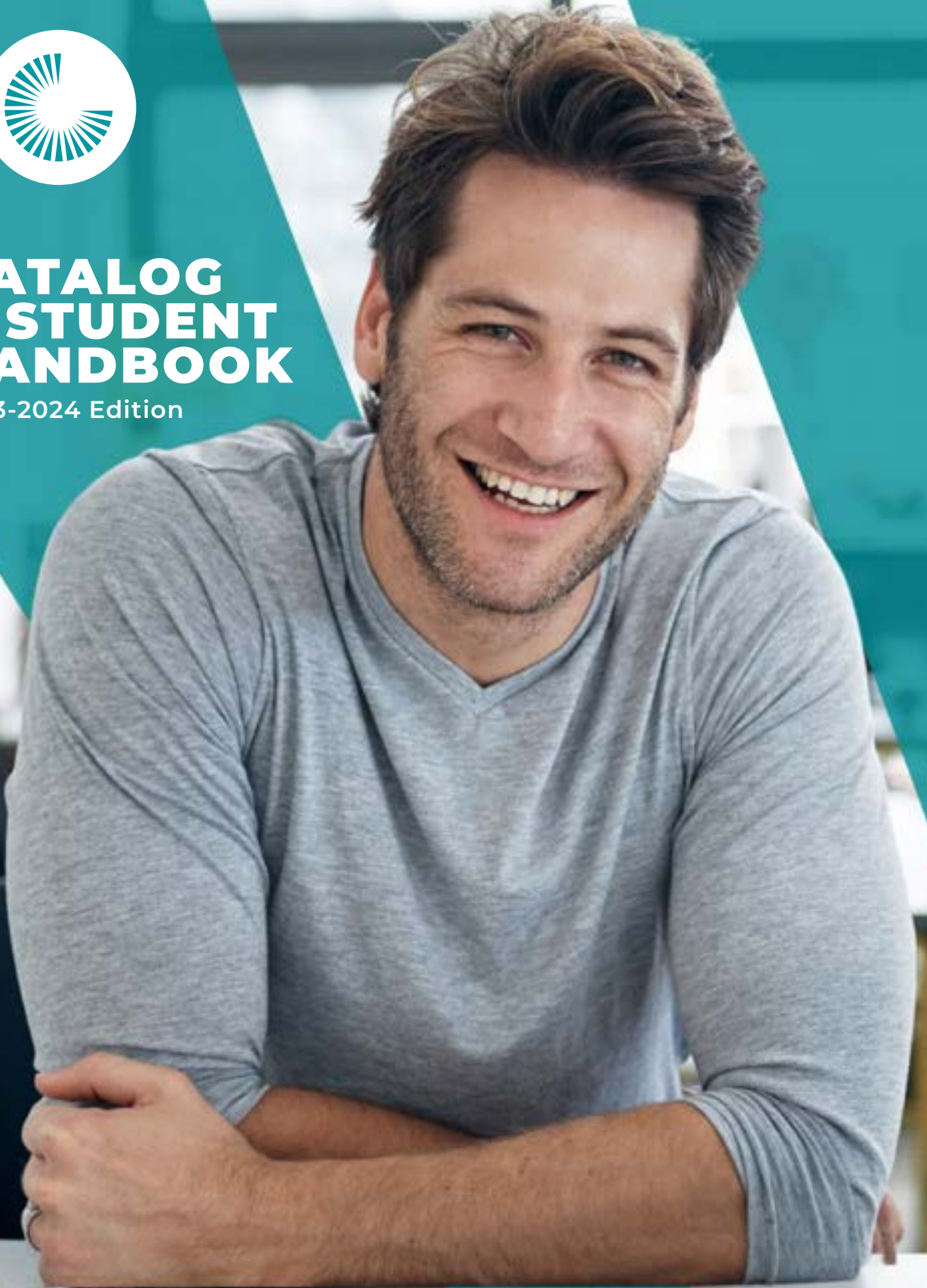




# CATALOG & STUDENT HANDBOOK

2023-2024 Edition



# PROGRAMS A-Z

## A

- Accounting, Associate in Applied Science (p. 114)
- Accounting, Certificate of Completion (p. 116)
- Administration of Justice Studies, Associate in Applied Science (p. 219)
- Administration of Justice, Certificate of Completion (p. 222)
- Administrative Professional, Certificate of Completion (p. 116)
- Adobe Foundations: Animation and Graphics Production, Certificate of Completion (p. 117)
- Aircraft Maintenance Technology - Airframe, Associate in Applied Science (p. 90)
- Aircraft Maintenance Technology - Airframe, Certificate of Completion (p. 92)
- Aircraft Maintenance Technology - Powerplant, Associate in Applied Science (p. 93)
- Aircraft Maintenance Technology - Powerplant, Certificate of Completion (p. 94)
- Aircraft Maintenance Technology, Associate in Applied Science (p. 88)
- Aircraft Maintenance Technology, Certificate of Completion (p. 89)
- Airway Science Technology - Flight Emphasis, Associate in Applied Science (p. 95)
- Amazon Web Services Cloud Associate, Certificate of Completion (p. 117)
- Amazon Web Services Cloud Practitioner, Certificate of Completion (p. 118)
- Amazon Web Services Cloud Specialist, Certificate of Completion (p. 118)
- Android App Development, Certificate of Completion (p. 119)
- Artificial Intelligence and Machine Learning, Associate in Applied Science (p. 261)
- Artificial Intelligence and Machine Learning, Certificate of Completion (p. 262)
- Associate in Arts, Elementary Education Degree (AAEE) (p. 34)
- Associate in Arts, Fine Arts (AAFA) (p. 38)
- Associate in Business, General Requirements (ABUS-GR) Degree (p. 45)
- Associate in Business, Special Requirements (ABUS-SR) Degree (p. 48)

## C

- Certified Flight Instructor Instrument Airplane Rating, Certificate of Completion (p. 97)
- Chicana and Chicano Studies, Academic Certificate (p. 243)
- Cisco Certified Network Professional: Enterprise Advanced Routing and Services, Certificate of Completion (p. 120)
- Cisco Certified Network Professional: Enterprise Core, Certificate of Completion (p. 121)
- Cisco Certified Network Professional: Enterprise, Certificate of Completion (p. 122)
- Cisco Network Administration and Security, Certificate of Completion (p. 123)

- Cisco Network Administration: CCNA, Certificate of Completion (p. 123)
- Cisco Network Administration: CCNP, Certificate of Completion (p. 124)
- Computer System Configuration and Support, Certificate of Completion (p. 125)
- Computer System Configuration and Support, Linux, Certificate of Completion (p. 125)
- Computer System Configuration and Support, Network, Certificate of Completion (p. 126)
- Computer System Configuration and Support, Security, Certificate of Completion (p. 127)
- Corrections, Certificate of Completion (p. 222)
- Creative Writing, Academic Certificate (p. 210)
- Crime Scene Investigation, Certificate of Completion (p. 223)
- Cyber Engineering, Certificate of Completion (p. 128)
- Cyber Operations, Certificate of Completion (p. 129)
- Cybersecurity Fundamentals, Certificate of Completion (p. 130)
- Cybersecurity, Associate in Applied Science (p. 130)

## D

- Data Analytics, Associate in Applied Science (p. 133)
- Data Analytics, Certificate of Completion (p. 134)
- Desktop Support, Certificate of Completion (p. 135)

## E

- Early Childhood Education, Associate in Applied Science (p. 270)
- Early Childhood Education, Certificate of Completion (p. 272)
- Emergency Medical Technology Comprehensive, Certificate of Completion (p. 224)
- Emergency Medical Technology, Certificate of Completion (p. 223)
- Enrolled Agent, Certificate of Completion (p. 136)
- Esports, Certificate of Completion (p. 136)
- Exercise Science: Health, Fitness and Sports Performance, Associate in Applied Science (p. 225)

