CFS206 Child and Family Organizations: Management and Administration	3
CFS207 Organization and Community Leadership in Child and Family Organizations	3
CFS208 Child and Family Organizations: Fiscal Management and Grant Writing	3
Block Four: Any CFS, ECH, EED, ITD or FCS prefixed courses not listed in the Required Courses area	9
CFS+++++ Any CFS Child/Family Studies course(s)	1-9
ECH+++++ Any ECH Early Childhood Education course(s) except courses used to satisfy Required Courses area.	1-9
EED+++++ Any EED Early Education course(s) except courses used to satisfy Required Courses area.	1-9
ITD+++++ Any ITD Infant/Toddler Development course(s)	1-9
FCS+++++ Any FCS Family and Consumer Science course(s)	1-9



General Education: Credits:	22-27
General Education Core: Credits:	12-17
First-Year Composition: Credits:	6
+ 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: Credits:	3
Any approved General Education course in the Oral Communication Area	3
Critical Reading: Credits:	0-3
+ CRE101 College Critical Reading (3) OR	
Equivalent as indicated by assessment.	0-3
Mathematics: Credits:	3-5
Any approved general education course in the Mathematics area	3-5
General Education Distribution: Credits	10
Humanities and Fine Arts: Credits:	3
Any approved General Education course in the Humanities and Fine Arts area	2-3
Social and Behavioral Sciences: Credits:	3
CFS/ECH176 Child Development (3) OR	
EED205 The Developing Child: Prenatal to Age Eight (3) OR	
CFS235 Developing Child: Theory into Practice, Prenatal - Age 8 (3)	3
Natural Sciences: Credits:	4
Any approved General Education course in the Natural Sciences area	4

Editor's Note: At the time of publication the two CCL's above that are associated with this AAS 3124 were pending DOE approval.

### Engineering Technology

#### Associate of Arts - Credits: 63-93 (3228)

Description: The Associate in Applied Science (AAS) in Engineering Technology program is designed to provide skills required of entry-level engineering technicians. Students are provided with the fundamentals of physics, engineering, computer hardware, programming, engineering design fundamentals, and computer software program usage. A solid foundation in mathematics, science, communication skills, humanities, and social sciences provides a well-rounded curriculum.

#### Program Notes:

+ indicates course has a prerequisite and/or co requisites.

Students must earn a grade of "C" or better for all courses required within the program.

Program Prerequisites: Credits: 0-17

The credit hour range is subject to change depending on the student's educational experiences. PHY111 AND PHY112 are also strongly recommended for those who have not completed one year of high school physics with a grade of C or better.

+MAT120 Intermediate Algebra (5) OR	
+MAT121 Intermediate Algebra (4) OR	
+MAT122 Intermediate Algebra (3) OR	
Equivalent by assessment	0-5

+MAT187 Precalculus (5)	
OR	
+MAT150 College Algebra/Functions (5) OR	
+MAT151 College Algebra/Functions (4) OR	

+MAT152 College Algebra/Functions (3) AND +MAT182 Plane Trigonometry (3) OR Equivalent by assessment	0-8
CHM130 Fundamental Chemistry (3) AND CHM130LL Fundamental Chemistry Lab (1) OR CHM130AA Fundamental Chemistry with Lab (4) OR one year of high school chemistry with a grade of C or better taken within the last five years	0-4
Required Courses: Credits:	32-38
+ECE102 Engineering Analysis Tools and Techniques (2) OR +ECE102AA Engineering Analysis Tools and Techniques (2) 2	
+ECE103 Engineering Problem Solving and Design (2) OR +ECE103AB Engineering Problem Solving and Design (2) 2	
+EEE202 Circuits and Devices	5
+MAT220 Calculus with Analytic Geometry I (5) OR + MAT221 Calculus with Analytic Geometry I (4)	4-5
+ MAT230 Calculus with Analytic Geometry II (5) OR + MAT231 Calculus with Analytic Geometry II (4)	4-5
+ MAT240 Calculus with Analytic Geometry III (5) OR + MAT241 Calculus with Analytic Geometry III (4)	4-5
+ MAT276 Modern Differential Equations (4) OR + MAT277 Modern Differential Equations (3)	3-4
+PHY115 University Physics I (5) OR +PHY121 University Physics I: Mechanics (4)	4-5
+PHY116 University Physics II (5) OR +PHY131 University Physics II: Electricity and Magnetism (4)	4-5
Restricted Electives: Credits:	16-20
Students should select 16-20 credits from the following list of electives based on their area of Engineering and interests. Consultation with Program Director is recommended particularly for students considering transfer to the university so that they optimize their transferable course work.	
+BIO181 General Biology (Majors) I +BIO182 General Biology (Majors) II	4 4
+CHM150 General Chemistry I (4) OR +CHM151 General Chemistry I (3) AND +CHM151LL General Chemistry I Laboratory (1) OR +CHM150AA General Chemistry I (5) OR +CHM151AA General Chemistry I (4)	4-5
+CHM152 General Chemistry II (3) AND	

+CHM152LL General Chemistry II Laboratory (1) OR +CHM152AA General Chemistry II (4)	4
+CHM230 Fundamental Organic Chemistry (3) AND +CHM230LL Fundamental Organic Chemistry Laboratory (1) OR +CHM235 General Organic Chemistry I (3) AND +CHM235LL General Organic Chemistry I Laboratory (1)	4
+CHM236 General Organic Chemistry IIA (3) OR +CHM238 General Organic Chemistry IIB (3)	3
+CSC100 Introduction to Computer Science (C++) (3) OR +CSC100AA Introduction to Computer Science (C++) (3) OR +CSC100AB Introduction to Computer Science (C++) (4) OR +CSC110 Introduction to Computer Science (Java) (3) OR +CSC110AB Introduction to Computer Science (Java)(4)	3-4
+ CSC205 Object Oriented Programming and Data Structures (3) OR + CSC205AB Object Oriented Programming and Data Structures (4)	3-4
+CSC/EEE120 Digital Design Fundamentals (4) OR +ECE216 Computer-Aided Engineering (2) AND +ECE216LL Computer-Aided Engineering Laboratory (1)	3-4
ECE105 MATLAB Programming	1
ECE111 Bioengineering Systems	3
+ECE211 Engineering Mechanics-Statics	3
+ECE212 Engineering Mechanics-Dynamics	3
+ECE214 Engineering Mechanics	4
+ECE215 Mechanics of Materials	3
+CSC/EEE220 Programming for Computer Engineering	3
+CSC/EEE230 Computer Organization and Assembly Language	4
GLG101 Introduction to Geology I - Physical Lecture	3
+MAT225 Elementary Linear Algebra	3
+MAT227 Discrete Mathematical Structures	3
+PHY241 University Physics III: Thermodynamics, Optics, and Wave Phenomena	4
General Education: Credits:	15-18
General Education Core: Credits:	9-12
First-Year Composition: Credits:	6
+ 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: Credits:	3
Any approved General Education course in the Oral Communication Area COM100 or COM110 or COM230 recommended.	3
Critical Reading: Credits:	0- 3
+ CRE101 College Critical Reading (3) OR + CRE111 Critical Reading for Business and Industry (3) OR Equivalent as indicated by assessment	0-3

Mathematics: Credits: 3-5  
Met by any Mathematics course listed in the Required Courses area.

General Education Distribution Credits: 6

Humanities & Fine Art: Credits: 3  
Any approved General Education course in the Humanities and Fine Arts Area 3

Social and Behavioral Sciences: Credits: 3  
Any approved General Education course in the Social and Behavioral Sciences Area 3

Natural Sciences: Credits: 0  
Met by PHY115 or PHY121 in the Required Courses area.

### **Entrepreneurial Studies Level I**

#### **Certificate of Completion - Credits: 10-11 (5819)**

Description: The Certificate of Completion (CCL) in Entrepreneurial Studies Level I program is designed to provide students with an introduction to the entrepreneurial process. Courses include a history of entrepreneurship, current research into its impacts on society, types of business start-up opportunities, and creating a preliminary business plan, as well as securing a healthy financial future.

Program Notes:  
Students must earn a grade of C or better for all courses within the program.

Program Prerequisites: None

Required Courses Credits: Credits:	10-11
EPS150 Introduction to Entrepreneurship	3
EPS160 New Venture Creation	2
EPS180 Technology Business Planning (3) OR	
EPS195 Business Start-Up and Planning (2)	2-3
GBS/HEC132 Personal and Family Financial Security	3

Restricted Electives: None

### **Entrepreneurial Studies: Level II**

#### **Certificate of Completion - Credits: 18-19 (5820)**

Description: The Certificate of Completion (CCL) in Entrepreneurial Studies Level II program is designed to provide students with the necessary skills, knowledge, and abilities to start and run their own business. Courses include new venture legal issues, financial projections, and alternatives, in addition to market research to determine business feasibility. Also covers management skills and entrepreneurial thinking for owning and operating a small business.

Program Notes:  
Students must earn a grade of C or better for all courses within the program.

Program Prerequisites: Certificate of Completion in Entrepreneurial Studies Level I (5819) 10-11

Required Courses Credits:	
EPS161 New Venture Law and Finance	3
EPS165 New Venture Feasibility Analysis	2
MGT253 Owning and Operating a Small Business	3

Editor's Note: At the time of this publication, CCL 5820 was pending DOE approval.

### **Family Child Care Management Program**

#### **Certificate of Completion - Credits - 16 (5714) (NEW)**

Description:

The Certificate of Completion (CCL) in Family and Child Care Management program provides individuals with a foundation in early childhood care theories, practices and administration. Topics include curriculum development, health and safety guidelines, business procedures, and cognitive and physical development of the young child.

**Program Notes:**

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

+ indicates course has prerequisites and/or co-requisites.

Program Prerequisites: None

Required Courses: Credits	16
CFS163 Family Child Care: Introduction to Business Management	3
CFS164 Family Child Care: Curriculum and Environment	3
CFS207 Organization and Community Leadership in Child and Family Organizations	3
EED205 The Developing Child: Prenatal to Age Eight	3
EED215 Early Learning: Health, Safety, Nutrition and Fitness	3
+ EED260 Early Childhood Infant/Toddler Internship	1

Editor’s Note: At the time of publication CCL 5714 was pending DOE approval.

**General Business**

**Associate Applied Science - Credits 61-66 (3148)**

Description: The Associate in Applied Science (AAS) in General Business program is designed to meet the needs of students who wish a broad overview of business and desire not to enroll in a specialized curriculum in business. The program is designed to acquaint students with major subject areas of business, to improve the student’s business vocabulary, and to provide students with an understanding of influencing factors in business decision making and activities. In addition, this program may aid a student in recognizing a specific business field to be pursued in future studies. Although many courses will transfer to a four-year institution, some courses do not. This curriculum is not designed to meet the needs of students who wish to transfer to a four-year institution. A Certificate of Completion (CCL) is also available.

Program Prerequisites: None

**Program Notes:**

+ indicates course has prerequisites and/or co requisites Students must earn a grade of “C” or better in all courses within the program

Required Courses: Credit	21
ACC111 Accounting Principles I	3
CIS105 Survey of Computer Information Systems	3
GBS110 Human Relations in Business and Industry (3) OR	
MGT175 Business Organization and Management	
(3) OR	
MGT251 Human Relations in Business (3)	3
GBS151 Introduction to Business	3
GBS205 Legal, Ethical and Regulatory Issues in Business	3
+ GBS233 Business Communication	3
MKT271 Principles of Marketing	3

Restricted Electives: Credits: 19

ACC+++++ Any ACC Accounting course(s)	
GBS+++++ Any GBS General Business course(s)	
MGT+++++ Any MGT Management course(s)	
MKT+++++ Any MKT Marketing course(s)	
EPS+++++ Any EPS Entrepreneurial Studies course(s)	
IBS+++++ Any IBS International Business course(s)	
REA+++++ Any REA Real Estate course(s)	
SBS+++++ Any SBS Small Business Management course(s)	
CIS114DE Excel Spreadsheet	3
CIS117DM Microsoft Access: Database Management	3

CIS133DA Internet/Web Development Level I	3
General Education Requirement: Credits	22-27
General Education Core: Credits:	12-17
First-Year Composition: Credits:	6
+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: Credits:	3
Any approved General Education course in the Oral Communication area.	3
Critical Reading: Credits:	0-3
+CRE101 College Critical Reading (3) OR equivalent by assessment	0-3
Mathematics: Credits:	3-5
+MAT120 Intermediate Algebra (5) OR	
+MAT121 Intermediate Algebra (4) OR	
+MAT122 Intermediate Algebra (3)	
General Education Distribution: Credits:	10
Humanities and Fine Arts: Credits:	3
Any approved General Education course in the Humanities and Fine Arts area.	3
Social and Behavioral Sciences: Credits:	3
ECN211 Macroeconomic Principles (3) OR	
ECN212 Microeconomic Principles (3) OR	
SBU200 Society and Business (3)	
Natural Sciences: Credits:	4
Any approved General Education course in the Natural Sciences area.	4

### General Business

#### Certificate of Completion - Credits: 21 (5683)

Description: The Certificate of Completion (CCL) in General Business is designed to provide business training for various entry-level positions in business. The courses include an introduction to business concepts, accounting and computer principles, and legal issues related to business. An Associate in Applied Science (AAS) is also available.

#### Program Notes:

+ indicates course has prerequisites and/or co-requisites

Students must earn a grade of "C" or better in all courses required within the program.

Program Prerequisites: None

Required Courses: Credits:	12
ACC111 Accounting Principles I	3
CIS105 Survey of Computer Information Systems	3
GBS151 Introduction to Business	3
GBS205 Legal, Ethical and Regulatory Issues in Business	3

Restricted Electives: Credits: 9

Students should select nine (9) credits from the following courses.

Any 100/200 level prefixed courses may be selected except courses used to satisfy the Required Courses area.

ACC+++++ Any ACC Accounting course(s)

GBS+++++ Any GBS General Business course(s)

MGT+++++ Any MGT Management course(s)	
MKT+++++ Any MKT Marketing course(s)	
IBS+++++ Any IBS International Business course(s)	
REA+++++ Any REA Real Estate course(s)	
SBS+++++ Any SBS Small Business Management course(s)	
CIS114DE Excel Spreadsheet	3
CIS117DM Microsoft Access: Database Management	3
CIS133DA Internet/Web Development Level I	3
EPS+++++ Any EPS Entrepreneurial Studies course(s)	1-3
CFS157 Marriage and Family Life (3)	3
+EED260 Early Childhood Infant/Toddler Internship (1) OR	
+EED261 Early Childhood Preschool Internship (1) 1	

### Infant and Toddler Development

#### Certificate of Completion - Credits: 16 (5715) (NEW)

Description:

The Certificate of Completion (CCL) in Infant and Toddler Development program prepares individuals with foundational knowledge on the development of the young child. Included topics are child health, physical milestones, and cognitive development. Also covered are adult/child relationship building, and communication and language acquisition.

Program Notes:

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

+ indicates course has prerequisites and/or co-requisites.

++ indicates any module/suffixed courses

Program Prerequisites: None

Required Courses: Credits	16
EED205 The Developing Child: Prenatal to Age Eight	3
EED215 Early Learning: Health, Safety, Nutrition and Fitness	3
+ EED260 Early Childhood Infant/Toddler Internship	1
+ ITD200 The Physical Child: Birth to Age Three	3
+ ITD210 Early Attachments, Relationships and Families: Birth to Age Three	3
+ ITD220 Cognition and Communication: Birth to Age Three	3

Editor’s Note: At the time of publication CCL 5715 was pending DOE approval.

### Information Technology Support

#### Certificate of Completion - Credits 21-22 (5163)

Description: The Certificate of Completion (CCL) in Information Technology Support program is designed to provide training in the fundamental competencies of information technology in business or industry and prepares the student for employment in entry-level information technology support positions.

Program Notes:

+ indicates course has a prerequisite and/or co requisites.

++ indicates any module/suffixed course.

Grade of “C” or better is required for all courses within the program.

Program Prerequisites: None

Required Courses: Credits	9-20
CIS105 Survey of Computer Information Systems	3
+CIS190Introduction to Local Area Networks (3) OR	
CNT140AA Introduction to Networks (4) OR	
MST150++ Microsoft Windows (Any MST150++module) (3)	3-4
GBS151 Introduction to Business	3

Restricted Electives: Credits:	11-12
CIS114D+ Spreadsheet (any CIS114 D module)	3
CIS117D+ Database Management (any CIS117 D module)	3
CIS120D+ Computer Graphics (any CIS120 D module)	3
CIS121AB Microsoft Command Line Operations	1
CIS121AE Windows Operating System: Level I	1
+ BPC170 Computer Maintenance I: A+ Essentials Prep	3
CIS126AL Linux Operating System I (1) OR	
CIS126DL Linux Operating System (3)	1-3
CIS133DA Internet/Web Development Level I	3
+ CIS15+ Programming (any CIS15+) (3) OR	
CIS15+++ Programming (any CIS15+++ module) (3) OR	
+ CIS16+ Programming (any CIS16+) (3) OR	
CIS16+++ Programming (any CIS16+++ module) (3)	3
CNT150AA Cisco – Routing and Switching Essentials	4
+ ITS110Information Security Fundamentals	4
+ MST157DA Active Directory Windows Server Configuration	4

#### Instructional Assistance

##### Certificate of Completion - Credits: 27 (5119) NEW

Description: The Certificate of Completion (CCL) in Instructional Assistance is designed to prepare students to assist the classroom teacher in grades K through 12. Program requirements include coursework in foundations of education and language as well as practical application coursework, including a practicum within a classroom setting.

##### Program Notes:

Students must earn a grade of “C” or better for all courses required within the program.

+ indicates course has prerequisites and/or co-requisites.

++ indicates any module/suffixed courses.

Program Credits: 27

Program Prerequisites: None

Required Course Credits:	18
CFS/ECH176 Child Development	3
EDU220 Introduction to Serving English Language Learners (ELL)	3
EDU221 Introduction to Education	3
EDU222 Introduction to the Exceptional Learner	3
EDU230 Cultural Diversity in Education	3
EDU/ENH291 Children’s Literature	3

Restricted Electives: Credits: 9  
 Restricted Electives (BPC110 or CIS105), COM225, and (ENG101 or ENG107) courses are recommended if completing coursework for the Associate in Arts Elementary Education (AAEE) degree.

BPC110 Computer Usage and Applications (3) OR	
CIS105 Survey of Computer Information Systems (3)	3
+COM225 Public Speaking	3
EDU101A+ Tutor Training and Practicum (any suffixed course)	1-3
EDU236 Classroom Relationships	3
+EDU282A+ Service-Learning Experience in Education (any suffixed course)	1-3
EDU/HUM/STO292 The Art of Storytelling	3
+ECH/EDU298A+ Special Projects (any suffixed course)	3
+ENG101 First-Year Composition (3) OR	



+ENG107 First-Year Composition for ESL (3)	3
Any foreign language course	3-4

### Linux Professional

#### Certificate of Completion Credits: 12 (5204)

Description: The Certificate of Completion (CCL) in Linux Professional program is designed to 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 help develop a student's knowledge and skill level in preparation for employment or to improve current professional skills. Objectives for a variety of industry certifications are encompassed within course and program objectives.

#### Program Notes:

+ indicates course has prerequisites and/or co-requisites.

++ indicates any modules/suffixed courses

Students must earn a grade of "C" or better for all courses within the program.

Program Prerequisites: None

Required Courses: Credits: 6

CIS126DL Linux Operating System 3

+ CIS238DL Linux System Administration 3

Restricted Electives: Credits: 6

+ BPC170 Computer Maintenance: A+ Exam Prep Level I 3

+ BPC270 Computer Maintenance: A+ Exam Prep Level II 3

CIS105 Survey of Computer Information Systems 3

+ CIS197 VMware ESXI Server Enterprise 4

CIS121AH Microsoft PowerShell/Command Line Operations 3

+ CIS226AL Internet/Intranet Server Administration-Linux 3

+ CIS239DL Linux Shell Scripting 3

+ CIS240DL Linux Network Administration 3

+ CIS241DL Apache Web Server Administration (Linux/Unix) 3

+ CIS270 Essentials of Network and Information Security 3

+ CIS271DL Linux Security 3

+ CIS190 Introduction to Local Area Networks (3) OR

CNT140AA Introduction to Networks (4) OR

MST140 Microsoft Networking Essentials (3) 3-4

+ CNT150AA Cisco – Routing and Switching Essentials 4

MST150++ Microsoft Windows (any suffixed course) 3

CIS280 Current Topics in Computing 3

+ CIS290++ Computer Information Systems Internship (any suffixed course) 1-3

### Management

#### Certificate of Completion - Credits: 18 (5729)

Description: The Certificate of Completion (CCL) in Management program is designed to provide skills for management careers. Students completing this program are better equipped to apply competencies needed for successful performance in management occupations such as manufacturing, wholesaling, retailing, and service industries. An Associate in Applied Science (AAS) is also available.

#### Program Notes:

+ indicates course has prerequisites and/or co-requisites.

Students must earn a grade of C or better for all courses required within the program.

Program Prerequisites: None

Required Courses Credits:	18
ACC111 Accounting Principles I	3
BPC110 Computer Usage and Applications (3) O	
CIS105 Survey of Computer Information Systems (3)	3
GBS151 Introduction to Business	3
GBS205 Legal, Ethical, and Regulatory Issues in Business	3
MGT229 Management and Leadership I	3
MGT251 Human Relations in Business	3

## Marketing

### Certificate of Completion - Credits: 18 (5094)

Description: The Certificate of Completion (CCL) in Marketing program meets students' needs by providing skills necessary for marketing careers. The program is designed to develop competencies essential for success in marketing. By completing this program students will be better equipped to apply competencies needed for successful performance in a variety of marketing/management occupations including wholesaling, retailing, professional sales, and entrepreneurship.

#### Program Notes:

++ indicates any module/suffixed courses.

+ 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: None

Required Courses: Credits:	15
BPC110 Computer Usage and Applications (3) OR	
CIS105 Survey of Computer Information Systems (3)	3
GBS151 Introduction to Business	3
MKT263 Advertising Principles	3
MKT267 Principles of Salesmanship	3
MKT271 Principles of Marketing	3

Restricted Electives: Credits:	3
Students should select from the following courses in consultation with Department Advisor.	
MGT251 Human Relations in Business	3
MKT101 Introduction to Public Relations	3
MKT110 Marketing and Social Networking	3
MKT268 Merchandising	3

## Microsoft Programming

### Certificate of Completion Credits 12 (5833) NEW

Description: The Certificate of Completion (CCL) in Information Technology: Microsoft Programming would provide students with entry-level programming skills and knowledge in developing software for Windows devices, both desktop and mobile devices. It includes programming in both VB.NET and C#.

Program Notes: Students must earn a grade of "C" or better in all courses within the program.

Students should select from the following courses in consultation with a Department Advisor.

+ indicates course has prerequisites and/or corequisites.

Program Prerequisites: Credits:	0-3
CIS105 Survey of Computer Information Systems (3) OR	
Permission of division chair or department coordinator	0-3

Required Courses: Credits:	12
+ CIS159 Visual Basic Programming I	3
+ CIS162AD C#: Level I	3
+ CIS165DB C#/VB.NET: Windows 8 App Development	3

+ CIS259 Visual Basic Programming II (3) OR  
 + CIS262AD C#: Level II (3) 3

**Mobile Apps Programming**

**Associate in Applied Science - Credits: 62-64 (3139)**

Description: The Associate in Applied Science (AAS) in Mobile Apps Programming is designed to provide information and training on the programming aspect of technology. Individuals will be provided with the opportunity to develop skills necessary to work in the programming field including mobile applications programming. The program also includes a Certificate of Completion (CCL) in Programming, a Certificate of Completion (CCL) in Programming and System Analysis, and a Certificate of Completion (CCL) in Mobile Apps Programming.

Program Notes:

Students must earn a grade of “C” or better for all courses within the program

+ indicates course has prerequisites and/or co-requisites

++ indicates any module/suffixed courses.

Program Prerequisites: None

Required Courses: Credits: 37-45

Certificate of Completion in Programming (5047) (21-26) OR

Certificate of Completion in Programming and System Analysis (5048) 24

AND

Certificate of Completion in Mobile Apps Programming

(5793) 37-45

General Education Requirements: Credits: 19-27

General Education Core: Credits: 9-17

First-Year Composition: Credits: 6

+ 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: Credits: 3

Any approved General Education course in the Oral Communication area.

Critical Reading: Credits: 0-3

+ CRE101 College Critical Reading (3) OR

+ CRE111 Critical Reading for Business and Industry (3) OR

Equivalent as indicated by assessment. 0-3

Mathematics: Credits: Credits: 0-5

Mathematics may be met by MAT120, or MAT121, or MAT122 if taken in Required Courses area.

+ MAT120 Intermediate Algebra (5) OR

+ MAT121 Intermediate Algebra (4) OR

+ MAT122 Intermediate Algebra (3) OR

Satisfactory completion of a higher level mathematics course. 0-5

General Education Distribution: Credits: 10

Humanities and Fine Arts Credits: 3

Any approved general education course from the Humanities and Fine Arts area. 3

Social and Behavioral Sciences Credit: 3

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

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

### Mobile Apps Programming

#### Certificate of Completion in Credits: 16-45 (5793)

Description: The Certificate of Completion (CCL) in Mobile Apps Programming is designed to prepare individuals with the skills necessary to develop and distribute applications for mobile devices. Courses will include Mac Operating System, Adobe Photoshop, and Hypertext Markup Language (HTML)/Cascading Styles Sheets (CSS) for the development of iPhone, Android, and Windows 8 App development.

Program Notes: The Computer Information System (CIS) courses required by this program are not applicable if taken more than eight (8) years prior to the completion of the certificate program. Consult with an Academic Advisor for complete information.

Students must earn a grade of "C" or better for all courses within the program.

+ indicates course has prerequisites and/or co-requisites.

Program Prerequisites: Credits:	0-29
+ CIS150 Programming Fundamentals (3) AND	
Certificate of Completion in Programming (5047) (21-26) OR	
Certificate of Completion in Programming and System Analysis (5048) (24) OR	
Permission of Department or Division Chair.	0-29

Required Courses: Credits	16
CIS120DF Adobe Photoshop Level I: Digital Imaging	3
CIS121AI Mac Operating System	1
CIS132 HTML/CSS	3
+ CIS165 Introduction to IOS Application Development	3
+ CIS165DA Android Mobile Device Programming	3
+ CIS165DB C#/VB.NET: Windows 8 Mobile App Development	3

### Music Business:

#### Associate in Applied Science - Credits: 60-63 (3017)

Description: The Associate in Applied Science (AAS) in Music Business program is an innovative curriculum designed to prepare students for today's music industry. The certificate and degree with a music business emphasis are designed for both the performing musician and the business student with limited performing experience. This program combines a flexible curriculum with an emphasis in business and marketing, along with music industry related courses and experiences.

Program Notes:

Students must earn a grade of "C" or better for all courses required within the program.

+ indicates course has prerequisite and/or co-requisites.

++ indicates any module/suffixed courses.

Program Prerequisites: None

Required Courses: Credits	14
MUC109 Music Business: Merchandising and the Law	3
MUC110 Music Business: Recording and Mass Media	3
MUC295AA Self Promotion for Music	1
+MUC209 Music Industry Entrepreneurship (3) OR	
MGT253 Owning and Operating a Small Business (3)	3
+MUC290AA Music Business Internship	1
MHL+++++ Any MHL Music: History/Literature course	3

Restricted Electives: Credits: 12

Students must select twelve (12) credits from the approved list of Restricted Elective courses below to specialize in Music Production, Disc Jockey Techniques, Songwriting, Performance, Marketing, Business, or Communications.

Students must consult with the Music Business Program Director, Music Department Chair or designee to select the Restricted

Elective courses recommended for each specialization.

Free Electives: Credits: 12  
 Students should choose twelve (12) credits from the following list of Free Elective courses except courses used to satisfy the Restricted Electives area.

ACC111 Accounting Principles I	3
BPC128 Introduction to Desktop Publishing	1
CIS131AA Doing Business on the Internet	1
GBS151 Introduction to Business	3
+GBS233 Business Communication	3
MKT110 Marketing and Social Networking	3
MKT271 Principles of Marketing	3

MTC101 Introduction to Music Theory (3)  
 or higher level MTC Music: Theory/Composition course (3) 3

MTC113 Songwriting Techniques	1
+MUC111 Digital Audio Workstation I (DAWI)	3
MUC135 Introduction to Disc Jockey Techniques	3
MUC145 Recording Studio Business Operations	2
+MUC180 Computer Literacy for the Music Business	3

MUC195 Studio Music Recording I (3) OR  
 MUC195AA Studio Music Recording I (3) 3

+MUC210 Advanced Industry Topics: Concert Promotion and Training	3
+MUC211 Advanced Industry Topics: Artist Management and Talent Development	3
MUC215 Music Industry Seminar: Innovation in Music Technology	1
+MUC240 Creative Music Production	4
+MUC241 Business Principles of Music Production	3
MUC274AB Music Industry Study Tour	2
+MUC295AB Portfolio for Music	1
+MUC298AA Special Projects	1
+MUC298AB Special Projects	2
+MUC298AC Special Projects	3
SBS230 Financial and Tax Management for Small Business	2

General Education Requirements: Credits 22-25

General Education Core: Credits: 12-15

First-Year Composition: Credits: 6  
 Any approved general education courses from the First-Year Composition area

Oral Communication: Credits: 3  
 Any approved general education course from the Oral Communication Area

Critical Reading: Credits: 0-3  
 CRE101 College Critical Reading (3) OR  
 Equivalent as indicated by assessment

Mathematics: Credits: 3  
 + Any approved general education course from the Mathematics Area

General Education Distribution: Credits: 10

Humanities & Fine Arts: Credits:	3
Any approved general education course from the Humanities and Fine Arts Area	3
Social and Behavioral Sciences: Credits:	3
Any approved general education course from the Social and Behavioral Sciences Area	
Natural Sciences: Credits:	4
Any approved general education course from the Natural Sciences Area	

### **Music Business**

#### **Certificate of Completion - Credits: 26 (5258)**

Description: The Certificate of Completion (CCL) in Music Business program is an innovative curriculum designed to prepare students for today's music industry. The certificate and degree with a music business emphasis are designed for both the performing musician and the business student with limited performing experience. This program combines a flexible curriculum with an emphasis in business and marketing, along with music industry related courses and experiences.

#### Program Notes:

+ indicates course has prerequisite and/or co-requisites.

++ indicates any module/suffixed courses.

Students must earn a grade of "C" or better for all courses required within the program.

Program Prerequisites: None

Required Courses: Credits	11
MUC109 Music Business: Merchandising and the Law	3
MUC110 Music Business: Recording and Mass Media	3
MUC295AA Self Promotion for Music	1
+MUC209 Music Industry Entrepreneurship (3) OR MGT253 Owning and Operating a Small Business (3)	3
+MUC290AA Music Business Internship	1

Restricted Electives: Credits: 15

Students must select fifteen (15) credits from the approved list of Restricted Elective courses to specialize in Music Production, Disc Jockey Techniques, Songwriting, Performance, Marketing, Business or Communications. Students must consult with the Music Business Program Director, Music Department Chair or designee to select the Restricted Elective courses recommended for each specialization.

### **Networking Administration: Cisco**

#### **Certificate of Completion - Credits: 14-18 (5969)**

Description: The Certificate of Completion (CCL) in Networking Administration: Cisco program is a Cisco Systems recognized Regional or Local Academy that prepares students for industry-recognized certification. The curriculum is taught by Cisco Systems Certified Professionals. The Certificate of Completion (CCL) 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). The courses in the program also prepare students for the Cisco Certified Networking Associate examination.

#### Program Notes:

+ indicates course has prerequisites and/or co requisites.

Students must earn a grade of "C" or better for all courses required within the program

Program Prerequisites: None

Required Courses: Credits: 14-18  
 One of the following 2 tracks must be fulfilled:

Track 1 - Exploration: Credits: 14-18

- CNT140 Cisco Networking Basics (4) OR
- CNT140AA Introduction to Networks (4) OR
- CNT138 CCNA Discovery - Networking for Home and Small Businesses (3) AND
- + CNT148 CCNA Discovery - Working at a Small- to-Medium Business or Internet Service Provider (3) 4-6
- + CNT150 Cisco Networking Router Technologies (4) OR
- + CNT150AA Cisco – Routing and Switching Essentials (4) 4
- + CNT160 Cisco Switching Basics and Intermediate Routing (3) OR
- + CNT160AA Scaling Networks (4) 3-4
- + CNT170 Cisco Wide Area Networks (WAN) Technologies (3) OR
- + CNT170AA Cisco – Connecting Networks (4) 3-4

Track 2 - Discovery: Credits: 14

- CNT138 CCNA Discovery - Networking for Home and Small Businesses 3
- + CNT148 CCNA Discovery - Working at a Small- to-Medium Business or Internet Service Provider 3
- + CNT158 CCNA Discovery - Introduction to Routing and Switching in the Enterprise 4
- + CNT168 CCNA Discovery - Designing and Supporting Computer Networks 4

**Network Administration: Cisco Network Professional Certificate of Completion - Credits: 16 (5328)**

Description: The Certificate of Completion (CCL) in Network Administration: Cisco Network Professional program equip students with marketable skills for learning the specific tasks and industry-recognized standards associated with network professional who can install, configure, and troubleshoot local and wide area networks for enterprise organizations with networks comprised of 100 to 500 or more nodes. The coursework emphasizes security, converged networks, quality of service (QoS), virtual private networks (VPN), broadband technologies, and integrating technologies in the network infrastructure. The program also prepares students to complete the required certification tests in Cisco Certified Network Professional (CCNP) certification, which indicates advanced or journeyman knowledge of networks.

**Program Notes:**

- + indicates course has prerequisites and/or co-requisites.
- ++ indicates any module/suffixed courses.
- Students must earn a grade of “C” or better for all courses within the program.

Program Prerequisites: Credits: 0-4

- CNT170AA Cisco – Connecting Networks (4) OR
- Cisco Certified Network Associate (CCNA) Industry Certification 0-4

Required Courses: Credits: 16

- +CNT200 CCNP ROUTE: Implementing Cisco IP Routing 4
- +CNT202 Cisco Secure Firewall Appliance Configuration (4) OR
- +CNT205 Cisco Certified Network Associate Security (4) OR
- +CNT206 Cisco Certified Network Associate Wireless (4) OR
- +CNT208 Cisco Certified Network Associate Voice (4) 4
- +CNT220 CCNP SWITCH: Implementing Cisco IP Switching 4
- +CNT231 CCNP TSHOOT: Maintaining and Troubleshooting Cisco IP Networks 4

**Network Security Associate in Applied Science - Credits: 63-69 (3097)**

Description: The Associate of Applied Science (AAS) in Information Technology: Network Security program is designed to focus on the necessary skills required to secure a network including the security of various operating systems and network devices. Emphasis is placed on developing the theoretical and practical skills needed to maintain security on mission-critical networking and server 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 Technology: Network Security program also focuses on the skills needed for internationally recognized IT certifications and high demands in business, industry and government. A Certificate of Completion (CCL) is also available.

Program Notes:

+ indicates course has prerequisites and/or co requisites.

++ indicates any module

Students must earn a grade of "C" or better in all courses within the program. Students should select from the following courses in consultation with a Department Advisor.

Program Prerequisites: Credits: 3

CIS105, Survey of Computer Information Systems OR

permission of Program Director

Required Courses: Credits:

		38
CIS126DL	Linux Operating System	3
CNT140AA	Introduction to Networks	4
+CNT150AA	Cisco – Routing and Switching Essentials	4
+CNT160AA	Scaling Networks	4
+CNT170AA	Cisco – Connecting Networks	4
+CNT205	Cisco Certified Network Associate Security	4
+CNT202	Cisco Secure Firewall Appliance Configuration	4
+ITS110	Information Security Fundamentals	4
MST150++	Microsoft Windows (any MST150++ module)	3
+MST157DA	Active Directory Windows Server Configuration	4

Restricted Electives: Credits: 3-4

+CIS238DL	Linux System Administration	3
+MST15+	Microsoft Windows (any MST15++ module)	3-4
+MST2++	Microsoft (any MST2++ module)	3-4
BPC170	Computer Maintenance I: A+ Essentials Prep	3
+BPC270	Computer Maintenance II: A+ Technician Prep	3
+CNT2++	Cisco (Any CNT2++ Module)	4

General Education Requirements: Credits:

22-27

General Education CORE: Credits:

12-17

First-Year Composition: Credits:

6

Any approved General Education course in the First-Year Composition Area

6

Oral Communication: Credits:

3

Any approved General Education course in the Oral Communication Area

3

Critical Reading: Credits:

0-3

Any approved General Education course in the Critical Reading Area OR Equivalent as indicated by assessment.

3

Mathematics: Credits:

3-5

MAT120 Intermediate Algebra (5) OR

MAT121 Intermediate Algebra (4) OR

MAT122 Intermediate Algebra (3) OR

MAT151 Intermediate Algebra (4)

3-5

General Education Distribution Credits:

10



Humanities & Fine Arts: Credits:	3
Any approved General Education course in the Humanities and Fine Arts Area	3
Social and Behavioral Sciences: Credits:	3
Any approved General Education course in the Social and Behavioral Sciences Area	3
Natural Sciences: Credits:	4
Any approved General Education course in the Natural Sciences Area	4

### Network Security

#### Certificate of Completion - Credits: 41-42 (5530)

Description: The Certificate of Completion (CCL) in Information Technology: Network Security program is designed to focus on the necessary skills required to secure a network including the security of various operating systems and network devices. Emphasis is placed on developing the theoretical and practical skills needed to maintain security on mission-critical networking and server 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 Technology: Network Security program also focuses on the skills needed for internationally recognized IT certifications and high demands in business, industry and government. An Associate in Applied Science (AAS) is also available.