## F

- Fingerprint Identification and Photography, Certificate of Completion (p. 227)
- Forensic Science, Associate in Applied Science (p. 227)
- Forensic Science, Certificate of Completion (p. 229)
- Foundations of Early Childhood Education, Certificate of Completion (p. 274)

## G

- General Business, Associate in Applied Science (p. 137)
- General Business, Certificate of Completion (p. 139)

## H

- Homeland Security, Certificate of Completion (p. 230)

## I

- Illustration and Sequential Art, Associate in Applied Science (p. 201)
- Illustration, Certificate of Completion (p. 200)

- Information Technology, Associate in Applied Science (p. 140)
- iOS App Development, Certificate of Completion (p. 149)

## K

- Kubernetes Administration, Certificate of Completion (p. 150)
- Kubernetes Application Development, Certificate of Completion (p. 150)
- Kubernetes Security, Certificate of Completion (p. 151)

## L

- Language Studies, Academic Certificate (p. 244)
- Law Enforcement Training Academy, Certificate of Completion (p. 232)
- Law Enforcement Training, Associate in Applied Science (p. 231)
- Law Enforcement, Certificate of Completion (p. 230)
- Leadership in Public Safety Organizations, Certificate of Completion (p. 233)
- Legal Studies, Certificate of Completion (p. 233)
- Linux Associate, Certificate of Completion (p. 151)
- Linux System Administration, Certificate of Completion (p. 152)

## M

- Management, Associate in Applied Science (p. 153)
- Microsoft Desktop Associate, Certificate of Completion (p. 154)
- Microsoft Office Professional, Certificate of Completion (p. 154)
- Microsoft Office Specialist, Certificate of Completion (p. 155)
- Microsoft System Administration, Certificate of Completion (p. 156)
- Mortuary Science, Associate in Applied Science (p. 234)

## N

- Network and Systems Administration, Associate in Applied Science (p. 157)

## O

- Oracle Database Operations, Certificate of Completion (p. 160)
- Organizational Leadership, Certificate of Completion (p. 161)
- Organizational Management, Associate in Applied Science (p. 162)

## P

- Personal Training, Certificate of Completion (p. 235)
- Personal Training: Advanced, Certificate of Completion (p. 236)
- Photography, Associate in Applied Science (p. 202)
- Programming and Systems Analysis Level I, Certificate of Completion (p. 163)
- Programming and Systems Analysis Level II, Certificate of Completion (p. 163)
- Programming and Systems Analysis, Associate in Applied Science (p. 165)
- Python Applications, Certificate of Completion (p. 167)

## R

- Red Hat Linux Administrator, Certificate of Completion (p. 168)
- Red Hat Linux Engineer, Certificate of Completion (p. 168)

- Registered Nurse Pathway, Associate in Applied Science (p. 252)
- Retail Management, Certificate of Completion (p. 169)

## S

- Securities Industry Essentials, Certificate of Completion (p. 169)
- Security Industry Essentials: Pre-licensure, Certificate of Completion (p. 170)
- Sequential Art, Certificate of Completion (p. 205)
- Small Business Management Level I, Certificate of Completion (p. 170)
- Small Business Management Level II, Certificate of Completion (p. 171)
- Small Business Start-Up, Certificate of Completion (p. 172)
- Social Media Marketing, Certificate of Completion (p. 172)
- Spanish Language and Culture, Academic Certificate (p. 245)
- Sustainability, Academic Certificate (p. 101)

## U

- Unmanned Aircraft Systems, Associate in Applied Science (p. 97)
- Unmanned Aircraft Systems, Certificate of Completion (p. 98)

## V

- Victimology, Certificate of Completion (p. 238)
- VMware Network Administrator, Certificate of Completion (p. 173)

## W

- Web App Development, Certificate of Completion (p. 173)
- Web Design, Certificate of Completion (p. 174)
- Web Design/Development, Associate in Applied Science (p. 175)
- Web Development, Certificate of Completion (p. 177)
- Web Foundations, Certificate of Completion (p. 178)
- Women and Gender Studies, Academic Certificate (p. 246)

## Associate in Applied Science

- Accounting, Associate in Applied Science (p. 114)
- Administration of Justice Studies, Associate in Applied Science (p. 219)
- Aircraft Maintenance Technology - Airframe, Associate in Applied Science (p. 90)
- Aircraft Maintenance Technology - Powerplant, Associate in Applied Science (p. 93)
- Aircraft Maintenance Technology, Associate in Applied Science (p. 88)
- Airway Science Technology - Flight Emphasis, Associate in Applied Science (p. 95)
- Artificial Intelligence and Machine Learning, Associate in Applied Science (p. 261)
- Associate in Arts, Elementary Education Degree (AAEE) (p. 34)
- Associate in Arts, Fine Arts (AAFA) (p. 38)
- Associate in Business, General Requirements (ABUS-GR) Degree (p. 45)
- Associate in Business, Special Requirements (ABUS-SR) Degree (p. 48)
- Cybersecurity, Associate in Applied Science (p. 130)

- Data Analytics, Associate in Applied Science (p. 133)
- Early Childhood Education, Associate in Applied Science (p. 270)
- Exercise Science: Health, Fitness and Sports Performance, Associate in Applied Science (p. 225)
- Forensic Science, Associate in Applied Science (p. 227)
- General Business, Associate in Applied Science (p. 137)
- Illustration and Sequential Art, Associate in Applied Science (p. 201)
- Information Technology, Associate in Applied Science (p. 140)
- Law Enforcement Training, Associate in Applied Science (p. 231)
- Management, Associate in Applied Science (p. 153)
- Mortuary Science, Associate in Applied Science (p. 234)
- Network and Systems Administration, Associate in Applied Science (p. 157)
- Organizational Management, Associate in Applied Science (p. 162)
- Photography, Associate in Applied Science (p. 202)
- Programming and Systems Analysis, Associate in Applied Science (p. 165)
- Registered Nurse Pathway, Associate in Applied Science (p. 252)
- Unmanned Aircraft Systems, Associate in Applied Science (p. 97)
- Web Design/Development, Associate in Applied Science (p. 175)

## Academic Certificate

- Chicana and Chicano Studies, Academic Certificate (p. 243)
- Creative Writing, Academic Certificate (p. 210)
- Language Studies, Academic Certificate (p. 244)
- Spanish Language and Culture, Academic Certificate (p. 245)
- Sustainability, Academic Certificate (p. 101)
- Women and Gender Studies, Academic Certificate (p. 246)

## Certificate of Completion

- Accounting, Certificate of Completion (p. 116)
- Administration of Justice, Certificate of Completion (p. 222)
- Administrative Professional, Certificate of Completion (p. 116)
- Adobe Foundations: Animation and Graphics Production, Certificate of Completion (p. 117)
- Aircraft Maintenance Technology - Airframe, Certificate of Completion (p. 92)
- Aircraft Maintenance Technology - Powerplant, Certificate of Completion (p. 94)
- Aircraft Maintenance Technology, Certificate of Completion (p. 89)
- Amazon Web Services Cloud Associate, Certificate of Completion (p. 117)
- Amazon Web Services Cloud Practitioner, Certificate of Completion (p. 118)
- Amazon Web Services Cloud Specialist, Certificate of Completion (p. 118)
- Android App Development, Certificate of Completion (p. 119)
- Artificial Intelligence and Machine Learning, Certificate of Completion (p. 262)
- Certified Flight Instructor Instrument Airplane Rating, Certificate of Completion (p. 97)
- Cisco Certified Network Professional: Enterprise Advanced Routing and Services, Certificate of Completion (p. 120)