#### Program Notes:

+ indicates course has prerequisites and/or co requisites.

++ indicates any module

Students must earn a grade of “C” or better in all courses within the program. Students should select from the following courses in consultation with a department advisor.

Program Prerequisites: Credits:	3
CIS105, Survey of Computer Information Systems OR Permission of Program Director	

Required Courses: Credits:	38
CIS126DL Linux Operating System	3
CNT140AA Introduction to Networks (4)	4
+CNT150AA Cisco – Routing and Switching Essentials (4)	4
+CNT160AA Scaling Networks	4
+CNT170AA Cisco – Connecting Networks	4
+CNT205 Cisco Certified Network Associate Security	4
+CNT202 Cisco Secure Firewall Appliance Configuration	4
+ITS110 Information Security Fundamentals	4
MST150++ Microsoft Windows (any MST150++ module)	3
+MST157DA Active Directory Windows Server Configuration	4

Restricted Elective:	3-4
+ CIS238DL Linux System Administration	3
+ MST15+ Microsoft Windows (any MST15++ module)	3-4
+ MST2++ Microsoft (any MST2++ module)	3-4
BPC170 Computer Maintenance I: A+ Essentials Prep	3
+BPC270 Computer Maintenance II: A+ Technician Prep	3
+CNT2++ Cisco (Any CNT2++ Module)	4

### Network Server

#### Associate in Applied Science - Credit: 61-67 (3096)

Description: The Associate in Applied Science (AAS) in Information Technology: Network Server program focuses on the skills needed to install, implement, manage, and troubleshoot networks and systems in both a Linux and Microsoft server environment.

Most complex networking environments today include multiple operating system platforms which include Linux and Microsoft servers. A Certificate of Completion (CCL) is also available.

Program Notes:

+ indicates course has prerequisites and/or co requisites. Students must earn a grade of “C” or better in all courses within the program. Students should select from the following courses in consultation with a department advisor.

Program Prerequisites: Credits:	3
CIS105, Survey of Computer Information Systems (3) or permission of Program Director	
Required Courses: Credits:	32
CIS126DL Linux Operating System	3
+CIS238DL Linux System Administration	3
CNT140AA Introduction to Networks	4
+CNT150AA Cisco – Routing and Switching Essentials	4
+CNT160AA Scaling Networks	4
+CNT170AA Cisco – Connecting Networks	4
MST150++ Microsoft Windows (any MST150++ module)	3
+MST157DA Active Directory Windows Server Configuration	4
BPC170 Computer Maintenance I: A+ Essentials Prep	3
Restricted Electives: Courses:	7-8
+ BPC270 Computer Maintenance II: A+ Technician Prep	3
+ CIS15+++ Programming (any CIS15+++ module)	3
CIS190 Introduction to Local Area Networks (3) OR	
MST140 Microsoft Networking Essentials (3)	3
+ MST15+ Microsoft Windows (any MST15+)	3-4
+ MST2++ Microsoft (any MST2++)	3-4
+ ITS110Information Security Fundamentals	4
+ CIS239DL Linux Shell Scripting	3
General Education Requirement: Credits:	22-27
General Education CORE: Credits:	12-17
First-Year Composition: Credits:	6
Any approved General Education course in the First-Year Composition Area	6
Oral Communication: Credits:	3
Any approved General Education course in the Oral Communication Area	3
Critical Reading: Credits:	0-3
Any approved General Education course in the Critical Reading Area OR Equivalent as indicated by assessment.	0-3
Mathematics: Credits:	3-5
MAT120 Intermediate Algebra (5) OR	
AT121 Intermediate Algebra (4) OR	
MAT122 Intermediate Algebra (3) OR	
MAT151 Intermediate Algebra (4)	3-5
General Education Distribution Credits:	10
Humanities & Fine Arts: Credits:	3
Any approved General Education course in the Humanities and Fine Arts Area	3
Social and Behavioral Sciences: Credits:	3
Any approved General Education course in the Social and Behavioral Sciences Area	3

Natural Sciences: Credits	4
Any approved General Education course in the Natural Sciences Area	4

### Network Server

#### Certificate of Completion - Credits: 39-40 (5529)

Description: The Certificate of Completion (CCL) in Information Technology: Network Server program focuses on the skills needed to install, implement, manage, and troubleshoot networks and systems in both a Linux and Microsoft server environment. Most complex networking environments today include multiple operating system platforms which include Unix/Linux and Microsoft servers. An Associate in Applied Science (AAS) is also available.

#### Program Notes:

+ indicates course has prerequisites and/or co requisites.

++ indicates any module

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

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

Program Prerequisites: Credits:	3
CIS105, Survey of Computer Information Systems (3) OR permission of Program Director	

Required Courses: Credits	32
CIS126DL Linux Operating System	3
+CIS238DL Linux System Administration	3
CNT140AA Introduction to Networks	4
+CNT150AA Cisco – Routing and Switching Essentials	4
+CNT160AA Scaling Networks	4
+CNT170AA Cisco – Connecting Networks	4
MST150++ Microsoft Windows (any MST150++ module)	3
+MST157DA Active Directory Windows Server Configuration	4
BPC170 Computer Maintenance I: A+ Essentials Prep	3

Restricted Elective: Credits:	7-8
+ BPC270 Computer Maintenance II: A+ Technician Prep	3
+ CIS15+ Programming (any CIS15+) (3) OR + CIS15+++ Programming (any CIS15+++ module) (3)	3
CIS190 Introduction to Local Area Networks (3) OR MST140 Microsoft Networking Essentials (3)	3
+ MST15+ Microsoft Windows (any MST15+)	3-4
+ MST2++ Microsoft (any MST2++)	3-4
+ ITS110Information Security Fundamentals	4
+ CIS239DL Linux Shell Scripting	3

### Pharmacy: Customer Service

#### Certificate of Completion Credits: 17 (5348)

Description: The Certificate of Completion (CCL) in Pharmacy: Customer Service program is designed to provide students with the knowledge and skills needed to meet the challenges of working in the retail pharmacy environment. The courses will cover federal and state pharmacy regulations and pharmacy services including prescription dispensing and drug distribution and control.

Emphasis will be on providing quality customer service and using effective communications and interpersonal skills when dealing with pharmacy customers and personnel.

#### Admission Criteria:

Submit current CPR card for Health Care Provider and maintain current status throughout the program.

Students must complete a basic physical exam by their doctor.

Proof of current immunization: Tuberculosis skin test (TB).

#### Program Notes:

+ indicates course has prerequisites and/or co-requisites.

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

Program Prerequisites: None

Required Courses: Credits:	17
CSR139 Introduction to Retail Pharmacy Customer Care	3
+CSR156 Retail Pharmacy Procedures	2
+CSR160 Pharmacy Practice for the Customer Service Representative	1
+CSR162 Pharmacy Operations for the Customer Service Representative	3
+CSR280AB Customer Service Internship	2
GBS120 Workplace Communication Skills	3
PHT120 Pharmacy Technician Responsibilities	3

### Programming

#### Certificate of Completion - Credits 21-26 (5047)

Description: The Certificate of Completion (CCL) in Programming is designed to prepare the student to work in the programming field. Courses focus on programming theory, Java programming, Visual Basic programming, and web programming.

#### Program Notes:

The Computer Information System (CIS) or the Computer Science (CSC) courses required by this program are not applicable if taken more than eight (8) years prior to the completion of the certificate program. Consult with an Academic Advisor for complete information.

Students must earn a grade of "C" or better for all courses required within the program.

+ indicates course has prerequisites and/or co-requisites.

++ indicates any module/suffixed courses.

Program Prerequisites: Credits: 0-5  
Students selecting CSC110 in the Required Courses area must complete MAT120/MAT121/MAT122.

+ MAT120 Intermediate Algebra (5) OR  
+ MAT121 Intermediate Algebra (4) OR  
+ MAT122 Intermediate Algebra (3) OR  
Permission of Instructor 0-5

Required Courses: Credits 21  
CIS105 Survey of Computer Information Systems 3

+ CIS119DO Introduction to Oracle: SQL (3) OR  
+ CIS276DA MySQL Database (3) OR  
+ CIS276DB SQL Server Database (3) 3

+ CIS159 Visual Basic Programming I 3  
+ CIS162AD C#: Level I 3

+ CIS163AA Java Programming: Level I (3) OR  
+ CSC110 Introduction to Computer Science (Java) (3) 3

+ CIS225AB Object-Oriented Analysis and Design (3) OR  
+ CSC205 Object Oriented Programming and Data Structures (3) 3

+ CIS259 Visual Basic Programming II (3) OR  
+ CIS262AD C# Level II (3) OR  
+ CIS263AA Java Programming: Level II (3) 3

### Programming and Mobile Development

#### Associate in Applied Science - Credits: 61 (3099)

Description: The Associate in Applied Science (AAS) in Information Technology: Programming and Mobile Development program is designed to provide students with the design and programming skills necessary for entry-level computer programming support positions, with an emphasis on mobile apps. A Certificate of Completion (CCL) in Information Technology: Programming and

Mobile Development program is also available.

Program Notes:

Students must earn a grade of “C” or better in all courses within the program.  
 Students should consult with a Department Advisor in arranging their schedules.  
 + indicates course has prerequisites and/or co-requisites.

Program Prerequisites: Credits:	0-6
CIS105 Survey of Computer Information Systems (3) OR Permission of division chair or department coordinator.	0-3
+ CIS150 Programming Fundamentals (3) OR Permission of division chair or department coordinator.	0-3
Required Courses: Credits:	36
CIS120DF Adobe Photoshop Level I: Digital Imaging	3
CIS132 HTML / CSS (3) OR CIS133DA Internet/Web Development Level I (3)	3
+ CIS159 Visual Basic Programming I	3
+ CIS162AD C#: Level I	3
+ CIS163AA Java Programming: Level I	3
+ CIS165 Introduction to IOS Application Development	3
+ CIS165DA Android Mobile Device Programming	3
+ CIS165DB C#/VB.NET: Windows 8 App Development	3
+ CIS166AA Introduction to JavaScripting	3
+ CIS233D+ Internet/Web Development (Any module)	3
+ CIS259 Visual Basic Programming II (3) OR + CIS262AD C#: Level II (3)	3
+ CIS263AA Java Programming: Level II	3
Restricted Electives: Credits:	0-3
Students may select zero (0) to three (3) credits from the following list of courses to complete the minimum 61 credits for the AAS degree, except courses used to satisfy the Required Courses area.	
CIS117DM Microsoft Access: Database Management	3
CIS120DC Adobe Flash Level I: Digital Animation	3
CIS190 Introduction to Local Area Networks	3
CIS220DF Adobe Photoshop Level II: Advanced Digital Imaging	3
+ CIS259 Visual Basic Programming II (3) OR + CIS262AD C#: Level II (3)	3
CSC100 Introduction to Computer Science (C++)	3
EPS150 Introduction to Entrepreneurship	3
EPS180 Technology Business Planning	3
GBS151 Introduction to Business	3
General Education Requirements: Credits:	22-25
General Education Core: Credits:	12-15
First-Year Composition: Credits:	6
Any approved General Education course in the First-Year Composition Area	6
Oral Communication: Credits:	3

Any approved General Education course in the Oral Communication Area	3
Critical Reading: Credits:	0-3
Any approved general education course in the Critical Reading area OR equivalent as indicated by assessment.	0-3
Mathematics: Credits:	3
Any approved general education course in the Mathematics area.	3
General Education Distribution Credits:	10
Humanities & Fine Arts: Credits:	3
Any approved General Education course in the Humanities and Fine Arts Area	3
Social and Behavioral Sciences: Credits:	3
Any approved General Education course in the Social and Behavioral Sciences Area	
Natural Sciences: Credits: Credits:	4
Any approved General Education course from the Natural Sciences Area	

### **Programming and Mobile Development**

#### **Certificate of Completion - Credits: 36-39 (5193)**

Description: The Certificate of Completion (CCL) in Information Technology: Programming and Mobile Development program is designed to provide students with the design and programming skills necessary for entry-level computer programming support positions, with an emphasis on mobile apps. An Associate in Applied Science (AAS) in Information Technology: Programming and Mobile Development program is also available.

#### Program Notes:

+ indicates course has prerequisites and/or co-requisites.

Students must earn a grade of "C" or better in all courses within the program.

Students should consult with a Department Advisor in arranging their schedules.

Program Prerequisites:	0-6
CIS105 Survey of Computer Information Systems (3) OR Permission of division chair or department coordinator.	0-3
+ CIS150 Programming Fundamentals (3) OR Permission of division chair or department coordinator.	0-3
Required Courses: Credits:	36
CIS120DF Adobe Photoshop Level I: Digital Imaging	3
CIS132 HTML/CSS (3) OR CIS133DA Internet/Web Development Level I (3)	3
+ CIS159 Visual Basic Programming I	3
+ CIS162AD C#: Level I	3
+ CIS163AA Java Programming: Level I	3
+ CIS165 Introduction to IOS Application Development	3
+ CIS165DA Android Mobile Device Programming	3
+ CIS165DB C#/VB.NET: Windows 8 App Development	3
+ CIS166AA Introduction to JavaScripting	3
+ CIS233D+ Internet/Web Development (Any module)	3
+ CIS259 Visual Basic Programming II (3) OR + CIS262AD C#: Level II (3)	3
+ CIS263AA Java Programming: Level II	3

### **Real Estate: Prelicense**

#### **Certificate of Completion - Credits: 6.5 (5139)**

Description: The Certificate of Completion (CCL) in Real Estate: Prelicense program is designed to prepare students with the

minimum coursework required by the state of Arizona for eligibility to take the state's real estate salesperson's license exam.

Admission Criteria: High school diploma or GED or equivalent. Current ASSET/COMPASS/ACCUPLACER placement tests reflecting eligibility for the following:

CRE101 College Critical Reading OR Equivalent  
ENG101 First Year Composition OR  
ENG107 First-Year Composition for ESL OR Equivalent

MAT102 Mathematical Concepts/Applications OR Completion of higher level mathematics course OR  
GBS131 Business Calculations

Program Prerequisites: None

Required Courses: Credits:	6.5
REA179 Real Estate Principles I (3) AND + REA180 Real Estate Principles II (3) OR REA201 Real Estate Principles I and II (6)	6
+ REA290AH Real Estate Seminar: Contract Writing	0.5

### Recovery Support

#### Associate in Applied Science - Credits: 70-72 (3032)

Description: The Associate in Applied Science (AAS) in Recovery Support program prepares students for careers as behavioral health technicians, case managers, parent aides, family advocates, respite care workers, and paraprofessional counselors. The program includes courses designed to provide students with the skills necessary to deliver basic, specialized, and comprehensive behavioral health services. The core focus of the program is practical training and service learning experiences.

Program Notes:

+ indicates course has prerequisites and/or co requisites.

Students must earn a grade of "C" or better in each course in the Required Course area.

Program Prerequisites: None

Required Courses: Credits	45
BHS101 Introduction to Ethical Counseling Issues	3
+ BHS105 Introduction to Human Relations	2
BHS115 Group Dynamics	3
BHS/SWU130 Addictions and Substance Use Disorders	3
+ BHS151 Communications Skills in Counseling I	3
+ BHS152 Communication Skills in Counseling II	3
+ BHS156 Supervised Practice I	3
BHS178 Peer Training for Behavioral Health Paraprofessionals (3) OR	
+ BHS278 Recovery Coaching (3)	3
+ BHS204 Counseling in Multicultural Setting	3
+ BHS205 Therapeutic Intervention Models	3
+ BHS215 Group Process	3
+ BHS260 Case Report Writing	1
+ BHS263 Applied Case Report Writing	1
+ BHS290 Child & Family Advocacy	3
CPD102AD Eliminating Self-Defeating Behavior	2
PSY101 Introduction to Psychology	3
+ PSY240 Developmental Psychology	3
General Education Requirement: Credits	25-27
General Education Core Credits:	15-17
First Year Composition: Credits	6

+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: Credits	3
COM100 Introduction to Human Communication (3) OR COM100AA Intro to Human Communication Part I (1) AND COM100AB Intro to Human Communication Part II (1) AND COM100AC Intro to Human Communication Part III (1) OR COM110 Interpersonal Communication (3) OR COM230 Small Group Communication (3)	3
Critical Reading: Credits	3
+ CRE101 College Critical Reading I (3) OR Equivalent as indicated by assessment.	
Mathematics: Credits:	3-5
Any approved general education course from the Mathematics area.	
General Education Distribution: Credits	10
Humanities and Fine Arts: Credits:	3
Any approved general education course in the Humanities and Fine Arts area.	
Social and Behavioral Sciences: Credits:	3
Any approved general education course in the Social and Behavioral Sciences area.	
Natural Sciences: Credits	4
Any approved general education course in the Natural Sciences area.	

**Retail Management**

**Associate in Applied Science - Credits: 61-63 (3048)**

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:

+ indicates course has prerequisites and/or co requisites. Students must earn a grade of "C" or better in all courses within the program.

Program Prerequisites: None

Required Courses: Credits	24-27
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Choose one of the following three accounting sequences:

ACC111 Accounting Principles I (3) AND  
+ ACC230 Uses of Accounting Information I (3) AND  
+ ACC240 Uses of Accounting Information II (3)  
OR

ACC111 Accounting Principles I (3) AND  
+ ACC112 Accounting Principles II (3) AND  
+ ACC212 Managerial Accounting (3)  
OR

ACC211 Financial Accounting (3) AND + ACC212 Managerial Accounting (3)	6-9
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BPC110 Computer Usage and Applications (3) OR



CIS105 Survey of Computer Information Systems (3)	3
GBS110 Human Relations in Business and Industry (3) OR MGT251 Human Relations in Business (3)	3
MGT101 Techniques of Supervision (3) OR MGT229 Management and Leadership I (3)	3
MGT179 Utilizing the Human Resources Department (3) OR MGT276 Personnel/Human Resources Management (3)	3
MKT268 Merchandising (3) OR MGT180 Retail Management (3)	3
MKT271 Principles of Marketing	3
Restricted Electives:	9-15
Student must complete additional nine (9) to fifteen (15) credits from GBS, MGT, and/or MKT prefixed courses (except courses used to satisfy Required Courses area nor excluded below) to complete a minimum of 61 total program credits. Must include at least one MKT course.	
GBS+++++ Any GBS General Business course(s)	0-12
MGT+++++ Any MGT Management course(s) except MGT180	0-12
MKT+++++ Any MKT Marketing course(s) except MKT268	3-15
General Education Requirements: Credits	22-27
General Education Core: Credits:	11-15
First-Year Composition: Credits:	6
+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: Credits:	3
COM100 Introduction to Human Communication	3
Critical Reading: Credits:	3
CRE101 Critical and Evaluative Reading I (3) OR	
Equivalent by assessment	3
Mathematics: Credits:	3
Any approved general education course from the Mathematics area.	
General Education Distribution: Credits:	10
Humanities and Fine Arts: Credits:	3
Any approved general education course from the	
Humanities and Fine Arts and Design area.	3
Social and Behavioral Sciences: Credits:	3
SBU200 Society and Business	3
Natural Sciences: Credits:	4
Any approved general education course from the Natural	
Sciences area.	4

**Retail Management****Certificate of Completion - Credits: 24 (5286)**

Description: The Certificate of Completion (CCL) in Retail Management is designed to prepare individuals working in the Retail industry, and related fields, for the industry training needs in supervision and management, marketing, financial management, and business planning. The curriculum encompasses several business essentials and also emphasizes the skill sets needed for effective management and communication in the work environment.

## Program Notes:

+ indicates course has a prerequisite and/or co requisites. Students must earn a grade of "C" or better for all courses required within the program.

Program Prerequisites: None

Required Courses: Credits	24
ACC111 Accounting Principles I (3) OR ACC211 Financial Accounting (3)	3
BPC110 Computer Usage and Applications (3) OR CIS105 Survey of Computer Information Systems (3)	3
COM100 Introduction to Human Communication	3
GBS110 Human Relations in Business and Industry (3) OR MGT251 Human Relations in Business (3)	3
MGT180 Retail Management (3) OR GBS270AC Business Internship (3) OR GBS296WC Cooperative Education (3) OR GBS298AC Special Projects (3)	3
MGT101 Techniques of Supervision (3) OR MGT229 Management and Leadership I (3)	3
MGT179 Utilizing the Human Resources Department (3) OR MGT276 Personnel/Human Resources Management (3)	3
MKT271 Principles of Marketing	3

Restricted Electives: None

**Small Business Entrepreneurship****Certificate of Completion - Credits 11 (5192)**

Description: The Certificate of Completion (CCL) in Small Business Entrepreneurship program prepares students to acquire the skills, tools and knowledge necessary for successful start-up and operations of a profit-making business. Emphasis is placed on evaluating potential business opportunities, developing a business plan, and practical application of small business operating principles. Students develop a foundation of business start-up strategies and practices that will enable them to prosper in the ever- changing small business environment.

## Program Notes:

+ indicates course has prerequisites and/or co requisites.

Students must earn a grade of "C" or better in all courses within the program.

Program Prerequisites: None

Required Courses: Credits	9
EPS195 Business Start-Up and Planning	2
SBS200 Small Business Operations	2
SBS202 Small Business Bookkeeping and Tax Preparation	1
SBS203 Financing and Cash Management for a Small Business	1
SBS204 Small Business Marketing & Advertising	2

SBS213 Hiring and Managing Employees	1
Restricted Electives: Credits	2
Students should select two (2) credits from any of the following courses:	
SBS211 Small Business Computer Applications	1
SBS214 Small Business Customer Relations	1
SBS215 Managing Stress in Small Business	1
+ SBS216 Planning for a Small Business	2
SBS217 Starting/Managing a Home Business	1
SBS218 Establishing an Import/Export Business	1
SBS220 Internet Marketing for Small Business	2
+ SBS298AA Special Projects	1
MGT253Owning and Operating a Small Business	3

### Small Business Start-Up

#### Certificate of Completion - Credits: 12 (5706)

Description: The Certificate of Completion (CCL) in Small Business Start-Up program is designed to meet the needs of individuals who wish to become entrepreneurs. Courses provide a background in marketing, management, finance, and a capstone course in which students complete a business plan. The goal of the Small Business Start-Up certificate is to create a foundation for prospective small business owners and contribute to the long-term success of the business community.

#### Program Notes:

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

Program Prerequisites: None

Required Courses: Credits:	12
MGT253Owning & Operating a Small Business	3
MKT271 Principles of Marketing	3
SBS213 Hiring & Management Employees	1
SBS214 Small Business Customer Relations	1
SBS220 Internet Marketing for Small Business	2
SBS230 Financial & Tax Management for Small Business	2

### Storytelling

#### Academic Certificate of Completion - Credits 30 (6200)

Description: The Academic Certificate (AC) in Storytelling is not designed to prepare students for employment in a specific occupation. This program is designed to provide students with an understanding of universal themes and basic practices, which are the foundation for storytelling. While completion of this certificate does not lead to a particular degree program, it does provide interactive storytelling training, which will enhance the skills of persons in areas such as education, library science, the arts, human relations, law, mental health, law enforcement, business, prevention programs, the ministry, and interpretive settings such as museums and parks. This program will also aid students interested in enhancing interpersonal relations skills and in using stories in family settings.

#### Program Notes:

+ indicates course has prerequisites and/or co requisites.

++ indicates any module/suffixed courses.

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

Program Prerequisites: None

Required Courses: Credits	18
STO289 courses may not be applied to both Required Courses and Restricted Electives areas.	
+STO282AC Volunteerism for Education: A Service Learning Experience	3
STO286 Using Storytelling in a Variety of Settings (3) OR	
EDU283AA/STO289AA Using Storytelling in Educational Settings (1) OR	
STO289ABUsing Storytelling in Business Settings (1) OR	

STO289AC Using Storytelling in Healing Settings (1) OR STO289AD Using Storytelling in Interpretive Settings (1)	3
STO292 The Art of Storytelling (3) OR EDU292 The Art of Storytelling (3) OR HUM292 The Art of Storytelling (3)	3
+STO293 The Art of Storytelling II	3
STO294 Multicultural Folktales (3) OR EDU294 Multicultural Folktales (3) OR ENH294 Multicultural Folktales (3)	3
+STO295 Multicultural Folktales II	3
<b>Restricted Electives: Credits</b>	<b>12</b>
ENH251 Mythology	3
EDU/ENH291 Children's Literature	3
HUM260 Intercultural Perspectives	3
MUP133Class Voice I	2
STO101 Storytelling for Literacy	1
STO200AA Biographical Storytelling	1
STO288 Telling Sacred Stories	3
EDU283AA/ STO289AA Using Story in Educational Settings	1
STO289AB Using Story in Business Settings	1
STO289AC Using Story in Healing Settings	1
STO289AD Using Story in Interpretive Settings	1
+STO291AA Storytelling Circle	1-3
+STO297 Telling Personal Stories	3
STO298++ Special Projects (*any module)	1-3
THP112 Acting I	3
THP211AB Creative Drama: Storytelling & Puppets	

### Supervision and Management I

#### Certificate of Completion - Credits: 15 (5721)

Description: The Certificate of Completion (CCL) in Supervision and Management I is designed to provide knowledge in the following areas: Computer concepts of information processing, supervision, and human relations. Students completing this program will be able to perform the supervisory and management functions of first-line supervisors. Students should have a desire to supervise employees and work in a business environment.

#### Program Notes:

+ indicates course has a prerequisite and/or co requisites

Students must earn a grade of "C" or better for all courses listed within the program

Program Prerequisites: None

<b>Required Courses: Credits</b>	<b>12</b>
CIS105 Survey of Computer Information Systems	3
MGT229Management & Leadership I	3
+MGT230 Management & Leadership II	3
MGT251 Human Relations in Business	3
<b>Restricted Electives: Credits</b>	<b>3</b>
Note: Students should select from the following courses in consultation with a departmental advisor.	
GBS151 Introduction to Business	3
MGT135 Global Procurement and Supply Management	3
MGT277 Labor Relations	3
MKT263 Advertising Principles	3
MKT267 Principles of Salesmanship	3
+MGT296WA Cooperative Education	1
+MGT296WB Cooperative Education	2

+MGT296WC Cooperative Education	3
MGT275 Office Management and Procedures	3
MGT253 Owning and Operating a Small Business	3

## **Supervision and Management II**

### **Certificate of Completion - Credits: 30-31 (5722)**

Description: The Certificate of Completion (CCL) in Supervision and Management II is designed to provide knowledge in the following areas: accounting, business communications, business organizations, and management leadership trends. Students completing this program will be able to perform supervisory functions beyond that of a first-line supervisor. Students pursuing this occupation should have a desire to supervise employees, oversee management and decisions of first line supervisors, and make supervisory decisions in a business.

#### Program Notes:

+ indicates course has a prerequisite and/or co requisites. Students must earn a grade of “C” or better for all courses listed within the program

Program Prerequisite: Credits	15
Certificate of Completion in Supervision and Management I (5721)	15
Required Courses: Credits	15-16
ACC107 Bookkeeping Theory & Practice (4) OR	
ACC111 Accounting Principles I (3)	3-4
GBS131 Business Calculations	3
+GBS233 Business Communication	3
GBS205 Legal, Ethical/Reg. Issues In Business	3
MKT271 Principles of Marketing (3) OR	
MGT276 Personnel/Human Resources Management (3)	3

## **Sustainability**

### **Academic Certificate of Completion - Credits 15-17 (6240)**

Description: The Academic Certificate (AC) in Sustainability is interdisciplinary and builds a strong academic expertise along one of four significant pillars of sustainability, where students will examine and assess how to minimize unintended consequences and enhance a mutually productive relationship between man and nature. The four pillars are organized into specialized tracks, including land use and human transformations of the earth, competition for water and other natural resources from the earth systems, political and economic treatment of the earth, and coupled human-environment interactions.

#### Program Notes:

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

+ indicates course has prerequisites and/or co requisites.

Program Prerequisites: None

Required Courses: Credits	6
SSH111 Sustainable Cities	3
SUS110 Sustainable World	3
Restricted Electives: Credits	9-12
Students must select one (1) of the following four (4) tracks:	
Track I: Earth Systems Credits:	11-12
AGS260 Origin and Composition of Soils	4
AGS261 Soil Fertility and Management	3
BIO105 Environmental Biology	4
+ BIO182 General Biology (Majors) II	4
GLG101 Introduction to Geology I-Physical Lecture (3) and	
GLG103 Introduction to Geology I-Physical Lab (1)	4

GLG110 Geological Disasters and the Environment (3) and GLG111 Geological Disasters and the Environment Lab (1)	4
GPH111 Introduction to Physical Geography + GPH211 Landform Processes	4 4
GPH213 Introduction to Climatology (3) and + GPH215 Introduction to Climatology Laboratory (1)	4
Track II: Social, Political, Economic Treatment of the Earth Credits:	9
ECN212 Microeconomic Principles	3
+ ECN263 The Economics of Natural Resources, Population and the Environment	3
ENH206 Nature and Environmental Literature	3
GCU102 Introduction to Human Geography	3
GCU141 Introduction to Economic Geography	3
+ HRM290 Ecotourism	3
PHI216 Environmental Ethics	3
POS120 World Politics	3
SBU200 Society and Business	3
SOC251 Social Problems	3
Track III: Coupled Human-Environment Systems Credits:	9-12
ASB102 Culture in Globalization World	3
ASB222 Buried Cities and Lost Tribes: Old World (3) OR ASB223 Buried Cities and Lost Tribes: New World (3)	3
ASB226 Human Impacts on Ancient Environments	3
ASM104 Bones, Stones, and Human Evolution	4
BIO105 Environmental Biology	4
BIO108 Plants and Society	4
CHM107 Chemistry and Society	3
GCU121 World Geography I: Eastern Hemisphere (3) OR GCU122 World Geography II: Western Hemisphere (3)	3
+ GPH210 Society and Environment	3
GPH267 Extreme Weather and Climate	3
Track IV: Human Transformation of the Earth Credits:	9-11
ASB100 Introduction to Global Health	3
CNS205 Sustainable Construction/LEED Certification	3
ECE111 Bioengineering Systems	3
FON135 Sustainable Cooking	3
FON143 Food and Culture	3
FON161 Sustainable Food Production Systems	3
+ INT170 Interior Materials	3
SCT100 Introduction to Sustainable Built Environments	3
SCT271AA Sustainable Design Internship (1) OR SCT271AB Sustainable Design Internship (2)	1-2
SOC180 Social Implications of Technology	3
WED124 Environmental Wellness	3

### **Sustainability/Ecological Literacy**

#### **Academic Certificate of Completion Credits 16 (6232)**

Description: The interdisciplinary Academic Certificate (AC) in Sustainability and Ecological Literacy enhances students'

understanding of sustainable living practices associated with economics, equity and the environment. Through a combination of coursework and experiential learning, students engage in critical thinking, inquiry, and discourse, skills necessary for becoming socially responsible citizens who are ecologically and environmentally aware. The certificate is designed for, although not limited to, students seeking an Associate in Arts Degree and planning transfer to four-year colleges and universities.

**Program Notes:**

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

+ indicates course has prerequisites and/or co requisites.

Program Prerequisites: Credits: 3

+ ENG101 First Year Composition (3) OR 3

+ ENG107 First Year Composition for ESL (3) 3

Required Courses: Credits 7

PHI216 Environmental Ethics 3

BIO105 Environmental Biology (4) OR

GLG110 Geological Disasters and the Environment (3) AND

GLG111 Geological Disasters and the Environment Lab (1) 4

Restricted Electives: Credits 9

Humanities, Social Science and Wellness: Credits: 9

Students will choose 2 different courses from the following list:

+ ECN263 The Economics of Natural Resources, Population and the Environment (3)

ENH206 Nature and Environmental Literature (3)

ENH260 Literature of the Southwest (3)

HUM201 Humanities: Universal Themes (3)

REC150AB Outdoor Adventure Skills (3)

SBU200 Society and Business (3) 6

Students will choose 1 course from the following list:

HIS110 World History to 1500 (3)

HIS111 World History 1500 to the Present (3)

HUM250 Ideas and Values in the Humanities (3)

PHI104 World Philosophy (3)

POS120 World Politics (3)

PSY132 Psychology and Culture (3)

SOC101 Introduction to Sociology (3) 3

**Web and Graphic Design**

**Associate in Applied Science - Credits: 61-65 (3100)**

Description: The Associate in Applied Sciences (AAS) degree in Information Technology: Web and Graphic Design is designed to enhance the information technology skills gained, focusing on the analysis, design, and programming skills necessary for entry-level computer programming support positions. A Certificate of Completion (CCL) is also available.

**Program Notes:**

+ indicates course has prerequisites and/or co requisites. Students must earn a grade of “C” or better in all courses within the program. Students should select from the following courses in consultation with a Department Advisor.

Program Prerequisites: None

Required Courses: Credits: 27

CIS105 Survey of Computer Information Systems 3

CIS120DB Computer Graphics: Adobe Illustrator 3

CIS120DC Flash: Digital Animation 3

CIS120DF Adobe Photoshop Level I: Digital Imaging 3

CIS133DA Internet/Web Development Level I 3

+CIS220DC Flash: Advanced Animation and ActionScript 3

+CIS220DF Adobe Photoshop Level II: Advanced Digital Imaging	3
+CIS233DA Internet/Web Development Level II (3) OR	
+CIS233DC Internet Web Development: Dreamweaver	3
+CIS235 e-Commerce	3
Restricted Electives: Credits:	9-11
ART100 Introduction to Computer Graphic Art	1
+CIS190 Introduction to Local Area Networks (3)	
OR	
CNT140AA Cisco Networking Fundamentals (4) OR	
MST150++ Microsoft Windows (Any MST150++ module) (3)	3-4
+CIS243D+ Internet/Web Development Level III (any	
CIS243D+ module)	3
+CIS259 Visual Basic Programming II (3) OR	
CIS262AD C#: Level II (3) OR	
+CIS263AA Java Programming: Level II (3)	3
GBS151 Introduction to Business	3
General Education Requirements: Credits:	22-27
General Education CORE: Credits:	12-17
First-Year Composition: Credits:	6
Any approved General Education course in the First-Year Composition Area	6
Oral Communication: Credits:	3
Any approved General Education course in the Oral Communication Area	3
Critical Reading: Credits:	3
Any approved General Education course in the Critical Reading Area	3
Mathematics: Credits:	3-5
MAT120 Intermediate Algebra (5) OR	
MAT121 Intermediate Algebra (4) OR	
MAT122 Intermediate Algebra (3) OR	
MAT151 Intermediate Algebra (4)	3-5
General Education Distribution Credits:	10
Humanities & Fine Arts: Credits:	3
Any approved General Education course in the Humanities and Fine Arts Area	3
Social and Behavioral Sciences: Credits:	3
Any approved General Education course in the Social and Behavioral Sciences Area	3
Natural Sciences: Credits:	4
Any approved General Education course from the Natural Sciences Area	4

### **Web and Graphic Design**

#### **Certificate of Completion - Credits 36-38 (5168)**

Description: The Certificate of Completion in Information Technology: Web and Graphic Design is designed to enhance the information technology skills gained and focuses on the analysis, design, and programming skills necessary for entry-level web development support positions. An Associate in Applied Science (AAS) is also available.

#### Program Notes:

+ indicates course has prerequisites and/or co requisites. Students must earn a grade of "C" or better in all courses within the program. Students should select from the following courses in consultation with a department advisor.

Program Prerequisites: None



Required Courses: Credits:	27
CIS105 Survey of Computer Info. Systems	3
CIS120DB Computer Graphics: Adobe Illustrator	3
+ CIS120DC Flash: Digital Animation	3
+ CIS120DF Adobe Photoshop Level I: Digital Imaging	3
CIS133DA Internet/Web Development Level I	3
+ CIS220DC Flash: Advanced Animation and ActionScript	3
+ CIS220DF Adobe Photoshop Level II: Advanced Digital Imaging	3
+ CIS233DA Internet/Web Development Level II (3) OR	
+ CIS233DC Internet Web Development: Dreamweaver	3
+ CIS235 e-Commerce	3
Restricted Electives: Credits:	9-11
ART100 Introduction to Computer Graphic Art	1
ART111 Drawing I	3
ADA/ART112 Two-Dimensional Design	3
+ ART122 Drawing and Composition II	3
ART131 Photography I (3) OR	
ART142 Introduction to Digital Photography (3)	3
CIS120AK Introduction to Digital Video Editing	1
CIS120D+ Computer Graphics (any D+ module except DB, DC and DF)	3
CIS126AL Linux Operating System I (1) OR	
CIS126DL Linux Operating System (3)	1-3
+ CIS159 Visual Basic Programming I	3
+ CIS162AD C# Level I	3
+ CIS163AA Java Programming: Level I	3
+ CIS166++ Web Scripting/Programming (any CIS166++ module)	3
+ CIS190 Introduction to Local Area Networks (3) OR	
CNT140AA Introduction to Networks (4) OR	
MST150++ Microsoft Windows (Any MST150++ module) (3)	3-4
+ CIS259 Visual Basic Programming II (3) OR	
CIS262AD C#: Level II (3) OR	
+ CIS263AA Java Programming: Level II (3)	3
GBS151 Introduction to Business	3

### Web Application Development

#### Certificate of Completion - Credits: 12 (5835) NEW

Description: The Certificate of Completion (CCL) in Web App Development program is designed to provide students with the design and programming skills necessary for entry-level positions creating web apps for multiple mobile device platforms using HTML, CSS, and JavaScript.

#### Program Notes:

Students must earn a grade of "C" or better for all courses within the program.

Students should consult with a Department Advisor / faculty member in arranging their schedules.

+ indicates course has prerequisites and/or co-requisites.

++ indicates any module/suffixed courses.