- Cisco Certified Network Professional: Enterprise Core, Certificate of Completion (p. 121)
- Cisco Certified Network Professional: Enterprise, Certificate of Completion (p. 122)
- Cisco Network Administration and Security, Certificate of Completion (p. 123)
- Cisco Network Administration: CCNA, Certificate of Completion (p. 123)
- Cisco Network Administration: CCNP, Certificate of Completion (p. 124)
- Computer System Configuration and Support, Certificate of Completion (p. 125)
- Computer System Configuration and Support, Linux, Certificate of Completion (p. 125)
- Computer System Configuration and Support, Network, Certificate of Completion (p. 126)
- Computer System Configuration and Support, Security, Certificate of Completion (p. 127)
- Corrections, Certificate of Completion (p. 222)
- Crime Scene Investigation, Certificate of Completion (p. 223)
- Cyber Engineering, Certificate of Completion (p. 128)
- Cyber Operations, Certificate of Completion (p. 129)
- Cybersecurity Fundamentals, Certificate of Completion (p. 130)
- Data Analytics, Certificate of Completion (p. 134)
- Desktop Support, Certificate of Completion (p. 135)
- Early Childhood Education, Certificate of Completion (p. 272)
- Emergency Medical Technology Comprehensive, Certificate of Completion (p. 224)
- Emergency Medical Technology, Certificate of Completion (p. 223)
- Enrolled Agent, Certificate of Completion (p. 136)
- Esports, Certificate of Completion (p. 136)
- Fingerprint Identification and Photography, Certificate of Completion (p. 227)
- Forensic Science, Certificate of Completion (p. 229)
- Foundations of Early Childhood Education, Certificate of Completion (p. 274)
- General Business, Certificate of Completion (p. 139)
- Homeland Security, Certificate of Completion (p. 230)
- Illustration, Certificate of Completion (p. 200)
- iOS App Development, Certificate of Completion (p. 149)
- Kubernetes Administration, Certificate of Completion (p. 150)
- Kubernetes Application Development, Certificate of Completion (p. 150)
- Kubernetes Security, Certificate of Completion (p. 151)
- Law Enforcement Training Academy, Certificate of Completion (p. 232)
- Law Enforcement, Certificate of Completion (p. 230)
- Leadership in Public Safety Organizations, Certificate of Completion (p. 233)
- Legal Studies, Certificate of Completion (p. 233)
- Linux Associate, Certificate of Completion (p. 151)
- Linux System Administration, Certificate of Completion (p. 152)
- Microsoft Desktop Associate, Certificate of Completion (p. 154)
- Microsoft Office Professional, Certificate of Completion (p. 154)

- Microsoft Office Specialist, Certificate of Completion (p. 155)
- Microsoft System Administration, Certificate of Completion (p. 156)
- Oracle Database Operations, Certificate of Completion (p. 160)
- Organizational Leadership, Certificate of Completion (p. 161)
- Personal Training, Certificate of Completion (p. 235)
- Personal Training: Advanced, Certificate of Completion (p. 236)
- Programming and Systems Analysis Level I, Certificate of Completion (p. 163)
- Programming and Systems Analysis Level II, Certificate of Completion (p. 163)
- Python Applications, Certificate of Completion (p. 167)
- Red Hat Linux Administrator, Certificate of Completion (p. 168)
- Red Hat Linux Engineer, Certificate of Completion (p. 168)
- Retail Management, Certificate of Completion (p. 169)
- Securities Industry Essentials, Certificate of Completion (p. 169)
- Security Industry Essentials: Pre-licensure, Certificate of Completion (p. 170)
- Sequential Art, Certificate of Completion (p. 205)
- Small Business Management Level I, Certificate of Completion (p. 170)
- Small Business Management Level II, Certificate of Completion (p. 171)
- Small Business Start-Up, Certificate of Completion (p. 172)
- Social Media Marketing, Certificate of Completion (p. 172)
- Unmanned Aircraft Systems, Certificate of Completion (p. 98)
- Victimology, Certificate of Completion (p. 238)
- VMware Network Administrator, Certificate of Completion (p. 173)
- Web App Development, Certificate of Completion (p. 173)
- Web Design, Certificate of Completion (p. 174)
- Web Development, Certificate of Completion (p. 177)
- Web Foundations, Certificate of Completion (p. 178)

## Microcert

- Administration of Justice, Certificate of Completion (p. 222)
- Amazon Web Services Cloud Practitioner, Certificate of Completion (p. 118)
- Android App Development, Certificate of Completion (p. 119)
- Cisco Certified Network Professional: Enterprise Advanced Routing and Services, Certificate of Completion (p. 120)
- Cisco Certified Network Professional: Enterprise Core, Certificate of Completion (p. 121)
- Cisco Network Administration: CCNA, Certificate of Completion (p. 123)
- Computer System Configuration and Support, Certificate of Completion (p. 125)
- Computer System Configuration and Support, Linux, Certificate of Completion (p. 125)
- Computer System Configuration and Support, Network, Certificate of Completion (p. 126)
- Corrections, Certificate of Completion (p. 222)
- Emergency Medical Technology, Certificate of Completion (p. 223)
- Fingerprint Identification and Photography, Certificate of Completion (p. 227)

- Foundations of Early Childhood Education, Certificate of Completion (p. 274)
- Homeland Security, Certificate of Completion (p. 230)
- iOS App Development, Certificate of Completion (p. 149)
- Law Enforcement, Certificate of Completion (p. 230)
- Legal Studies, Certificate of Completion (p. 233)
- Linux Associate, Certificate of Completion (p. 151)
- Microsoft Desktop Associate, Certificate of Completion (p. 154)
- Personal Training, Certificate of Completion (p. 235)
- Red Hat Linux Administrator, Certificate of Completion (p. 168)
- Red Hat Linux Engineer, Certificate of Completion (p. 168)
- Victimology, Certificate of Completion (p. 238)
- Web App Development, Certificate of Completion (p. 173)

## Applied Technology

- Aircraft Maintenance Technology - Airframe, Associate in Applied Science (p. 90)
- Aircraft Maintenance Technology - Airframe, Certificate of Completion (p. 92)
- Aircraft Maintenance Technology - Powerplant, Associate in Applied Science (p. 93)
- Aircraft Maintenance Technology - Powerplant, Certificate of Completion (p. 94)
- Aircraft Maintenance Technology, Associate in Applied Science (p. 88)
- Aircraft Maintenance Technology, Certificate of Completion (p. 89)
- Airway Science Technology - Flight Emphasis, Associate in Applied Science (p. 95)
- Certified Flight Instructor Instrument Airplane Rating, Certificate of Completion (p. 97)
- Unmanned Aircraft Systems, Associate in Applied Science (p. 97)
- Unmanned Aircraft Systems, Certificate of Completion (p. 98)

## Behavioral Science and Human Services

- Administration of Justice Studies, Associate in Applied Science (p. 219)
- Administration of Justice, Certificate of Completion (p. 222)
- Corrections, Certificate of Completion (p. 222)
- Crime Scene Investigation, Certificate of Completion (p. 223)
- Fingerprint Identification and Photography, Certificate of Completion (p. 227)
- Forensic Science, Associate in Applied Science (p. 227)
- Forensic Science, Certificate of Completion (p. 229)
- Homeland Security, Certificate of Completion (p. 230)
- Law Enforcement Training Academy, Certificate of Completion (p. 232)
- Law Enforcement Training, Associate in Applied Science (p. 231)
- Law Enforcement, Certificate of Completion (p. 230)
- Leadership in Public Safety Organizations, Certificate of Completion (p. 233)
- Legal Studies, Certificate of Completion (p. 233)
- Victimology, Certificate of Completion (p. 238)