Program Prerequisites: Credits: None

Required Courses: Credits:	12
CIS120DF Adobe Photoshop Level I: Digital Imaging	3
CIS133DA Internet/Web Development Level I	3
+CIS166AA Introduction to JavaScripting	3

+CIS233D+ Internet Web Development Level II (any module) 3

### Web Design

#### Certificate of Completion Credits 18 (5159)

Description: The Certificate of Completion (CCL) in Web Design is intended for those interested in designing and maintaining web pages for personal or small business use.

#### Program Notes:

Students must earn a grade of "C" or better for all courses within the program.

+ indicates course has prerequisites and/or co-requisites.

++ indicates any module/suffixed courses.

Program Prerequisites: None

Required Courses: Credits	18
CIS120DC Adobe Flash Level I: Digital Animation	3

CIS120DF Adobe Photoshop Level I: Digital Imaging (3) OR CIS120AF Computer Graphics: Adobe Photoshop: Level I (1) AND CIS120BF Computer Graphics: Adobe Photoshop: Level II (1) AND CIS120CF Computer Graphics: Adobe Photoshop: Level III (1)	3
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CIS133DA Internet/Web Development Level I	3
+ CIS166++ Web Scripting (any module)	3
+ CIS233DA Internet/Web Development Level II	3
+ CIS235 e-Commerce	3

Editor's Note: At the time of publication CCL 5159 was pending DOE approval.





## COURSE SUBJECTS BY DIVISION

### Division of BIT, Health and Wellness, Library, and CTL (OCCCTLL)

**CHAIRPERSON:** Mark Nielsen .....(602) 243-8012

#### **SUBJECTS:**

ACC	Accounting
AJS	Administration of Justice Studies
BHS	Behavioral Health Sciences
BPC	Business/Personal Computers
CIS	Computer Information Systems
CNT	Cisco Networking Technology
CSC	Computer Science
CSR	Customer Service Representative
CWE	Career Work Experience
ECN	Economics
EPS	Entrepreneurial Studies
ESS	Employment Support Systems
EXS	Exercise Science
FIN	Financial Planning
FON	Food and Nutrition
GBS	General Business
HCC	Health Care Curriculum
HCR	Health Care Related
HES	Health Science
IFS	Information Studies
IND	Industry
ITS	Information Technology Security
MAS	Medical Assisting
MGT	Management
MKT	Marketing
MST	Microsoft Technology
MTR	Medical Transcription
PED	Physical Education
PHT	Pharmacy Technology
REA	Real Estate
REC	Recreation
SBS	Small Business Management
SCT	Sustainability/Career and Technical
SBU	Society and Business
SWU	Social Work
WED	Wellness Education

### Division of Communication, Fine Arts and Social Sciences (CFASS)

**CHAIRPERSON:** Dr. Jerome Garrison .....(602) 243-8382

#### **SUBJECTS:**

AIS	American Indian Studies
ARH	Art Humanities
ART	Art
ASB	Anthropology (Soc/Behavioral Sciences)
CFS	Child Family Studies
COM	Communication
DAH	Dance Humanities
DAN	Dance
ECH	Early Childhood Education
EDU	Education
EED	Early Education
ENH	English Humanities
HIS	History
HON	Honors

HUM	Humanities
MHL	Music: History/Literature
MTC	Music: Theory/Composition
MUC	Music: Commercial Business
MUE	Music: Education
MUP	Music: Performance
PHI	Philosophy
POS	Political Science
PSY	Psychology
REL	Religious Studies
SOC	Sociology
SSH	Sustainability –Social Sciences/Humanities
STO	Storytelling
THE	Theater
THF	Theatre and Film
THP	Theater Performance/Production
YAQ	Yaqui Indian History & Culture

### Division of Language Arts (LA)

**CHAIRPERSON:** Jim Smith .....(602) 305-5771

#### **SUBJECTS:**

ARB	Arabic
CRE	Critical Reading
CRW	Creative Writing
ENG	English
ENH	English Humanities
ESL	English as a Second Language
FRE	Frenh
GER	German
NAV	Navajo
RDG	Reading
SLG	Sign Language
SPA	Spanish
SPH	Spanish Humanities
WST	Women's Studies
YAQ	Yaqui Indian History & Culture (Language)

### Division of Math, Science, Engineering, and Counseling (MSEC)

**CHAIRPERSON:** Dr. Jacqueline Levy .....(602) 243-8086

#### **SUBJECTS:**

AAA	Advancing Academic Achievement
AGS	Agricultural Science
ASM	Anthropology (Science/Math)
AST	Astronomy
BIO	Biology
CHM	Chemistry
CPD	Counseling and Personal Development
ECE	Engineering Science
EEE	Electrical Engineering
GCU	Cultural Geography
GLG	Geology
GPH	Physical Geography
MAT	Mathematics
PHS	Physical Science
PHY	Physics
PLB	Phlebotomy
SUS	Sustainability/Natural Sciences

## OFFICIAL COURSE DESCRIPTIONS

### ADVANCING ACADEMIC ACHIEVEMENT (AAA)

AAA115 - Creating College Success

LEC 1 Credit 1 Period

Strategies to create success in college. Methods for selecting and developing effective academic strategies, increasing self-awareness and developing self-management strategies. Elements of college resources and relationships with others explored in support of students' educational experience. Prerequisites: None. Cross-References: CPD115

### ACCOUNTING (ACC)

ACC105 - Payroll, Sales and Property Taxes

LEC 3 Credits 3 Periods

Tax reporting for payroll, sales, and personal property. Prerequisites: None.

ACC 107 - Bookkeeping Theory & Practice

LEC + LAB 4 Credits 5 Periods

Fundamental accounting practices; application to retail stores, professional firms, and personal service operations. Prerequisites: None.

ACC111 - Accounting Principles I

LEC 3 Credits 3 Periods

Fundamental theory of accounting principles and procedures. Prerequisites: None.

ACC112 - Accounting Principles II

LEC 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.

ACC115 - Computerized Accounting

LEC + LAB 2 Credits 3 Periods

Mastery of a microcomputer accounting system including the general ledger, accounts receivable, accounts payable and payroll. Prerequisites: ACC107, or higher level accounting course, or permission of instructor.

ACC121 - Income Tax Preparation

LEC + LAB 3 Credits 3 Periods

Preparation of and practical experience in preparing individual federal income tax returns using computer software. Prerequisites: None.

ACC211 - Financial Accounting

■ ACC 2201

LEC 3 Credits 3 Periods

Introduction to theory and practice in the preparation and interpretation of general purpose financial statements. Prerequisites: None.

ACC212 - Managerial Accounting

■ ACC2202

LEC + LAB 3 Credits 3 Periods

Development and analysis of accounting information for managerial planning and control. Prerequisites: A grade of "C"

or better in (ACC111 and ACC112), or ACC211, and (CIS105 or permission of Department or Division).

ACC221 - Tax Accounting

LEC 3 Credits 3 Periods

Preparation of and accounting procedures for individuals; introduction to partnerships and corporate tax structures. Prerequisites: ACC111 or ACC211 or permission of Department or Division.

ACC230 - Uses of Accounting Information I

LEC 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

LEC 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: ACC 230

### AGRICULTURE (AGS)

AGS260 - Origin and Composition of Soils

LEC 4 Credits 3 Periods

LAB 0 Credit 3 Periods

Derivation, classification, and evaluation of soils; emphasizing their chemical, physical and biological properties in relation to plant growth. Prerequisites: None

AGS261 - Soil Fertility and Management

LEC 3 Credits 3 Periods

Relationship of soils, crops, and climatic factors to economic use of commercial fertilizer. Prerequisites: None

### AMERICAN INDIAN STUDIES (AIS)

AIS110 - Navajo Government

Addresses and examines major historical developments of the Navajo People with a focus on government, law, society, livelihood, tradition, and culture. Includes the major components and operation of Navajo government and related tribal laws, such as Title II and Title VII of the Navajo Nation Code, as well as the significance of the Treaty of 1868. Federal Indian policies and their impact on Navajo society and government, the importance of federal and tribal citizenship and related federal and tribal laws, and the role of the Navajo clanship system and other relevant cultural concepts addressed. Prerequisites: None General Education Designation: Cultural Diversity - [C]; General Education Designation: Historical Awareness - [H]

### ADMINISTRATION OF JUSTICE (AJS)

AJS101 - Introduction to Criminal Justice

■ AJS 1101

LEC 3 Credits 3 Periods  
An introduction to crime and society's responses to it. Examines the nature and causes of crime, the criminal law, constitutional safeguards, and the organization and operation of the criminal justice system including the police, courts, jails, prisons, probation and parole departments, and community corrections agencies. Covers the history of the criminal justice system, terminology and career opportunities. Prerequisites: None. General Education Designation: Social and Behavioral Sciences: [SB]

AJS109 – Substantive Criminal Law  
LEC 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

AJS113 - Criminal Justice Crime Control Policies and Practices  
LEC 3 Credits 3 Periods  
Focus on changing the distribution of crime opportunities rather than offender motivation. Topics include application of situational crime prevention strategies, problem-oriented crime control approaches, hot spots policing, defensible space, and crime prevention through defensible space. Prerequisites: None.

AJS123 - Ethics and the Administration of Justice  
LEC 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

AJS201 - Rules of Evidence  
LEC 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.

AJS210 - Constitutional Law  
LEC 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.

AJS212 - Juvenile Justice Procedures  
LEC 3 Credits 3 Periods

Examines the history and development of juvenile justice theories, procedures, and institutions. Prerequisites: None.

AJS225 - Criminology  
LEC 3 Credits 3 Periods  
Study of deviance, society's role in defining behavior; 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 crime and categories of offenders. Required in the AJS program.

AJS270 - Community Relations  
LEC 3 Credits 3 Periods  
Examination, recognition and understanding of community problems; community action programs; methods of coping with human behavior, victimology, conflict and communication; ethnic and minority cultures and environments; the community and relationships with the criminal justice system. Prerequisites: None. General Education Designation: Social and Behavioral Sciences – General Education Designation: Humanities and Fine Arts - [SB]

### ART HUMANITIES (ARH)

ARH100 - Introduction to Art  
LEC 3 Credits 3 Periods  
Understanding and enjoyment of art through study of painting, sculpture, architecture design, photography, and decorative arts. Emphasis on contemporary topics and cultural diversity in the arts. Prerequisites: None. General Education Designation – Humanities and Fine Arts -[HU]

ARH101 - Prehistoric through Gothic Art  
ART1101  
LEC 3 Credits 3 Periods  
History of art from prehistoric through medieval Period. Prerequisites: None. General Education Designation: Historical Awareness - [H]; Humanities and Fine Arts – [HU]

ARH102 - Renaissance Through Contemporary Art  
ART1102  
LEC 3 Credits 3 Periods  
History of art from around the world from the Renaissance through contemporary period. Prerequisites: None. General Education Designation: Historical Awareness - [H]; Humanities and Fine Arts – [HU]

### ART (ART)

ART100 - Introduction to Computer Graphic Art  
LEC 1 Credit 2 Periods  
Conceptualization, visualization, and production of art using the computer. Prerequisites: None.

ART111 - Drawing I  
ART1111  
LEC + LAB 3 Credits 6 Periods  
Fundamental principles of drawing. Emphasis on composition and facility in objective and expressive representation, using variety of drawing media. Prerequisites: None.

ART112 - Two-Dimensional Design

ART 1112

LEC + LAB 3 Credits 6 Periods

Study of fundamental elements and principles of two dimensional design. Prerequisites: None.

ART113 – Color

LEC + LAB 3 Credits 6 Periods

Investigation seeking visual solutions to a variety of problems concerning color in two and three dimensions and modes of color appearances, including light and effects in design and theory of design.

ART122 - Drawing and Composition II

LEC + LAB 3 Credits 6 Periods

Emphasis on composition and exploration of drawing media. Prerequisites: ART111.

ART131 - Photography I

LEC + LAB 3 Credits 6 Periods

Basic photographic principles and techniques. Basic camera functions and controls. Experience in the image-making process by creating and editing photographs for various display environments. Introduction to the photographic aesthetic and photography's role in society. Prerequisites: None. Course Notes: Camera required.

ART132 - Photography II

LEC + LAB 3 Credits 6 Periods

Advanced camera and darkroom techniques. Aesthetic awareness with personal expression. Prerequisites: ART131 or permission of instructor.

ART142 - Introduction to Digital Photography

LEC + LAB 3 Credits 6 Periods

Fundamentals of digital photography. Includes camera operations, exposure techniques, introduction to digital output, and theory of digital photography. Prerequisites: None.

ART143 - Intermediate Digital Photography

LEC + LAB 3 Credits 6 Periods

Intermediate theory and techniques of digital photography. Aesthetic awareness and personal expression from image capture through intermediate techniques in the digital darkroom. Introduction to high-resolution digital output. Prerequisites: ART142 or permission of instructor. Course Note: Semi-adjustable, high-resolution digital camera is required.

ART161 - Ceramics I

LEC + LAB 3 Credits 6 Periods

Introduction to ceramic materials and techniques of hand construction, decorating, glazing and throwing on potter's wheel. Prerequisites: None.

ART162 - Ceramics II

LEC + LAB 3 Credits 6 Periods

Major emphasis on wheel throwing, glaze making and decorating techniques. Prerequisites: ART161.

ART211 - Drawing and Composition III

LEC + LAB 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

LEC + LAB 3 Credits 6 Periods

Further study of drawing techniques with emphasis on individual problems and techniques. Prerequisites: ART211 or permission of instructor.

ART255AB - The Portfolio

LEC 1 Credit(s) 1 Period

Choosing the right pieces to include, presenting art work, developing the portfolio. Prerequisites: ART182, or ART/MMT185, or ART255AA, or permission of instructor.

ART261 - Ceramics III

LEC + LAB 3 Credits 6 Periods

Emphasis on wheel throwing skill and individual style development. Prerequisites: ART162.

ART262 - Ceramics IV

LEC + LAB 3 Credits 6 Periods

Experimental work in clays and glazes. Prerequisites:ART261.

ART298AA - Special Projects

LAB 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.

**ANTHROPOLOGY (ASB)**

ASB211 – Women in Other Cultures

LEC 3 Credits 3 Periods

Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies. Prerequisites: None General Education Designation: Global Awareness - [G]; General Education Designation: Humanities and Fine Arts - [HU]; General Education Designation: Social and Behavioral Sciences - [SB]

**ASTRONOMY (AST)**

AST101 – Survey of Astronomy

LEC 3 Credits 3 Periods

Survey of astronomy for the nontechnical student. The history, content, and evolution of the solar system and the universe in general. Astronomical principles and instrumentation.



The planets, moons, sun, comets, stars and star formation, galaxies, and cosmology. Prerequisites: None  
General Education Designation: Natural Sciences (General) - [SG] in combination with: AST102

AST102 – Survey of Astronomy Laboratory  
LEC 1 Credit 3 Periods

Astronomical observations and exercises designed to familiarize students with the sky, telescopes, and methods used in astronomy. Prerequisites: None. May accompany AST101. General Education Designation: Natural Sciences (General) [SG] in combination with AST101

### **BEHAVIORAL HEALTH SERVICES TECHNOLOGY (BHS)**

BHS101 - Introduction to Ethical Counseling Issues  
LEC 3 Credits 3 Periods

Explanation of expectations and limitations of the role of the behavioral health professional on a counseling team. Exposure to the variety of modes of work available to the behavioral health professional, the ethical obligations and responsibilities of working with clients under professional supervision. Prerequisites: None.

BHS105 - Introduction to Human Relations  
LEC 2 Credits 2 Periods

Introduction to the field of Behavioral Health Professionals including exposure to basic counseling skills. Prerequisites: None.

BHS115 - Group Dynamics  
LEC 3 Credits 3 Periods

Participation in group processes with focus on group dynamics. Exploration of group developmental stages and various counseling approaches and techniques. Prerequisites: None.

BHS130 – Addictions and Substance Use Disorders  
LEC 3 Credits 3 Periods

Sociological, psychological and physiological aspects of addictive behaviors and chemical abuse. Consideration of a variety of treatment programs offered in community agencies. Prerequisites: None. Cross-References: SWU130

BHS151 - Communication Skills in Counseling I  
LEC 3 Credits 3 Periods

Development of communication skills important in establishing and maintaining effective helping relationships. Emphasis on rapport building, effective listening skills, appropriate feedback and the helping process. Prerequisites: BHS105 with a grade of “C” or better.

BHS156 - Supervised Practice I  
LEC + LAB 3 Credits 15 Periods

Familiarization with social service agencies through conducting intake interviews, observing agency practices, and attending staff meetings. Prerequisites: BHS115, BHS130, and BHS151, and departmental approval.

BHS168 - Hospice Volunteer Training  
LEC 2 Credits 2 Periods

Exploration of hospice care and related medical, social, emotional and spiritual concepts for the helping professional working with patients and their families. Prerequisites: None

BHS178 - Peer Training for Behavioral Health Paraprofessionals  
LEC 3 Credits 3 Periods

Role exploration and expectations of the behavioral health paraprofessional. Confidentiality, communication, attending skills and developing rapport with persons with psychiatric illnesses. Workplace responsibilities, ethics, and boundaries. Mental health recovery, psychosocial rehabilitation and best practices in the treatment of psychiatric disorders. Client management and interventions to include crises intervention, coordination of care, and psychopharmacology, and clinical documentation. Prerequisites: None

BHS204 - Counseling in Multicultural Setting  
LEC 3 Credits 3 Periods

Values, perceptions, attitudes, behaviors emphasizing intercultural communication patterns. Techniques for establishing rapport and interaction methodologies in a multicultural context. Competencies, strategies, and treatment modalities necessary for the paraprofessional working successfully with the multicultural clients. Prerequisites: BHS101, BHS151, or departmental approval.

BHS205 – Therapeutic Intervention Models  
LEC 3 Credits 3 Periods

Familiarization with at least five models of therapeutic intervention. Defines the key concepts, therapeutic process, techniques and procedures of each model. Prerequisites: ASD102 BHS105 or permission of Department or Division.

BHS215 - Group Process  
LEC 3 Credits 3 Periods

Evaluate and demonstrate the methods and techniques for influencing change in group settings. Prerequisites: BHS151 or departmental approval.

BHS260 - Case Report Writing  
LEC 1 Credit 1 Period

Terminology, technical forms and techniques of observation necessary to create and maintain records. Prerequisites: BHS151 or departmental approval.

BHS263 - Applied Case Report Writing  
LEC 1 Credit 1 Period

Application of observation and documentation techniques necessary to maintain clinical records in a variety of community based behavioral health settings. Application of legal issues to case report writing. Prerequisites: BHS260

BHS264 – Understanding Trauma  
LEC 3 Credits 3 Periods

Introduction to trauma in children and adults and its impact on human development, mental health, personality, and overall

wellness. Overview of major screening tools for assessing and the major treatment modalities available for treating trauma. Prerequisites: (Grade of C or better in RDG091 or eligibility for CRE101 as indicated by appropriate reading placement test score) and (grade of C or better in ENG091 or eligibility for ENG101 as indicated by appropriate writing placement test score).

**BHS265 - Violence & Abuse Matters**

LEC 2 Credits 2 Periods

Exploration of topics relative to the development of helping professionals involved with perpetrators and individuals directly affected by traumatic or continuous physical or emotional violence and abuse. Prerequisites: None.

**BHS266 - Violence & Abuse Counseling**

LEC 3 Credits 3 Periods

Techniques, strategies, and treatment modalities necessary for the helping professional working with the victims and perpetrators of violence and abuse. Prerequisites: BHS105 or department approval. Co-requisite: BHS265

**BHS267 - Introduction to Play Therapy**

LEC 3 Credits 3 Periods

Exploration and application of therapeutic play techniques and strategies for the helping professional working with children. Prerequisites: (BHS105 and BHS151) or department approval.

**BHS268 - Grief and Bereavement Issues**

LEC 2 Credits 2 Periods

Exploration of topics related to the development of helping professionals involved with loss, bereavement, and grief work. Prerequisites: None.

**BHS269 - Grief Counseling Techniques**

LEC 3 Credits 3 Periods

Techniques, strategies, and treatment modalities necessary for the helping professional working with the bereaved and others affected by traumatic loss. Prerequisites: BHS168 or BHS268 or permission of department.

**BHS270 - Introduction to Dance and Movement Therapy**

LEC 3 Credits 3 Periods

A lively course focused on basic techniques used in expressive arts and body-based therapies. The course incorporates Tools for integrating body, mind, and spirit in a creative dance and movement format. Prerequisites: PSY101 and BHS105.

**BHS272 - Managing Difficult Children**

LEC 3 Credits 3 Periods

Strategies for training and reinforcing positive interaction with children. Covers behavior management strategies and techniques for oppositional, defiant and explosive children. Prerequisite: PSY240 or permission of Department or Division.

**BHS278 - Recovery Coaching**

LEC 3 Credits 3 Periods

Recovery based mental health treatment plans and

processes. Recovery based concepts, barriers, principles, practices, and environments. Organizational support, expectations, and activities related to mental health issues and recovery in the work setting. Planning techniques, learning styles, participation methods, and problem behavior due to mental health issues in the workplace. Prerequisites: BHS105

**BHS281 - Introduction to Art Therapy**

LEC 3 Credits 3 Periods

Exploration of the process, dynamics and objectives of the therapeutic art experience. Emphasis on Art Therapy from both the psychological and artistic perspectives. Highlights topics in the history, theory and practice of Art Therapy. Prerequisites: BHS105 or departmental approval.

**BHS285 - Facilitating Art Therapy Groups**

LEC 3 Credits 3 Periods

Emphasis on facilitating art therapy groups in a variety of settings using visual art as a medium. Process, dynamics, and objectives of group work and the therapeutic art process. Prerequisites: BHS215 and BHS281

**BHS290 - Child and Family Advocacy**

LEC 3 Credits 3 Periods

Define and clarify the role of advocacy in relation to multiple systems affecting children and their families. Emphasis on identifying appropriate systems, community resources, wrap around theory and navigation skills in a variety of children's systems to facilitate family support and needs. Prerequisite: BHS105

**BIOLOGY (BIO)**

**BIO100 - Biology Concepts**

LEC 4 Credits 3 Periods

LAB 0 Credits 3 Periods

Introductory course covering basic principles and concepts of biology. Methods of scientific inquiry and behavior of matter and energy in biological systems are explored. Prerequisites: None. Course Notes: Field trips may be required at students' expense. General Education Designation: Natural Sciences (Quantitative) - [SQ]

**BIO101 - Introduction to Human Genetics for Non-Majors**

LEC 4 Credits 3 Periods

LAB 0 Credits 3 Periods

Study of inheritance in humans, at the organismal, cellular and molecular levels. Includes exploration of gene expression, isolation and manipulation of DNA, Mendelian genetics, pedigree analysis, as well as chromosomal abnormalities and genetic diseases. Prerequisites: None. General Education Designation: Natural Sciences (Quantitative) [SQ]

**BIO105 - Environmental Biology**

LEC 4 Credits 3 Periods

LAB 0 Credit 3 Periods

Fundamentals of ecology and their relevance to human impact on natural ecosystems. Field trips may be required at

students' expense. Prerequisites: None. General Education Designation: Natural Sciences (Quantitative) - [SQ]

#### BIO106 - Biotechnology & Society I

LEC 4 Credits 3 Periods

Introduction to biotechnology and its impact on society. Covers applications, limitations, benefits, risks, and legal and moral issues associated with biotechnology. 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. General Education Designation: Natural Sciences (Quantitative) - [SQ]

#### 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. General Education Designation: Natural Sciences (General) - [SG]

#### BIO156 - Introductory Biology for Allied Health

LEC 4 Credits 3 Periods

LAB 0 Credit 3 Periods

An introductory biology course for allied health majors with an emphasis on humans. Topics include fundamental concepts of cell biology, histology, microbiology, and genetics. Prerequisites: Grade of "C" or better in RDG091 or higher or eligibility for CRE101 as indicated by appropriate reading placement test score. One year high school or one semester of college-level chemistry is strongly recommended. General Education Designation: Natural Sciences (Quantitative) - [SQ]

#### BIO160 - Introduction to Human Anatomy and Physiology

LEC 4 Credits 3 Periods

LAB 0 Credit 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. General Education Designation: Natural Sciences (General) - [SG]

#### BIO174 – Biosafety

LEC 1 Credits 1 Period

General laboratory safety, hazardous chemical use and disposal, biohazardous material use and disposal, biosafety procedures, and radiation safety. Prerequisites: None Cross-references: ABS174

#### BIO175 - Research Methods in Biology

LEC & LAB 1 Credit(s) 2 Periods

Fundamentals of planning and conducting biological experiments, including ones that simultaneously vary multiple experimental variables. Subsequent analysis, interpretation, and reporting of results. Prerequisites: None. BIO156 or BIO181 recommended.

#### BIO181 - General Biology (Majors) I

##### ■ BIO1181

LEC 4 Credits 3 Periods

LAB 0 Credit 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: Grade of "C" or better in RDG091 or higher or eligibility for CRE101 as indicated by appropriate reading placement test score. One year of high school or one semester of college-level biology and chemistry is strongly recommended. General Education Designation: Natural Sciences (Quantitative) - [SQ]

#### BIO182 - General Biology (Majors)

##### ■ BIO1182

LEC 4 Credits 3 Periods

LAB 0 Credit 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. General Education Designation: Natural Sciences (Quantitative) - [SG]

#### BIO201 - Human Anatomy and Physiology I

##### ■ BIO2201

LEC 4 Credits 3 Periods

LAB 0 Credit 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: (A grade of "C" or better in BIO156 or BIO156XT or one year of high school biology) and a grade of "C" or better in better in RDG091 or higher or eligibility for CRE101 as indicated by reading placement test score. CHM130 or higher or one year of high school chemistry suggested but not required. General Education Designation: Natural Sciences (General) - [SG]

#### BIO202 - Human Anatomy and Physiology II

##### ■ BIO2202

LEC 4 Credits 3 Periods

LAB 0 Credit 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. General Education Designation: Natural Sciences (General) - [SG]

#### BIO205 - Microbiology

## ■ BIO2205

LEC 4 Credits 3 Periods

LAB 0 Credit 3 Periods

Study of microorganisms and their relationship to health, ecology, and related fields. Prerequisites: (A grade of "C" or better in BIO156 or BIO156XT or BIO181 or BIO181XT or one year of high school biology) and a grade of "C" or better in RDG091 or higher or eligibility for CRE101 as indicated by reading placement test score. CHM130 or higher or one year of high school chemistry suggested but not required. General Education Designation: Natural Sciences (General) - [SG]

## BIO211AA - Biotechnology Seminar – Biomedical Applications

LEC 1 Credit 1 Period

Special topics in biotechnology with an emphasis on current issues not covered in other life science courses. Prerequisites: None Course Notes: BIO211AA may be repeated for a total of two (2) credit hours

## BIO211AD - Biotechnology Seminar - Ethical and Moral Issues

LEC 1 Credit 1 Period

Special topics in biotechnology with an emphasis on current issues not covered in other life science courses. Prerequisites: BIO211AC or permission of instructor.

## BIO215 - Biotechnology Internship

LEC 3 Credits 3 Periods

Internship experience in a biotechnology laboratory. Setting, achieving, and evaluating goals for hands-on learning experience in a biotechnology laboratory. Development of skills and knowledge needed to work in a biotechnology laboratory. Prerequisites: (BIO208 or BIO209 or BIO212AA or BIO212BA or BIO213 completed within the last year) and permission of Program Director. Course Notes: BIO215 requires 240 clock hours in the laboratory setting. BIO 215 may be repeated for a total of six (6) credit hours.

## BIO298AC - Special Projects

LEC + LAB 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.

## **BUSINESS-PERSONAL COMPUTERS (BPC)**

### BPC100 - Business-Personal Computers

LEC 2 Credits 2 Periods

Introduction to the use of personal computers in the business environment. Computer hardware components, operating system functions and concepts. Procedures for running and using business application software to produce documents and spreadsheets. Prerequisites: None.

### BPC104AD - Using Excel: Level I

LEC .5 Credits .5 Periods

Use of Excel to create, edit, save and print worksheets.

Prerequisites: None.

### BPC104BD - Using Excel: Level II

LEC .5 Credits .5 Periods

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.

### BPC110 - Computer Usage and Applications

LEC + LAB 3 Credits 4

Periods 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. General Education Designation: Computer/Statistics/Quantitative Applications - [CS]

### BPC111AA - Computer Keyboarding I

LEC + LAB 1 Credit 1.7 Periods

Mastery of essential microcomputer keyboarding skills. Emphasis on touch typing of alphabetic and numeric keys and symbols. Prerequisites: None. Cross-References: OAS111AA

### BPC128 - Introduction to Desktop Publishing

LEC + LAB 1 Credit 2 Periods

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.

### BPC130DK - Beginning Word

LEC 1 Credit 2 Periods

Using Word for Windows to create, edit, and print documents. Prerequisites: Ability to keyboard a minimum of 20 wpm or permission of instructor. Cross-Reference: OAS130DK

### BPC170 - Computer Maintenance: A+ Exam Prep Level I

LEC + LAB 3 Credits 4 Periods

Explore technical aspects of personal computers, including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis placed on proper usage of tools, safety procedures, and professionalism. Helps prepare students for the CompTIA A+ examinations. Prerequisites: CIS105 or permission of Instructor.

### BPC270 - Computer Maintenance: A+ Exam Prep Level II

LEC + LAB 3 Credits 4 Periods

Explore advanced technical aspects of maintaining and servicing computers. Emphasis placed on installation, maintenance, mobile devices, security, troubleshooting, and resolving various computer problems. Helps prepare students

for the CompTIA A+ examinations. Prerequisites: BPC170 with grade of C or better, or permission of Instructor.

### **CHILD/FAMILY STUDIES (CFS)**

CFS101AR – Learning With Toys

LEC 1 Credit 1 Period

Use of creative imagination with toys to enable the child alone or with others to explore the world. Includes evaluating proper use of toys and appropriate developmental skills.

Prerequisites: None

CFS116 - Discipline and Guidance

LEC 3 Credits 3 Periods

Age appropriate principles for disciplining and guiding young children's behavior in child care settings, including interpersonal and environmental strategies. Observational opportunities provided. Prerequisites: None.

CFS157 - Marriage and Family Life

LEC 3 Credits 3 Periods

Study of marriage and the family as a social system, including models of family analysis, intra- and interpersonal relations, and cross-cultural and historical patterns. Prerequisites: None.

CFS163 – Family Child Care: Introduction to Business Management

LEC 3 Credits 3 Periods

Emphasis on small business management and effective policies and procedures for family child care providers. Licensing, legal, and regulatory issues in a home setting are examined. Prerequisites: None.

CFS164 – Family Child Care: Curriculum and Environment

LEC 3 Credits 3 Periods

Family child care planning for multi-age groupings of children through age eight. Role of the environment as well as various curriculum programs will be explored and evaluated. Exploration of culturally rich, inclusive and child-centered environment in his/her own child care setting. Issues of professionalism, family partnerships, observation, guidance, and health/safety practices are examined. Prerequisites: None

CFS176 - Child Development

LEC 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-Reference: ECH176 General Education Designation: Social and Behavioral Sciences - [SB]

CFS178 - Survey of Early Childhood Education

LEC 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.

CFS179 – Child Care: A Multifaceted Career

LEC 1 Credits 1 Periods

Overview of the child care field. Focus on enhancing children's self esteem, providing for children's nutritional needs, and developing adequate safety and sanitation practices.

Prerequisites: None

CFS194AB - Early Childhood Program Management: Human Relations

LEC 1 Credit 1 Period

Basic human relations in early childhood organizations and the influence of the individual's personal needs on the overall needs and objectives of the organization. Prerequisites: None.

CFS206 - Child and Family Organizations: Management and Administration

LEC 3 Credits 3 Periods

Examination of management and administration of community- based child and family organizations within the context of organizational behaviors. Focus on attributes of effective organizations: the impact of organizational culture and learning, work-place diversity and employee motivation. Prerequisites: None.

CFS207 - Organization and Community Leadership in Child and Family Organizations

LEC 3 Credits 3 Periods

Examination of organization and community leadership as it applies to the management and administration of community-based child and family services organizations. Provides overview of leadership styles and function. Prerequisites: None.

CFS208 - Child and Family Organizations: Fiscal Management and Grant Writing

LEC 3 Credits 3 Periods

Examination of fiscal accountability and resource development as it applies to the management and administration of community-based child and family social service organizations. Provides overview of grant development processes beginning with research into governmental and private funding sources through fiscal and grant audit processes. Includes budget development, risk management, and cost control issues. Prerequisites: None.

CFS212 - Creative Activities for the Young Child

LEC 3 Credits 3 Periods

Children's development in play, creativity and the arts. Focus on learning environment for creative expression. Field experiences with children in groups required. Prerequisites: CFS/ECH176 or permission of instructor.

CFS235 - Developing Child: Theory into Practice, Prenatal - Age 8

LEC 3 Credits 3 Periods

Understanding and working with young children, birth through age 8. Analysis of young children's physical, social, emotional, cognitive and linguistic development within their

home, school, and cultural contexts. Typical and atypical development. Implications for teachers and parents. Emphasis on observations and planning curriculum based on theories, research, and child-specific data. Prerequisites: None. General Education Designation: Social and Behavioral Sciences - [SB]

CFS242 - Curriculum Planning for Diversity  
LEC 3 Credits 3 Periods  
Practical early childhood classroom applications for a diverse population, including integration of cultures, generations, genders, and races into the classroom, facilitation of second language acquisition, and practical teaching strategies which are also developmentally appropriate. Prerequisites: CFS/ECH176. General Education Designation: Cultural Diversity - [C]

CFS269 - Child Care Seminar  
LEC 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. Cross-References: ECH269

CFS271 - Arranging the Environment  
LEC 1 Credits 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. Cross-References: ECH271

CFS273 - Math for the Young Child  
LEC 1 Credits 1 Period  
Methods and techniques for encouraging the beginnings of mathematical/logical thought with young children. Focus upon the theory of Jean Piaget. Prerequisites: None. Cross-References: ECH273

CFS275 - Literacy Development and the Young Child  
LEC 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. Cross-References: ECH275

CFS278 - Early Childhood Education  
LEC 3 Credits 3 Periods  
Early childhood education with emphasis on philosophy and curriculum in the preschool years. Observation and participation in school programs required. Prerequisites: CFS176 ECH176, or permission of instructor.

CFS282 - Mainstreaming the Young Child with a Disability  
LEC 1 Credit 1 Period  
An exploration of the educational, social, and behavioral issues and concerns involved in the successful integration of children with disabilities into typical preschool classes. Includes discussion of practical concerns such as adaptation

of environment and accessing existing resources in the community. Prerequisites: None.

CFS283 - Multicultural Early Child Education  
LEC 1 Credit 1 Period  
Practical early childhood classroom applications for a diverse ethnic population, including integration of multi-cultures into the classroom, facilitation of second language acquisition, and practical teaching strategies which are also developmentally appropriate. Prerequisites: CFS/ECH176.

CFS284AA - Early Childhood Teaching Internship  
LEC + LAB 2 Credits 2 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 or Division. Co-requisites: CFS/ECH269. Cross-References: ECH284AA

CFS285AA - Family School Interaction: Preschool  
LEC 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: CFS/ECH176 or CFS278 or permission of instructor.

CFS290AA - Child Abuse: Identification and Reporting in Child Care Settings  
LEC 1 Credit 1 Period  
Identification, recording, and reporting by child care providers of sexual abuse, physical abuse, or neglect of young children. Prerequisites: None.

CFS296WA-WC - Cooperative Education  
LAB 1-3 Credit 5-15 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.

## **CHEMISTRY (CHM)**

CHM107 - Chemistry and Society  
LEC 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. [CHM107 and CHM107LL must be taken as block to meet AGEC value] General Education Designation: Natural Sciences (Quantitative) - [SQ]

CHM107LL - Chemistry and Society Laboratory

LAB 1 Credit 3 Periods  
Laboratory experience in support of CHM107. Prerequisites or Co-requisites: CHM107. General Education Designation: Natural Sciences (Quantitative) - [SQ]

CHM130 - Fundamental Chemistry

■ CHM1130

LEC 3 Credits 3 Periods  
A survey of the fundamentals of general chemistry. Emphasis on essential concepts and problem solving techniques. Basic principles of measurement, chemical bonding, structure and reactions, nomenclature, and the chemistry of acids and bases. Preparation for students taking more advanced courses in chemistry. Designed to meet needs of students in such diverse areas as agriculture, nursing, home economics, physical education and water technology. Prerequisites: Grade of "C" or better in [CHM090 or MAT090 or MAT091 or MAT092, or (MAT092AA and MAT092AB) or MAT093, or (MAT103AA and MAT103AB), or higher or satisfactory score on math placement exam] and [RDG091 or higher or eligibility for CRE101 as indicated by appropriate reading placement test score]. General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with CHM130LL

CHM130LL - Fundamental Chemistry Laboratory

■ CHM1130

LAB 1 Credit 3 Periods  
Laboratory experience in support of CHM 130. Prerequisites or Co-requisites: A grade of "C" or better in CHM130. General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with CHM130

CHM151 - General Chemistry I

■ CHM1151

LEC 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 years), and completion of intermediate algebra or equivalent. Completion of all prerequisites within the last two years is recommended. Course Note: Students may receive credit for only one of the following: CHM150 or CHM151. [CHM151 and CHM151LL must be taken as block to meet AGEC value] General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with CHM151LL

CHM151LL - General Chemistry I Laboratory

■ CHM1151

LAB 1 Credit 3 Periods  
Laboratory experience in support of CHM 151. Prerequisites: CHM 130LL, or permission of instructor. Prerequisites or Co requisites: CHM150 or CHM151. General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with CHM150 or CHM151

CHM152 - General Chemistry II

■ CHM1152

LEC 3 Credits 3 Periods

A study of the chemical properties of the major groups of elements, equilibrium theory, thermodynamics, electrochemistry, and other selected topics. Prerequisites: A grade of "C" or better in [(CHM150 or CHM151), or CHM150AA, or CHM151LL. Completion of prerequisites within the last two years recommended. Course Notes: Completion of CHM152LL required to meet the Natural Science requirement. Student may receive credit for only one of the following: CHM152 and CHM152LL, or CHM152AA.

General Education Designation: Natural Sciences (Quantitative) - [SQ] Arizona Shared Unique Number SUN# CHM1152

CHM152LL - General Chemistry II Laboratory

CHM1152

LAB 1 Credit 3 Periods  
Laboratory experience in support of CHM 152. Prerequisites or Corequisites: A grade of "C" or better in CHM 152. Course Notes: Student may receive credit for only one of the following: CHM152 and CHM152LL, or CHM152AA. General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with CHM152. Arizona Shared Unique Number SUN# CHM1152

CHM154 - General Chemistry II with Qualitative Analysis

LEC 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. Course Notes: Completion of CHM154LL required to meet the Natural Science requirement. Prerequisites: A grade of "C" or better in [(CHM150 or CHM151) and CHM151LL] or CHM150AA. Completion of prerequisites within the last two years recommended. General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM154LL

CHM154LL - General Chemistry II with Qualitative Laboratory

LAB 2 Credits 6 Periods  
Laboratory experience in support of CHM 154. Includes quantitative analysis. Prerequisites or Corequisites: A grade of "C" or better in CHM154. General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM154

CHM220 - Analytical Chemistry

LEC 3 Credits 3 Periods

Principles and methods of chemical analysis. Prerequisites: CHM152 and CHM152LL, or CHM154 and CHM154LL.

CHM220LL - Analytical Chemistry Laboratory

LAB 2 Credits 6 Periods  
Laboratory experience in support of CHM220. Prerequisites: CHM152LL, or CHM154LL, or equivalent. Prerequisites or Corequisites: CHM220.

CHM230 - Fundamental Organic Chemistry

■ CHM2230

LEC 3 Credits 3 Periods

Chemistry of representative groups of organic compounds, emphasizing biological applications. Prerequisites: (CHM130 and CHM130LL), or (CHM150 or CHM151 and CHM151LL). Completion of (CHM130 and CHM130LL) or (CHM150 or CHM151 and CHM151LL) within the last two years recommended. Course Note: CHM230 course content is designed to meet the needs of students in such areas as agriculture, home economics, nursing, pre-physician assistant, and physical education among others. General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM230LL

CHM230LL - Fundamental Organic Chemistry Laboratory  
■ CHM2230

LAB 1 Credit 3 Periods  
Laboratory experience in support of CHM230. Prerequisites: CHM130LL, or CHM151LL, or equivalent. Prerequisites: CHM130LL or CHM151LL or equivalent or Corequisites: CHM230. General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM230 Arizona Shared Unique Number SUN# 2230

CHM235 - General Organic Chemistry I

■ CHM2235

LEC 3 Credits 3 Periods  
Rigorous introduction to chemistry of carbon-containing compounds. Reaction mechanisms and recent methods of synthesis emphasized. Prerequisites: A grade of "C" or better in (CHM152 and CHM152LL), or (CHM154 and CHM154LL). Completion of prerequisites within the last two years recommended. Arizona Shared Unique Number SUN# 2235

CHM235LL - General Organic Chemistry I Laboratory  
CHM2235

LAB 1 Credit 4 Periods  
Laboratory experience in support of CHM235. Prerequisites or Co-requisites: A grade of "C" or better in CHM235. Completion of prerequisites within the last two years recommended. Arizona Shared Unique Number SUN# 2235

CHM236 - General Organic Chemistry IIA

■ CHM2236

LEC 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: A grade of "C" or better in CHM235 and CHM235LL. Completion of prerequisites within the last two years recommended. Arizona Shared Unique Number SUN# 2236

CHM236LL - General Organic Chemistry IIA Laboratory

■ CHM2236

LAB 1 Credit 4 Periods  
Laboratory experience in support of CHM236. Prerequisites: A grade of "C" or better in CHM236. Completion of prerequisites within the last years recommended. Arizona Shared Unique Number SUN# 2236

CHM238 - General Organic Chemistry IIB

LEC 3 Credits 3 Periods

Alternate to CHM236. Study of chemistry of carbon containing compounds continued. Structural determination and additional reaction mechanisms and modern methods of synthesis emphasized. Recommended for chemistry, chemical engineering and mining engineering majors. Prerequisites: CHM235 and CHM235LL.

CHM238LL - General Organic Chemistry IIB Laboratory

LAB 2 Credits 6 Periods

Laboratory experience in support of CHM238. Prerequisites: CHM235LL or equivalent. Prerequisites or Corequisites: CHM238.

CHM260 - Fundamental Biochemistry

LEC 3 Credits 3 Periods

Structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates and lipids; the utilization and synthesis of these materials by living systems and the relationship of the processes to energy production and utilization. Designed for students in agriculture, dental hygiene, home economics, nursing, and physical therapy. Prerequisites: A grade of "C" or better in (CHM230 and CHM230LL), or (CHM235 and CHM235LL). Completion of prerequisites within the last two years recommended.

CHM260LL - Fundamental Biochemistry Laboratory

LAB 1 Credit 3 Periods

Laboratory experience in support of CHM260. Prerequisites: A grade of "C" or better in CHM230. Completion of prerequisites within last two years recommended.

## COMPUTER INFORMATION SYSTEMS (CIS)

CIS105 - Survey of Computer Information Systems

■ CIS1120

LEC + LAB 3 Credits 4 Periods

Overview of computer technology, concepts, terminology, and the role of computers in business and society. Discussion of social and ethical issues related to computers. Use of word processing, spreadsheet, database, and presentation software. Includes uses of application software and the Internet for efficient and effective problem solving. Exploration of relevant emerging technologies. Prerequisites: None. General Education Designation: Computer/Statistics/Quantitative Applications - [CS]

CIS113DE - Microsoft Word: Word Processing

LEC 3 Credits 4 Periods

Using word processing software to create, name and manage files, edit text, format, apply themes and styles, create and modify tables, apply desktop publishing features, and print a variety of types of documents.

Prerequisites: None.

CIS114AE - Excel: Level I

LEC + LAB 1 Credits 2 Periods



Computer spreadsheet skills for solving business problems using Excel, including calculations, forecasting, and projections. Prerequisites: None.

CIS114DE - Excel Spreadsheet

LEC + LAB 3 Credits 5 Periods

Computer spreadsheet skills for solving business problems using Excel, including calculations, forecasting, projections, macro programming, database searching, extraction, linking, statistics, and matrix manipulation. Production of graphs and reports. Project design using multiple, integrated spreadsheets. Prerequisites: None.

CIS117AM - Database Management: Microsoft Access – Level I

LEC + LAB 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

CIS117BM - Database Management: Microsoft Access – Level II

LEC + LAB 1 Credit 2 Periods

Exploration of additional components of the Microsoft Access database management program. Prerequisites: CIS117AM or permission of Instructor.

CIS117CM - Database Management: Microsoft Access – Level III

LEC + LAB 1 Credit 1 Periods

Application of the features of the Microsoft Access program to some common database management problems. Prerequisites: CIS117BM.

CIS117DM - Microsoft Access: Database Management

LEC + LAB 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.

CIS118AB - Powerpoint Level I

LEC + LAB 1 Credits 2 Periods

Use of PowerPoint software to produce professional-quality presentation visuals. Prerequisites: None.

CIS118DB - Desktop Presentation: PowerPoint

LEC + LAB 3 Credits 5 Periods

Use of PowerPoint to produce professional-quality presentation visuals with animation and sound. Prerequisites: None.

CIS119DO – Introduction to Oracle: SQL

LEC + LAB 3 Credit 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.

CIS120AF - Computer Graphics: Adobe Photoshop: Level I  
LEC + LAB 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.

CIS120AJ - Introduction to Digital Photo Editing

LEC + LAB 1 Credit 2 Periods

Introduction to digital photography and image editing. Digital photo editing use of electronic techniques to select, manipulate, and edit images. Prerequisites: None.

CIS120AK - Introduction to Digital Video Editing

LEC + LAB 1 Credit 2 Periods

Introduction to digital video editing provides basic video import, export, and editing functions. Prerequisites: None.

CIS120BF – Computer Graphics: Adobe Photoshop: Level II

LEC + LAB 1 Credit 1 Period

Provides students with the capability to use Adobe Photoshop graphics software on a computer. Includes working with masks, channels and layers, and combining raster and vector graphics. Prerequisites: CIS120AF

CIS120CF – Computer Graphics: Adobe Photoshop: Level III

LEC + LAB 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: CIS120BF

CIS120DA – Introduction to Digital Video Editing: Adobe Premiere

LEC + LAB 3 Credit 4 Periods

Foundations of video import, export, and editing. Includes parts and function of a video camera, preproduction and production, incorporating photographs, titles, graphics, animation and audio, capturing, editing, rendering and outputting digital video. Helps students prepare for the Adobe Certifications related to Adobe Premiere. Prerequisites: None

CIS120DB - Computer Graphics: Adobe Illustrator

LEC + LAB 3 Credit 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.

CIS120DC – Adobe Flash Level I: Digital Animation

LEC + LAB 3 Credits 4 Periods

Provides students with the ability to use Flash graphics software on microcomputers. Covers basic animation

techniques used in the creation, manipulation, and editing of Flash animation graphics. Prerequisites: None.

CIS120DF - Adobe Photoshop Level I: Digital Imaging  
LEC + LAB 3 Credit 4 Periods  
Focuses on entry-level skill expectations for digital imaging using Adobe Photoshop. Helps students prepare for the Adobe Certifications related to Photoshop. Prerequisites: None.

CIS120DG – Fireworks: Web Graphics  
LEC + LAB 3 Credit 4 Periods  
Use of graphics software to create and edit vector and bitmap (raster) graphics. Creation and manipulation of paths and special effects. Covers slices, buttons, pop-up menus, navigation bars, and animations for use in web sites. Prerequisites: None.

CIS120DH - Microsoft Graphics: Microsoft Visio  
LEC + LAB 3 Credits 4 Periods  
Use of graphics software to create and edit drawings with predefined shapes and templates. Addition and manipulation of images, stencils, layers, and pages to drawings. Creation of new shapes, stencils, templates, styles, and colors. Publishing and exportation of drawings. Prerequisites: None.

CIS120DK – Introduction to Digital Video Editing  
LEC + LAB 3 Credits 4 Periods  
Introduction to digital video editing comprises of a foundation for video import, export, and editing functions. Includes parts and function of a video camera, preproduction and production, incorporating photographs, titles, graphics, animation and audio, capturing, editing, rendering and outputting digital video. Prerequisites: None.

CIS120DL - Digital Video Compositing: After Effects  
LEC + LAB 3 Credits 4 Periods  
Includes creating visual effects for video projects. Techniques and methodologies used to create shots for big budget special effects will be explored. Topics such as color and light matching, keying, motion tracking, rotoscoping and working with film will be discussed. Prerequisites: None.

CIS120DO – Adobe Audition: Audio Editing  
LEC + LAB 3 Credits 4 Periods  
Introduction to editing audio files in a multitrack editing environment using Adobe Audition. Includes the import of files in a variety of formats that were generated using other software and how to export files. Prerequisites: None

CIS120DP – Adobe Acrobat Pro: Portable Document Format (PDF) Files  
LEC + LAB 3 Credits 4 Periods  
Introduction to creating PDF (Portable Document Format) files using Adobe Acrobat for web viewing and printing. Addresses creation of interactive PDF documents including security settings, navigation links, and form fields. Prerequisites: None.

CIS121AB - Microsoft Command Line Operations  
LEC + LAB 1 Credit 2 Periods  
Use of the Microsoft command line interface: basic concepts, internal and external commands, subdirectories, and editor. Prerequisites: None.

CIS121AE - Windows Operating System: Level I  
LEC + LAB 1 Credit 2 Periods  
Specific topics include Windows basics, navigating and customizing the desktop, maintaining hardware and software, improving performance, configurations, securing your computer, taskbar, organizing, searching and managing folders and files, installing and uninstalling applications, Internet Explorer fine tuning, security, and searching, including advanced search techniques, keyboard shortcuts, and current topics. Prerequisites: None.

CIS121AH – Microsoft PowerShell/Command Line Operations  
Day-to-day command line administration tasks of Microsoft Windows. PowerShell used to create scripts to administer Microsoft windows environment. Prerequisites: None. MST150 suggested but not required.

CIS121AI – Mac Operating System  
Specific topics include getting started with Mac OS; working with disks, folders, and files; installing and using applications; setting system preferences; printing, faxing, and scanning; getting and living online; using iLife; sharing a Mac with other users; creating a home network; and maintaining the Mac. Prerequisites: None.

CIS122AB–OS/400 Operating System  
LEC + LAB 1 Credit 2 Periods  
The use of the OS/400 operating system on the AS/400 computer; basic concepts, commands, file organization and management, and task management Prerequisites: None.

CIS126AA - UNIX Operating System: Level I  
LEC + LAB 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  
LEC + LAB 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  
LEC 1 Credit 1 Period  
Installation, configuration, and maintenance of the UNIX operating system Prerequisites: CIS126AA.

CIS126BL – Linux Operating System II  
LEC + LAB 1 Credit 1 Period  
Introduction to the Linux Operating system. Develop

knowledge and skills required to configure a Linux-based workstation including basic printing functions. Learn basic command line and Graphical User Interface (GUI) desktop environment utilities and applications. Prerequisites: CIS126AL or permission of Instructor.

#### CIS126CA - UNIX Operating System: Level III

LEC 1 Credit 1 Period

Create login scripts and batch files, and maintain system communications. Prerequisites: CIS126BA.

#### CIS126CL – Linux Operating System III

LEC 1 Credit 1 Period

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

LEC + LAB 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

LEC + LAB 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.

#### CIS131AA - Doing Business on the Internet

LEC 1 Credit 1 Period

Overview of different ways businesses are taking advantage of and using the Internet. Includes how companies are selling items and services over the Internet; techniques used to expand customer contacts; marketing strategies; availability of government and financial information; future potential and disadvantages; using the Internet for customer service; establishing a World Wide Web site. Some previous computer experience preferred. Prerequisites: None.

#### CIS132 – HTMS/CSS

LEC + LAB 3 Credits 4 Periods

Overview of foundational HyperText Markup Language (HTML) and Cascading Style Sheets (CSS) coding. Create web pages and sites that adhere to web standards and best practices using current web coding standards. Prerequisites: None

#### CIS133AA - Internet/World Wide Web: Level I-A

LEC + LAB 1 Credit 2 Periods

Overview of the Internet and its resources. Hands-on experience with various Internet communication tools. Prerequisites: None.

#### CIS133BA – Internet/Web Development Level I-B

LEC + LAB 1 Credit 1 Period

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: CIS133AA

#### CIS133CA – Internet/Web Development Level I-C

LEC + LAB 1 Credit 1 Periods

Web site development using enhancement codes. Includes frames, style sheets and javascript as well as design principles and typography. Prerequisites: CIS133BA

#### CIS133DA - Internet/Web Development Level I

LEC + LAB 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.

#### CIS136 – Content Management Systems: WordPress

Overview of WordPress Content Management System. Includes hands-on design and creation of web pages and blogs for the World Wide Web. Designed to cover best practices for web site/blog creation. Prerequisites: None.

#### CIS138DA - Desktop Design and Publishing Using Adobe InDesign

LEC + LAB 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.

#### CIS150 - Programming Fundamentals

LEC + LAB 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

LEC + LAB 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.

#### CIS159 - Visual Basic Programming I

LEC + LAB 3 Credits 4 Periods

Use of the Visual Basic programming language to solve problems using suitable examples from business or other

disciplines. Prerequisites: CIS105 or permission of instructor.

#### CIS162 - C Programming I

LEC + LAB 3 Credits 4 Periods

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.

#### CIS162AB - C++: Level I

LEC + LAB 3 Credits 4 Periods

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. General Education Designation: Computer/Statistics/Quantitative Applications - [CS]

#### CIS162AD - C#: Level I

LEC + LAB 3 Credits 4 Periods

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. General Education Designation: Computer/Statistics/Quantitative Applications - [CS]

#### CIS163AA - JAVA Programming: Level I

LEC + LAB 3 Credit 4 Period

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. General Education Designation: Computer/Statistics/Quantitative Applications - [CS]

#### CIS165 - Introduction to IOS Application Development

LEC + LAB 3 Credits 4 Periods

Introduction to iOS device programming utilizing the XCode application, and the programming languages ObjectiveC and/or Swift, utilizing various iOS frameworks. Understand iOS hardware and feature basics. Go through entire design process from concept to final product delivery. Prerequisites: CIS150++, or CIS159, or CIS162++, or CIS163AA, or permission of Instructor.

#### CIS165DA - Android Mobile Device Programming

LEC + LAB 3 Credits 4 Periods

Beginning with an overview of Android features, this class explores the required software tools and programming techniques for developing Android device applications from creating the user interface, working with activities, intents and views, to using databases, providing data persistence, accessing device features and services, to debugging and publishing applications. Prerequisites: CIS163AA, or permission of Instructor.

#### CIS165DB - C#/VB.NET: Windows 8 App Development

LEC + LAB 3 Credits 4 Periods

Building upon desktop application development with Visual Studio using VB.NET or C# languages, developing apps for Windows 8 utilizes Extensible Application Markup Language (XAML) for interface design. Windows 8 utilizes UI design standards that are unique from previous versions. Develop apps for Windows 8 smartphones and tablets that utilize touch input methods, translate into different resolutions, states, and orientations, and can tap into mobile features such as location and acceleration sensors. Includes working with external data and packaging for Windows Store distribution. Prerequisites: CIS159 or CIS162AD or permission of Instructor.

#### CIS166 - Web Scripting/Programming

LEC + LAB 3 Credits 4 Periods

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.

#### CIS166AA - Introduction to Java Scripting

LEC + LAB 3 Credits 4 Periods

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.

#### CIS169 - Introduction to Visual Basic for Applications

LEC + LAB 3 Credits 4 Periods

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.

#### CIS181 - IBM Mainframe Z OS - Level I

LEC + LAB 3 Credits 4 Periods

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.

#### CIS190 - Introduction to Local Area Networks

LEC + LAB 3 Credits 4 Periods

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.

CIS191 - Novell NetWare System Administration  
LEC + LAB 3 Credits 4 Periods  
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.

CIS191 - Advanced Microsoft Word: Word Processing  
LEC 3 Credits 4 Periods  
Using advanced word processing software features to perform tasks such as mail merge, collaboration, web pages, math functions, macros, photo enhancements, graphics, tables, forms and manage long documents.  
Prerequisites: CIS113DE or (CIS113AE and CIS113BE and CIS113CE) or permission of Instructor.

CIS197 – VMware ESXI Server Enterprise  
LEC + LAB 3 Credits 4 Periods  
Introduction to vSphere and VMware ESXI 5.5 server in the enterprise. Covers many aspects of virtualization for VMware ESXI server administration. Designed to develop knowledge and skills required to install, configure and troubleshoot a VMware ESXI Server (vSphere) including basic network functions. Provides basic command line and vCenter (formerly Management User Interface (MUI)) using VMware vSphere Client. Prerequisites: (CIS126DL or MST150 (any module)) and (CIS190 or MST140 or CNT140) or permission of Instructor.

CIS213DE - Advanced Excel Spreadsheet: Level II  
LEC + LAB 3 Credits 5 Periods  
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.

CIS214DE - Advanced Excel Spreadsheet: Level II  
LEC + LAB 3 Credits 5 Periods  
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.

CIS217AM - Advanced Microsoft Access: Database Management  
LEC + LAB 3 Credits 4 Periods  
Basic 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: (CIS117DM or CIS117CM).

CIS220DC - Flash: Advanced Animation and ActionScript

LEC + LAB 3 Credits 4 Periods  
Advanced Flash programming, action scripting, tweening, advanced buttons and user input, movie clips, using dynamic sound and text, managing information flow, Object-Oriented Programming concepts in relation to Flash. Prerequisites: CIS120DC or permission of Instructor.

CIS220DF – Adobe Photoshop Level II: Advanced Digital Imaging  
LEC 3 Credits 4 Periods  
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: (CIS120AF, CIS120BF and CIS120CF) or CIS120DF, or permission of instructor.

CIS224 – Project Management Microsoft Project for Windows  
LEC + LAB 3 Credits 4 Periods  
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 cc Mail. Prerequisites: None.

CIS225 - Business Systems Analysis and Design  
LEC + LAB 3 Credits 4 Periods  
Investigation, analysis, design, implementation and evaluation of business computer systems. Prerequisites: Any programming language or permission of instructor.

CIS225AB - Object-Oriented Analysis and Design  
LEC + LAB 3 Credits 4 Periods  
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.

CIS226AL Internet/Intranet Server Administration-Linux  
LEC + LAB 3 Credits 4 Periods  
Configuration and management of internet/intranet services, including the Apache web server, Simple Mail Transfer Protocol servers (SMTP), Structured Query Language (SQL server), File Transfer Protocol (FTP), Network Time Protocol (NTP), and other network services used in home and small business environments. Covers basic security configuration and testing. Prerequisites: CIS126 (any module) or permission of Instructor.

CIS233DA - Internet/Web Development Level II  
LEC + LAB 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: CIS133CA or CIS133DA or permission of instructor.

CIS233DC - Internet Web Development: Dreamweaver  
LEC + LAB 3 Credits 4 Periods  
Design and development of comprehensive and interactive websites using Dreamweaver. Hands-on experience designing, developing, testing, and publishing web documents that contain various client-side web technologies. Assists in preparing students for the Adobe Certifications related to Adobe Dreamweaver.  
Prerequisites: CIS132, or CIS133CA, or CIS133DA, or permission of Instructor.

CIS235 - e-Commerce  
LEC + LAB 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.

CIS236 - Web-Based Teaching and Learning I  
LEC + LAB 2 Credits 3 Periods  
Experience using a web-based learning environment from an online student's perspective. Use communication tools, submit assignments, use evaluation tools, create homepages, and navigate online-learning environment. Introduction to basics of online pedagogy. Hands-on experience with a web-based learning environment. Prerequisites: CIS133CA or CIS133DA, or permission of instructor.

CIS238 - Advanced UNIX System Administration  
LEC + LAB 3 Credits 4 Periods  
System administration tasks using one or more versions of UNIX. Topics include: installing the operation system, configuring peripherals, security, monitoring system performance, networking, and troubleshooting.  
Prerequisites: CIS126DA, or permission of instructor.

CIS238DL - Linux System Administration  
LEC+ LAB 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

CIS239DL - Linux Shell Scripting  
LEC + LAB 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  
LEC + LAB 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 permission of Instructor.

CIS241DL – Apache Web Server Administration (Linux/Unix)  
LEC + LAB 3 Credits 4 Periods  
Knowledge and skills to install configure and securely manage a 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: CIS226AA or CIS226AL or CIS238DL or permission of Instructor

CIS243 - Internet/Web Development Level III  
LEC + LAB 3 Credits 4 Periods  
Development of interactive websites with graphics, video, and sound using advanced web design techniques and tools. Design theory for maximizing web readership, interactive and multimedia elements, speed and accessibility optimization, and intuitive user interfaces. Prerequisites: CIS233DA or permission of instructor.

CIS240DL – Linux Network Administration  
LEC + LAB 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)  
LEC + LAB 3 Credits 4 Periods  
Knowledge and skills to install configure and securely manage a 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: CIS226AA, or CIS226AL, or CIS238DL, or permission of instructor.

### CIS250 - Management of Information Systems

LEC 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.

### CIS259 - Visual Basic Programming II

LEC 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.

### CIS262AB - C++ : Level II

LEC + LAB 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: CIS162AB or permission of instructor.

### CIS262AD - C# Level II

LEC + LAB 3 Credits 4 Periods

Advanced C# programming with emphasis on data structures, dynamic memory allocation, object-oriented programming, user interfaces, and database processing. Overview of web applications, network programming, and reporting tools. Prerequisites: CIS162AD, or permission of instructor.

### CIS263AA - Java Programming: Level II

LEC + LAB 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.

### CIS270 - Essentials of Network and Information Security

LEC + LAB 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.

### CIS271DL – Linux Security

LEC + LAB 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

### CIS276DA – MySQL Database

LEC + LAB 3 Credits 4 Periods

A broad overview of the MySQL database. Includes Structured Query Language (SQL) instruction for data definition, data manipulation, and data retrieval. Develops knowledge and skills required to install MySQL, model and create new databases, manage users, authentication, and stored procedures, and develop backup/restore strategies. Prerequisites: CIS105 or permission of Instructor.

### CIS276DB – SQL Server Database

LEC + LAB 3 Credits 4 Periods

A broad overview of the Microsoft Structured Query Language (SQL) Server database. Includes SQL instruction for data definition, data manipulation, and data retrieval. Develops knowledge and skills required to install SQL Server, model and create new databases, manage users, authentication, and stored procedures, and develop backup/restore strategies. Prerequisites: CIS105 or permission of Instructor.

### CIS296WA-WD - Cooperative Education

LAB 1 Credits 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: None. Co-requisites: must be concurrently enrolled in at least one class related to job/co-op subject area; must maintain an enrollment ratio of two (2) hours of Credit in other courses for every one (1) hour of Cooperative Education Credit (excluding radio and television); a maximum of sixteen (16) hours of Cooperative Education Credit is allowable in a college program.

### CIS298 AA-AC - Special Projects

LAB 1-3 Credits 1-3 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: None.

### **CISCO NETWORKING TECHNOLOGY (CNT)**

CNT138 - CCNA Discovery - Networking for Home and Small Businesses

LEC + LAB 3 Credit(s) 5 Period(s)

Introduces skills for entry-level home network installer jobs including personal computer (PC) installation, Internet connectivity, wireless connectivity, file and print sharing, and the installation of peripherals. Provides introduction to networking and the Internet using tools and hardware from home and small business environments.

Prerequisites: None.

CNT140 - Cisco Networking Basics

LEC + LAB 4 Credit 6 Periods

Introduction to the computer networking field. Covers network terminology and protocols, local area networks (LAN), and wide area networks (WAN). Includes Open Systems Interconnection (OSI) models, cabling and cabling tools, routers, router programming, Ethernet, Internet Protocol (IP) addressing, and network standards. Preparation for the Cisco Certified Network Associate examination. Prerequisites: None.

CNT140AA – Introduction to Networks

LEC + LAB 4 Credits 6 Periods

Introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced. Students will build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. Preparation for Cisco certification examination. Prerequisites: None.

CNT148 - CCNA Discovery - Working at a Small-to-Medium Business or Internet Service Provider

LEC + LAB 3 Credits 5 Periods

Prepares students as network technicians. Develops skills for computer and help desk technicians including soft skills. Provides overview of routing, remote access, addressing, and security. Provides familiarity with e-mail, web, and authenticated access servers. Presents network monitoring and basic troubleshooting skills in context.

Prerequisites: CNT138.

CNT150 - Cisco Networking Router Technologies

LEC + LAB 4 Credits 6 Periods

Knowledge of skills to install, configure, customize, maintain and troubleshoot Cisco routers and components. Preparation for Cisco certification examination. Prerequisites: CNT140 or permission of instructor.

CNT150AA - Cisco Routing and Switching Essentials

LEC + LAB 4 Credits 6 Periods

Architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. Configuration and troubleshooting routers and switches and resolving common issues with RIPv1, RIPng, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks. Preparation for Cisco certification examination. Prerequisites: CNT140AA or permission of Instructor.

CNT158 - CCNA Discovery - Introduction to Routing and Switching in the Enterprise

LEC + LAB 4 Credits 6 Periods

Familiarizes students with the equipment, applications and protocols installed in enterprise networks, with a focus on switched networks, Internet Protocol (IP) Telephony requirements, and security. Introduces advanced routing protocols such as Enhanced Interior Gateway Routing Protocol (EIGRP) and Open Shortest Path First (OSPF) Protocol. Hands-on exercises include configuration, installation, and troubleshooting. Prerequisites: CNT148.

CNT160 - Cisco Switching Basics and Intermediate Routing

LEC+ LAB 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.

CNT160AA – Scaling Networks

LEC + LAB 4 Credits 6 Periods

Architecture, components, and operations of routers and switches in large and complex networks. Configuring routers and switches for advanced functionality. Configuring and troubleshooting routers and switches and resolving common issues with OSPF, EIGRP, and STP in both IPv4 and IPv6 networks. Developing the knowledge and skills needed to implement a WLAN in a small-to-medium network. Preparation for Cisco certification examination. Prerequisites: CNT150AA or permission of Instructor.

CNT168 - CCNA Discovery - Designing and Supporting Computer Networks

LEC + LAB 4 Credits 6 Periods

Networking design and customer support including gathering requirements, designing basic networks, establishing proof-of-concept, and performing project management tasks. Lifecycle services, including upgrades, competitive analyses, and system integration, in the context of pre-sale support. Prerequisites: CNT158.

CNT170 - Cisco Wide Area Networks (WAN) Technologies

LEC + LAB 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.

CNT170AA - Cisco – Connecting Networks  
LEC + LAB 4 Credits 6 Periods

Wide Area Network (WAN) technologies and network services required by converged applications in a complex network. Criteria selection of network devices and WAN technologies to meet network requirements. Configuring and troubleshooting network devices, and resolving common issues with data link protocols issues, and developing the knowledge and skills needed to implement Internet Protocol Security (IPSec) and Virtual Private Network (VPN) operations. Preparation for Cisco certification examination. Prerequisites: CNT160AA or permission of Instructor.

CNT171 - CCNA Exam Prep  
LEC + LAB 1 Credits 2 Periods

Preparation for renewal of CCNA certification by reviewing the OSI model and industry standards including network topologies, IP addressing, subnet masks, access control list, basic network design and cable installation. Practice the skills to configure, customize, maintain and troubleshoot Cisco routers and switches for Local Areas Networks (LANs) and Wide Area Networks (WANs) using Cisco IOS command set. Review any new material introduced since the last CCNA exam version. Prerequisites: CNT170 or CNT170AA or CCNA certification or permission of instructor. Course Note: CNT171 can be offered on credit (P) No credit (Z) basis. Standard grading available according to procedures outlined in college catalog.

CNT175 - Cisco Certified Network Associate Security  
LEC + LAB 0 Credit 6 Periods

Associate-level knowledge and skills required to secure Cisco networks. Development of a security infrastructure, identification of threats and vulnerabilities to networks. Mitigation of security threats. Core security technologies. Installation, troubleshooting and monitoring of network devices to maintain integrity, confidentiality and availability of data and devices. Competency in the technologies that Cisco uses in its security structure. Prerequisites: CNT170 or CNT170AA or Certified Cisco Networking Associate (CCNA) certification or permission of Instructor.

CNT181 - Cisco Securing IOS Networks  
LEC + LAB 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, secure router installation, configuration, and maintenance, AAA (Authentication, Authorization, and Accounting), and VPN (Virtual Private Network) implementation using routers. Preparation for the Securing Cisco IOS Networks (SECUR) exam, which applies toward the Cisco Certified Security Professional (CCSP), Virtual Private Network (VPN) Specialist,

Intrusion Detection System (IDS) Specialist and the Firewall Specialist certifications. Prerequisites: CNT170 or permission of instructor.

CNT185 - Cisco Network Security  
LEC + LAB 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.

CNT200 - CCNP ROUTE: Implementing Cisco IP Routing  
LEC + LAB 4 Credits 6 Periods

Development of knowledge and skills needed to manage Internet Protocol (IP) traffic and access, understand scalable internetworks configure advanced routing protocols Border Gateway Protocol [BGP], Enhanced Interior Gateway Routing Protocol [EIGRP], Open Shortest Path First [OSPF], as well as Internet Protocol (IPv6), and configuration of secure routing solutions to support branch offices and mobile workers. Comprehensive labs emphasize hands-on learning and practice to reinforce configuration skills. Prerequisites: CNT170 or CCNA industry certification, or permission of Instructor. Corequisites: CNT220 Course Notes: Preparation for Cisco Certified Network Professional (CCNP) exam.

CNT202 - Cisco Secure Firewall Appliance Configuration  
LEC + LAB 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, secure firewall design, installation, configuration and maintenance, Authentication, Authorization, and Accounting (AAA), Failover, and Virtual Private Network (VPN) implementation using firewalls. Prerequisites: CNT170AA or permission of Instructor.

CNT205 - Cisco Certified Network Associate Security  
LEC + LAB 4 Credits 6 Periods

Associate-level knowledge and skills required to secure Cisco networks. Development of a security infrastructure, identification of threats and vulnerabilities to networks. Mitigation of security threats. Core security technologies. Installation, troubleshooting and monitoring of network devices to maintain integrity, confidentiality and availability of data and devices. Competency in the technologies that Cisco uses in its security structure. Prerequisites: CNT170

or CNT170AA or Certified Cisco Networking Associate (CCNA) certification or permission of Instructor.

**CNT206 - Cisco Certified Network Associate Wireless**  
LEC + LAB      4 Credits      6 Periods  
Associate-level knowledge and skills required in Cisco wireless networks. Includes comprehensive hands-on labs to design, plan, implement, operate, secure, and troubleshoot wireless networks. Prerequisites: CNT170, or CNT170AA, or permission of Instructor. Course Notes: Prepares students to earn Cisco Certified Network Associate Wireless (CCNA Wireless) designation by taking the Implementing Cisco Unified Wireless Networks Essentials (IUWNE) exam.

**CNT208 – Cisco Certified Network Associate Voice**  
LEC + LAB      4 Credits      6 Periods  
Introduction to IP telephony for Medium and Small Organizations networks. Covers Packet Voice Technologies, Configuring Voice Interfaces, Voice Dial Peers, VoIP Signaling, Cisco Unified Communications Manager Express (CUCME), Cisco Unity Express (CUE) and Call Control. Includes data and voice integration solutions at the network-access level. Prerequisites: CNT170 or CNT170AA, or CCNA Certification, or permission of Instructor. Course Notes: CNT208 may be repeated for a total of Twelve (12) credit hours.

**CNT220 - CCNP SWITCH: Implementing Cisco IP Switching**  
LEC + LAB      4 Credits      6 Periods  
Development of knowledge and skills in building, monitoring, and maintaining switching in converged enterprise networks using advanced and multi-layer switching technologies. Planning, configuring, securing and verifying the implementation of complex enterprise switching solutions. Hands-on learning and practice to reinforce configuration skills. Prerequisites: CNT170AA or CCNA industry certification, or permission of Instructor. Corequisites: CNT200. Course Notes: Preparation for Cisco Certified Network Professional (CCNP) exam.

**CNT231 - CCNP TSHOOT: Maintaining and Troubleshooting Cisco IP Networks**  
LEC + LAB      4 Credits      6 Periods  
Development of knowledge and skills in monitoring and maintaining complex enterprise routed and switched Internet Protocol (IP) networks. Skills learned include the planning and execution of regular network maintenance, as well as support and troubleshooting using technology-based processes and best practices, in a systematic approach. Extensive labs emphasize hands-on learning and practice to reinforce configuration skills. Prerequisites: (CNT200 and CNT220), or permission of Instructor. Course Notes: Preparation for Cisco Certified Network Professional (CCNP) exam.

**CNT242 - Cisco Quality of Service**  
LEC + LAB      4 Credits      5 Periods  
IP QoS theory, design issues, and configuration of various QoS mechanisms. IP Quality of Service (QoS) requirements, conceptual models using Differentiated Services (DiffServ) Integrated Services (IntServ) and Best Effort. Implementation

of IP QoS on Cisco IOS switch and router platforms. Prerequisites: CNT170 or permission of instructor

**CNT248 - Cisco IP Telephony Troubleshooting**  
LEC + LAB      4 Credits      5 Periods  
Knowledge of skills to install, configure, monitor and troubleshoot Cisco voice gateways and gatekeepers in an Enterprise network. Prerequisites: CNT244 or permission of instructor.

## **COMMUNICATION (COM)**

COM100 - Introduction to Human Communication

■ COM1100  
LEC                      3 Credits                      3 Periods  
Theory and practice of communication in public, small group, and interpersonal settings. Includes study of the speech communication process. Prerequisites: None. General Education Designation: Social and Behavioral Sciences - [SB]

COM100AA - Introduction to Human Communication Part I  
LEC                      1 Credits                      1 Period  
Theory and practice of communication skills in public, small group, and interpersonal settings. Includes study of the speech communication process. Prerequisites: None.

COM100AB - Introduction to Human Communication Part II  
LEC                      1 Credit                      1 Period  
Theory and practice of communication skills in public, small group, and interpersonal settings. Includes study of the speech communication process. Prerequisites: None.

COM100AC - Introduction to Human Communication Part III  
LEC                      1 Credits                      1 Period  
Theory and practice of communication skills in public, small group, and interpersonal settings. Includes study of the speech communication process. Prerequisites: None.

COM110 - Interpersonal Communication

■ COM1110  
LEC                      3 Credits                      3 Periods  
Theory and practice of communication skills which affect day-to-day interactions with other persons. Topics may include using verbal and nonverbal symbols, interactive listening, resolving interpersonal conflict, developing and maintaining personal and professional relationships. Prerequisites: None. General Education Designation: Social and Behavioral Sciences - [SB] Arizona Shared Unique Number SUN# COM 1110

COM181 - Conflict Mediation

LEC                      3 Credits                      3 Periods  
Develop communication skills necessary to conduct mediation in formal and informal settings. Applies principles and theories of message production and responding, listening, questioning, source and receiver factors, and emotion to conflict management communication. Emphasis on respecting diversity and empowering joint problem solving throughout. Prerequisites: None. Cross-Reference Course:

MCM181

COM207 - Introduction to Communication Inquiry

LEC 3 Credits 3 Periods

Overview of theory and methodological practice in communication with particular attention to scholarly writing skills. Emphasis on development of critical thinking skills through active participation in the research process. Prerequisites: ENG101 or ENG107 or equivalent, and COM100 or equivalent, or permission of instructor. Course Note: Recommended for the communication major.