## Business Entrepreneurialism, and Management

- Accounting, Associate in Applied Science (p. 114)
- Accounting, Certificate of Completion (p. 116)
- Administrative Professional, Certificate of Completion (p. 116)
- Associate in Business, General Requirements (ABUS-GR) Degree (p. 45)
- Associate in Business, Special Requirements (ABUS-SR) Degree (p. 48)
- Enrolled Agent, Certificate of Completion (p. 136)
- Esports, Certificate of Completion (p. 136)
- General Business, Associate in Applied Science (p. 137)
- General Business, Certificate of Completion (p. 139)
- Management, Associate in Applied Science (p. 153)
- Organizational Leadership, Certificate of Completion (p. 161)
- Organizational Management, Associate in Applied Science (p. 162)
- Retail Management, Certificate of Completion (p. 169)
- Securities Industry Essentials, Certificate of Completion (p. 169)
- Security Industry Essentials: Pre-licensure, Certificate of Completion (p. 170)
- Small Business Management Level I, Certificate of Completion (p. 170)
- Small Business Management Level II, Certificate of Completion (p. 171)
- Small Business Start-Up, Certificate of Completion (p. 172)
- Social Media Marketing, Certificate of Completion (p. 172)

## Computer Information Technology

- Adobe Foundations: Animation and Graphics Production, Certificate of Completion (p. 117)
- Amazon Web Services Cloud Associate, Certificate of Completion (p. 117)
- Amazon Web Services Cloud Practitioner, Certificate of Completion (p. 118)
- Amazon Web Services Cloud Specialist, Certificate of Completion (p. 118)
- Android App Development, Certificate of Completion (p. 119)
- Cisco Certified Network Professional: Enterprise Advanced Routing and Services, Certificate of Completion (p. 120)
- Cisco Certified Network Professional: Enterprise Core, Certificate of Completion (p. 121)
- Cisco Certified Network Professional: Enterprise, Certificate of Completion (p. 122)
- Cisco Network Administration and Security, Certificate of Completion (p. 123)
- Cisco Network Administration: CCNA, Certificate of Completion (p. 123)
- Cisco Network Administration: CCNP, Certificate of Completion (p. 124)
- Computer System Configuration and Support, Certificate of Completion (p. 125)
- Computer System Configuration and Support, Linux, Certificate of Completion (p. 125)

- Computer System Configuration and Support, Network, Certificate of Completion (p. 126)
- Computer System Configuration and Support, Security, Certificate of Completion (p. 127)
- Cyber Engineering, Certificate of Completion (p. 128)
- Cyber Operations, Certificate of Completion (p. 129)
- Cybersecurity Fundamentals, Certificate of Completion (p. 130)
- Cybersecurity, Associate in Applied Science (p. 130)
- Data Analytics, Associate in Applied Science (p. 133)
- Data Analytics, Certificate of Completion (p. 134)
- Desktop Support, Certificate of Completion (p. 135)
- Information Technology, Associate in Applied Science (p. 140)
- iOS App Development, Certificate of Completion (p. 149)
- Kubernetes Administration, Certificate of Completion (p. 150)
- Kubernetes Application Development, Certificate of Completion (p. 150)
- Kubernetes Security, Certificate of Completion (p. 151)
- Linux Associate, Certificate of Completion (p. 151)
- Linux System Administration, Certificate of Completion (p. 152)
- Microsoft Desktop Associate, Certificate of Completion (p. 154)
- Microsoft Office Professional, Certificate of Completion (p. 154)
- Microsoft Office Specialist, Certificate of Completion (p. 155)
- Microsoft System Administration, Certificate of Completion (p. 156)
- Network and Systems Administration, Associate in Applied Science (p. 157)
- Oracle Database Operations, Certificate of Completion (p. 160)
- Programming and Systems Analysis Level I, Certificate of Completion (p. 163)
- Programming and Systems Analysis Level II, Certificate of Completion (p. 163)
- Programming and Systems Analysis, Associate in Applied Science (p. 165)
- Python Applications, Certificate of Completion (p. 167)
- Red Hat Linux Administrator, Certificate of Completion (p. 168)
- Red Hat Linux Engineer, Certificate of Completion (p. 168)
- VMware Network Administrator, Certificate of Completion (p. 173)
- Web App Development, Certificate of Completion (p. 173)
- Web Design, Certificate of Completion (p. 174)
- Web Design/Development, Associate in Applied Science (p. 175)
- Web Development, Certificate of Completion (p. 177)
- Web Foundations, Certificate of Completion (p. 178)

## Culture and Society

- Chicana and Chicano Studies, Academic Certificate (p. 243)
- Creative Writing, Academic Certificate (p. 210)
- Language Studies, Academic Certificate (p. 244)
- Spanish Language and Culture, Academic Certificate (p. 245)
- Women and Gender Studies, Academic Certificate (p. 246)

## Education

- Associate in Arts, Elementary Education Degree (AAEE) (p. 34)
- Early Childhood Education, Associate in Applied Science (p. 270)
- Early Childhood Education, Certificate of Completion (p. 272)

- Foundations of Early Childhood Education, Certificate of Completion (p. 274)

## Health Sciences

- Emergency Medical Technology Comprehensive, Certificate of Completion (p. 224)
- Emergency Medical Technology, Certificate of Completion (p. 223)
- Exercise Science: Health, Fitness and Sports Performance, Associate in Applied Science (p. 225)
- Personal Training, Certificate of Completion (p. 235)
- Personal Training: Advanced, Certificate of Completion (p. 236)
- Registered Nurse Pathway, Associate in Applied Science (p. 252)

## Science, Technology, Engineering and Mathematics

- Artificial Intelligence and Machine Learning, Associate in Applied Science (p. 261)
- Artificial Intelligence and Machine Learning, Certificate of Completion (p. 262)
- Mortuary Science, Associate in Applied Science (p. 234)
- Sustainability, Academic Certificate (p. 101)

## Visual and Performing Arts

- Associate in Arts, Fine Arts (AAFA) (p. 38)
- Illustration and Sequential Art, Associate in Applied Science (p. 201)
- Illustration, Certificate of Completion (p. 200)
- Photography, Associate in Applied Science (p. 202)
- Sequential Art, Certificate of Completion (p. 205)

# Aviation & Applied Technology

Bashir Khalil, Occupational Program Director  
480-988-8112 | bashir.khalil@cgcc.edu

## Courses

Prefix	Course
AET	Aeronautics
AIT	Automated Industrial Technology
AMT	Aircraft Maintenance Technology
PPT	Power Plant Technology
UAS	Unmanned Aircraft Systems

## Career Programs

Aircraft Maintenance Technology  
Aircraft Maintenance Technology-Airframe  
Aircraft Maintenance Technology-Powerplant  
Airway Science Technology, Flight Emphasis  
Certified Flight Instructor Instrument Airplane Rating  
Unmanned Aircraft Systems

## Associate in Applied Science (AAS)

- Aircraft Maintenance Technology - Airframe, Associate in Applied Science (p. 90)
- Aircraft Maintenance Technology - Powerplant, Associate in Applied Science (p. 93)
- Aircraft Maintenance Technology, Associate in Applied Science (p. 88)
- Airway Science Technology - Flight Emphasis, Associate in Applied Science (p. 95)
- Unmanned Aircraft Systems, Associate in Applied Science (p. 97)

## Certificate Of Completion (CCL)

- Aircraft Maintenance Technology - Airframe, Certificate of Completion (p. 92)
- Aircraft Maintenance Technology - Powerplant, Certificate of Completion (p. 94)
- Aircraft Maintenance Technology, Certificate of Completion (p. 89)
- Certified Flight Instructor Instrument Airplane Rating, Certificate of Completion (p. 97)
- Unmanned Aircraft Systems, Certificate of Completion (p. 98)

## Aircraft Maintenance Technology

Hutto, Clarence (Mike)

- A.A., Mesa Community College
- B.A., St. Leo College

Julian, William

- Kansas College of Technology
- A.A.S., Eastern New Mexico University

Khalil, Bashir M.