COM225 - Public Speaking

LEC 3 Credits 3 Periods

Designed to enhance the student's ability to present public speeches confidently and competently. Also designed to improve information literacy and critical thinking skills. Prerequisites: ENG101 or ENG107, or equivalent. General Education Designation: Literacy and Critical Inquiry - [L]

COM230 - Small Group Communication

COM2271

LEC 3 Credits 3 Periods

Principles and processes of small groups and development of skills for participation and leadership in small group settings. Practice in problem solving, decision making, and information sharing. Prerequisites: None. General Education Designation: Social and Behavioral Sciences - [SB] Arizona Shared Unique Number SUN# COM 2271

COM263 - Elements of Intercultural Communication

LEC 3 Credits 3 Periods

Basic concepts, principles, and skills for improving oral communication between persons from different minority, racial, ethnic, and cultural backgrounds. Prerequisites: None. General Education Designation: Cultural Diversity - [C]; Global Awareness [G]; Social and Behavioral Sciences - [SB]

COM271 - Voice and Diction

LEC 3 Credits 3 Periods

Exercises and techniques to free the voice and improve projection, resonance, and articulation. Covers international phonetic alphabet and standard stage speech. Prerequisites: None. Cross-References: THP271

### **CAREER PERSONAL DEVELOPMENT (CPD)**

CPD125 - Employee Development: Problem Solving/Decision Making

LEC 1 Credit 1 Period

Development of decision-making skills as well as techniques for problem solving. Focus on values and value conflicts as related to decision-making. Also includes establishing short and long-term goals for personal and career development. Prerequisites: None.

CPD150 - Strategies for College Success

LEC 3 Credits 3 Periods

Focus on increasing student success through college orientation and personal growth, study skills development, and educational and career planning. Prerequisites: None. Cross-Reference: AAA150

### **CRITICAL READING (CRE)**

CRE101 - College Critical Reading

LEC 3 Credits 3 Periods

Apply critical inquiry skills to varied and challenging reading materials. Includes analysis, synthesis, and evaluation through at least two substantial writing and/or speaking tasks. Prerequisites: (A grade of "C" or better in ENG101 or ENG107) and (appropriate reading placement test score or a grade of "C" or better in RDG091 or RDG095 or RDG100 or RDG111 or RDG112 or RDG113 or permission of Instructor). General Education Designation: Literacy and Critical Inquiry - [L]

CRE111 - Critical Reading for Business and Industry

LEC 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.

### **CREATIVE WRITING (CRW)**

CRW150 - Introduction to Creative Writing

LEC 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.

### **COMPUTER SCIENCE (CSC)**

CSC100 - Introduction to Computer Science (C++)

LEC + LAB 3 Credits 3 Periods

Concepts of problem solving, structured programming in C++, fundamental algorithms and techniques, and computer system concepts. Social and ethical responsibilities. Intended for majors other than Computer Science. Prerequisites: MAT120, or MAT121, or MAT122. General Education Designation: Computer/Statistics/Quantitative Applications - [CS]

CSC100AB - Introduction to Computer Science (C++)

LEC + LAB 4 Credits 4 Periods

Concepts of problem solving, structured programming in C++, fundamental algorithms and techniques, and computer system concepts. Social and ethical responsibilities. Intended for majors other than Computer Science. Prerequisites: MAT120 or MAT121 or MAT122.

CSC110 - Introduction to Computer Science - Java

LEC + LAB 3 Credits 3 Periods  
Concepts of problem solving, structured and object-oriented programming in Java, fundamental algorithms and techniques and computer system concepts. Social and ethical responsibilities. Intended for Computer Science and Computer Systems Engineering Majors. Prerequisites: MAT120 or MAT121 or MAT122. General Education Designation: Computer/Statistics/Quantitative Applications - [CS]

CSC205 – Object Oriented Programming and Data Structures  
LEC + LAB 3 Credits 3 Periods  
Covers Object-Oriented design and programming; elementary data structures; arrays; lists; stacks; queues; binary trees; recursion; searching and sorting algorithms. Prerequisites: CSC110, or permission of Instructor.

#### **CUSTOMER SERVICE REPRESENTATIVE (CSR)**

CSR139 - Introduction to Retail Pharmacy Customer Care  
LEC 3 Credits 3 Periods  
Introduction to the retail pharmacy program. Includes customer care responsibilities, confidentiality, and eligibility status in addition to various types of member inquiries. Also covers quality assurance and Federal and State laws governing controlled substances. Prerequisites: None

CSR156 – Retail Pharmacy Procedures  
LEC + LAB 2 Credits 4 Periods  
Practical application of retail pharmacy customer care procedures. Includes procedures for accessing accounts, responding to eligibility issues, and completing customer requests. Also covers billing and payment procedures as well as the provision of non-technical web support. Prerequisites: CSR139.

CSR160 – Pharmacy Practice for the Customer Service Representative  
LEC 1 Credit 1 Period  
Orientation to customer service responsibilities in pharmacy practice. Includes educational and licensure requirements as well as basic functions of the pharmacy and the customer service representative. Prerequisites: Permission of Department or Division.

CSR162 – Pharmacy Operations for the Customer Service Representative  
LEC 3 Credits 3 Periods  
Customer service responsibilities in pharmacy operations. Includes procedures for prescription dispensing and drug distribution in the retail setting. Inventory control, packaging and storage, in addition to computer usage and third party operations.  
Prerequisites: CSR160

CSR280AB –Customer Service Internship  
LEC + LAB 2 Credits 2 Periods  
Customer service experience in business or industry. Eighty hours of designated work per credit. Prerequisites: Permission of Department or Division. Course Notes: Maximum of eight

credits allowed.

#### **CAREER/WORK EXPERIENCE (CWE)**

CWE198AA-AC - Career/Work Experience  
LEC + LAB 1-3 Credits  
Participation in a work experience, gaining on-the-job training, and/or exploring a career or field of choice. Helps students relate their education to the real work world. Resume writing and interviewing skills. Development of employability skills. Prerequisites: None.

#### **DANCE HUMANITIES (DAH)**

DAH100 - Introduction to Dance  
LEC 3 Credits 3 Periods  
Overview of the field of dance focusing on origins, historical development, and cultural characteristics of the various styles of dance. Prerequisites: None. General Education Designation: Global Awareness – [G]; Humanities and Fine Arts - [HU]

#### **DANCE (DAN)**

DAN102AA - Hip Hop I  
LEC + LAB 1 Credit 3 Periods  
Theory and practice of Hip Hop dance at the beginning level. Development of movement quality and performance skills. Prerequisites: None. Course Note: DAN102AA may be repeated for credit.

DAN120AA World Dance: African Dance  
LEC + LAB 1 Credit 3 Periods  
Theory and practice of African dance. Development of movement quality and performance skills, individually or in a group setting. May include African, Caribbean or Afro-fusion dance. Prerequisites: None. Course Notes: DAN120AA may be repeated for credit.

DAN132 - Modern Dance I  
LEC + LAB 1 Credit 3 Periods  
Introduction to the theory and practice of modern 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.

DAN133 - Jazz Dance I  
LEC + LAB 1 Credit 3 Periods  
Introduction to the theory and practice of jazz dance at the beginning level. Development of movement quality and performance skills. Prerequisites: None. Course Note: DAN133 may be repeated for credit.

DAN135 - Modern Dance II  
LEC + LAB 1 Credit 3 Periods  
Theory and practice of modern dance at the advanced beginning level. Development of movement quality and performance skills. Prerequisites: DAN132 or permission of instructor. Course Notes: DAN135 may be repeated for credit.

DAN136 - Jazz Dance II

LEC + LAB 1 Credit 3 Periods

Theory and practice of jazz dance at the advanced beginning level. Development of movement quality and performance skills. Prerequisites: DAN133 or permission of instructor. Course Notes: DAN136 may be repeated for credit.

DAN141 – Dance Workshop

LEC + LAB 1 Credit 3 Periods

An intensive experience in the process of choreography, performance, and production elements. Prerequisites: None Course Notes: DAN141 may be repeated for credit.

DAN150 - Dance Performance II

LEC + LAB 1 Credit 3 Periods

Continued study of the process and practice of dance performance at a level II. Prerequisites: DAN150 or permission of instructor. Course Notes: DAN150 may be repeated for credit.

DAN155 - Dance Performance II

LEC + LAB 1 Credit 3 Periods

Continued study of the process and practice of dance performance at a level II. Prerequisites: DAN150 or permission of Instructor. Course Notes: DAN155 may be repeated for credit.

DAN210 - Dance Production I

LEC + LAB 1 Credit 3 Periods

Introduction to the elements of light, sound, and scenery as they relate to the art of dance. Prerequisites: None.

DAN232 – Modern Dance III

LEC + LAB 1 Credit 3 Periods

Theory and practice of modern dance at the beginning intermediate level. Development of movement quality and performance skills. Prerequisites: DAN135 or permission of Instructor.

DAN233 - Jazz Dance III

LEC + LAB 1 Credit 3 Periods

Theory and practice of jazz dance at the beginning intermediate level. Development of movement quality and performance skills. Prerequisites: DAN136 or permission of instructor. Course Notes: DAN233 may be repeated for credit.

DAN235 – Modern Dance IV

LEC + LAB 1 Credit 3 Periods

Theory and practice of modern dance at the intermediate level. Development of movement quality and performance skills. Prerequisites: DAN232 or permission of instructor. Course Notes: DAN25 may be repeated for credit.

DAN236 - Jazz Dance IV

LEC + LAB 1 Credit 3 Periods

Theory and practice of jazz dance at the intermediate level. Development of movement quality and performance skills Prerequisites: DAN233 or permission of Instructor. Course Notes: DAN236 may be repeated for credit.

DAN250 - Dance Performance III

LEC + LAB 1 Credit 3 Periods

Continued study of the process and practice of dance performance at a level III. Prerequisites: DAN155 or permission of Instructor. Course Notes: DAN250 may be repeated for credit.

DAN264 - Choreography I

LEC + LAB 3 Credits 3 Periods

Study of basic dance choreography to include construction of a phrase, structure and form in a composition, and the basic elements of time, space and energy. Prerequisites: None.

DAN265 - Choreography II

LEC 3 Credits 3 Periods

Exploration of the craft of choreography at the intermediate level. Experimentation with the various approaches to contemporary choreography as established by 20th century artists. Prerequisites: DAN264.

DAN280 - Dance Practicum

LEC + LAB 2 Credits 6 Periods

A culmination of coursework for the dance major requiring completion of an extended choreographic work from conception to performance. Also requires a final evaluative paper on the successes and challenges encountered throughout the project. Prerequisites: Permission of instructor.

**ENGINEERING SCIENCE (ECE)**

ECE102 - Engineering Analysis Tools and Techniques

■ EGR1102

LEC + LAB 2 Credits 4 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. Co-requisites: MAT151 or MAT182 or MAT187.

ECE102AA

■ EGR1102 – in combination with ECE103AB

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

ECE103 - Engineering Problem Solving and Design

■ EGR1102

LEC + LAB 2 Credits 4 Periods

Fundamentals of the design process: engineering modeling, communication, and problem-solving skills in a team environment. Emphasis on process-based improvements to the design process. Introduction to engineering as a profession. Prerequisites: ECE102 and (high school physics or PHY111).

ECE103AB – Engineering Problem Solving and Design

LEC 2 Credits 2 Periods

LAB 0 Credits 2 Periods

■ EGR1102 – in combination with ECE102A

Fundamentals of the design process: engineering modeling, communication and problem-solving skills in a team environment. Emphasis on process-based improvements to the design process. Introduction to engineering as a profession.

Prerequisites: (ECE102 or ECE102AA) and (high school physics, or PHY111, or PHY111AA).

ECE105 – MATLAB Programming

LEC 1 Credit 1 Period

Use MATLAB to solve engineering problems. An overview of programming, including arrays, structures, strings, functions, control flow, file management, data analysis, graphing, and performing calculations. Prerequisites: None.

ECE201 - Introduction to Engineering Statics

LEC 2 Credits 2 Periods

LAB 0 Credit 1 Periods

Introduction to engineering statics, including force systems, resultants, equilibrium of particles and rigid bodies, introduction to centroids and centers of mass, area moments of inertia, distributed loading, and friction. Prerequisites: (ECE103 or ECE103AB), and (MAT230 or MAT231), and (PHY115 or PHY121).

ECE211 - Engineering Mechanics-Statics

LEC 3 Credits 3 Periods

LAB 0 Credit 2 Periods

Mathematical treatment of the basic physical principles of statics. Methods of vector algebra and vector calculus. Prerequisites: ECE103, (MAT230 or MAT231), and (PHY115 or PHY121). Co-requisites: MAT241.

ECE212 - Engineering Mechanics - Dynamics

LEC 3 Credits 3 Periods

LAB 0 Credits 2 Periods

Kinematics and kinetics of particles, translating and rotating coordinate systems, rigid body kinematics, dynamics of systems of particles and rigid bodies, and energy and momentum principles. Prerequisites: ECE211 and MAT241.

ECE214 - Engineering Mechanics

LEC 4 Credits 4 Periods

LAB 0 Credits 2 Periods

Foundations of engineering mechanics, including force systems, resultants, equilibrium of particles and rigid bodies, centroids and centers of mass, area and mass moments of inertia, friction, internal forces in structures, kinematics and kinetics of particles, kinematics and kinetics of rigid bodies, energy and momentum principles. Prerequisites: (ECE103 or ECE103AB), (MAT230 or MAT231), and (PHY115 or PHY121). Co-requisites: MAT240 or MAT241.

ECE294 – Special Topics in Engineering

Exploration and investigation of a focused topic in engineering.

Prerequisites: Permission of Instructor, or Department or Division Chair. Course Notes: ECE294 may be repeated for credit.

ECE298AB - Special Projects

LAB 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 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.

**EARLY CHILDHOOD EDUCATION (ECH)**

ECH100 - Montessori 2.5-6 Overview

LEC 3 Credits 3 Periods

Montessori principles and activities needed to understand and teach the 2.5-6 year old in a Montessori classroom. Covers Montessori Philosophy, Practical Life, Sensorial, Mathematics, Language, Cultural Studies, Art, Music, Movement, Geography, History, and Science in the Montessori Early Childhood setting. Prerequisites: Permission of Instructor. Course Note: Instructors for ECH100 must have Montessori Early Childhood 2.5-6 Certification.

ECH125 – Writing for Early Childhood Professionals

LEC 1 Credit 1 Period

Elements of effective written communication and use in the field of early childhood education. Practical experience using common classroom documents. Course surveys document purpose, readers needs, information organization, and clear expression of ideas. Prerequisites: None

ECH128 Early Learning: Play and the Arts

LEC 3 Credits 3 Periods

Examines theory, research and practices relating to play and the creative arts in early childhood. Considers practical constraints and alternative perspectives. Prerequisites: None

ECH182 – Enhancing Toddler Development

LEC 1 Credit 1 Period

Overview of the developmental needs of children from 15 through 30 months. Emphasis on the adult role in providing a safe, stimulating everyday environment where toddlers may explore, imitate and communicate with others. Prerequisites: None

ECH269 – Child Care Seminar

LEC 1 Credit 1 Period

Emphasizes the blend of job-related activities including career exploration, employment procedures, human relations, and on-the-job issues. Prerequisites: Permission of Department or Division. Course Notes: ECH269 may be repeated for a total of three (3) credit hours. Cross-References: CFS269

ECH270 – Observing Young Children

LEC 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

ECH272 – Science for the Young Child  
LEC 1 Credit 1 Period  
Methods and techniques for encouraging beginning scientific thinking among young children. Focus upon the theory of Jean Piaget. Prerequisites: None.

ECH273 – Math for the Young Child  
LEC 1 Credit 1 Period  
Methods and techniques for encouraging the beginnings of mathematical/logical thought with young children. Focus upon the theory of Jean Piaget. Prerequisites: None.

ECH282 – Discipline/Guidance of Child Groups  
LEC 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.

ECH284AA - Early Childhood Teaching Internship  
LEC + LAB 2 Credits 2 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. Co-requisites: CFS/ECH269. Cross-References: CFS284AA

ECH287 – Professional Development in Early Childhood Education  
LEC 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. Cross-References: CFS287

ECH296WA-WD - Cooperative Education  
LAB 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.

## **ECONOMICS (ECN)**

ECN211 - Macroeconomic Principles  
■ ECN2201  
LEC 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. General Education Designation: Social and Behavioral Sciences - [SB]

ECN212 - Microeconomic Principles

■ ECN2202  
LEC 3 Credits 3 Periods  
Microeconomic analysis including the theory of consumer choice, price determination, resource allocation and income distribution. Includes noncompetitive market structures such as monopoly and oligopoly; and the effects of government regulation. Prerequisites: None. General Education Designation: Social and Behavioral Sciences - [SB]

## **EDUCATION (EDU)**

EDU101AA – Tutor Training and Practicum  
LEC 1 Credits 1 Period  
Tutor training with an opportunity to gain insights into instructional support services through a minimum of 30 hours of supervised on-site experience within an educational setting. Overview of the role and responsibilities of instructional tutors as well as tutoring techniques, with particular focus on reading and writing strategies. Prerequisites: None

EDU105 - Substitute Teacher Training  
LEC + LAB 2 Credits 2 Periods  
Survey of issues important to substitute teaching in Arizona. Discussion of certification, professional behavior, and classroom techniques. Prerequisites: None. Course Notes: EDU105 requires an approved field experience.

EDU220 – Introduction to Serving English Language Learners (ELL)  
LEC 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 Course Notes: Approved school-based practicum is required. EDU220 incorporates the 45-clock hour curricular framework for provisional SEI endorsement through the Arizona Department of Education  
Prerequisites: None

EDU221 - Introduction to Education  
LEC 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. General Education Designation: Social and Behavioral Sciences - General Education Designation: Social and Behavioral

Sciences - [SB]; Cultural Diversity – [C]

EDU222 - Introduction to the Exceptional Learner

LEC 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, intellectually disabled, and gifted students. Prerequisites: None.

Course Notes: EDU222 requires an approved field experience.

Prerequisites: None. Education Designation: Social and Behavioral Sciences - General Education Designation: Social and Behavioral Sciences - [SB]; Cultural Diversity – [C]

EDU230 - Cultural Diversity in Education

LEC 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. General Education Designation: Cultural Diversity – [C]

EDU236 – Classroom Relationships

LEC 3 Credits 3 Periods

Analysis of K-12 classroom interactions, classroom environment, and classroom management skills from a teacher's point of view. Focus on classroom as a multidimensional environment in which principles of classroom design, communication, management, and resources determine effectiveness. Prerequisites: None. EDU221 suggested but not required. Course Notes: Requires a 20-hour field experience in a K-12 classroom.

EDU250 - Teaching and Learning in the Community College

LEC 3 Credits 3 Periods

The history, functions, organization and current issues in the community/junior college with emphasis on the Arizona community colleges. Includes focus on the design and practice of effective community college teaching and learning with special emphasis on the Maricopa County Community College District. Prerequisites: None.

EDU282AA - Service Learning Experience in Education

LEC 1 Credit 1 Period

Unpaid Service-Learning (SL) experience, completed with approved community partner. Prerequisites: Permission of Instructor. Course Notes: EDU282AA 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.

EDU283AA - Using Storytelling in Educational Settings

LEC 1 Credit 1 Period

The application of storytelling and storytelling activities in educational settings. Prerequisites: None. Cross-Reference:

STO289AA

EDU289 - Secondary Methods and Curriculum Development

LEC 1 Credit 1 Period

Overview and practical application of teaching methodology and curriculum development for secondary education teachers. Teaching strategies, curriculum design, lesson objectives, time management skills, teaching resources and student assessments covered. State Board of Education Professional Teaching Standards emphasized. Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.

EDU291 - Children's Literature

LEC 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-References: ENH291 General Education Designation: Humanities and Fine Arts - [HU]

EDU292 - The Art of Storytelling

LEC 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 General Education Designation: Humanities and Fine Arts - [HU]; Cultural Diversity - [C]

EDU294 - Multicultural Folktales

LEC 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: ENH294, STO294. General Education Designation: Humanities and Fine Arts - [HU]; Cultural Diversity - [C]

EDU298AA - Special Projects

LAB 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.

### EARLY EDUCATION (EED)

EED200 - Foundations of Early Childhood Education

LEC 3 Credits 3 Periods

Overview of early childhood education (birth to age eight) in American society, including current

issues and responsibilities. Emphasis on issues of professionalism, ethics and program types. Opportunities for students to explore potential career paths. Prerequisites:



None. Course Note: EED200 requires a minimum of 30 hours of field experience in birth to age eight environments. General Education Designation: Social and Behavioral Sciences - [SB]

EED205 – The Developing Child: Prenatal to Age Eight  
LEC 3 Credits 3 Periods  
Examination of process of physical, social, emotional, cognitive, language, and literacy development of typical and atypical young children; prenatal through age eight. Includes practical application and fieldwork experience. Prerequisites: None General Education Designation: Social and Behavioral Sciences - [SB]

EED212 - Guidance, Management and the Environment  
LEC 3 Credits 3 Periods  
Principles for guiding young children in early care and education environments. Exploration of guidance, management, and how the environment impacts the lives of young children. Includes observation of classrooms of children ages birth to age eight. Prerequisites: None.

EED215 - Early Learning, Health, Safety, Nutrition and Fitness  
LEC 3 Credits 3 Periods  
Consideration of public health issues and safety procedures within early childhood settings, serving young children birth to age eight. Overview of nutritional needs and issues of physical fitness and well-being in young children. Includes field experiences. Prerequisites: None

EED220 - Child, Family, Community and Culture  
LEC 3 Credits 3 Periods  
Examines family, community and cultural influences on development of the young child (birth to age eight). Considers trends and threats to attachment, relationships and cultural identity. Includes social and emotional experiences and their impact on the developing brain. Prerequisites: None. General Education Designation: Cultural Diversity - [C]

EED222 - Intro to the Exceptional Young Child: Birth to Age Eight  
LEC 3 Credits 3 Periods  
Overview of the exceptional learner (birth - age eight), one who differs from the average or the norm, with emphasis on observation, techniques, characteristics, identification, types of programs, and work with families. Issues related to learning exceptionalities, sensory and communication disorders, social and emotional problems, physical and health related disorders, and giftedness. Includes field experience. Prerequisites: None. General Education Designation: Social and Behavioral Sciences - [SB]; Cultural Diversity - [C]

EED245 – Early Learning: Language Acquisition and Literacy Development  
LEC 3 Credits 3 Periods  
Overview of language acquisition and development, emergent literacy, early literacy development, and appropriate early experiences with books, reading, and writing for typical and atypical children birth to age eight. Emphasis placed on

reading and writing readiness, methods to enhance literacy development, and strategies for selecting and using children's books. Prerequisites: None

EED255 – Portfolio Development and Writing for the Profession  
LEC 3 Credits 3 Periods  
Portfolio development, completion, and presentation. Self-assessment and educational short-term and long-term planning, professional development, writing and critical learning included. Prerequisites: Completion of twelve (12) credit hours of EED coursework and permission of Program Coordinator.

EED260 – Early Childhood Infant/Toddler Internship  
LAB 1 Credit 1 Period  
Work experience with infants and toddlers in early care and education settings. 80 hours of designated work per credit. Prerequisites: Permission of Department or Division. Course Notes: EED260 may be repeated for a total of six (6) credits.

EED261 - Early Childhood Preschool Internship  
LAB 1 Credit 1 Period  
Work experience with preschoolers in early care and education settings. 80 hours of designated work per credit. Prerequisites: Permission of department. Course Note: May be repeated for a total of six (6) credit hours.

EED278 - Early Learning: Curriculum and Instruction - Birth/Preschool  
LEC 3 Credits 3 Periods  
Considerations and evaluations of curriculum appropriate to the developmental characteristics of learners, birth through five years. Includes how early childhood standards, philosophies, and program settings relate to the teaching, learning, and assessment process. Includes field experience. Prerequisites: EED200.

EED280 - Standards, Observation & Assessment of Typical/Atypical Behaviors of Young Children Birth to Age Eight  
LEC 3 Credits 3 Periods  
Standards, observation, and assessment of typical and atypical behaviors, overview of standards, observation and assessment methodologies for typical and atypical young children (birth to age eight). Includes ethics, referral and reporting procedures, and collaboration with families and other professionals. Prerequisites: CFS/ECH176, or CFS235, or EED205.

### **ELECTRICAL ENGINEERING (EEE)**

EEE202 - Circuits and Devices  
LEC 5 Credits 4 Periods  
LAB 0 Credits 3 Periods  
Introduction to circuits and devices. Component models, transient analysis, steady state analysis, Laplace transform, and active and passive filter networks. Prerequisites: ECE103 or ECE103AB. Corequisites: (MAT276 or MAT277) and (PHY116 or PHY131).

### **ENGLISH (ENG)**

ENG071 – Preparatory Academic Writing I  
LEC 3 Credits 3 Periods  
Emphasizes preparation for college level composition and related reading tasks with a focus on communicating through complete, grammatically correct writing, organized to communicate a central idea. Prerequisites: Appropriate writing placement test score or permission of Department or Division.

ENG081 – Preparatory Academic Writing II  
LEC 3 Credits 3 Periods  
Emphasizes preparation for college-level composition and related reading tasks with a focus on critical writing, reading, and thinking skills and processes. Prerequisites: Appropriate writing placement test score, or a grade of C or better in ENG071 or ESL077, or permission of Department or Division.

ENG091 – Preparatory Academic Writing III  
LEC 3 Credits 3 Periods  
Emphasizes preparation for first year composition with a focus on critical writing, reading, and thinking skills and processes at an increased level of academic complexity. Prerequisites: Appropriate writing placement test score, or a grade of C or better in ENG081 or ESL087, or permission of Department or Division.

ENG100AC - The Mechanics of Written English  
LEC 1 Credit 1 Period  
Review of the mechanics of written English, including punctuation, arbitrary marks and usages, capitalization, agreement, tense, and sentence patterns. Prerequisites: Appropriate English placement test score, or a grade of “C” or better in ENG091 or ESL097, or permission of Instructor.

ENG100AE - Composition Skills  
LEC 1 Credit 1 Period  
Developing generative and evaluative writing skills using selected software programs. Prerequisites: None.

ENG101 - First Year Composition  
ENG1101  
LEC 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 writing placement test score, or a grade of C or better in ENG091 or ESL097. General Education Designation: First-Year Composition - [FYC]

ENG102 - First Year Composition  
ENG1102  
LEC 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: Grade of C or

better in ENG101. General Education Designation: First-Year Composition - [FYC]

ENG107 - First-Year Composition for ESL  
LEC 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 writing placement test score, or a grade of C or better in ENG091 or ESL097. General Education Designation: First-Year Composition - [FYC]

ENG108 - First-Year Composition for ESL  
LEC 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. General Education Designation: First-Year Composition - [FYC]

ENG111 - Technical and Professional Writing  
LEC 3 Credits 3 Periods  
Covers analyzing, planning, organizing, researching, and writing correspondence, reports, and presentations for specific work-related audiences. Includes integrating data and graphics into work-related documents and presentations. Prerequisites: ENG101 with a grade of C, or better, or permission of Instructor. General Education Designation: Literacy and Critical Inquiry - [L]

ENG210 - Creative Writing  
LEC 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.

ENG218 - Writing About Literature  
LEC 3 Credits 3 Periods  
Advanced writing course requiring analytical and expository essays about fiction, poetry, and drama. For non-English majors. Prerequisites: ENG102. General Education Designation: Humanities and Fine Arts – [HU]; Literacy and Critical Inquiry - [L]

ENG260 - Film Analysis  
LEC 3 Credits 3 Periods  
Understanding and enjoyment of film and its correlation to literature, art, music, and other disciplines. Prerequisites: None. Cross-References: THE260

ENG295 - Teaching Composition in the Two-Year College  
LEC 3 Credits 3 Periods  
Overview of the theoretical and pedagogical strategies of teaching composition in the community college.  
Prerequisites: Bachelor's degree and permission of Instructor.

### ENGLISH HUMANITIES (ENH)

ENH110 - Introduction to Literature  
LEC 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. General Education Designation: Humanities and Fine Arts – [HU]; Literacy and Critical Inquiry - [L]

ENH111 - Literature and the American Experience  
LEC 3 Credits 3 Periods  
Introduction to the foundations and diversity of American culture through a survey of its literature, including minority and women writers. Exploration of various facets of American culture including frontier, regional, rural, and urban life; ethnic, racial, and immigrant experience; and political and social philosophies. Prerequisites: None.

ENH112 - Chicano Literature  
LEC 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. General Education Designation: Humanities and Fine Arts – [HU]; Cultural Diversity - [C]

ENH114 - African-American Literature  
LEC 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. General Education Designation: Humanities and Fine Arts – [HU]; Cultural Diversity - [C]

ENH214 - Poetry Study  
LEC 3 Credits 3 Periods  
Involves reading, discussing, and analyzing poetry of various forms and from selected Periods. Prerequisites: None. General Education Designation: Humanities and Fine Arts -[HU]

ENH241 - American Literature Before 1860  
LEC 3 Credits 3 Periods  
Includes literature written prior to 1860 in the United States.  
Prerequisites: None. General Education Designation: Humanities and Fine Arts -[HU]

ENH242 - American Literature After 1860  
LEC 3 Credits 3 Periods  
Includes literature written after 1860 in the United States.  
Prerequisites: None. General Education Designation: Humanities and Fine Arts -[HU]

ENH251 - Mythology  
LEC 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. General Education Designation: Global Awareness - [G]; Humanities and Fine Arts – [HU]

ENH254 - Literature and Film  
LEC 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. General Education Designation: Humanities and Fine Arts – [HU]; Literacy and Critical Inquiry – [L]

ENH255 - Contemporary U.S. Literature and Film  
LEC 3 Credits 3 Periods  
Strengths and weaknesses of literature and film. Challenges of adapting literature to film. Addressing racial, ethnic, gender, class and religious differences between cultures and mediums. Use of narrative in each medium and how it translates various cultural values and assumptions. Specific genres present in literature and film. Cultural metaphors and symbols used in literature and film. Prerequisites: ENG101. General Education Designation: Humanities and Fine Arts – [HU]; Literacy and Critical Inquiry – [L]; Cultural Awareness – [C]

ENH259 - American Indian Literature  
LEC 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. General Education Designation: Humanities and Fine Arts – [HU]; Cultural Awareness – [C]

ENH260 - Literature of the Southwest  
LEC 3 Credits 3 Periods  
Investigates major themes in Southwestern American literature including the Western myth, minority roles in the region's literature, control of nature versus primacy of nature, and growth. Both prose and poetry are examined with an emphasis on contemporary Southwestern writing. Prerequisites: None. General Education Designation: Humanities and Fine Arts – [HU]; Cultural Diversity - [C]

ENH291 - Children's Literature  
LEC 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- References: EDU291 General Education Designation:

Humanities and Fine Arts – [HU]

**ENH294 - Multicultural Folktales**

LEC 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 General Education Designation: Humanities and Fine Arts – [HU]; Cultural Diversity[C]

**ENTREPRENEURIAL STUDIES (EPS)**

**EPS150 – Introduction to Entrepreneurship**

LEC 3 Credits 3 Periods

Overview of entrepreneurship. Includes the entrepreneurial process and the skills required to be successful, including starting, planning, financing, marketing, and managing a business. Prerequisites: None.

**EPS160 – New Venture Creation**

LEC 2 Credits 2 Periods

Process of starting a new venture including evaluating specific business opportunities identifying financing alternatives, and defining start-up issues. Prerequisites: None

**EPS161 – New Venture Law and Finance**

LEC 3 Credits 3 Periods

Introduction to the principles of legalization and capitalization of a new business venture. Includes the processes required to organize, register, finance, launch and protect a business. Prerequisites: None.

**EPS165 – New Venture Feasibility Analysis**

LEC 2 Credits 2 Periods

Introduction to the industry's market and competitive structure. Includes the technical skills to develop a competitive strategy for entry into the business segment. Covers the market potential evaluation, niche identification, analysis of competition, and development of customer profiles. Also involves development of a marketing strategy and sales projections for new business ventures. Prerequisites: None

**EPS180 – Technology Business Planning**

LEC 3 Credits 3 Periods

Fundamentals of identifying new technologies and innovations for profitable commercial feasibility. Determination of capabilities, resources, and interests of the entrepreneur. Evaluation and selection of technology opportunities. Creation of business concept and plan. Customer development and business models. Finances, venture capital and accounting. Marketing and sales. Legal formation and intellectual property. Operations and resource management. Growth, harvest and success. Prerequisites: None

**EPS195 – Business Start-Up and Planning**

LEC 3 Credits 3 Periods

Development of a feasibility approach to strategic decision making concerning new venture start-up. Includes development of a business feasibility study and a preliminary business plan.

Prerequisites: None.

**ENGLISH AS A SECOND LANGUAGE (ESL)**

**ESL001 - Basic English as a Second Language I**

LEC 6 Credits 6 Periods

Listening, speaking, reading, and writing in English at a basic level. Focus on survival skills related to life in the United States. Introduction to elementary grammatical patterns. Prerequisites: None.

**ESL001AD - Basic English as a Second Language I: Employment**

LEC 1 Credit 1 Period

Listening, speaking, reading and writing in English at a basic level. Focus on survival skills related to employment when living in the United States. Introduction to elementary grammatical patterns. Prerequisites: ESL001AC, or ESL001CA, 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 two (2) credits.

**ESL001AF - Basic English as a Second Language I: Everyday Life**

LEC 1 Credit 1 Period

Listening, speaking, reading and writing in English at a basic level. Focus on survival skills related to everyday life when living in the United States. Introduction to elementary grammatical patterns. Prerequisites: ESL001AE, 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 two (2) credits.

**ESL002BB - Basic ESK II: Services & Employment**

LEC 2 Credits 2 Periods

Listening, speaking, reading, and writing English at a high beginning level. Focus on survival skills related to services and employment when living in the United States. Continuing development of grammatical patterns. May be repeated for a total of four (4) credits. Prerequisites: ESL002BA 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 two (2) credits.

**ESL010 - English as a Second Language I-Grammar**

LEC 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 - English as a Second Language I Listening and Speaking**

LEC 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 Credits. Prerequisites: Appropriate ESL placement test score or ESL002. Course Notes: ESL011 may be repeated for a maximum of six (6) credits.

ESL020 - English as a Second Language II-Grammar  
LEC 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 (ESL010AA, ESL010AB, and ESL010AC)

ESL021 - English as a Second Language II Listening and Speaking  
LEC 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 - English as a Second Language II - Writing with Oral Practice  
LEC 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: Appropriate ESL course placement score, or a grade of C or better in ESL012, or permission of instructor.

ESL030 - English as a Second Language III-Grammar  
LEC 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 a grade of "P" or "C" or better in ESL020, or (ESL020AA, ESL020AB, and ESL020AC).

ESL031 - English as a Second Language III Listening and Speaking  
LEC 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 III - Writing with Oral Practice  
LEC 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 ESL022, or permission of instructor.

ESL040 - English as a Second Language IV-Grammar  
LEC 3 Credits 3 Periods  
Fourth level of English as a Second Language (ESL). Continued 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 a grade of "P" or "C" or better in ESL030, or (ESL030AA, ESL030AB, and ESL030AC).

ESL041 - English as a Second Language IV-Listening and Speaking  
LEC 3 Credits 3 Periods  
Emphasis on academic skills. Listening to Lectures, note taking, 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  
LEC 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 ESL032, or permission of instructor.

ESL049 - General Vocational English as a Second Language  
LEC 3 Credits 3 Periods  
General English speaking, listening, reading, and writing skills needed for use at work. Prerequisites: Appropriate ESL placement test score, or a grade of "C" or better in ESL010, or (ESL010AA, ESL010AB, and ESL010AC), or permission of instructor.

ESL050 - Review Grammar For ESL  
LEC 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

LEC 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.

ESL052 - Job-Specific Writing and Speaking Skills for ESL  
LEC 3 Credits 3 Periods  
Using and understanding English for specific employment or vocational training. Includes English speaking, reading and writing skills. Prerequisites: Appropriate ESL test score or satisfactory completion of ESL049, or permission of instructor.

ESL052 - Job-Specific Writing and Speaking Skills for ESL  
LEC 3 Credits 3 Periods  
Using and understanding English for specific employment or vocational training. Includes English speaking, reading and writing skills. Prerequisites: Appropriate ESL test score or satisfactory completion of ESL049, or permission of instructor.

ESL061 - Informal Conversational and Written English for Non-native Speakers  
LEC 3 Credits 3 Periods  
Practice speaking and writing English in informal settings. Emphasis on friendly conversational techniques and effective use of the computer and the Internet to communicate in a friendly, relaxed manner. Prerequisites: Appropriate ESL placement test score, or completion of ESL020 or ESL021 or ESL022 or RDG020 with a grade of "P" or "C" or better.

ESL077 – Language Skills: Speaking and Writing Standard English for English Language Learner  
LEC 3 Credits 3 Periods  
Emphasis on basic Standard English speaking and writing skills. Focus on essential idiomatic grammar in developing effective sentence-level speaking and writing strategies. Prerequisites: Appropriate writing placement test score or permission of Department or Division.

### **EMPLOYMENT SUPPORT SYSTEMS (ESS)**

ESS101 - Introduction to Employment Support  
LEC 3 Credits 3 Periods  
Roles and responsibilities of the Employment Support Specialist. Philosophy and values of employment support systems. Procedures and practices for establishing relationships with trainees, identifying suitable employment and assisting the trainee in learning the job for job acquisition. Prerequisites: None.

ESS103 - Employment Support Systems Practices  
LEC + LAB 3 Credits 5 Periods  
Specific characteristics and safety requirements for developmental, physical and serious mental illness disabilities. Skills and techniques for Employment Support Specialists to assist trainees after employment acquisition. Responsibilities and on-the-job application in the employment setting including orientation, task/job analysis,

training "assists", data collection and documentation. Prerequisites: ESS101 or permission of department.

ESS110 - Americans with Disabilities Act Overview  
LEC 2 Credits 2 Periods  
Titles of Americans with Disabilities Act regulations and requirements including employment, transportation, accessibility, community awareness and assertive technology. Prerequisites: None.

### **EXERCISE SCIENCE (EXSO)**

EXS101 – Introduction to Exercise Science, Kinesiology, and Physical Education  
LEC 3 Credits 3 Periods  
Introductory course that will provide the student with a general overview of the disciplines and professions associated with the fields of Exercise Science, Kinesiology and Physical Education. Basic history, philosophy, and theory of each discipline will be examined as well as relevant career potential and options. Prerequisites: None.

EXS112 – Professional Applications of Fitness Principles  
LEC 3 Credits 3 Periods  
Basic principles of fitness for the prospective fitness professional and characteristics of quality communication and fitness leadership. Topics include behavior modification, enhancing motivation components of fitness, fitness assessment, risk stratification, exercise programming and modifications. Prerequisites: None

EXS125 – Introduction to Exercise Physiology  
LEC 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. BIO160 recommended but not required.

EXS130 – Strength Fitness – Physiological Principles and Training Techniques  
LEC 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.

EXS132 – Cardiovascular Fitness: Physiological Principles and Training Techniques  
L+L 3 Credits 3 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

EXS145 – Guidelines for Exercise Testing and Prescription  
L+L 3 Credits 4.5 Periods  
Follows the current ACSM guidelines for health appraisal, risk assessment, safety of exercise, exercise testing, and exercise

prescription. Prerequisites: None.

#### EXS265BA – Baseball Theory of Coaching

LEC 3 Credits 3 Periods

Reviews the principles, philosophy, strategies and theory of coaching baseball, as a competitive sport. Prerequisites: None.

#### EXS281BA – Baseball Methods of Coaching

LEC 3 Credits 3 Periods

Overview of the art and science of coaching baseball including: identifying various coaching styles, elements of effective communication, methods and techniques of coaching baseball. Prerequisites: None.

### FOOD AND NUTRITION (FON)

#### FON100 - Introductory Nutrition

LEC 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 nutrition 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 pre-dietetics or selected other pre-professional majors. May not be taken for credit if credit has been earned in FON100AA and/or FON100AC. Prerequisites: None.

#### FON105 – Nutrition Principles for Fitness Professionals

LEC 3 Credits 3 Periods

Basic principles of nutrition for the prospective fitness professional. Overview of health and wellness and its relationship to personal trainers. Emphasis on general principles of nutrition for health and fitness. Topics include: basic nutrition principles using the current food plans and dietary guidelines, label reading, estimating calorie and nutrient needs for health, fitness, sport, and weight management. Prerequisites: None

#### FON241 - Principles of Human Nutrition

LEC 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

### FRENCH (FRE)

#### FRE085AA - Speedy French I

LEC 1 Credit 1 Period

Basic vocabulary and grammar to develop conversational skills in French. Prerequisites: None.

#### FRE085AB - Speedy French II

LEC 1 Credit 1 Period

Intermediate vocabulary and grammar to develop conversational skills in French. Prerequisites: FRE085AA.

#### FRE085AC - Speedy French III

LEC 1 Credit 1 Period

Advanced vocabulary and grammar to develop conversational skills in French. Prerequisites: FRE085AB.

#### FRE101 - Elementary French I

##### ■ FRE1101

LEC 4 Credits 4 Periods

Basic grammar, pronunciation and vocabulary of the French language. Includes the study of French culture, practice of listening, speaking, reading and writing skills. Prerequisites: None.

#### FRE102 - Elementary French II

##### ■ FRE1102

LEC 4 Credits 4 Periods

Continued study of grammar and vocabulary of the French language along with the study of French culture. Emphasis on speaking, listening, reading and writing skills. Prerequisites: FRE101 or equivalent.

### GENERAL BUSINESS (GBS)

#### GBS110 - Human Relations in Business and Industry

LEC 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.

#### GBS120 – Workplace Communication Skills

LEC 3 Credits 3 Periods

Reviews planning, organization, development, and evaluation of written and oral communication in business settings, including informative and persuasive messages. Prerequisites: None

#### GBS131 - Business Calculations

LEC 3 Credits 3 Periods

Review of basic arithmetic and application of mathematics to business problems, includes percentage, interest, discount, and markups. Prerequisites: None.

#### GBS132 - Personal and Family Financial Security

LEC 3 Credits 3 Periods

Principles and practices of personal and family financial planning, includes savings, budgeting, credit, buying versus renting and general principles of consumerism. Prerequisites: None. Cross-References: HEC132

GBS151 - Introduction to Business

LEC 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

LEC 3 Credits 3 Periods

Applications of basic financial mathematics; includes interest, financial statement, stocks and bonds, and international business. Prerequisites: GBS131 or permission of Department or Division.

GBS205 - Legal Ethical, and Regulatory Issues in Business

LEC 3 Credits 3 Periods

Legal theories, ethical issues and regulatory climate affecting business policies and decisions. Prerequisites: None.

GBS207 - Business Law (General Corporate)

LEC 3 Credits 3 Periods

Legal and ethical aspects of agency, partnerships, corporations, bankruptcy, antitrust, securities, and other regulations of business. Prerequisites: None.

GBS220 - Quantitative Methods of Business

LEC 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

■ BUS2201

LEC 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. General Education Designation: Computer/Statistics/Quantitative Applications - [CS]

GBS233 - Business Communication

LEC 3 Credits 3 Periods

Internal and external business communications, including verbal and nonverbal techniques. Prerequisites: ENG 101 or ENG 107 with grade of "C" or better, or permission of department/division. General Education Designation: Literacy and Critical Inquiry -[L]

GBS261 - Investments I

LEC 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.

GBS270AC – Business Internship

LEC 3 Credits 3 Periods

General business work experience in a business or industry. Eighty hours of designated work per credit. Prerequisites: Permission of Department or Division.

GBS296WC – Cooperative Education

LAB 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: Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.

GBS298AA-AC - Special Projects

LAB 1-3 Credits 1-3 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.

GERMAN (GER)

GER085AA - Speedy German I

LEC 1 Credit 1 Period

Basic grammar and vocabulary of the German language to practice listening and speaking skills. Prerequisites: None.

GER085AB - Speedy German II

LEC 1 Credit 1 Period

Intermediate vocabulary, German syntax and inflections to further develop conversational skills in German. Prerequisites: GER085AA.

GER085AC - Speedy German III

LEC 1 Credit 1 Period

Continued development of German speaking and listening skills to express opinions and thoughts on a variety of subjects. Prerequisites: GER085AA and GER085AB.

GER101 - Elementary German I

■ GER1101

LEC 4 Credits 4 Periods

Basic grammar, pronunciation and vocabulary of the German language. Includes the study of German culture, practice of listening, speaking, reading and writing skills. Prerequisites: None.

GER102 - Elementary German II

■ GER1102

LEC 4 Credits 4 Periods

Continued study of grammar and vocabulary of the German



language along with the study of German culture. Emphasis on German language skills. Prerequisites: GER101 or equivalent.

### **GEOLOGY (GLG)**

GLG101 - Introduction to Geology I – Physical Lecture

■ GLG1101

LEC 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. General Education Designation: Natural Sciences (Quantitative) – [SQ] in combination with GLG103

GLG102 - Introduction to Geology II – Historical Lecture

LEC 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. General Education Designation: Historical Awareness [H]; Natural Sciences (General) – [SG] in combination with GLG104

GLG103 - Introduction to Geology I: Physical LAB

■ GLG1101

LAB 1 Credit 3 Periods

May accompany GLG 101. Study of common rock forming minerals, rocks and maps. Prerequisites: None. General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: GLG101

GLG104 - Introduction to Geology II: Historical

LAB 1 Credit 3 Periods

May accompany GLC 102. Study of geological structures and rocks, fossils, and geologic maps. may require field trips. Prerequisites: None. General Education Designation: Natural Sciences (General) [SG] in combination with: GLG102

GLG110 - Geologic Disasters and the Environment

LEC 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. General Education Designation: Global Awareness – [G]; Natural Sciences (General) – [SG] in combination with: GLG111

GLG111 - Geologic Disasters and the Environment

LAB 1 Credit 3 Periods

May accompany GLG 110. Basic geological processes and concepts. Emphasis on geology-related environmental problems concerning Arizona. Case histories and field studies. May require field trips. Prerequisites: None. [GLG110 & GLG111 must be taken as block to meet AGEC value] General Education Designation: Global Awareness – [G]; Natural Sciences (General) – [SG] in combination with: GLG111

### **PHYSICAL GEOGRAPHY – (GPH)**

GPH111 – Introduction to Physical Geography

LEC 4 Credit 3 Periods

LAB 0 Credit 3 Periods

GPH111 – Introduction to Physical Geography

Spatial and functional relationships among climates, landforms, soils, water, and plants. Prerequisites: None General Education Designation: Natural Sciences (Quantitative) – [SQ]

GPH211 – Landform Processes

LEC 4 Credit 3 Periods

LAB 0 Credit 3 Periods

Geographic characteristics of landforms and earth-surface processes emphasizing erosion, transportation, deposition and implications for human management of the environment. Prerequisites: ENG101 or ENG107 equivalent. General Education Designation: Natural Sciences (Quantitative) – [SQ]

GPH213 – Introduction to Climatology

LEC 3 Credit 3 Periods

Study of atmospheric phenomena over periods of time measured in months, years or longer. Includes average weather conditions, infrequent and unusual types of weather, and the influence of weather on the cultural and human landscape. Prerequisites: None. General Education Designation: Natural Sciences (General) - [SG] in combination with: GPH215

GPH215 – Introduction to Climatology Laboratory

LAB 1 Credit 3 Periods

A mathematical, statistical, and spatial analysis of climatological phenomena. Prerequisites: None. Corequisites: GPH213 General Education Designation: Natural Sciences (General) - [SG] in combination with: GPH213

### **HEALTH CORE CURRICULUM (HCC)**

HCC109 - CPR for Health Care Provider

LEC 0.50 Credits 0.50 Periods

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

HCC130 - Fundamentals of Health Care Delivery

LEC 3 Credits 3 Periods

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. Health care and life values. Definition and importance of values, ethics, and essential behaviors in the workplace. Worker rights and responsibilities. Healthful living practices to include nutrition, stress management and exercise. Occupational Safety and Health Administration (OSHA) standard precautions and facility safety. Use of principles of body mechanics in daily

living activities. 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.

HCC130AF - Decision Making in the Health Care Setting  
LEC 0.50 Credit 0.50 Period  
Principles and application of a decision making model. Description and application of ethics and process improvement and the relationship of both to the decision making model. Prerequisites: None

### HEALTH CARE RELATED (HCR)

HCR210 - Clinical Health Care Ethics  
LEC 3 Credits 3 Periods  
An introduction to health care ethics with emphasis on analysis and ethical decision making at both the clinical and health policy levels for health care professionals. Theoretical foundation of bioethics reviewed within historical and contemporary contexts. Prerequisites: ENG102 or ENG108 or permission of Instructor. General Education Designation: Humanities, Arts and Design - [HU]

HCR220 – Introduction to Nursing and Health Care Systems  
LEC 3 Credits 3 Periods  
Introduction to the social, political, and economic contexts of the nursing profession and health care systems in the United States. Prerequisites: A grade of “C” or better in ENG102 or ENG108 or permission of Instructor. General Education Designation: Historical Awareness - [H]

HCR230 - Culture and Health  
LEC 3 Credits 3 Periods  
Relation between cultures of diverse groups and health/illness. Emphasis on cross-cultural communication, including awareness of own cultural influences and indigenous and complementary healing practices. Prerequisites: None. [C, G]

HCR240 – Human Pathophysiology  
LEC 4 Credits 4 Periods  
Chemical, biological, biochemical, and psychological processes as a foundation for the understanding of alterations in health. The structural and functional pathophysiology of alterations in health; selected therapeutics considered. Prerequisites: BIO202 or BIO205, or permission of Instructor.

### HEALTH SCIENCES (HES)

HES100 - Healthful Living  
LEC 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. General Education Designation: Social and Behavioral Sciences - [SB]

HES154 - First Aid/Cardiopulmonary Resuscitation  
LEC 3 Credits 3 Periods  
Cardiopulmonary Resuscitation (CPR) 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.

### HISTORY (HIS)

HIS101 - History of Western Civilization Middle Ages to 1789  
LEC 3 Credits 3 Periods  
Survey of origin and development of Western civilization and its institutions from the Renaissance and Reformation through Age of Enlightenment. Prerequisites: None. General Education Designation: Historical Awareness - [H]; Humanities and Fine Arts - [HU]; Social and Behavioral Sciences - [SB]

HIS102 - History of Western Civilization 1789 to Present  
LEC 3 Credits 3 Periods  
Survey of origin and development of Western civilization and its institutions from French Revolution through the present. Prerequisites: None. General Education Designation: Historical Awareness - [H]; Humanities and Fine Arts - [HU]; Social and Behavioral Sciences - [SB]

HIS103 - United States History to 1865  
LEC 3 Credits 3 Periods  
The political, economic, and social development of United States from Pre-Columbian period through the end of the Civil War (1865). Prerequisites: None. General Education Designation: Historical Awareness - [H]; Humanities and Fine Arts - [HU]; Social and Behavioral Sciences - [SB]

HIS104 - United States History 1865 to Present  
LEC 3 Credits 3 Periods  
The political, economic, and social development of United States from 1865 to the present time The political, economic, and social development of United States from 1865 to the present time. Prerequisites: None. General Education Designation: Historical Awareness - [H]; Social and Behavioral Sciences - [SB]

HIS105 - Arizona History  
LEC 3 Credits 3 Periods  
The prehistoric and contemporary Native American experience, Spanish colonial times, the Mexican National Period, the U.S. federal territorial years, and Arizona's political and economic development during the twentieth century. Prerequisites: None. General Education Designation: Historical Awareness - [H]; Social and Behavioral Sciences - [SB]

HIS106 - Southwest History  
LEC 3 Credits 3 Periods  
Survey of Hispanic, Anglo, African-American and Native cultures of the peoples who have settled the American

Southwest. Emphasis on cattle, mining, fur trade and transportation industries and role development of the region. Prerequisites: None. General Education Designation: Historical Awareness – [H]; Social and Behavioral Sciences - [SB]; Cultural Diversity [C]

HIS109 - Mexican-American History and Culture  
LEC 3 Credits 3 Periods  
Examination of origins and development of Spanish-American and Mexican- American peoples and their contribution to culture, history and development of United States. Emphasis on Mexican-American War and its impact on educational, social, and economic conditions of the Mexican-Americans of the southwest. Prerequisites: None. General Education Designation: Historical Awareness – [H]; Social and Behavioral Sciences - [SB]; Cultural Diversity [C]

HIS111 - World History 1500 to Present  
LEC 3 Credits 3 Periods  
Survey of the economic, social, cultural, and political elements of world history from 1500 to the present. Prerequisites: None. General Education Designation: Global Awareness – [G]; Historical Awareness – [H]; Humanities and Fine Arts - [HU]

HIS140 - American Indian History  
LEC 3 Credits 3 Periods  
Survey of American Indian history with emphasis on the last 200 years including developments in the 20th century. Focuses on selected groups such as the Cherokee, Iroquois Confederation, Navajo, Sioux and Indians of the Southwest in relation to cultural, economic, political and social continuity and changes. Topics include development and influence of federal policies, past and present issues confronting Native Americans and how Native American individuals and communities maintain their identities as they confront social changes. Prerequisites: None. Cross-References: AIS140  
General Education Designation: Cultural Diversity – [C]; Historical Awareness – [H]; Social and Behavioral Sciences - [SB]

HIS201 - History of Women in America  
LEC 3 Credits 3 Periods  
Introduction to women's history from the colonial Period to the present. Deals chronologically with changes and developments which have influenced the lives of women. Prerequisites: None. General Education Designation: Cultural Diversity – [C]; Historical Awareness – [H]; Social and Behavioral Sciences - [SB]

HIS203 - African-American History to 1865  
LEC 3 Credits 3 Periods  
History and cultural heritage of African-Americans from their beginnings in Ancient Africa through the experience of chattel slavery in the Americas to their eventual emancipation and participation in the American Civil War. Prerequisites: None. General Education Designation: Cultural Diversity – [C]; Historical Awareness – [H]; Humanities and Fine Arts – [HU]; Social and Behavioral Sciences – [SB]

HIS204 - African-American History 1865 to Present  
LEC 3 Credits 3 Periods  
Multifaceted experiences of African-American people from the post-Civil War period (1865) to the present, including the collective struggle for freedom, equality, and self-determination in the United States. Prerequisites: None. General Education Designation: Cultural Diversity – [C]; Historical Awareness – [H]; Social and Behavioral Sciences - [SB]

### **HONORS (HON)**

HON201 – Leadership Development: Historical and Contemporary Perspectives  
LEC 3 Credits 3 Periods  
Interdisciplinary study of leadership focusing on development of leadership skills. Prerequisites: Admission to the college honors program or permission of instructor. General Education Designation: Social and Behavioral Sciences – [SB]

### **HUMANITIES (HUM)**

HUM100 - Great Ideas Symposium  
LEC 1 Credit 1 Period  
Interrelationships among cultures and behavior in the modern world. Focuses on selected themes and topics. Prerequisites: None.

HUM101 - General Humanities  
LEC 3 Credits 3 Periods  
A general humanities course concentrating on three great ages of outstanding human achievement: The Golden Age of Greece, the Renaissance and the 20th Century. Prerequisites: None. General Education Designation: Humanities and Fine Arts - [HU]

HUM107 – Humanities Through the Arts  
LEC 3 Credits 3 Periods  
Introduction to humanities including film, drama, music, literature, painting, sculpture, and architecture. Prerequisites: None. General Education Designation: Humanities and Fine Arts - [HU]

HUM190AA-AI - Honors Forum  
LEC 1 Credit 1 Period  
Interdisciplinary studies of selected issues confronting the individual and society. Formal LECTures followed by informal discussions 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. [AH through AI prefix have HU designation].

HUM201 – Humanities: Universal Themes  
LEC 3 Credits 3 Periods  
Study of worldviews in a variety of historical and contemporary

world cultures, including analysis of origin and creation myths, artistic expression, spirituality, and the natural environment. Prerequisites: None. General Education Designation: Global Awareness - [G] General Education Designation: Humanities and Fine Arts - [HU]

#### HUM205 - Introduction to Cinema

LEC 3 Credits 3 Periods

Survey of the history and development of the art of motion pictures, including criticism of aesthetic and technical elements. Prerequisites: None. Cross-References: THE205 General Education Designation: Humanities and Fine Arts - [HU]

#### HUM210 - Contemporary Cinema

LEC 3 Credits 3 Periods

A study of contemporary films, directors and critics with emphasis on evaluating film as an art form. Prerequisites: None. Cross-References: THE210 General Education Designation: Humanities and Fine Arts - [HU]

#### HUM213 - Hispanic Film

LEC 3 Credits 3 Periods

Analysis of Hispanic film as art form and as social commentary. Prerequisites: None. General Education Designation: Global Awareness - [G]; Humanities and Fine Arts - [HU]

#### HUM214 - African-Americans in Film

LEC 3 Credits 3 Periods

Study of films featuring African-American performers and directors from the Silent Era to the present. Emphasis on the historical and social elements of African Americans in film and basics of film analysis. Prerequisites: None. General Education Designation: Cultural Diversity - [C]; Humanities and Fine Arts - [HU]

#### HUM250 - Ideas and Values in the Humanities

LEC 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. General Education Designation: Historical Awareness - [H]; Humanities and Fine Arts - [HU]; Literacy and Critical Inquiry - [L]

#### HUM251 - Ideas and Values in the Humanities

LEC 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. General Education Designation: Historical Awareness - [H]; Humanities and Fine Arts - [HU]; Literacy and Critical Inquiry - [L]

#### HUM260 - Intercultural Perspectives

LEC 3 Credits 3 Periods

Cultural, literary, and artistic expressions of Native, Hispanic, and African Americans. Includes traditional and modern work

and contribution to American civilization. Prerequisites: None. General Education Designation: Cultural Diversity - [C]; Humanities and Fine Arts - [HU]

#### HUM292 - The Art of Storytelling

LEC 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 General Education Designation: Humanities and Fine Arts - [HU]; Cultural Diversity - [C]

### INFORMATION STUDIES (IFS)

#### IFS110 – Critical Research for College Success

LEC 1 Credit 1 Period

Access, evaluate, and incorporate sources appropriately into academic projects. Prerequisites: None. Course Notes: IFS110 may be repeated for a total of four (4) credit hours.

#### IFS201 – Research in the Digital Age

LEC 3 Credits 3 Periods

Development of skills and competency in accessing, evaluating and using information resources while examining the social and historical context, as well as the technological implications of the use and organization of information. Prerequisites: A grade of “C” or better in ENG101 or ENG107. General Education Designation: Literacy and Critical Inquiry - [L]

#### IFS210 – Research in a Global Society

LEC 3 Credits 3 Periods

A comparative study focused on access to digital information in a global environment. Explore the global culture developing around the Internet and the impact of local, national and global cultures as well as economic and social factors related to the flow of information in a global society. Examine emerging technologies to produce and distribute information across cultures in a global society in an ethical manner. Prerequisites: None. Course Notes: IFS210 may be repeated for a total of six (6) credit hours. General Education Designation: Global Awareness [G]

### INDUSTRY AND BUSINESS (IND)

#### IND133 - Speaking in Business

LEC 3 Credits 3 Periods

Practical, effective speech techniques for everyday business interactions. Listening skills and stages of and barriers to the perception process. Examination of effective message preparation skills and communication styles and techniques. Interaction emphasizing conflict management and resolution in oral communication. Prerequisites: None.

### INFANT/TODDLER DEVELOPMENT (ITD)

ITD200 – The Physical Child: Birth to Age Three

LEC 3 Credits 3 Periods  
Examines the physical aspects of child growth and development in the first three years of life in the context of contemporary communities. Includes nutrition and feeding, health and safety, motor skills and exercise, neurological development, and identification of developmental delay. Prerequisites: CFS/ECH176, or CFS235, or EED205.

ITD210 – Early Attachments, Relationships, and Families: Birth to Age Three

LEC 3 Credits 3 Periods  
Explores the attachment process and relationships within families. Considers contemporary social contexts where children develop a concept of self, self-regulation, and interaction skills with children and adults. Examines social-emotional development, societal stresses, and supportive professional roles and responsibilities. Prerequisites: CFS/ECH176, or CFS235, or EED205.

ITD220 – Cognition and Communication: Birth to Age Three

LEC 3 Credits 3 Periods  
Examines the cognitive development and language acquisition of infants and toddlers. Considers the role of people and daily environments on development. Also covers disabilities and developmental delays as well as major theories and research in the field. Prerequisites: CFS176/ECH176, or CFS235, or EED205

### **INFORMATION TECHNOLOGY SECURITY (ITS)**

ITS100 - Information Security Awareness

LEC 1 Credit 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

LEC + LAB 3 Credits 4 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 operating 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, or permission of Program Director. Prerequisites or Corequisites: Any MST150++ course.

### **MATHEMATICS (MAT)**

MAT065 - Graphing Calculator

LEC 1 Credit 1 Period

Computations, graphing, matrices, and elementary programming using a graphing calculator. Prerequisites: None.

MAT082 - Basic Arithmetic

LEC 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. Course Notes: Students may receive credit for only one of the following: MAT081, MAT082, or MAT083.

MAT090 - Developmental Algebra

LEC 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: A grade of "C" or better in MAT082 or successful completion of required Maricopa Modules or satisfactory score on District placement exam. Course Note: Students may receive credit for only one of the following: MAT090, MAT091, MAT092, or MAT093.

MAT091 - Introductory Algebra

LEC 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 successful completion of required Maricopa Modules or satisfactory score on District placement exam. Course Note: May receive credit for only one of the following: MAT090, MAT091, MAT092, or MAT093.

MAT092 - Introductory Algebra

LEC 3 Credits 3 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 successful completion of required Maricopa Modules or satisfactory score on District Placement exam. Course Note: May receive credit for only one of the following: MAT090, MAT091, MAT092, or MAT093

MAT093 - Introductory Algebra/Math Anxiety Reduction

LEC 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. This course will be supplemented by instruction in anxiety reducing techniques, math study skills, and test taking techniques. Prerequisites: Grade of "C" or better in MAT082 or successful

completion of required Maricopa Modules or satisfactory score on District placement exam. Course Note: Students may receive credit for only one of the following: MAT090, MAT091, MAT092, or MAT093.

#### MAT108 - Tutored Mathematics

LEC 2 Credits 2 Periods

Structured tutorial assistance and math study skills to help students achieve success in a mathematics course in which they are concurrently enrolled. Mathematics study skills emphasized. Prerequisites: None. Corequisites: MAT082, or MAT090, or MAT091, or MAT092, or MAT120, or MAT121, or MAT122, or MAT140, or MAT 141, or MAT 142, or MAT150, or MAT151, or MAT152, or permission of department chair. Course Note: MAT108 may be repeated for a total of ten (10) credits.

#### MAT112 - Mathematical Concepts/Applications

LEC 3 Credits 3 Periods

A problem solving approach to mathematics as it applies to real-life situations. Development, use and communication of mathematical concepts and applications that relate to measurement, percentage, practical geometry, statistics, finance, and unit conversions. Prerequisites: A grade of "C" or better in MAT090, or MAT091, or MAT092, or MAT093, or successful completion of Maricopa modules, or satisfactory score on District placement exam.

#### MAT120 - Intermediate Algebra

LEC 5 Credits 5 Periods

Analysis of rational, radical, quadratic and exponential equations, functions and applications; graphs of radical, quadratic and exponential functions; operations on polynomial, rational, and radical expressions Prerequisites: (A grade of "C" or better in MAT090, MAT091, MAT092, or MAT093) or successful completion of required Maricopa Modules, or satisfactory score on the District placement exam. Course Note: Students may receive credit for only one of the following: MAT120, MAT121, or MAT122.

#### MAT121 - Intermediate Algebra

LEC 4 Credits 4 Periods

Analysis of rational, radical, quadratic and exponential equations, functions and applications; graphs of radical, quadratic and exponential functions; operations on polynomial, rational, and radical expressions. Prerequisites: (A grade of "C" or better in MAT090, or MAT091, or MAT092, or MAT093), or successful completion of required Maricopa Modules, or a satisfactory score on the District placement exam Course Note: May receive credit for only one of the following: MAT120, MAT121, or MAT122.

#### MAT122 - Intermediate Algebra

LEC 3 Credits 3 Periods

Analysis of rational, radical, quadratic and exponential equations, functions and applications; graphs of radical, quadratic and exponential functions; operations on polynomial, rational, and radical expressions Prerequisites: (A grade of "B" or better in MAT090, or MAT091, or MAT092, or MAT093),

or successful completion of required Maricopa Modules, or satisfactory score on the District placement exam. Course Note: May receive credit for only one of the following: MAT120, MAT121, or MAT122.

#### MAT140 - College Mathematics

LEC 5 Credits 5 Periods

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: (A grade of "C" or better in MAT090, or MAT091, or MAT092, or MAT093), or successful completion of Maricopa Modules, or satisfactory score on District placement exam, or a grade of "C" or better in MAT120, or MAT121, or MAT122. Course Notes: Students may receive credit for only one of the following: MAT140, MAT141, or MAT142. General Education Designation: Mathematics - [MA]

#### MAT141 - College Mathematics

LEC 4 Credits 4 Periods

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: (A grade of "C" or better in MAT090, or MAT091, or MAT092, or MAT093), or successful completion of Maricopa Modules, or satisfactory score on District placement exam, or a grade of "C" or better in MAT120, or MAT121, or MAT122. Course Note: Students may receive credit for only one of the following: MAT140, MAT141, or MAT142. General Education Designation: Mathematics - [MA]

#### MAT142 - College Mathematics

■ MAT1142

LEC 3 Credits 3 Periods

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: (A grade of "B" or better in MAT090, or MAT091, or MAT092, or MAT093), or successful completion of Maricopa Modules, or satisfactory score on District placement exam, or a grade of "C" or better in MAT120, or MAT121, or MAT122. Course Notes: Students may receive credit for only one of the following: MAT140, MAT141, or MAT142. General Education Designation: Mathematics - [MA] Arizona Shared Unique Number SUN# 1142

#### MAT150 - College Algebra/Functions

LEC 5 Credits 5 Periods

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 C or better in MAT120, or MAT121, or MAT122, or equivalent, or satisfactory score on

District placement exam. Course Notes General Education Designation: Mathematics - [MA]

**MAT151 - College Algebra/Functions**

■ MAT1151

LEC 4 Credits 4 Periods

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 "C" or better in MAT120, or MAT121, or MAT122, or equivalent, or satisfactory score on District placement exam. Course Note: Students may receive credit for only one of the following: MAT150, MAT151, MAT152, or MAT187. General Education Designation: Mathematics - [MA] Arizona Shared Unique Number SUN# 1151

**MAT152 - College Algebra/Functions**

LEC 3 Credits 3 Periods

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 "B" or better in MAT120, or MAT121, or MAT122, or equivalent, or satisfactory score on District placement exam.

Course Notes: Students may receive credit for only one of the following: MAT150, MAT151, MAT152, or MAT187. General Education Designation: Mathematics - [MA] in combination with: MAT182

**MAT156 - Mathematics for Elementary Teachers I**

LEC 3 Credits 3 Periods

Focuses on numbers and operations. Algebraic reasoning and problem solving integrated throughout the course. Prerequisites: Grade of "C" or better in MAT142 or MAT150 or MAT151 or MAT152 or equivalent, or satisfactory score on District placement exam.

**MAT157 - Mathematics for Elementary Teachers II**

LEC 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**

LEC 3 Credits 3 Periods

An introduction to the mathematics required for the study of social and behavioral sciences. Includes sets, combinatorics, probability, matrix algebra, linear programming and mathematics of finance. Prerequisites: Grade of "C" or better in MAT150, or MAT151, or MAT152, or MAT187 or equivalent, or satisfactory score on District placement exam. General Education Designation: Mathematics - [MA]

**MAT182 - Plane Trigonometry**

LEC 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: MAT 182 or MAT 187. Prerequisites: Grade of "C" or better in MAT150, or MAT151, or MAT152, or equivalent, or concurrent registration in MAT150, or MAT151, or MAT152, or satisfactory score on District placement exam. [MAT152 and MAT182 must be taken as block to meet AGEC value.] General Education Designation: Mathematics - [MA]

**MAT187 - Pre-calculus**

■ MAT1187

LEC 5 Credits 5 Periods

A precalculus course combining topics from college algebra and trigonometry. Preparation for analytic geometry and calculus. Prerequisites: Grade of B or better in MAT120, or MAT121, or MAT122, or equivalent, or satisfactory score on district placement exam. Course Note: Strongly recommended that students have some knowledge of trigonometry. Students may receive credit for only one of the following: MAT150, MAT151, MAT152, or MAT187. General Education Designation: Mathematics - [MA] Arizona Shared Unique Number SUN# 1187

**MAT206 - Elements of Statistics**

■ MAT1160

LEC 3 Credits 3 Periods

Basic concepts and applications of statistics, including data description, estimation and hypothesis tests.

Prerequisites: (A grade of "C" or better in MAT140 or MAT141 or MAT142) or (A grade of "C" or better in MAT150 or MAT151 or MAT152) or equivalent, or satisfactory score on District placement exam. General Education Designation: Computer/Statistics/Quantitative Applications - [CS] Arizona Shared Unique Number SUN# 1160

**MAT212 - Brief Calculus**

■ MAT2212

LEC 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 appropriate Math placement test score. Course Notes: Students may receive credit for only one of the following: MAT212 or MAT213. General Education Designation: Mathematics - [MA] Arizona Shared Unique Number SUN# 2212

**MAT213 - Brief Calculus**

LEC 4 Credits 4 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 appropriate Math placement test score. Course Notes: Students may receive credit for only one of the following: MAT212 or MAT213. General Education Designation: Mathematics - [MA]

#### MAT218 - Mathematical Analysis for Business

LEC 4 Credits 4 Periods

An introduction to the mathematics required for the study of business. Includes multivariable optimization, Lagrange multipliers, linear programming, linear algebra, probability, random variables, discrete and continuous distributions. Prerequisites: Grade of C or better in MAT212 or MAT213.

#### MAT220 - Calculus with Analytic Geometry I

■ MAT220

LEC 5 Credits 5 Periods

Limits, continuity, differential and integral calculus of functions of one variable. Prerequisites: Grade of “C” or better in [MAT182 and (MAT150, MAT151 or MAT152)], or MAT187, or appropriate Math placement test score. Course Note: Students may receive credit for only one of the following: MAT220 or MAT221. General Education Designation: Mathematics - [MA] Arizona Shared Unique Number SUN# 2220

#### MAT221 - Calculus with Analytic Geometry I

LEC 4 Credits 4 Periods

Limits, continuity, differential and integral calculus of functions of one variable. Prerequisites: Grade of “C” or better in [MAT182 and (MAT150, MAT151 or MAT152)], or MAT187, or appropriate Math placement test score. Course Note: Student may receive credit for only one of the following: MAT220 or MAT221. General Education Designation: Mathematics - [MA]

#### MAT225 – Elementary Linear Algebra

LEC 3 Credits 3 Periods

Introduction to matrices, systems of linear equations, determinants, vector spaces, linear transformations and eigenvalues. Emphasizes the development of computational skills. Prerequisites: Grade of “C” or better in MAT212 or MAT220, or MAT221, or equivalent.

#### MAT230 – Calculus with Analytic Geometry II

■ MAT230

LEC 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. Students may receive credit for only one of the following: MAT230 or MAT231. General Education Designation: Mathematics - [MA] Arizona Shared Unique Number SUN# 2230

#### MAT231 - Calculus with Analytic Geometry II

LEC 4 Credits 4 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. General Education Designation: Mathematics - [MA]

#### MAT240 – Calculus with Analytic Geometry III

LEC 5 Credits 5 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: Students may receive credit for only one of the following: MAT240 or MAT241. Course Attributes: General Education Designation: Mathematics - [MA]

#### MAT241 - Calculus with Analytic Geometry III

■ MAT241

LEC 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 Note: Student may receive credit for only one of the following: MAT240 or MAT241. General Education Designation: Mathematics - [MA] Arizona Shared Unique Number SUN# 2241

#### MAT256 – Investigating Quantity: Number, Operations and Numeration Systems

LEC 4 Credits 4 Periods

Explore number, numeration systems and operations on numbers. Techniques of problem solving with an emphasis on exploring a variety of strategies. Use a variety of visualization techniques to develop a conceptual understanding of these topics. Prerequisites: A grade of “C” or better in (MAT150 or MAT151 or MAT152 or higher), or a grade of “C” or better in [(MAT120 or MAT121 or MAT122) and (MAT140 or MAT141 or MAT142 or higher)], or [a grade of “C” or better in (MAT140 or MAT141 or MAT142) and satisfactory score on District placement exam to permit enrollment in (MAT150 or MAT151 or MAT152 or higher)]. Course Notes: MAT256 is designed to meet requirements for prospective elementary education teachers.

#### MAT257 – Investigating Geometry, Probability and Statistics

LEC 4 Credits 4 Periods

Explores geometry, measurement, probability and statistics. Uses visualization, technologies, problem solving, reasoning and proof to develop a conceptual understanding of these topics. Prerequisites: MAT256 or permission of Instructor. Course Notes: MAT257 is designed to meet the requirements for prospective elementary education teachers.

#### MAT262 - Differential Equations

■ MAT262

LEC 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.  
General Education Designation: Mathematics - [MA] Arizona  
Shared Unique Number SUN# 2262

**MAT276 - Modern Differential Equations**  
LEC 4 Credits 4 Periods  
Introduces differential equations, theoretical and practical solution techniques with applications. Problem solving using MATLAB. Prerequisites: Grade of "C" or better in MAT230, or MAT231, or permission of Department or Division. Course Notes: Students may receive credit for only one of the following: MAT276 or MAT277. General Education Designation: Mathematics - [MA]

**MAT277 - Modern Differential Equations**  
LEC 3 Credits 3 Periods  
Introduces differential equations, theoretical and practical solution techniques with applications. Problem solving using MATLAB. Prerequisites: Grade of C or better in MAT230 or MAT231 or permission of Department or Division. General Education Designation: Mathematics - General Education Designation: Mathematics - [MA]

#### **MANAGEMENT (MGT)**

**MGT101 - Techniques of Supervision**  
LEC 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.

**MGT135 - Global Procurement and Supply Management**  
LEC 3 Credits 3 Periods  
The evolution of purchasing to supply management. Underlying fundamentals of tactical purchasing and strategic supply management. Prerequisites: MGT102 or permission of department.

**MGT175 - Business Organization and Management**  
LEC 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**  
LEC + LAB 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

**MGT180 - Retail Management**  
LEC 3 Credits 3 Periods  
The role of management in retailing and retail performance.

Challenges and processes of retail management across various institutions. Prerequisites: None

**MGT229 - Management and Leadership I**  
LEC 3 Credits 3 Periods  
Covers management concepts and applications for business, industry, and government organizations. Prerequisites: None.