Occupational Program Director

- A.A., A.S., Cochise College
- B.S., M.S., Indiana State University

Snyder, Eric

- B.S., Southern Illinois University

Summerford, Roark David

- B.S. Arizona State University

Varela, Rachel Leigh

- B.S., Arizona State University

Zilch, John

- B.S., Midwestern State University
- M.S., Embry Riddle Aeronautical University

## Unmanned Aircraft Systems

Vacant

## Aeronautics (AET)

AET107 / Private Pilot Ground School

5 Credits / 5.0 Periods for Lecture

Ground school in preparation for the Federal Aviation Administration (FAA) Private Pilot Certificate written examination. Includes aerodynamics, airplane systems, airports, airspace, communications, Federal Air Regulations, navigation, airplane performance, flight planning, and flight physiology. Requires passing a written exam similar to the FAA Private Pilot written exam. Prerequisites: None. Corequisites: AET110 or AET112.

Division: Aviation and Applied Technology

AET110 / Private Pilot Flight

1 Credit / 5.0 Periods for Laboratory

Flight course in preparation for the Federal Aviation Administration (FAA) Private Pilot Certificate practical examination. Includes preflight preparation and planning, ground operations, airport operations, departures, navigation, basic instrument flight, night flight, slow flight, ground reference maneuvers, emergency operations, and arrivals. Approximately 50 hours airplane flight experience at student's expense required. Requires passing check ride similar to the FAA Private Pilot check ride. Prerequisites: None. Corequisites: AET107.

Division: Aviation and Applied Technology

AET112 / Private Pilot Flight-Test Course

1 Credit / 5.0 Periods for Laboratory

Flight course in preparation for transition into continued AET course work. Includes preflight preparation and planning, ground operations, airport operations, departures, navigation, basic instrument flight, slow flight, ground reference maneuvers, emergency operations, and arrivals. Requires passing check ride similar to the Federal Aviation Administration Private Pilot check ride. Prerequisites: FAA Private Pilot Airplane Single-Engine Land or advanced certification. Corequisites: AET107. Course Notes: Flight and ground briefing time at student's expense required.

Division: Aviation and Applied Technology



**AET115 / Aviation Meteorology****3 Credits / 3.0 Periods for Lecture**

Meteorology for professional pilots. Includes atmosphere, air mass circulation, cloud type identification, weather hazards, and high altitude, Arctic, and tropical weather systems. Basic forecasting, use of Direct User Access Terminal (DUAT) systems and reading and interpreting weather charts. Prerequisites: None.

**Division:** Aviation and Applied Technology

**AET203 / Basic Airplane Systems****3 Credits / 3.0 Periods for Lecture**

Beginning commercial pilot ground course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot Certificate and Commercial written examination. Discussions will include, but not be limited to reciprocating engines, engine systems, airplane systems, altitude systems, and commercial regulations. Prerequisites: A grade of C or better in (AET207, AET217, and AET210) or permission of Instructor. Corequisites: AET222.

**Division:** Aviation and Applied Technology

**AET207 / Attitude Instruments and Navigation****3 Credits / 3.0 Periods for Lecture**

Beginning instrument pilot ground course in preparation for the Federal Aviation Administration (FAA) Instrument Pilot Rating and Instrument Rating written examinations. Includes preflight preparation, flight instruments, basic attitude instrument flying, radio navigation systems, and technically advanced aircraft systems. Prerequisites: A grade of C or better in AET110 or permission of Instructor. Corequisites: AET210, AET217, and AET220.

**Division:** Aviation and Applied Technology

**AET208 / Aviation Safety****3 Credits / 3.0 Periods for Lecture**

Introduction to aviation safety, including aviation safety programs, risk management, pilot psychology, physiology, human factors, and accident review and investigation. Prerequisites: A grade of C or better in AET107, or permission of Instructor.

**Division:** Aviation and Applied Technology

**AET210 / Commercial Flight Lab I****1 Credit / 5.0 Periods for Laboratory**

Initial flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on instrument and technically advanced aircraft operations. Student must fly approximately 10 hours at own expense. Requires passing operational stage checks similar to the FAA check rides. Prerequisites: A grade of C or better in AET110 or permission of Instructor. Corequisites: AET207, AET217, and AET220.

**Division:** Aviation and Applied Technology

**AET213 / Aerodynamics and Performance****3 Credits / 3.0 Periods for Lecture**

Advanced commercial pilot ground course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot Certificate and Commercial written examinations. Includes discussion of aerodynamic factors including lift, weight, drag, and thrust. Discussions will include, but are not limited to aerodynamics, performance, safe and efficient airplane operations, airplane stability and control, stalls, and spins. Prerequisites: A grade of C or better in AET207, AET217, and AET210. Corequisites: AET221.

**Division:** Aviation and Applied Technology

**AET217 / Instrument Procedures****3 Credits / 3.0 Periods for Lecture**

Advanced instrument pilot ground school course in preparation for the Federal Aviation Administration (FAA) Instrument pilot rating and Instrument rating written examinations. Includes Federal Aviation Regulations, instrument approach procedures, and instrument en route considerations. Requires passing written exam similar to the Instrument pilot rating and Instrument rating written exams. Prerequisites: A grade of C or better in AET110 or permission of Instructor. Corequisites: AET207, AET210, and AET220.

**Division:** Aviation and Applied Technology

**AET220 / Instrument Flight Lab****1 Credit / 5.0 Periods for Laboratory**

Flight course in preparation for the Federal Aviation Administration (FAA) Instrument rating practical examination. Emphasis on instrument operations. Student must fly approximately 40 hours at own expense. Requires passing of stage checks similar to the FAA check ride. Prerequisites: A grade of C or better in AET110 or permission of Instructor. Corequisites: AET207, AET210, and AET217.

**Division:** Aviation and Applied Technology

**AET221 / Commercial Flight Lab II****1 Credit / 5.0 Periods for Laboratory**

Intermediate flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on commercial and solo cross-country flight operations. Student must fly approximately 45 hours at their own expense. Maneuvers and procedures during dual instruction are designed to be performed with flight instructor guidance. Requires passing commercial pilot stage checks similar to the FAA check ride. Prerequisites: A grade of C or better in AET207 and AET210 or permission of Instructor. Corequisites: AET213.

**Division:** Aviation and Applied Technology

**AET222 / Commercial Flight Lab III****1 Credit / 5.0 Periods for Laboratory**

Advanced flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on commercial operations. Student must fly approximately 45 hours at their own expense. Maneuvers and procedures are designed to be performed with little flight instructor guidance. Requires commercial pilot stage checks similar to the FAA check ride. Prerequisites: A grade of C or better in AET221 and AET213. Corequisites: AET203.

**Division:** Aviation and Applied Technology

**AET225 / Advanced Aircraft Systems****4 Credits / 4.0 Periods for Lecture**

Survey of advanced aircraft systems to include electrical, automatic flight control, pressurization, cabin atmosphere, ice control, rain control, fire detection and extinguishing. Includes theory and analysis of turbine aircraft engines. Introduction to turbine engine systems to include lubrication, ignition, fuel control, cooling, exhaust, and propellers. Includes overview of maintenance publications, forms and records. Prerequisites: Private Pilot Certificate or permission of Instructor.

**Division:** Aviation and Applied Technology

**AET227 / Certified Flight Instructor: Airplane, Single Engine Land Ground School****5 Credits / 5.0 Periods for Lecture**

Ground school in preparation for the Federal Aviation Administration (FAA) Certified Flight Instructor and Fundamentals of Instruction written examinations. Includes fundamentals of instruction, aerodynamics, airplane performance, systems, operations, weight and balance, weather, federal regulations, navigation, maneuvers, pilot physiology, ethics, and aeronautical decision making. Requires passing written exams similar to the FAA Certified Flight Instructor: Airplane, and Fundamentals of Instruction written exams. Prerequisites: A grade of C or better in AET240 or FAA Commercial Pilot Certificate with instrument rating. Corequisites: AET230.

**Division:** Aviation and Applied Technology

**AET229 / Crew Resource Management****3 Credits / 3.0 Periods for Lecture**

Crew communications, teamwork, leadership, "followership," decision-making, and situational awareness; also the benefits of diversity, and the role diversity plays in the modern aerospace industry. Emphasis on utilization of all available resources in order to conduct a safe and efficient flight. Prerequisites: A grade of C or better in AET217, or permission of instructor.

**Division:** Aviation and Applied Technology

**AET230 / Certified Flight Instructor: Airplane, Single Engine Land Flight Lab****1 Credit / 3.0 Periods for Laboratory**

Flight course in preparation for the Federal Aviation Administration (FAA) Certified Flight Instructor: Airplane practical examination. Emphasis on demonstration and analysis of flight maneuvers. Includes preflight, ground operations, airport operations, takeoffs, climbs, flight fundamentals, stalls, spins, slow flight, basic instrument operations, performance maneuvers, ground reference maneuvers, emergency operations, approaches, landings, and postflight procedures. Requires approximately 25 hours of flight that includes high performance operations at student's expense. Also requires passing check ride similar to the FAA Certified Flight Instructor check ride. Prerequisites: A grade of C or better in AET240 or FAA Commercial Pilot Certificate with instrument rating. Corequisites: AET227.

**Division:** Aviation and Applied Technology

**AET237 / Multiengine Airplane Pilot Ground School****2 Credits / 2.0 Periods for Lecture**

Aeronautical knowledge necessary to meet requirements for a multi-engine airplane rating including orientation, aerodynamics, airplane systems, airplane performance, flight planning, and emergency procedures. Prerequisites: A grade of C or better in AET220 or FAA Commercial Pilot Certificate with instrument rating. Corequisites: AET240.

**Division:** Aviation and Applied Technology

**AET239 / Commercial Flight Lab IV****1 Credit / 5.0 Periods for Laboratory**

Final flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on commercial operations. Student must fly approximately 20 hours at their own expense. Maneuvers and procedures are designed to be performed without flight instructor guidance. Requires passing commercial pilot stage check similar to the FAA check ride. Prerequisites: A grade of C or better in (AET203 and AET222), or permission of Instructor.

**Division:** Aviation and Applied Technology

**AET240 / Multiengine Airplane Pilot Flight Lab****1 Credit / 1.5 Periods for Laboratory**

Flight course in preparation for the Federal Aviation Administration (FAA) Multi-engine Airplane practical examination. Approximately 18 hours of flight experience at the student's expense and passing check ride similar to the FAA Multi-engine check ride are required. Prerequisites: A grade of C or better in AET239 or FAA Commercial Pilot Certificate with Single Engine Land and Instrument rating. Corequisites: AET237.

**Division:** Aviation and Applied Technology

**Automated Industrial Technology (AIT)****AIT124 / Composites****3 Credits / 4.0 Periods for Lecture & Lab**

Basic composite materials, construction, and repair. Manufacturing methods and equipment. Assessment and repair of composite structures using vacuum bagging and other approved procedures. Corrosion control, electrical bonding, materials substitutions, machining of composite components, mold fabrication. Hot bond repair of composite components including complex shapes and varied materials. Prerequisites: None.

**Division:** Aviation and Applied Technology

**AIT132 / Industrial Technology for the Semiconductor Industry****3 Credits / 4.0 Periods for Lecture & Lab**

Introduction to semiconductor manufacturing concepts, processes, and hands-on application. Includes electrical theory, circuits, schematics, hand tools, safety, clean room protocols, model based problem solving, lean manufacturing, vacuum technology, and troubleshooting. Prerequisites: None.

**Division:** Aviation and Applied Technology

**Aircraft Maintenance Technology (AMT)****AMT124 / Aircraft Forms and Regulations, Weight and Balance, Drawings, and Ground Operations****5 Credits / 9.0 Periods for Lecture & Lab**

Federal Aviation maintenance publications, forms and records. Overview of technician's privileges and limitations. Perform aircraft weight and balance, aircraft ground operations and fuel servicing techniques. Drawings, symbols and schematic diagrams. Prerequisites: Admission to the Aircraft Maintenance Technology program.

**Division:** Aviation and Applied Technology

**AMT126 / Fundamentals of Mathematics and Electricity****9 Credits / 12.0 Periods for Lecture & Lab**

Mathematical computation of fundamental electrical circuit parameters. Basic definitions, laws, and concepts. Schematic, wiring, and parts placement diagrams. Test and troubleshoot electrical and electronic components and circuits. Prerequisites: Admission to the Aircraft Maintenance Technology program.

**Division:** Aviation and Applied Technology

**AMT128 / Fundamentals of Aviation Physics, Corrosion Control, Materials and Processes, Fluid Lines and Fittings****5 Credits / 9.0 Periods for Lecture & Lab**

Basic concepts of motion, fluid dynamics, heat and sound, aerodynamics, aircraft structure and theory of flight. Fluid lines and fittings, component identification, function, inspection, and installation. Cleaning and corrosion control, materials and processes, non-destructive testing, and precision measurement techniques. Prerequisites: Admission to the Aircraft Maintenance Technology program.

**Division:** Aviation and Applied Technology

**AMT220 / Fundamentals Of Aircraft Wood Structures, Covering And Finishing, And Bonded Structures**

**3 Credits / 6.0 Periods for Lecture & Lab**

Theories and techniques of aircraft wood structures. Inspection, test and repair of aircraft fabric and wood structures. Aircraft structural design and methods of working with selected materials. Characteristics of composites, inspections and repairs. Prerequisites: Admission to the program.

**Division:** Aviation and Applied Technology

**AMT222 / Atmosphere Control, Fire Detection, Ice and Rain Protection Systems**

**4 Credits / 6.0 Periods for Lecture & Lab**

Operation and maintenance of aircraft auxiliary systems. Inspection, servicing, troubleshooting and repair of environmental control, ice and rain control, fire protection and warning systems. Prerequisites: Admission to the program.

**Division:** Aviation and Applied Technology

**AMT224 / Aircraft Sheet Metal**

**5 Credits / 11.0 Periods for Lecture & Lab**

Inspection, fabrication, and repair techniques of aircraft structural and nonstructural components. Sheet metal heat-treating techniques. Prerequisites: Admission to the program.

**Division:** Aviation and Applied Technology

**AMT226 / Aircraft Landing Gear, Hydraulic, Pneumatic, Fuel, Position And Warning Systems**

**7 Credits / 12.0 Periods for Lecture & Lab**

Identification, inspection, repair, and troubleshooting techniques of aircraft landing gear, hydraulic, fuel, pneumatic, and position and warning system components. Prerequisites: Admission to the program.

**Division:** Aviation and Applied Technology

**AMT228 / Aircraft Electrical Systems, Instruments, Fuel Indicating, Communication And Navigation Systems**

**7 Credits / 12.0 Periods for Lecture & Lab**

Proper operation, inspection, servicing and troubleshooting of DC(Direct Current) and AC(Alternating Current) sources, systems, and components. Mechanical and electrical sensing and information display systems. Fuel indicator system inspections, repairs, and troubleshooting. Transmitter and receiver fundamentals. Avionics installation, inspection and testing. Prerequisites: Admission to the program.

**Division:** Aviation and Applied Technology

**AMT230 / Airframe Assembly, Inspection And Welding**

**6 Credits / 11.0 Periods for Lecture & Lab**

Aircraft assembly and rigging. Flight control balancing and rigging. Airframe inspection techniques, reporting procedures, and aircraft jacking. Welding techniques, theory, and materials identification. Prerequisites: Admission to the program.

**Division:** Aviation and Applied Technology

**AMT263 / Aircraft Turbine Engines**

**5 Credits / 9.0 Periods for Lecture & Lab**

Historical development and application of turbine engines. Theory of thrust and the design and environmental factors which influence thrust. Turbine engine troubleshooting, inspection, service, repair and overhaul. Operational characteristics and engine test techniques on the aircraft and in test cells. Prerequisites: Admission to the program.

**Division:** Aviation and Applied Technology

**AMT264 / Aircraft Reciprocating Engines**

**7 Credits / 11.0 Periods for Lecture & Lab**

Historical development and application of reciprocating engines, theory, design, and operations. Techniques used in troubleshooting, overhaul, inspection, and repair of opposed and radial engines. Prerequisites: Admission to the program.