**MGT230 - Management and Leadership II**  
LEC 3 Credits 3 Periods  
Includes practical applications of activities, issues, and problems related to current managerial and supervisory skills and talents. Prerequisites: MGT 229 or departmental approval.

**MGT251 - Human Relations in Business**  
LEC 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. MGT 101 or MGT 175 or MGT 229 suggested, but not required.

**MGT253 - Owning and Operating a Small Business**  
LEC 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.

**MGT275 - Office Management and Procedures**  
LEC 3 Credits 3 Periods  
Covers basic administrative office services and systems, including analysis and management of operations, information systems, human resources, and facilities design. Prerequisites: None. MGT 175 or MGT 229 suggested, but not required.

**MGT276 - Personnel/Human Resource Management**  
LEC 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.

**MGT277 - Labor Relations**  
LEC 3 Credits 3 Periods  
Covers the historical, legal, and environmental parameters surrounding current labor/management relations, including contract negotiations and grievance procedures. Prerequisites: None. MGT101, MGT175, or MGT229 suggested but not required.

**MGT296WA-WD - Cooperative Education**  
LAB 1-4 Credits 5-20 Periods/arranged  
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. Co requisites: 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.

### **MUSIC HISTORY/LITERATURE (MHL)**

MHL140 - Survey of Music History

LEC 3 Credits 3 Periods

Study of composers, compositions, styles, and Periods in music history. Prerequisites: None. General Education Designation: Historical Awareness - [H]; Humanities and Fine Arts - [HU]

MHL145 - American Jazz and Popular Music

LEC 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. General Education Designation: Cultural Diversity - [C]; Humanities and Fine Arts - [HU]

MHL153 - Rock Music and Culture

LEC 3 Credits 3 Periods

History of Rock music and how cultural, social, political, and economic conditions have shaped its evolution. Prerequisites: None. General Education Designation: Historical Awareness - [H]; Humanities and Fine Arts - [HU]

### **MARKETING (MKT)**

MKT101 - Introduction to Public Relations

LEC 3 Credits 3 Periods

Emphasizes public relations techniques used both within and outside the business organization, including operation of a PR counseling firm. Prerequisites: None.

MKT109 - Introduction to Fashion Merchandising

LEC 3 Credits 3 Periods

Explores the various levels and specialized segment of the fashion industry, the principles of fashion, the fundamentals of merchandising apparel, consumers' influence on demand and marketing activities. Prerequisites: None.

MKT110 - Marketing and Social Networking

LEC 3 Credits 3 Periods

Theory and practice in the use of social media in marketing. Topics may include a history of social media, preparation for social marketing, the power of collective influence, and how to engage with social media. Reviews social mediums, social networks, platforms and other marketing tools used to create a social media campaigns. Prerequisites: None.

MKT151 Display and Visual Merchandising

LEC + LAB 3 Credits 4 Periods

An examination of the principles of design including line, color, balance, and texture as they relate to the display of merchandise. Participation in displays, field trips, and individual projects. Prerequisites: None

MKT263 - Advertising Principles

LEC 3 Credits 3 Periods

Introduces the advertising function within business, including media study, creative strategies, and advertising campaigns. Prerequisites: None. MKT 271 recommended, but not required.

MKT267 - Principles of Salesmanship

LEC 3 Credits 3 Periods

Analyzes and applies the steps and techniques used in personal selling. Highlights the role of the professional sales representative and his/her functions as they relate to the company's mission and customer expectations. Prerequisites: None.

MKT268 - Merchandising

LEC 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

LEC 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.

MKT273 - Marketing Research

LEC 3 Credits 3 Periods

Planning and preparing for a marketing research effort and presentation of research findings in a professional manner. Includes the study of problem definition, sampling methods, statistical analysis, presentation techniques, and evaluation of data. Prerequisites: MKT271, or permission of instructor.

MKT280AA-AC

LEC + LAB 1-3 Credits 1-3 Periods

Marketing work experience in a business or industry. 80 hours of designated work per credit. Maximum of 8 credits allowed. Prerequisites: Departmental approval.

### **MICROCOMPUTER TECHNOLOGY (MST)**

MST140 - Microsoft Networking Essentials

LEC + LAB 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.

MST150 - Microsoft Windows Professional

LEC + LAB 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.

MST150EI – Configuring Windows 8  
LEC + LAB 3 Credits 4 Periods

In-depth exploration of how to effectively install and configure Windows 8. Includes features of Windows 8, virtualization with Hyper-V, network connectivity, access to resources, monitor and maintain Windows clients and backup and recovery. Designed to prepare students for the Microsoft Windows 8 certification examination (70-687). Prerequisites: MST140, or CNT140++, or permission of Instructor.

MST150SV - Microsoft Windows 7 Configuration  
LEC + LAB 3 Credits 4 Periods

Knowledge and skills necessary to perform installation and day-to-day administration and support of the Microsoft Windows 7 operating system. Prerequisites: None. CIS190, or CNT140AA, or MST140 suggested but not required. Course Notes: Preparation for Microsoft certification examination 70-680.

MST150XP - Microsoft Windows XP Professional  
LEC + LAB 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.

MST155DB – Configuring Advanced Windows Server Services  
LEC + LAB 4 Credits 5 Periods

In-depth exploration of how to effectively install and configure Windows Server. Designed to prepare students for the Microsoft Configuring Advanced Windows Server Services examination (70-412). Prerequisites: MST158++ or permission of Instructor. Course Notes: Recommend that prerequisite course completed was for the same version of Windows server as will be taught in this course.

MST157DA - Active Directory Windows Server Configuration  
LEC + LAB 4 Credits 5 Periods

Information and skills necessary to install, configure and administer Active Directory service. Covers tasks required to create users and groups, and to implement Group Policies which provide centralized management of users and computers. Prerequisites: Any MST course or permission of Instructor. Course Notes: MST157DA is a preparation for the Microsoft 70-640 professional certification test.

MST158DB – Installing and Configuring Windows Server  
LEC + LAB 4 Credits 5 Periods

In-depth exploration of how to effectively install and configure Windows Server. Includes roles and features of Server, virtualization with Hyper-V, core network services, Active Directory, and Group Policy. Designed to prepare students for

the corresponding Microsoft Windows Server Installation and Configuration examination (70-410). Prerequisites: (MST140 or CNT140++) and MST150++, or permission of Instructor.

### **MUSIC: THEORY/COMPOSITION (MTC)**

MTC101 - Introduction to Music Theory  
LEC 3 Credits 3 Periods

Designed to develop written and aural skills necessary for advanced study of music theory and skills. Recommended for music majors. Prerequisites: None.

MTC105 - Music Theory I  
LEC 3 Credits 3 Periods

The chronological study of music theory including: harmony, melody, texture, structure and timbre through analysis,

original compositions and basic exercises to demonstrate musical concepts. Prerequisites: MTC100 or MTC101 or permission of instructor; Co-requisites: MTC106.

MTC106 - Aural Perception I  
LEC + LAB 1 Credit 2 Periods

The development of listening and performing skills through dictation, sight singing and keyboard harmony. Co requisites: MTC105.

MTC130 - Jazz Theory  
LEC 2 Credits 2 Periods

Develop written and aural theory skills necessary in the jazz idiom. Prerequisites: (MTC101 and MTC103), or permission of Instructor. Course Notes: MTC130 is recommended for students taking jazz improvisation, jazz composition and jazz combo.

MTC155 - Music Theory II  
LEC 3 Credits 3 Periods

A continuation of Music Theory I with emphasis on harmony and part-writing procedures. Prerequisites: MTC105. Co requisites: MTC156.

MTC156 - Aural Perception II  
LEC + LAB 1 Credit 2 Periods

A continuation of Aural Perception I, including harmonic practices. Prerequisites: None. Co requisites: MTC155.

### **MUSIC: COMMERCIAL/BUSINESS (MUC)**

MUC109 - Music Business: Merchandising and the Law  
LEC 3 Credits 3 Periods

Operation, scope, and career opportunities in the music business. Focuses on music in the marketplace, songwriting, publishing, copyright procedures, and business affairs, agents, artist management, and concert production. Prerequisites: None.

MUC110 - Music Business: Recording and Mass Media  
LEC 3 Credits 3 Periods

The operation, scope, and career opportunities in the music business. Focuses on the record industry; environmental

music; uses of music in radio, telecommunications, and film; and career options. Prerequisites: None.

**MUC111 - Digital Audio Workstation I (DAW I)**

LEC + LAB 3 Credits 5 Periods

Use of digital mixing and automation software in conjunction with editing and recording. Includes computer operation, troubleshooting, and file management. Prerequisites: MUC195 or MUC195AA.

**MUC195 - Studio Music Recording I**

LEC + LAB 3 Credits 5 Periods

Basic principles of studio sound recording. Emphasis on musical acoustics, operation of recording equipment, studio setups, and multitrack recording. Includes studio session process and musical production decisions. Prerequisites: None.

**MUC196 - Studio Music Recording II**

LEC + LAB 3 Credits 6 Periods

Emphasis on signal-processing equipment, mixing consoles, and advanced musical recording session procedures, production, and engineering. Includes mix-down and resultant master tape of a musical recording session. Prerequisites: MUC195 or MUC195AA

**MUC209 - Music Industry Entrepreneurship**

LEC 3 Credits 3 Periods

Operation, scope, and career opportunities in the music business. Focuses on music in the areas of entrepreneurship, visionary development and the collaboration process. Prerequisites: MUC109 and MUC110 or permission of Instructor.

**MUC290AA – Music Business Internship**

LEC + LAB 1 Credit 1 Period

Music Business Internship work experience. Perform a variety of activities, to fulfill the routines and responsibilities of the department or business where the internship is served. Eighty (80) hours of designated work per credit. Prerequisites: Permission of Department or Division. Course Notes: MUC290AA may be repeated for a total of twelve (12) credit hours.

**MUC295AA - Self Promotion for Music**

LEC 1 Credit 1 Period

Career goal development. Includes self-presentation and communication skills, keeping files and records, and developing self-promotional materials. Prerequisites: None.

**MUC297AB - Music Internship**

LEC + LAB 2 Credits 2 Periods

Music Internship work experience in a business or industry eighty (80) hours of designated work per credit. A maximum of 12 credits allowed. Prerequisites: MUC110.

**MUC298AA-AC – Special Projects**

LAB 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.

**MUSIC: PERFORMANCE (MUP)**

**MUP101AA-CJ - Private Instruction**

LEC + LAB 1 Credit .6 Periods

Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. May be repeated for Credit. Prerequisites: None. Editors Note: See online course catalog for additional private instruction course descriptions.

**MUP102AA-CJ - Private Instruction**

LEC + LAB 2 Credits 1.2 Periods

Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. May be repeated for Credit. Prerequisites: None. Editors Note: See online course catalog for additional private instruction course descriptions.

**MUP110 - Concert Music**

LEC 0.50 Credits 0.50 Periods

Attendance at concerts, recitals and music Lectures on and off campus. Required each semester for all music majors. Prerequisites: None

**MUP131 - Class Piano I**

LEC + LAB 2 Credits 3 Periods

Development of beginning piano techniques and the fundamentals of music including basic hand position, music reading skills of melodic and harmonic material, major scales, transposition, and harmonization's including the I, IV, V7 chords. Prerequisites: None.

**MUP132 - Class Piano II**

LEC + LAB 2 Credits 3 Periods

Continuation of Piano I with emphasis on elementary piano techniques including major and minor scales, transposition, improvisation, and sight reading. Prerequisites: MUP 131 or permission of instructor.

**MUP133 - Class Voice I**

LEC + LAB 2 Credits 3 Periods

Introduction to the fundamentals of vocal production. Emphasis on breathing techniques, tone production and

performances in class of solo vocal literature. Prerequisites: None.

MUP134 - Class Voice II

LEC + LAB 2 Credits 3 Periods

Continuation of Class Voice I including the elements of stage presence and diction. Prerequisites: MUP 133 or permission of instructor.

MUP149 - Gospel Chorus

LEC + LAB 1 Credit 3 Periods

A mixed chorus with emphasis on college/community participation and preparation of a variety of Gospel Music for public performance. Auditions may be required. Prerequisites: None.

MUP150 - Community Chorus

LEC + LAB 1 Credit 3 Periods

A mixed chorus with emphasis on college/community participation and preparation of a variety of choral literature for public performance. Auditions may be required. May be repeated for Credit. Prerequisites: None.

MUP152AA - Private Instruction: Voice

LEC + LAB 2 Credits 1.2 Periods

Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: MUP102AA. Course Notes: MUP152AA may be repeated for credit.

MUP152AD - Private Instruction: Piano

LEC + LAB 2 Credits 1.2 Periods

Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: MUP102AD. Course Notes: MUP152AD may be repeated for credit.

MUP153 - Concert Choir

LEC + LAB 2 Credits 5 Periods

A mixed choir designed to emphasize choral techniques and performance of all styles of choral literature. Public performances are scheduled each semester. Prerequisites: None. Course Notes: Auditions may be required. MUP153 may be repeated for credit.

MUP159 - Community Orchestra

LEC + LAB 1 Credit 3 Periods

Emphasis on college/community participation and the preparation of orchestral literature for public performance. Auditions may be required. May be repeated for credit. Prerequisites: None.

MUP160 - Orchestra

LEC + LAB 2 Credits 5 Periods

A class designed to emphasize orchestral ensemble techniques and the preparation of all styles of orchestral literature. Public performances are scheduled during the year. Prerequisites: None. Course Notes: MUP160 may be repeated for credit. Auditions may be required.

MUP161 - Community Band

LEC + LAB 1 Credits 3 Periods

Emphasis on college/community participation and the preparation of band literature for public performance. Auditions may be required. May be repeated for Credit. Prerequisites: None.

MUP163 - Jazz Ensemble

LEC + LAB 1 Credit 3 Periods

Practical and performance experience in various jazz styles. Open to all students on the basis of auditions. May be repeated for Credit. Prerequisites: None.

MUP164 - Jazz Improvisation I

LEC 2 Credits 3 Periods

Theoretical and performance skills in many styles of jazz improvisation. May be repeated for a total of six (6) credit hours. Prerequisites: None.

MUP168 - Mariachi Band

LEC + LAB 1 Credit 3 Periods

Emphasis on college and community participation and the preparation of mariachi band literature for public performance. Auditions may be required. Prerequisites: None.

MUP181 - Chamber Music Ensembles

LEC + LAB 1 Credit 2 Periods

Practical and performance experience in instrumental, vocal, and mixed ensembles. Prerequisites: None Course Notes: MUP181 may be repeated for credit.

MUP217 - Music Theatre: Broadway Solos

LEC + LAB 2 Credits 3 Periods

Study and in-class performance of scenes and solos from Broadway musical literature. Prerequisites: None. Course Notes: MUP217 may be repeated for credit.

MUP218 - Audition Tech: Music Theater

LEC + LAB 1 Credits 3 Periods

Practice in the techniques of auditioning for musical theater. Identification and illustration techniques of the vocal and acting music theater audition. Prerequisites: None.

MUP225 - Class Guitar I

LEC + LAB 2 Credits 3 Periods

Emphasis on note-reading and folk-style harmonic accompaniment. Includes finger-style laying. Stresses development of efficient practicing techniques and proper sitting and hand positions. Prerequisites: None.

MUP226 - Class Guitar II

LEC + LAB 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.

#### MUP231 - Class Piano III

LEC + LAB 2 Credits 3 Periods

Development of intermediate piano techniques including selected solo literature, transposition of harmonic patterns, and secondary dominants. Prerequisites: MUP132 or permission of instructor.

#### MUP232 - Class Piano IV

LEC + LAB 2 Credits 3 Periods

Continuation of Piano III including modulation techniques, improvisation of piano accompaniments, advanced chromatic harmony, and sight reading of advanced literature. Prerequisites: MUP231 or permission of instructor.

#### MUP233 - Class Voice III

LEC + LAB 2 Credits 3 Periods

Interpretive singing through a closer examination of coloring, tone production, dynamics, and tempo indications. Prerequisites: MUP134.

#### MUP234 - Class Voice IV

LEC + LAB 2 Credits 3 Periods

Emphasis on the preparation of solo vocal literature for the purpose of evaluation and the integration of the music with the drama of the music. Prerequisites: MUP233 or permission of instructor. Course Notes: MUP234 may be repeated for credit.

### **NAVAJO (NAV)**

#### NAV101 - Elementary Navajo I

LEC 4 Credits 4 Periods

Basic grammar, pronunciation, and vocabulary of the Navajo language. Practice of listening, speaking, reading, and writing skills. Includes the study of the Navajo culture with participation in an off-campus Navajo cultural event. Prerequisites: None.

#### NAV102 - Elementary Navajo II

LEC 4 Credits 4 Periods

Continued study of grammar, pronunciation, and vocabulary of the Navajo language. Emphasis on listening, speaking, reading, and writing skills. Prerequisites: NAV101 or permission of department. Course Note: Includes the study of the Navajo culture with participation in an off-campus Navajo cultural event.

#### NAV113 - Beginning Navajo Conversation I

LEC 3 Credits 3 Periods

Beginning conversational Navajo with emphasis on basic listening and speaking skills, including basic pronunciation, vocabulary, sentence structure, and cultural awareness. Prerequisites: None.

### **PHYSICAL EDUCATION (PED)**

#### PED101BA - Baseball

LEC + LAB 1 Credit 2 Periods

Basic skills and game strategy of baseball. Class emphasis on competition and drills. Prerequisites: None.

#### PED101BB - Basketball

LEC + LAB 1 Credit 2 Periods

Basic skills and game strategy of basketball. Class emphasis on competition and drills. Prerequisites: None. Course Note: PED101BB may be repeated for credit.

#### PED101BC - Boot Camp

LEC + LAB 1 Credit 2 Periods

Vigorous physical and mental conditioning incorporating cardiovascular, core fitness, strength training, and flexibility. Emphasis will be placed on proper body mechanics and safety. Prerequisites: None. Course Note: PED101BC may be repeated for credit.

#### PED101FL - Fitness for Life

LEC + LAB 1 Credit 2 Periods

Learn the basics of designing and implementing a personalized fitness program to meet your needs in the areas of Cardiovascular Fitness, Weight Control, Muscular Strength and Flexibility. Prerequisites: None. Course Note: PED101FL may be repeated for credit.

#### PED101GO - Golf

LEC + LAB 1 Credit 2 Periods

Instruction and practice for all skill levels, beginning through advanced. Assistance on shot making, club selection and etiquette on the course. Prerequisites: None. Course Note: PED101GO may be repeated for credit.

#### PED101KA - Karate

LEC + LAB 1 Credit 2 Periods

Training emphasizes fundamentals, traditional form, and applied sparring that follows the theory of Karate. Prerequisites: None. Course Note: PED101KA may be repeated for credit.

#### PED101KB - Kickboxing

LEC + LAB 1 Credit 2 Periods

Techniques to increase muscular endurance and strength, enhance flexibility and increase body awareness and self-confidence. Jabs, kicks, and blocks will be used in this martial arts based workout. Prerequisites: None. Course Note: PED101KB may be repeated for credit.

#### PED101PC - Physical Conditioning

LEC + LAB 1 Credit 2 Periods

Exercise program with access to free weights, strength machines and cardio equipment. Prerequisites: None. Course Notes: PED101PC may be repeated for credit.

#### PED101PS - Pilates

LEC + LAB 1 Credit 2 Periods

Mat-based exercise system focused on improving flexibility

and strength for the total body. Teaches core control and stabilization while improving postural alignment. Prerequisites: None. Course Note: PED101PS may be repeated for credit.

**PED101SB - Softball**

LEC + LAB 1 Credit 2 Periods

Basic skills and game strategy of softball. Class emphasis on competition and drills. Prerequisites: None  
Course Notes: PED101SB may be repeated for credit.

**PED101SO - Soccer**

LEC + LAB 1 Credit 2 Periods

Basic skills and game strategy of soccer. Class emphasis on competition and drills. Prerequisites: None. Course Note: PED101SO may be repeated for credit.

**PED101ST – Strength Training**

LEC + LAB 1 Credit 2 Periods

Introduction to techniques of basic weight training, concentrating on incorporating an exercise regimen for increased strength. Prerequisites: None Course Notes: PED101ST may be repeated for credit.

**PED101VB - Volleyball**

LEC + LAB 1 Credit 2 Periods

Basic skills and game strategy of volleyball. Class emphasis on competition and drills. Prerequisites: None. Course Note: PED101VB may be repeated for credit.

**PED101WT - Weight Training**

LEC + LAB 1 Credit 2 Periods

Access to Olympic and Free Weights with a qualified instructor. Prerequisites: None. Course Note: PED101WT may be repeated for credit.

**PED101YO - Yoga**

LEC + LAB 1 Credit 2 Periods

Promotion of overall health by strengthening muscles and stimulating glands and organs. Basic postures, breathing and relaxation techniques. Prerequisites: None. Course Note: PED101YO may be repeated for credit.

**PED101ZU - Zumba® Fitness**

LEC + LAB 1 Credit 2 Periods

Zumba® dynamic fitness program. Features high energy, easy to follow rhythmic moves set to energizing Latin and international beats. Provides an enjoyable way to increase fitness level. Prerequisites: None. Course Notes: PED101ZU may be repeated for a total of (4) credit hours.

**PED102 - Physical Activities: Intermediate**

LEC + LAB 1 Credit 2 Periods

Individual, dual, or team sports activities at the intermediate level. Prerequisites: None. Prior experience recommended.

**PED102BA - Baseball: Intermediate**

LEC + LAB 1 Credit 2 Periods

To improve upon basic skills and game strategy of baseball at the intermediate level. Class emphasis on competition and

drills. Prerequisites: None. Prior experience recommended. Course Note: PED102BA may be repeated for credit.

**PED102BB - Basketball - Intermediate**

LEC + LAB 1 Credit 2 Periods

To improve upon basic skills and game strategy of basketball at the intermediate level. Class emphasis on competition and drills. Prerequisites: None. Prior experience recommended.

**PED102BC - Boot Camp - Intermediate**

LEC + LAB 1 Credit 2 Periods

Vigorous training at an intermediate level incorporating cardiovascular, core fitness, strength training, and flexibility. Emphasis will be placed on proper body mechanics and safety. Prerequisites: None. Prior experience recommended. Course Note: PED102BC may be repeated for credit.

**PED102GO - Golf - Intermediate**

LEC + LAB 1 Credit 2 Periods

Improving techniques of putting, chipping, the full swing, rules and scoring will be covered in this class. Prerequisites: None. Prior experience recommended. Course Note: PED102GO may be repeated for credit.

**PED102SB - Softball - Intermediate**

LEC + LAB 1 Credit 2 Periods

Improve upon basic skills and game strategy of softball at the intermediate level. Class emphasis on competition and drills. Prerequisites: None. Prior experience recommended. Course Note: PED102SB may be repeated for credit.

**PED102SO - Soccer - Intermediate**

LEC + LAB 1 Credit 2 Periods

To improve upon basic skills and game strategy of soccer at the intermediate level. Class emphasis on competition and drills. Prerequisites: None. Prior experience recommended. Course Note: PED102SO may be repeated for credit.

**PED102ST – Strength Training – Intermediate**

LEC + LAB 1 Credit 2 Periods

Intermediate techniques of strength training, concentrating on incorporating an exercise regimen for increased strength and endurance. Not recommended for the beginning weight lifter. Prerequisites: None. Prior experience recommended. Course Notes: PED102ST may be repeated for credit.

**PED102WT - Weight Training - Intermediate**

LEC + LAB 1 Credit 2 Periods

Increase knowledge and training with a qualified instructor on the use of Olympic and Free Weights. Prerequisites: None. Prior experience recommended. Course Note: PED102WT may be repeated for credit.

**PED102YO - Yoga - Intermediate**

LEC + LAB 1 Credit 2 Periods

Yoga for the experienced practitioner. Prerequisites: None. Prior experience recommended. Course Note: PED102YO may be repeated for credit.

**PED103BC - Boot Camp**

LEC + LAB 0.5 Credits 1 Periods

Vigorous physical and mental conditioning incorporating cardiovascular, core fitness, strength training, and flexibility. Emphasis will be placed on proper body mechanics and safety. Prerequisites: None Course Note: PED103BC may be repeated for credit.

**PED103GO - Golf**

LEC + LAB 0.50 Credits 1 Period

Instruction and practice for all skill levels, beginning through advanced. Assistance on shot making, club selection and etiquette on the course. Prerequisites: None. Course Note: PED103GO may be repeated for credit.

**PED115 - Lifetime Fitness**

LEC + LAB 2 Credits 4 Periods

Increase personal fitness, strength, and vitality. Current principles of cardiovascular exercise, weight training, flexibility, and balance exercises applicable to lifetime fitness goals. Personalized fitness plans developed and implemented with support of highly trained fitness professionals. Techniques to make sessions more effective and enjoyable. Prerequisites: None. Course Note: PED115 may be repeated for a total of (8) credit hours.

**PED117 - Weight Training for Wellness**

LEC + LAB 2 Credits 4 Periods

Strength training and muscular fitness activity to help develop a lifetime of regular exercise and muscular strength maintenance. Development of full body strength and stability of the body's core musculature, translating to increased power, balance, and functional movement ability including assessment of current strength and goal-specific program design to increase strength and muscular fitness. Prerequisites: None. Course Note: PED117 may be repeated for a maximum of eight (8) credits.

**PED120AF - Special Emphasis Activities: Weight Training**

LEC + LAB 2 Credits 4 Periods

Intensive experience in weight training. Prerequisites: None. Course Note: PED120AF may be repeated for a total of 8 credits.

**PED124 – Strength and Conditioning for Sport Performance: Basic**

LEC+LAB 2 Credits 4 Periods

Introduction to the principles and training techniques of strength and conditioning for sport performance. Emphasis is placed on beginning instructional techniques and safety of Olympic lifts; plyometrics; muscular endurance, strength and power development; anaerobic and aerobic capacity. Prerequisites: None. Course Notes: PED124 may be repeated for a total of eight (8) credit hours.

**PED125 – Strength and Conditioning for Sport Performance: Intermediate**

LEC+LAB 2 Credits 4 Periods

Principles and training techniques of strength and conditioning for sport performance. Emphasis is placed on instructional techniques and safety of Olympic lifts; plyometrics; muscular endurance, strength and power development; anaerobic and aerobic capacity. Prerequisites: PED124. Course Notes: PED125 may be repeated for a total of eight (8) credit hours.

**PED201GO - Golf - Advanced**

LEC + LAB 1 Credit 2 Periods

Experienced golfers gain helpful hints and practice to improve their game. Prerequisites: None. Prior experience at competitive level recommended. Course Note: PED201GO may be repeated for credit.

**PED201VB – Volleyball - Advanced**

LEC + LAB 1 Credit 2 Periods

Improve upon intermediate skills and game strategy of volleyball at the advanced level. Class emphasis on competition and drills. Prerequisites: None. Prior experience at competitive level recommended. Course Note: PED201VB may be repeated for credit.

**PED201WT – Weight Training - Advanced**

LEC + LAB 1 Credit 2 Periods

Advanced level training with a qualified instructor on the use of Olympic and Free Weights. Prerequisites: Prior experience at competitive level recommended. Course Notes: PED201WT may be repeated for credit.

**PED202SB – Softball - Elite**

LEC + LAB 1 Credit 2 Periods

Improve upon advanced skills and game strategy of softball at the elite level. Class emphasis on competition and drills. Prerequisites: None. Prior experience at competitive level recommended. Class Notes: PED202SB may be repeated for credit.

**PED202SO – Soccer - Elite**

LEC + LAB 1 Credit 2 Periods

Improve upon advanced skills and game strategy of soccer at the elite level. Class emphasis on competition and drills. Prerequisites: None. Prior experience at competitive level recommended. Class Notes: PED202SO may be repeated for credit.

**PHILOSOPHY (PHI)**

**PHI101 - Introduction to Philosophy**

**PHI1101**

LEC 3 Credits 3 Periods

General consideration of human nature and the nature of the universe. Knowledge, perception, freedom, and determinism, and the existence of God. Prerequisites: None. General Education Designation: Humanities and Fine Arts - [HU]

**PHI103 - Introduction to Logic**

**PHI1103**

LEC 3 Credits 3 Periods

Informal logic, logical fallacies, elementary symbolic logic,



analysis of argument forms, and construction of proofs for validity. Prerequisites: ENG101 or ENG107 or equivalent.

General Education Designation: Humanities and Fine Arts – [HU]; Literacy and Critical Inquiry - [L]

PHI105 - Introduction to Ethics

■ PHI1105

LEC 3 Credits 3 Periods

A survey of ethical theory in Western Philosophy, including the major normative theories and selected metaethical theories. Prerequisites: None General Education Designation: Humanities and Fine Arts - [HU]

PHI213 - Medical and Bio-Ethics

LEC 3 Credits 3 Periods

A philosophical consideration of moral problems that arise in relation to medicine and biology, e.g., death, patient's rights and biological experimentation. Prerequisites: None. General Education Designation: Humanities and Fine Arts - [HU]

PHI216 – Environmental Ethics

LEC 3 Credits 3 Periods

Philosophical consideration of diverse theories and perspectives on the environment, and application of these theories to global moral issues such as animal rights, preservation of wilderness and species, population, world hunger and poverty, and air and water pollution. Prerequisites: None. General Education Designation: Humanities and Fine Arts – [HU]

PHI218 - Philosophy of Sexuality

LEC 3 Credits 3 Periods

Philosophical examination of sexuality in human life. Historical and critical survey of philosophical and theological views. Comparison and evaluation of contemporary theories about the nature of sexual desire and sexual acts. Implications of theories for contemporary moral problems. Prerequisites: None. General Education Designation: Humanities and Fine Arts – [HU]; Literacy and Critical Inquiry - [L]

PHI251 – Philosophy of Sport

LEC 3 Credits 3 Periods

General consideration of sport in its philosophical dimensions. Possible topics include the Zen of sport, strategy and competition, sport, practice, and play, and cheating versus fair play Prerequisites: None General Education Designation: Humanities and Fine Arts - [HU]

### PHYSICAL SCIENCE (PHS)

PHS110 - Fundamentals of Physical Science

LEC 4 Credits 3 Periods

LAB 0 Credit 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. General Education Designation: Natural Sciences (Quantitative) - [SQ]

### PHARMACY TECHNOLOGY (PHT)

PHT120 – Pharmacy Technician Responsibilities

LEC 3 Credits 3 Periods

Responsibilities and skills of pharmacy technicians.

Emphasis on federal and state laws, prescription entry and fulfillment, drug regulations, and drug calculations, as well as pharmaceutical products, abbreviations, and terminology. Includes inventory management, administration routes, financial issues, and pharmacy environments. Prerequisites: None

### PHYSICS (PHY)

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.

PHY111 - General Physics I

■ PHY1111

LEC 4 Credits 3 Periods

LAB 0 Credit 3 Periods

Includes motion, energy, and properties of matter. Prerequisites: MAT182, or MAT 187, 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. General Education Designation: Natural Sciences (Quantitative) - [SQ]

PHY112 - General Physics II

■ PHY1112

LEC 4 Credits 3 Periods

LAB 0 Credit 3 Periods

Includes electricity, electromagnetism, and modern physics. Prerequisites: PHY105 or PHY111. General Education Designation: Natural Sciences (Quantitative) - [SQ]

PHY 115 – University Physics I

LEC 5 Credits 4 Periods

LAB 0 Credit 3 Periods

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.

PHY116 - University Physics II

LEC 5 Credits 4 Periods

LAB 0 Credit 3 Periods  
Principles of electricity, magnetism, waves, and optics.  
Required for Engineering majors. Prerequisites: PHY115 and (MAT230 or MAT231) Corequisites: MAT241

PHY121 - University Physics I: Mechanics

PHY121

LEC 4 Credits 3 Periods

LAB 0 Credit 3 Periods

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. General Education Designation: Natural Sciences (Quantitative) - [SQ]

PHY131 - University Physics II: Electricity and Magnetism

PHY131

LEC 4 Credits 3 Periods

LAB 0 Credit 3 Periods

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, and PHY121. Co requisites: MAT241 or permission of Department or Division. General Education Designation: Natural Sciences (Quantitative) - [SQ]

**POLITICAL SCIENCE (POS)**

POS110 - American National Government

POS110

LEC 3 Credits 3 Periods

Study of the historical backgrounds, governing principles, and institutions, of the national government of the United States. Prerequisites: None. (POS110 meets U.S. Constitution Requirements for Teacher Certification.) General Education Designation: Social and Behavioral Sciences - [SB]

**PSYCHOLOGY (PSY)**

PSY101 - Introduction to Psychology

PSY101

LEC 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. General Education Designation: Social and Behavioral Sciences - [SB]

PSY123 - Psychology of Parenting

LEC 3 Credits 3 Periods

The demonstration and application of psychological principles to the development and guidance of children and adolescents. Prerequisites: None.

PSY132 - Psychology and Culture

LEC 3 Credits 3 Periods Presents current

knowledge about human diversity in behavior and culture using examples from a variety of contexts within western and global societies. Highlights topics in cross-cultural psychology, such as intergroup relations, diverse cognitive styles, ethnocentrism, gender, personality, emotion, language, communication, work and health. The role of enculturation throughout the lifespan will be explored to increase awareness of how behavioral and cognitive principles affect interactions in a multicultural world. Prerequisites: None. General Education Designation: Cultu5al Diversity - [C]; Global Awareness [G]; Social and Behavioral Sciences - [SB]

PSY156 - Understanding Death and Dying

LEC 3 Credits 3 Periods

Designed to give the student an understanding of the research and theories of death, dying and the bereavement process. Prerequisites: None.

PSY230 - Introduction to Statistics

LEC 3 Credits 3 Periods

An introduction to 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

LEC 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. General Education Designation: Cultural Diversity - [C]; Social and Behavioral Sciences - [SB]

PSY240 - Developmental Psychology

LEC 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: PSY 101 with a grade of "C" or better or permission of the instructor. General Education Designation: Social and Behavioral Sciences - [SB]

PSY250 - Social Psychology

LEC 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. General Education Designation: Social and Behavioral Sciences - [SB]

PSY258 - Domestic Problems and Crisis

LEC 3 Credits 3 Periods

Acquaints personnel in Law Enforcement and related fields with techniques and agencies of domestic intervention. Considers such topics as family fights, child abuse, suicide, death, drug abuse and runaways. Prerequisites: PSY101 with a grade of "C" or better or permission of instructor.

PSY266 - Abnormal Psychology

LEC 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.

PSY277 - Psychology of Human Sexuality

LEC 3 Credits 3 Periods

Survey of psychological and physiological aspects of human sexual behavior. Emphasis placed on the integration of the cognitive, emotional, and behavioral factors in sexual functioning. Prerequisites: PSY101 with a grade of "C" or better, or permission of instructor. Student must be 18 years or older.

PSY290AB - Research Methods

LEC 4 Credits 3 Periods

LAB 0 Credits 3 Periods Planning, execution, analysis, and written reporting of psychological research using American Psychological Association guidelines (APA). Surveys the literature, procedures, and instruments in representative areas of psychological research. Prerequisites: ENG101, ENG107. Prerequisites or Corequisites: PSY230 with a grade of "C" or better, or permission of Instructor.

PSY298AC - Special Projects

LAB 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.

**READING (RDG)**

RDG008 - Phonics

LEC 3 Credits 3 Periods

Designed for students who are learning English as a second language. Includes the study of the speech sounds used in English as represented by the written symbols of the alphabet; recognition of spelling patterns and resulting pronunciation; and diacritical markings. Prerequisites:

Reading placement score (CELSA) or permission of instructor.

RDG010 - Reading English as a Second Language I

LEC 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. Teaches sound symbol relationships of the English alphabet. Expands essential vocabulary for daily communication both in isolation and context. Includes development of reading comprehension skills. Prerequisites: Appropriate ESL placement test score.

RDG013 - Spelling Development for ESL Speakers (Non-native Speakers)

LEC 3 Credits 3 Periods

Study of basic English spelling principles with emphasis on common spelling errors due to mispronunciation. Examination of homonyms, homophones, homographs, and contractions. Creating personalized mnemonic techniques to spell problem words. Prerequisites: RDG001 with grade of "C" or better, or permission of instructor.

RDG016 - Reading English as a Second Language I

LEC 3 Credits 3 Periods

Designed for students who are learning English as a second language. Skills needed to become proficient readers in English. Sound symbol relationships of the English alphabet. Essential vocabulary for daily communication both in isolation and context. Development of reading comprehension skills. Prerequisites: Appropriate ESL placement test score.

RDG020 - Reading English as a Second Language II

LEC 3 Credits 3 Periods

Designed for students who are learning English as a second language. Includes continued 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.

RDG026 - Reading English as a Second Language II

LEC 3 Credits 3 Periods

Designed for students who are learning English as a second language. Continued development of vocabulary and reading comprehension skills. Prerequisites: Appropriate ESL placement test score, or grade of "C" or better in ESL/RDG016, or permission of Instructor.

RDG030 - Reading English as a Second Language III

LEC 3 Credits 3 Periods

Designed for students who are learning English as a second language. Includes instruction for more advanced vocabulary and reading comprehension skills. Prerequisites: Appropriate ESL placement test score or grade of "C" or better in RDG020 or permission of instructor.

RDG031 - Advanced Vocabulary for ESL Speakers (Non-native Speakers)

LEC 3 Credits 3 Periods

Designed to expand and improve reading vocabulary skills.

Emphasis on understanding advanced vocabulary in both context and isolation through practice and review. Vocabulary building strategies which will aid in on-going study of words. Emphasis on both learning and using more advanced vocabulary effectively. Prerequisites: RDG020 with grade of C or better, or permission of instructor.

Course Note: Recommended for reading students at ESL Levels III and IV.