**Division:** Aviation and Applied Technology

**AMT266 / Engine Fuel Systems, Fuel Metering and Induction System**

**6 Credits / 9.0 Periods for Lecture & Lab**

Inspection, servicing, troubleshooting, overhaul, and repair of aircraft fuel systems and components, fuel metering devices, injection systems, turbochargers, and superchargers. Induction system principles of operation and design. Prerequisites: Admission to the program.

**Division:** Aviation and Applied Technology

**AMT268 / Engine Electrical, Ignition and Starter Systems**

**6 Credits / 12.0 Periods for Lecture & Lab**

Inspect, service, troubleshoot, overhaul, and repair of engine electrical, ignition, starter systems, and components. Prerequisites: Admission to the program.

**Division:** Aviation and Applied Technology

**AMT270 / Engine Instruments, Fire Protection And Lubrication, Cooling And Exhaust Systems**

**5 Credits / 8.0 Periods for Lecture & Lab**

Operation, maintenance, servicing, inspection, repair, and troubleshooting of engine instruments, fire detection and extinguishing, engine lubrication, cooling, and exhaust systems. Prerequisites: Admission to the program.

**Division:** Aviation and Applied Technology

**AMT272 / Propeller Systems and Engine Inspections**

**4 Credits / 8.0 Periods for Lecture & Lab**

Historical development, operation, disassembly, inspection, repair, and maintenance of propellers. Reciprocating and turbine engine inspection and documentation. Prerequisites: Admission to the program.

**Division:** Aviation and Applied Technology

## Power Plant Technology

**PPT120 / Energy Industry Fundamentals**

**3 Credits / 3.0 Periods for Lecture**

Various types of energy and their conversion to useable energy such as electrical power. How generated electrical power is transmitted and distributed to the point of use. Prerequisites: None.

**Division:** Aviation and Applied Technology

## Unmanned Aircraft Systems (UAS)

**UAS100 / sUAS Batteries and Electronics**

**5 Credits / 5.0 Periods for Lecture**

Small Unmanned Aircraft Systems (sUAS) basic electronics and circuits, communications, information display systems, transmitter and receiver fundamentals, flight controller installation and tuning, lithium polymer battery basics, radio telemetry, basic electrical troubleshooting and repair techniques. Prerequisites: Appropriate placement test score in Reading, Writing and Math, or [eligibility in ENG101, (RDG100 or RDG100LL), MAT120, MAT121, and MAT122].

**Division:** Aviation and Applied Technology

**UAS101 / Introduction to Unmanned Aircraft Systems Operation****3 Credits / 3.0 Periods for Lecture**

Introduction to Unmanned Aircraft Systems (UAS) history, flight, avionics, sensors, communication systems, and an introduction to data analysis and applications, such as first responders, Geographic Information Systems, and Precision Agriculture. Prerequisites: None.

**Division:** Aviation and Applied Technology

**UAS107 / Unmanned Aircraft Systems Operator Certification****3 Credits / 3.0 Periods for Lecture**

Develop knowledge and skills needed to manage and operate small Unmanned Aircraft Systems (sUAS). Includes Federal Aviation Regulations, radio communications, weather, airspace and airport authorization criteria, loading and performance, aeronautical decision making, sUAS flight operations, and maintenance. Operational skills acquired through both classroom and hands-on flight activities. Prerequisites: None. Course Notes: Students must complete the appropriate flight lessons to satisfactorily complete the course.

**Division:** Aviation and Applied Technology

**UAS205 / sUAS Instruments and Autopilot Programming and Uses****3 Credits / 3.0 Periods for Lecture**

Small unmanned aircraft systems (sUAS) proper operation of ground control stations with remote aircraft, troubleshooting radio link issues, changing parameters, setting up waypoints, flying on autopilot only. Prerequisites: A grade of C or better in UAS101 and UAS107. Corequisites: UAS206.

**Division:** Aviation and Applied Technology

**UAS206 / sUAS Instrument and Autopilot Flight Lab****2 Credits / 2.0 Periods for Laboratory**

Students will use their advanced skills to manipulate a ground control station in the practical operation of Small Unmanned Aircraft Systems (sUAS) in a controlled, but realistic environment. Prerequisites: A grade of C or better in UAS101 and UAS107. Corequisites: UAS205.

**Division:** Aviation and Applied Technology

**UAS207 / sUAS Dynamics and Design****5 Credits / 5.0 Periods for Lecture**

Design, configuration, and concepts of Small Unmanned Aircraft Systems (sUAS). Platform types including multi-rotors, single rotor, and fixed wing aircraft. Prerequisites: A grade of C or better in UAS205 and UAS206. Corequisites: UAS208.

**Division:** Aviation and Applied Technology

## Aircraft Maintenance Technology, Associate in Applied Science



**APPLIED  
TECHNOLOGY**

**Associate in Applied Science: AAS 3670**

**88-115 Credits**

**Program Contact**

Bashir Khalil | 480-988-8112 | bashir.khalil@cgcc.edu

## Program Description

The Associate in Applied Science (AAS) in Aircraft Maintenance Technology degree is designed to provide students with strong General Education skills in support of their aviation maintenance knowledge. This degree prepares students to enter careers in aircraft (fixed-wing and

rotorcraft) and structural manufacturing and maintenance. Graduates can potentially work in general, corporate, commercial, or military sectors. Students who complete this program are eligible to apply for relevant Federal Aviation Administration written, oral, and practical exams. A Certificate of Completion (CCL) in Aircraft Maintenance Technology is fully embedded in this AAS.

## Program Notes

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Admission Criteria

Students wishing to enroll in this Aircraft Maintenance Technology program must complete an application process before being officially accepted into the program.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-19	
AMT124 & AMT126 & AMT128	Aircraft Forms and Regulations, Weight and Balance, Drawings, and Ground Operations and Fundamentals of Mathematics and Electricity and Fundamentals of Aviation Physics, Corrosion Control, Materials and Processes, Fluid Lines and Fittin		
Hold a valid FAA Airframe or Powerplant Certificate			
AMT220	Fundamentals Of Aircraft Wood Structures, Covering And Finishing, And Bonded Structures	3	
AMT222	Atmosphere Control, Fire Detection, Ice and Rain Protection Systems	4	

AMT224	Aircraft Sheet Metal	5	_____
AMT226	Aircraft Landing Gear, Hydraulic, Pneumatic, Fuel, Position And Warning Systems	7	_____
AMT228	Aircraft Electrical Systems, Instruments, Fuel Indicating, Communication And Navigation Systems	7	_____
AMT230	Airframe Assembly, Inspection And Welding	6	_____
AMT263	Aircraft Turbine Engines	5	_____
AMT264	Aircraft Reciprocating Engines	7	_____
AMT266	Engine Fuel Systems, Fuel Metering and Induction System	6	_____
AMT268	Engine Electrical, Ignition and Starter Systems	6	_____
AMT270	Engine Instruments, Fire Protection And Lubrication, Cooling And Exhaust Systems	5	_____
AMT272	Propeller Systems and Engine Inspections	4	_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____

**General Education****Core***First-Year Composition*

ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____

*Oral Communication*

Select one of the following:	3	_____
------------------------------	---	-------

COM100	Introduction to Human Communication	_____
COM110	Interpersonal Communication	_____
COM225	Public Speaking	_____
COM230	Small Group Communication	_____

*Critical Reading*

Select one of the following:	0-3	_____
------------------------------	-----	-------

CRE101	College Critical Reading and Critical Thinking	_____
--------	--	-------

Or equivalent as indicated by assessment	_____
--	-------

*Mathematics*

Select one of the following:	3-6	_____
------------------------------	-----	-------