RDG036 - Reading English as a Second Language III  
LEC 3 Credits 3 Periods

Designed for students who are learning English as a second language. Instruction for more advanced vocabulary and reading comprehension skills. Prerequisites: Appropriate ESL placement test score, or grade of "C" or better in ESL/RDG026, or permission of Instructor.

RDG040 - Reading English as a Second Language IV  
LEC 3 Credits 3 Periods

Developed for students of English as a second language. Includes development of advanced vocabulary, comprehension skills, and culture awareness. Prerequisites: Appropriate ESL placement test score or grade of "C" or better in RDG030 or permission of instructor.

RDG046 - Reading English as a Second Language IV  
LEC 3 Credits 3 Periods

Developed for students of English as a second language. Development of advanced vocabulary, comprehension skills, and culture awareness. Prerequisites: Appropriate ESL placement test score, or grade of "C" or better in ESL/RDG036, or permission of Instructor.

RDG071 - Basic Reading

LEC 3 Credits 3 Periods

Provide opportunities for practice and application of basic reading skills. Includes phonic analysis, word recognition, structural analysis, use of context clues, and use of dictionary, reinforced through practical application. Development of vocabulary required for success in content area courses. Emphasis on literal comprehension and development of inferential interpretation. Prerequisites: Appropriate reading placement test score, or grade of "C" or better in RDG040. Course Note: Recommended for all students with limited reading experiences.

RDG081 - Reading Improvement

LEC 3 Credits 3 Periods

Designed to improve basic reading skills. Includes word recognition, interdisciplinary vocabulary development, recognizing patterns of organization, interpreting inference. Reviews interpreting graphic materials. Emphasis on identifying main ideas and related details. Prerequisites: Appropriate reading placement test score, or grade of "C" or better in RDG071.

RDG091 - College Preparatory Reading

LEC 3 Credits 3 Periods

Designed to improve basic reading and study skills, vocabulary

and comprehension skills. Prerequisites: Appropriate reading placement test score, or grade of "C" or better in RDG081 or permission of Instructor.

Course Notes: RDG091 is recommended to all students whose placement test scores indicate a need for reading instruction.

RDG095 – Intensive Foundations for College Reading

LEC 6 Credits 6 Periods

Accelerated format to improve basic reading skills, study skills, and information literacy skills including vocabulary development, main idea identification, patterns of organization recognition, and comprehension improvement.

Prerequisites: Appropriate reading placement test score, or a grade of "B" or better in RDG071, or permission of Instructor.

Course Notes: RDG095 is an accelerated and intensive learning program for students and meets the requirements for RDG081 and RDG091 in one semester

RDG100 – Successful College Reading

LEC 3 Credits 3 Periods

Emphasis on reading study strategies for any introductory class in any subject area. Introduction to Learning Management System (LMS), how to successfully read course textbooks and assessments, how to navigate information technology and development of academic vocabulary.

Prerequisites: A grade of C or better in RDG081 or appropriate reading placement score or permission of Instructor.

Corequisites: Any 100-level course in another content area or permission of Instructor.

## **REAL ESTATE PRINCIPLES (REA)**

REA179 – Real Estate Principles I

LEC 3 Credits 3 Periods

Basics of real estate principles including introduction to the profession and license law, definition of real property, legal descriptions, rights and interests in property, ownership, contracts, real estate economics, financing and foreclosure, land use, and valuation. Prerequisites: None.

REA180 Real Estate Principles II

LEC 3 Credits 3 Periods

Advanced work in real estate including escrow procedures and title insurance, liens and encumbrances, advanced contracts, water rights, toxic waste and environmental hazards, agency, ethics and professional relationships, real estate code and the Commissioner's rules, investment, property management, and government restrictions. Prerequisites: REA179 or permission of instructor.

REA201 - Real Estate Principles I and II

LEC 6 Credits 6 Periods

Comprehensive survey of real estate principles to include careers in real estate, nature and description of real estate, rights and interests in land, forms of real property ownership, forms of business organization, methods of title transfer, title search and insurance, contract law, real estate sales contracts, mortgage and notes payable, deeds of trust, lending practices, loans and consumer rights, sources of

financing real estate loans, types of financing instruments, real property taxes and assessments, title closing, escrow and settlement procedures, property management and real estate leases, real estate appraisal, state licensing laws and professional affiliations, real estate brokerage, real estate agency, fair housing and equal credit laws, types of residential real estate, real property insurance, land use control, economics of real estate, and investment considerations. Prerequisites: None. Course Note: This course is intended to satisfy the state of Arizona's requirement for 90 hours of prelicensure education. Students must attend all scheduled class meetings to meet the State's attendance requirement.

**REA290AH - Real Estate Seminar: Contract Writing**

LEC 0.50 Credits 0.50 Periods

Contract writing skills, techniques, and requirements. Writing of basic real estate contracts, including purchase offers, counter offers, sales listing agreements, and riders. Prerequisites: None.

**RECREATION (REC)**

**REC120 – Leisure and the Quality of Life**

LEC 3 Credits 3 Periods

Overview of the historical, psychological, social, and cultural aspects of play, leisure, and recreation and the role in contemporary society, Nature of play and leisure behavior in human development within different cultures and the contribution play, recreation, and leisure make to the quality of life for individuals in today's society. Prerequisites: None. General Education Designation: Social and Behavioral Sciences – [SB]

**RELIGIOUS STUDIES (REL)**

**REL100 – World Religions**

LEC 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 General Education Designation: Global Awareness - [G]; Humanities and Fine Arts – [HU]

**SMALL BUSINESS MANAGEMENT (SBS)**

**SBS200 - Small Business Operations**

LEC 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**

LEC 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**

LEC 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-today operational budgeting also included. Prerequisites: None.

**SBS204 - Small Business Marketing and Advertising**

LEC 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 product and market segment focus included. Design of an individual marketing and advertising/promotion plan. Prerequisites: None.

**SBS211 - Small Business Computer Applications**

LEC 1 Credit 1 Period

Hands-on opportunity for the small business owner to test several current computer application programs. Emphasizes practical applications, hardware and software purchasing decision criteria, and technological developments. Prerequisites: None.

**SBS213 - Hiring and Managing Employees**

LEC 1 Credit 1 Period

Methods and techniques for managing employees in a small business. Includes supervisor's role, leadership styles, interpersonal communications, staff planning, employee work styles, techniques for handling problem employees, and employee motivation. Focuses on real life situations to enable the business owner to gain high performance from their employee team. Includes segment on hiring, new employee orientation, training, benefits, and developing future staffing needs assessment. Prerequisites: None.

**SBS214 - Small Business Customer Relations**

LEC 1 Credit 1 Period Developing and improving customer relations for the small business. Planning and delivering quality customer service. Includes topics on attitude of employees, customer perceptions and motivations, handling customer dissatisfaction, and developing customer, supplier, vendor, and distributor

loyalty. Prerequisites: None.

**SBS215 - Managing Stress in Small Business**

LEC 1 Credit 1 Period

Explores the common causes of stress related to the operation of a small business. Includes discussion of the physiological and psychological effects of stress, and specific methods for dealing with the small business owner or manager stresses in business and personal life. Prerequisites: None.

**SBS216 - Planning for a Small Business**

LEC 2 Credit 2 Period

Relates business management issues to a specific small business through development of an individual study plan. Provides on-site review of business operation by trained instructor. Prerequisites: SBS200 and SBS204 or permission of instructor.

**SBS217 - Starting/Managing a Home Business**

LEC 1 Credit 1 Period

Analysis of the successful operation of a home-based business. Includes study of economic feasibility, practicality, and adjustments for the family. Analysis of the advantages/disadvantages of operating a home based business, versus a “store-front” business. Review of current trends in home business opportunities and franchises. Descriptions of home businesses that have succeeded in local, national, and international markets. Prerequisites: None.

**SBS218 - Establishing an Import/Export Business**

LEC 1 Credit 1 Period

Basic marketing and management techniques for exporting and importing. Includes researching viability of an import/export business, marketing an export or securing a product for import, and implementing the transaction. Prerequisites: None.

**SBS220 - Internet Marketing for Small Business**

LEC 2 Credits 2 Periods

Focuses on “e-Commerce”-doing business on the Internet and planning a website. 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.

**SBS221 – Social Media Marketing for Small Business**

LEC 2 Credits 2 Periods

Focuses on use of Social Media for Small Businesses and Entrepreneurs. Topics include: Use of Social Media, types of Social Media, how Social Media can help growth and success of business; examples of successful Social Media marketing, setting up and deploying various types of Social Media. Options for hardware and software for Social Media, determining products/services appropriate for Social Media, Monetization of Social Media. Budget constraints and on-going monitoring and content management of Social Media.

Prerequisites: None

**SBS230 - Financial and Tax Management for Small Business**

LEC 2 Credits 2 Periods

An overview of accounting and record-keeping 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 the choice of legal entity choice based on taxation. Prerequisites: None.

**SBS298AA - Special Projects**

LAB 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.

**SOCIETY AND BUSINESS (SBU)**

**SBU200 – Society and Business**

LEC 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 General Education Designation: Global Awareness - [G]; Social and Behavioral Sciences - [SB]

**SIGN LANGUAGE (SLG)**

**SLG101 - American Sign Language I**

LEC 4 Credits 4 Periods

Introduction of principles, methods, and techniques for communicating with deaf people who sign. Development of expressive and receptive sign skills, manual alphabet, numbers, and sign vocabulary. Overview of syntax, grammar, and culture related to American Sign Language (A.S.L.). Prerequisites: None. SLG103 suggested as a co requisite but not required.

**SLG102 – American Sign Language II**

LEC 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 or Division. Completion of prerequisites within the last three years is required.

**SLG201 – American Sign Language III**

LEC 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 or Division. Suggested but not required: (ENG101 or ENG107) and (CRE101, or CRE111, or exemption by score on the reading placement test (ASSET)). Completion of prerequisites within the last three years is required.

### **SOCIOLOGY (SOC)**

SOC101 - Introduction to Sociology

#### ■ SOC1101

LEC 3 Credits 3 Periods  
The systematic study of social behavior and human groups, particularly the influence of culture, socialization, social structure, stratification, social institutions, differentiation by region, race, ethnicity, sex/gender, age, class, and socio/cultural change upon people's attitudes and behaviors.. Prerequisites: None. General Education Designation: Social and Behavioral Sciences - [SB] Arizona Shared Unique Number SUN# 1101

SOC140 - Racial & Ethnic Relations

#### ■ SOC2215

LEC 3 Credits 3 Periods  
Examines how the social construction of race shapes social interaction and social institutions. Explores the consequences of power, privilege and oppression among major ethnic and racial groups in the United States. Prerequisites: None. General Education Designation: Social and Behavioral Sciences - [SB]; Cultural Diversity - [C] Arizona Shared Unique Number SUN# 2215

SOC157 - Sociology of Families and Relationships

LEC 3 Credits 3 Periods  
Systemic analysis of socio-cultural and historical origins of modern families in the U.S. and their importance, major challenges and changing trends. Explores being single, dating and attraction, love, cohabitation and marriage, family planning and parenthood, conflict and crisis within the family, and divorce. Prerequisites: None.

SOC220 – Society and Business

LEC 3 Credits 3 Periods  
Applies the sociological perspective to the study of sport. Emphasizes how hierarchies of race, class, and gender in the United States impact the sport experience of both the fan and the athlete, as well as how both professional and amateur sport have at times played a transformative role in society. Prerequisites: None General Education Designation: Social and Behavioral Sciences - [SB]

SOC251 - Social Problems

#### ■ SOC2250

LEC 3 Credits 3 Periods  
A sociological exploration of selected social problems and inequalities. Analyzes issues in health care, dependencies, crime/violence, inequalities in race/class/gender/region/age, family, education, work, the economy, population migration/immigration, the environment, war and global insecurity. Prerequisites: None. Arizona Shared Unique Number SUN# 2250

### **SPANISH (SPA)**

SPA085AA - Speedy Spanish I

LEC 1 Credit 1 Period  
Basic vocabulary and grammar to develop conversational skills in Spanish. Emphasis on speaking skills. Prerequisites: None.

SPA085AB - Speedy Spanish II

LEC 1 Credit 1 Period  
Intermediate development of vocabulary and grammar to develop conversational skills in Spanish. Emphasis on speaking skills. Prerequisites: SPA085AA.

SPA085AC - Speedy Spanish III

LEC 1 Credit 1 Period  
Advanced development of vocabulary and grammar to develop conversational skills in Spanish. Emphasis on speaking skills. Prerequisites: SPA085AB.

SPA101 - Elementary Spanish I

■ SPA1101  
LEC 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 Arizona Shared Unique Number SUN# 1101

SPA102 - Elementary Spanish II

■ SPA1102  
LEC 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: A grade of "C" or better in SPA101 or permission of Department or Division. Arizona Shared Unique Number SUN# 1102

SPA115 - Beginning Spanish Conversation I

LEC 3 Credits 3 Periods  
Basic pronunciation, vocabulary, sentence structures, and cultural awareness, necessary to develop speaking and listening skills in Spanish. Prerequisites: None.

SPA116 - Beginning Spanish Conversation II

LEC 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**

LEC 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.

**SPA117AA - Health Care Spanish I: Introduction**

LEC 1 Credit 1 Period

Part one of basic medical terminology in Spanish for health care personnel or students. Emphasis on pronunciation and vocabulary needed in health care setting, including coverage of routine information gathered. Prerequisites: None.

**SPA119 - Spanish for Educational Settings I**

LEC 3 Credits 3 Periods

Basic conversational Spanish for teachers, counselors, administrators and other school personnel. Emphasis on basic sentence structure, pronunciation and vocabulary used in educational settings. Prerequisites: None.

**SPA120 - Spanish for Educational Settings II**

LEC 3 Credits 3 Periods

Basic conversational Spanish for teachers, counselors, administrators and other school personnel. Continuation of SPA119, expanding into secondary and post-secondary educational settings. Emphasis on basic sentence structure, pronunciation and vocabulary. Prerequisites: SPA119 or permission of department.

**SPA201 - Intermediate Spanish I**

■ SPA2201

LEC 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: Grade of "C" or better in SPA102, or SPA102AA, or SPA111, or permission of Department or Division. General Education Designation: Global Awareness - [G] Arizona Shared Unique Number SUN# 2201

**SPA202 - Intermediate Spanish II**

■ SPA2202

LEC 4 Credits 4 Period

Review of grammar, continued development of Spanish language skills with continued study of the Spanish speaking cultures. Prerequisites: A grade of "C" or better in SPA 201 or permission of Department or Division. Completion of prerequisites within the last three years is required. General Education Designation: Global Awareness - [G] Arizona Shared Unique Number SUN# 2202

**SPA296WA - Cooperative Education**

LAB 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. Co requisites: 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.

**SPANISH HUMANITIES (SPH)**

**SPH245 – Hispanic Heritage in the Southwest**

LEC 3 Credits 3 Period

A survey of Hispanic heritage in the Southwest. Cultural and social institutions and their contribution to the development of the region and its heritage. Prerequisites: None. General Education Designation: Cultural Diversity: [C]; General Education Designation: Humanities and Fine Arts - [HU]

**SPECIAL PROJECTS**

**298AA-AC - Special Projects**

LAB 1-3 Credits 1-3 Periods/arranged

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: None. Note: Special Projects may be used under most disciplines. However, the student must communicate with the instructor of his/her class for assistance in having a special project section initiated.

**SUSTAINABILITY/SCIENCES and the HUMANITIES (SSH)**

**SSH111 – Sustainable Cities**

LEC 3 Credits 3 Periods

Introduction to the field of sustainability and exploration of the practices leading to the development of sustainable cities. Explores the concept of sustainable development of cities within local, regional, and global contexts.

**STORYTELLING (STO)**

**STO100AA - How to Tell Traditional Stories**

LEC 1 Credit 1 Period

Introduction to the art of storytelling. Finding, crafting and telling a traditional story in and out of class. Prerequisites: None

**STO101 – Storytelling for Literacy**

LEC 1 Credit 1 Period

Introduction to the natural process from oral to written language and the role of storytelling in both. Focus will be on the development and sharing of oral and written stories. Prerequisites: None



STO200AA - Biographical Storytelling

LEC 1 Credit 1 Period

Exploration of the art and craft of finding, developing and telling biographical stories. Prerequisite: None

STO282AA-AC - Volunteerism for Education: A Service Learning Experience

LAB 1-3 Credits 1-3 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.

STO283 - The African Storytelling Tradition

LEC 3 Credits 3 Periods

Introduction to the history and practice of storytelling in Africa. Overview of African myths, legends, folktales, parables, and fables. Great story tellers and story collectors of the past and present. Researching, developing, and crafting African stories for telling. Prerequisites: None.

STO284 - Storytelling and Music

LEC 3 Credits 3 Periods

Introduction to the role and importance of music in storytelling. Research, craft, and tell stories that include percussion, vocal, or instrumental elements. Prerequisites: None.

STO286 - Using Storytelling in a Variety of Settings

LEC 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

LEC 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

LEC 1 Credit 1 Period

The application of storytelling and storytelling activities in educational settings. Prerequisites: None Cross-Reference: EDU283AA

STO289AB - Using Storytelling in Business Settings

LEC 1 Credit 1 Period

The application of storytelling and storytelling activities in business settings. Prerequisites: None.

STO289AC - Using Storytelling in Healing Settings

LEC 1 Credit 1 Period

The application of storytelling and storytelling activities in healing settings. Prerequisites: None

STO289AD - Using Storytelling in Interpretive Settings

LEC 1 Credit 1 Period

The application of storytelling and storytelling activities in interpretive settings including museums, gardens, parks, and zoos. Prerequisites: None.

STO290AG - Using Storytelling in Advocacy Settings

LEC 1 Credit 1 Period

The application of storytelling and storytelling activities in contexts of advocacy and civic engagement. Focus on stories that reflect the goals and aims of a civic organization. Prerequisites: None.

STO291AA - Storytelling Circle

LEC + LAB 1 Credit 1.5 Periods

Designed to provide opportunities for students to practice and develop critical listening and storytelling skills. Prerequisites: EDU292, or HUM292, or STO292, or permission of instructor.

STO292 - The Art of Storytelling

LEC 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 General Education Designation: Humanities and Fine Arts - [HU]; Cultural Diversity - [C]

STO293 - The Art of Storytelling II

LEC 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

STO294 - Multicultural Folktales

LEC 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, ENH294 General Education Designation: Humanities and Fine Arts - [HU]; Cultural Diversity - [C]

STO295 - Multicultural Folktales II

LEC 3 Credits 3 Periods

Study of storytelling focusing on the cultural context in which stories are told, their meaning in those contexts, and ways of telling those stories that honor their original contexts and tellers. Prerequisites: EDU294 or ENH294 or STO294.

STO297 - Creating and Telling Personal Stories

LEC 3 Credits 3 Periods

Exploration of the art and craft of finding, developing and telling personal stories. Prerequisites: EDU292 or HUM292 or STO292.

**STO298AA - AC - Special Projects**

LAB 2 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 m Prerequisites: Permission of Program Director or instructor.

**SUSTAINABILITY/NATURAL SCIENCES (SUS)****SUS110 Sustainable World**

LEC 3 Credits 3 Periods

Introduction to the field of sustainability and exploration of the interaction between human and natural global systems. Framework for analyzing and investigating the global challenges such as land use change, competition for water and other natural resources, and renewable energy concerns and crises. Prerequisites: None.

**SOCIAL WORK (SWU)****SWU102 - Introduction to Social Work**

LEC 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 students enrolled in the associate degree program of the social work curriculum. Prerequisites: Eligibility for ENG101 and CRE101. General Education Designation: Historical Awareness – [H]; Social and Behavioral Sciences - [SB]

**SWU171 - Introduction to Social Welfare**

LEC 3 Credits 3 Periods

Analysis of contemporary social welfare services and professional social work. Prerequisites: None. General Education Designation: Historical Awareness – [H]; Social and Behavioral Sciences - [SB]

**SWU291 – Social Service Delivery Systems**

LEC 3 Credits 3 Periods

Purposes, structures, and delivery systems of human service agencies. Includes 40 hours of volunteer experience in local human service agencies. Prerequisites: or Corequisites: SWU102 or SWU171 or permission of Department or Division.

**SWU292 – Effective Helping in a Diverse World**

LEC 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 SWU171 suggested but not required.

**THEATER (THE)****THE111 - Introduction to Theatre**

LEC 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. General Education Designation: Humanities and Fine Arts - [HU]

**THE118 - Playwriting**

LEC + LAB 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.

**THE205 - Introduction to Cinema**

LEC 3 Credits 3 Periods

Survey of the history and development of the art of motion pictures, including criticism of aesthetic and technical elements. Prerequisites: None. General Education Designation: Humanities and Fine Arts- [HU]

**THE210 - Contemporary Cinema**

LEC 3 Credits 3 Periods

A study of contemporary films, directors, and critics with emphasis on evaluating film as an art form. Prerequisites: None. Cross-References: HUM210, General Education Designation: Humanities and Fine Arts - [HU]

**THE220 - Modern Drama****THE2220**

LEC 3 Credits 3 Periods

Analysis of dramatic literature studied within political, historical, and cultural contexts and examined from the perspective of the playwright's structure and style. Prerequisites: ENG101 or ENG107 or equivalent. General Education Designation: Humanities and Fine Arts – [HU]; Literacy and Critical Inquiry - [L] Arizona Shared Unique Number SUN# 2220

**THE260 - Film Analysis**

LEC 3 Credits 3 Periods

Understanding and enjoyment of film and its correlation to literature, art, music, and other disciplines. Prerequisites: None.

**THEATER AND FILM (THF)****THF115 – Makeup for Stage and Screen**

LEC + LAB 3 Credits 4 Periods

Purposes, materials, and techniques of makeup for stage and screen. Prerequisites: None

**THF120AA – Audition Techniques for Stage and Screen:****Prepared Monologue**

LEC + LAB 1 Credits 2 Periods

Practice in the techniques of auditioning for stage and screen. Identifies and illustrates techniques of the prepared monologue audition. Prerequisites: None.

**THF120AB – Audition Techniques for Stage and Screen: Cold**

#### Readings

LEC + LAB 1 Credits 2 Periods

Practice in the techniques of auditioning for stage and screen. Identifies and illustrates techniques of the cold reading audition. Prerequisites: None.

#### THF205 – Introduction to Cinema

LEC 3 Credits 4 Periods

Survey of the history and development of the art of motion pictures, including criticism of aesthetic and technical elements. Prerequisites: None General Education Designation: Humanities and Fine Arts - [HU]

#### THF210 – Contemporary Cinema

LEC 3 Credits 4 Periods

A study of contemporary films, directors and critics with emphasis on evaluating film as an art form. Prerequisites: None. General Education Designation: Humanities and Fine Arts - [HU]

#### THF215 – Advanced Makeup for Stage and Screen

LEC + LAB 3 Credits 4 Periods

Advanced character analysis and makeup design for stage and screen. Technical application of makeup for stage and screen. Prerequisites: THF115.

### **THEATER PERFORMANCE/PRODUCTION (THP)**

#### THP112 - Acting I

LEC + LAB 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.

#### THP115 - Theatre Makeup

LEC + LAB 3 Credits 4 Periods

Purposes, materials, and techniques of theatrical makeup. Prerequisites: None.

#### THP120AA - Audition Techniques: Prepared Monologue

LEC + LAB 1 Credit 2 Periods

Practice in the techniques of auditioning for the stage. Identifies and illustrates techniques of the prepared monologue audition. Prerequisites: None.

#### THP120AB - Audition Techniques: Cold Readings

LEC + LAB 1 Credit 2 Periods

Practice in the techniques of auditioning for the stage. Identifies and illustrates techniques of the cold reading audition. Prerequisites: None.

#### THP201AA - Theatre Production I

LAB 1 Credits 2 Periods

Designed to give college Credit to the cast and technical production crews of college theatre productions. May be repeated for up to a maximum of four (4) Credits. Prerequisites: None.

#### THP201AB - Theatre Production II

LAB 2 Credits 4 Periods

Designed to give college Credit to the cast and technical production crews of college theatre productions. May be repeated for up to a maximum of four (4) Credits. Prerequisites: None.

#### THP203 – Technical Theatre Production

LAB 3 Credits 6 Periods

Designed to give college credit to the technical production crews of college theatre productions. Prerequisites: None. Course Notes: THP203 may be repeated for up to a maximum of nine (9) credits.

#### THP210 - Acting: TV/Film

LEC + LAB 3 Credits 4 Periods

Special technical aspects of acting before a camera. Prerequisites: THP112 or permission of instructor.

#### THP211 - Creative Drama

LEC 3 Credits 3 Periods

Theory and practice of creative drama, including improvisation, storytelling, puppetry, and script and program development in drama, and their application to elementary and secondary school levels. Prerequisites: None.

#### THP211AB - Creative Drama: Storytelling/ Puppets

LEC 1 Credit 1 Period

Theory and practice of creative drama in storytelling and puppetry. Covers use of puppets to enhance storytelling skills. Emphasis on application in elementary and secondary school levels. Prerequisites: None.

#### THP212 - Acting II

LEC + LAB 3 Credits 4 Periods

Fundamental techniques of acting through script analysis, rehearsal, and performance. Prerequisites: THP112 or departmental approval.

#### THP213 - Introduction to Technical Theatre

LEC + LAB 3 Credits 5 Periods

Procedures of technical theatre production and demonstration. Topics include design and construction of scenery; lighting and properties. Prerequisites: None.

#### THP214 - Directing Techniques

LEC + LAB 3 Credits 4 Periods

Contemporary theory and practice in directing, the evolution of present-day directing procedures, and a sampling of scripts for directing practice. Principles of script analysis, blocking, casting, rehearsing, and performing. Prerequisites: THP112 or THE220, or permission of instructor.

#### THP217 – Introduction to Design Scenography

LEC + LAB 3 Credits 4 Periods

The role of the theatre designer in creating scenic, lighting, costume, sound, and multimedia effects for stage productions. Elements of the design process and communication of dramatic themes and visions to the audience. Prerequisites:

None

**THP226 – Theatrical Design: Costuming**

LEC + LAB 3 Credits 4 Periods

Basic techniques involved in researching, designing, and construction costumes for the stage. Prerequisites: None

**THP241 - Oral Interpretation of Literature**

LEC 3 Credits 3 Periods

The study, analysis, and preparation for performance of prose, poetry, and dramatic literature. Preparation of material for public audiences. Prerequisites: ENG101 or ENG107.

General Education Designation: Humanities and Fine Arts -[HU]; Literacy and Critical Inquiry – [L]

**THP271 - Voice and Diction**

LEC 3 Credits 3 Periods

Exercises and techniques to free the voice and improve projection, resonance, and articulation. Covers international phonetic alphabet and standard stage speech. Prerequisites: None. Cross-Reference: COM271

**THP281 - Production and Acting I**

LEC + LAB 3 Credits 4 Periods

Provides the continuing acting student with opportunities to expand the versatility of characterization skills. Emphasis on relating the actor's work to the total production process. Performance of monologues, scenes, and one-act plays. Prerequisites: Departmental approval.

**THP285 - Creating/Performing Solo/Collaborative Works**

LEC 3 Credits 3 Periods

Developing, rehearsing, and performing solo and collaborative works for fringe festivals and other storytelling and theatre venues. Prerequisites: None.

Cross-References: STO285

**THP298AB - Special Projects in Theatre**

LAB 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.

**WOMEN'S STUDIES (WST)**

**WST100 - Introduction to Women's and Gender Studies**

LEC 3 Credits 3 Periods

Introduction to critical issues in women's studies. Prerequisites: None.

**WST209 - Women in Films**

LEC 3 Credits 3 Periods

Analysis of images of women in films from both historical and contemporary perspectives. Prerequisites: None. Cross-

References: HUM209

**YAQUI INDIAN HISTORY AND CULTURE (YAQ)**

**YAQ100 - Yaqui Indian History and Culture**

LEC 3 Credits 3 Periods

Surveys Yaqui Indian history and culture from pre-contact to the present. Explores themes of resistance, dispersion, survival, tradition, family, community, belief systems, and identity. Places Yaqui history within the context of Arizona, American Indian, Mexican, and Mexican-American History. Examines historical writing and analysis, life histories, poetry, language, and emphasis on Yaqui experiences in 20th century Arizona. Prerequisites: None. General Education Designation: Cultural Diversity – [C]; Social and Behavioral Sciences - [SB]

**YAQ110 - Yaqui Language & Culture**

LEC 3 Credits 3 Periods

Introduction to the Yaqui language and overview of the traditional culture as a background for language use. Instruction in the grammar and writing system to assist student in speaking, reading, and writing Yaqui. Prerequisites: None





# ADMINISTRATION, FACULTY, MANAGEMENT AND STAFF

## GOVERNING BOARD

Mr. Doyle W. Burke, Member  
District 1 • Current Term Expires: December 31, 2016

Mr. Alfredo Gutierrez, Member  
District 5 • Current Term Expires: December 31, 2016

Ms. Johanna Haver, Secretary  
District 3 • Current Term Expires: December 31, 2018

Mr. John Heep, Member  
At-Large • Current Term Expires: December 31, 2016

Ms. Tracy Livingston, President  
At-Large • Current Term Expires: December 31, 2018

Ms. Jean McGrath, Member  
District 4 • Current Term Expires: December 31, 2018

Mr. Dana Saar, Member  
District 2 • Current Term Expires: December 31, 2016

## DISTRICT ADMINISTRATION

Dr. Rufus Glasper, Chancellor

LaCoya Shelton-Johnson, Vice Chancellor Human Resources

Dr. Maria Harper-Marinick, Vice Chancellor and Provost  
Academic and Student Affairs

Ms. Debra Thompson, Vice Chancellor  
Business Services

## COLLEGE PRESIDENTS

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Chandler-Gilbert Community College

Dr. Ernie Lara, President  
Estrella Mountain Community College

Dr. Eugene Giovannini, President  
Maricopa Corporate College

Dr. Steven R. Gonzales, President  
GateWay Community College

Dr. Irene Kovala, President  
Glendale Community College

Dr. Shouan Pan, President  
Mesa Community College

Dr. Paul Dale, President  
Paradise Valley Community College

Chris Haines, Interim President  
Phoenix College

Dr. Chris Bustamante, President  
Rio Salado Community College

Dr. Jan L. Gehler, President  
Scottsdale Community College

Dr. Shari L. Olson, President  
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Rochelle Rivas, Student Services Specialist  
B.A., University of Arizona  
M.A., Grand Canyon University

Christopher Rivers, Lead Custodian  
A.A.S., Olive Harvey College

BeJaye Roberts, Program Advisor  
B.A., M.A., Arizona State University

Sophie Rodriguez, Office Coordinator I

Dennis Romero, Admissions & Records Tech

Vincent Sabori, Receiving Clerk

Perla Saldana, Financial Aid Tech I  
B.S., Arizona State University

Lorrie S. Shelton, Administrative Secretary II  
A.A., A.G.S.: South Mountain Community College

Jean Slack, Administrative Secretary II  
A.A. and A.G.S., South Mountain Community College;  
B.S. Northern Arizona University

David Smith, Carpenter

Laura Smith, Student Services Specialist  
B.S., Colorado State University, M.Ed., Northern Arizona University

David Soria, Groundskeeper I

Deborah Spadafore, Student Services Specialist  
A.A.S., Alvin Community College, B.S., Arizona State University

Michael Stillwell, Electrician

Sonya Tatum, Administrative Assistant I  
B.A., Concordia University; M.B.A., University of Phoenix

Salina Tovar, Accounting Assistant

Angelina Valencia, Student Services Specialist  
A.G.S., A.A., South Mountain Community College

Vu (Davin) Vo, Client Support Analyst  
B.S., St. Gregory's University

Rachel Wainhaus, Program Advisor  
M.F.A., Brooklyn College

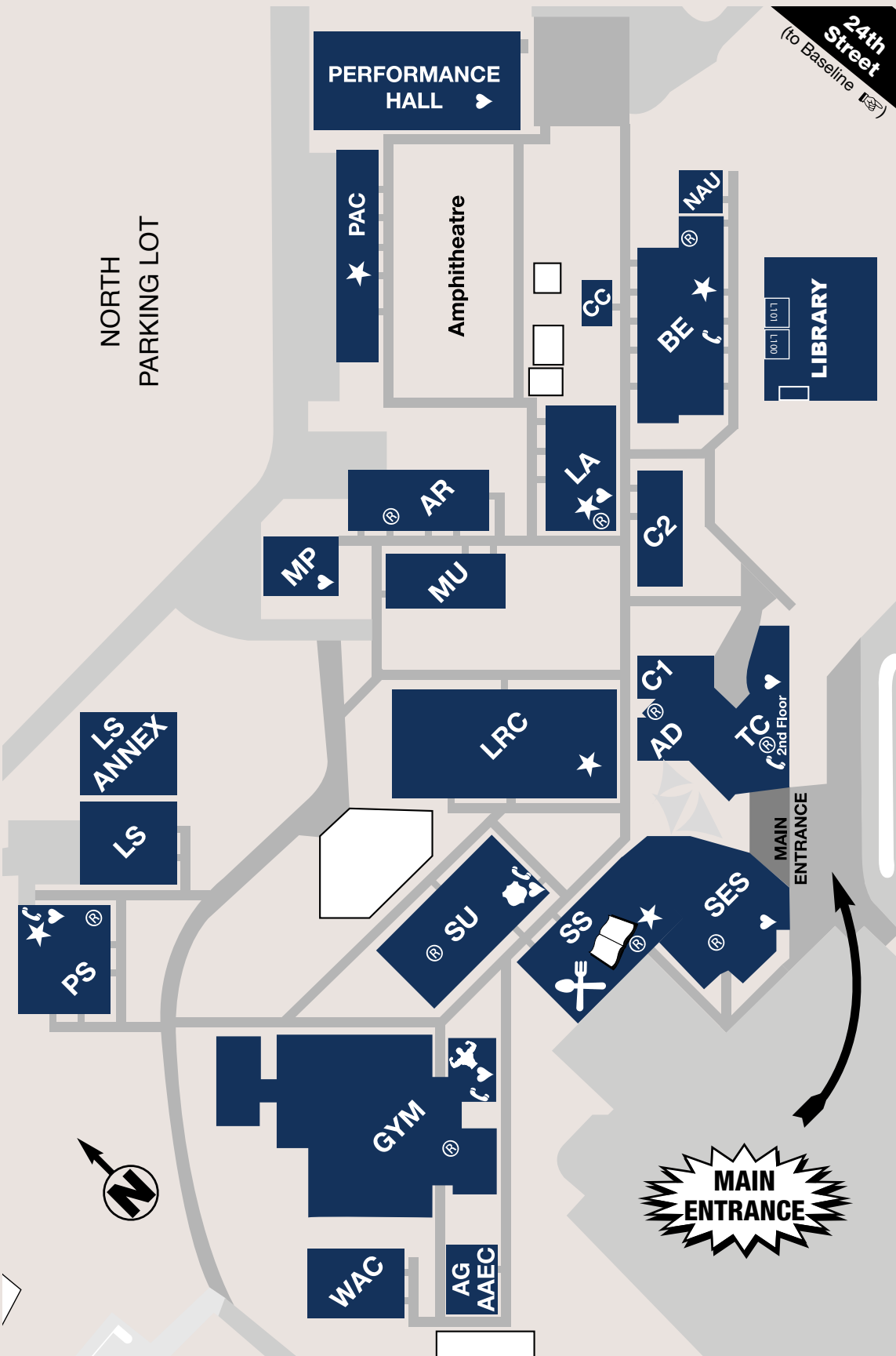
Derrick D. Washington, Office Coordinator I  
A.A.S., Phoenix College



**SOUTH MOUNTAIN  
COMMUNITY COLLEGE**

# CAMPUS MAP

7050 S. 24th Street • Phoenix, AZ 85042



- AAEC AZ Agribusiness & Equine Center High School
- AD Administration
- AG Rooms 904-907
- AR Art Rooms 501-510
- BE Business Education  
Rooms 130-135 (northwest)  
Rooms 149-153 (southwest)
- C1 Ikon Copy Center  
Rooms 101-104
- C2 General Classrooms II  
Rooms 300-303
- CC Child Care Center
- G Gymnasium  
Rooms 123, 124 and Fitness Center
- LA Liberal Arts  
Rooms 323-325 (southwest)  
Rooms 329-332 (northwest)
- LRC Learning Resource Center  
Rooms 174, 175, 180, 191, 192
- LS Life Sciences  
Rooms 420-428
- LS Annex Room 432
- MU Music  
Rooms 514-530
- NAU Northern Arizona University  
Rooms 601-603
- PAC Performing Arts Center  
Studio Theatre 725  
Rooms 728, 739, 740
- PS Physical Sciences  
Rooms 410-418
- SES Student Enrollment Services  
Rooms 101-148
- SMCL South Mountain Community Library  
Rooms L100-L101
- SS Student Services  
Rooms 100-129
- SU Student Union  
Rooms 100A-B-C
- TC Technology Center  
Rooms 155, 156, 157, 225, 226, 242 (Computer Commons), 243, 244
- WAC West Annex Complex  
Rooms 601-616, 623, 624

## LEGEND

- ★ **Division Offices:**
  - Language Arts (LA Bldg.)
  - Mathematics, Science & Engineering (PS Bldg.)
  - Business & Information Technology (BE Bldg.)
  - Communication, Fine Arts, & Social Sciences (PAC Bldg.)
  - Counseling, Health & Wellness (SS Bldg.)
  - Library Teaching & Learning Center (LRC Bldg.)
- 📖 **Bookstore**
- 🍴 **Cafeteria**
- 🏋️ **Fitness Center**
- 📞 **SECURITY 602-243-8100**
- 🚑 **AED** Automated External Defibrillator
- 📞 **Emergency Phone**
- 🚻 **Restrooms**