MAT120	Intermediate Algebra	_____
--------	----------------------	-------

MAT121	Intermediate Algebra	_____
--------	----------------------	-------

MAT122	Intermediate Algebra	_____
--------	----------------------	-------

MAT126	Intermediate Algebra with Review	_____
--------	----------------------------------	-------

**Distribution***Humanities, Arts and Design*

Any approved general education course(s) from the Humanities, Arts and Design area	3	_____
--	---	-------

*Social and Behavioral Sciences*

Any approved general education course(s) in the Social and Behavioral Sciences area	3	_____
---	---	-------

*Natural Sciences*

PHY101	Introduction to Physics	4	_____
--------	-------------------------	---	-------

<b>Total Credits</b>	<b>88-115</b>	_____
----------------------	---------------	-------

## Aircraft Maintenance Technology, Certificate of Completion



**APPLIED  
TECHNOLOGY**

**Certificate of Completion: CCL 5670**

**65-84 Credits**

**Program Contact**

Bashir Khalil | 480-988-8112 | bashir.khalil@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Aircraft Maintenance Technology prepares students to enter careers in aircraft, fixed-wing and rotorcraft,

and structural manufacturing and maintenance. Graduates can potentially work in general, corporate, commercial, manufacturing, and military sectors. Students who complete the certificate are eligible to apply for relevant Federal Aviation Administration (FAA) written, oral, and practical exams. This certificate is fully embedded in the Associate in Applied Science (AAS) in Aircraft Maintenance Technology.

## Program Notes

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Admission Criteria

Students wishing to enroll in this certificate program must complete an application process before being officially accepted into the program.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-19	
AMT124 & AMT126 & AMT128	Aircraft Forms and Regulations, Weight and Balance, Drawings, and Ground Operations and Fundamentals of Mathematics and Electricity and Fundamentals of Aviation Physics, Corrosion Control, Materials and Processes, Fluid Lines and Fittin		
Hold a valid FAA Airframe or Powerplant Certificate			
AMT220	Fundamentals Of Aircraft Wood Structures, Covering And Finishing, And Bonded Structures	3	
AMT222	Atmosphere Control, Fire Detection, Ice and Rain Protection Systems	4	
AMT224	Aircraft Sheet Metal	5	

AMT226	Aircraft Landing Gear, Hydraulic, Pneumatic, Fuel, Position And Warning Systems	7	
AMT228	Aircraft Electrical Systems, Instruments, Fuel Indicating, Communication And Navigation Systems	7	
AMT230	Airframe Assembly, Inspection And Welding	6	
AMT263	Aircraft Turbine Engines	5	
AMT264	Aircraft Reciprocating Engines	7	
AMT266	Engine Fuel Systems, Fuel Metering and Induction System	6	
AMT268	Engine Electrical, Ignition and Starter Systems	6	
AMT270	Engine Instruments, Fire Protection And Lubrication, Cooling And Exhaust Systems	5	
AMT272	Propeller Systems and Engine Inspections	4	
<b>Total Credits</b>		<b>65-84</b>	

## Aircraft Maintenance Technology - Airframe, Associate in Applied Science



**APPLIED  
TECHNOLOGY**

**Associate in Applied Science: AAS 3668**

**74-82 Credits**

**Program Contact**

Bashir Khalil | 480-988-8112 | bashir.khalil@cgc.edu

## Program Description

The Associate in Applied Science (AAS) in Aircraft Maintenance Technology-Airframe degree is designed to provide students with



strong General Education skills in support of their aviation maintenance knowledge. This degree prepares students to enter careers in aircraft and helicopter structural manufacturing and maintenance, where graduates can potentially work in general, corporate, commercial, or military sectors. Graduates are eligible to apply for relevant Federal Aviation Administration (FAA) written, oral, and practical exams. A Certificate of Completion (CCL) in Aircraft Maintenance Technology-Airframe is also available.

## Program Notes

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Admission Criteria

Students wishing to enroll in this Aircraft Maintenance Technology - Airframe program must complete an application process before being officially accepted into the program.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
AMT124	Aircraft Forms and Regulations, Weight and Balance, Drawings, and Ground Operations	5	
AMT126	Fundamentals of Mathematics and Electricity	9	
AMT128	Fundamentals of Aviation Physics, Corrosion Control, Materials and Processes, Fluid Lines and Fittin	5	
AMT220	Fundamentals Of Aircraft Wood Structures, Covering And Finishing, And Bonded Structures	3	
AMT222	Atmosphere Control, Fire Detection, Ice and Rain Protection Systems	4	
AMT224	Aircraft Sheet Metal	5	

AMT226	Aircraft Landing Gear, Hydraulic, Pneumatic, Fuel, Position And Warning Systems	7	
AMT228	Aircraft Electrical Systems, Instruments, Fuel Indicating, Communication And Navigation Systems	7	
AMT230	Airframe Assembly, Inspection And Welding	6	
FYE101	Introduction to College, Career and Personal Success	1-3	
or FYE103	Exploration of College, Career and Personal Success		
<b>General Education</b>			
<b>Core</b>			
<i>First-Year Composition</i>			
ENG101	First-Year Composition	3	
or ENG107	First-Year Composition for ESL		
ENG102	First-Year Composition	3	
or ENG108	First-Year Composition for ESL		
<i>Oral Communication</i>			
Select one of the following:		3	
COM100	Introduction to Human Communication		
COM110	Interpersonal Communication		
COM225	Public Speaking		
COM230	Small Group Communication		
<i>Critical Reading</i>			
Select one of the following:		0-3	
CRE101	College Critical Reading and Critical Thinking		
Or equivalent as indicated by assessment			
<i>Mathematics</i>			
Select one of the following:		3-6	
MAT120	Intermediate Algebra		
MAT121	Intermediate Algebra		
MAT122	Intermediate Algebra		

MAT126	Intermediate Algebra with Review		
<b>Distribution</b>			
<i>Humanities, Arts and Design</i>			
Any approved general education course(s) from the Humanities, Arts and Design area	3		
<i>Social and Behavioral Sciences</i>			
Any approved general education course(s) in the Social and Behavioral Sciences area	3		
<i>Natural Sciences</i>			
PHY101 Introduction to Physics	4		
<b>Total Credits</b>	<b>74-82</b>		

## Aircraft Maintenance Technology - Airframe, Certificate of Completion



**Certificate of Completion: CCL 5668**

**32-51 Credits**

**Program Contact**

Bashir Khalil | 480-988-8112 | bashir.khalil@cgc.edu

### Program Description

The Certificate of Completion (CCL) in Aircraft Maintenance Technology - Airframe program is designed to prepare students to enter careers in aircraft (fixed-wing and rotorcraft) structural manufacturing and maintenance. Graduates can potentially work in general, corporate, commercial, manufacturing, and military sectors. Graduates are eligible to apply for the Federal Aviation Administration (FAA), Aviation Maintenance Technician—Airframe exam. An Associates in Applied Science (AAS) in Aircraft Maintenance Technology - Airframe is also available.

### Program Notes

Students must earn a grade of “C” or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

### Admission Criteria

Students wishing to enroll in this certificate program must complete an application process before being officially accepted into the program.

### Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-19	

AMT124 & AMT126 & AMT128	Aircraft Forms and Regulations, Weight and Balance, Drawings, and Ground Operations and Fundamentals of Mathematics and Electricity and Fundamentals of Aviation Physics, Corrosion Control, Materials and Processes, Fluid Lines and Fittin		
Hold a valid FAA Airframe or Powerplant Certificate			
AMT220	Fundamentals Of Aircraft Wood Structures, Covering And Finishing, And Bonded Structures	3	
AMT222	Atmosphere Control, Fire Detection, Ice and Rain Protection Systems	4	
AMT224	Aircraft Sheet Metal	5	
AMT226	Aircraft Landing Gear, Hydraulic, Pneumatic, Fuel, Position And Warning Systems	7	
AMT228	Aircraft Electrical Systems, Instruments, Fuel Indicating, Communication And Navigation Systems	7	
AMT230	Airframe Assembly, Inspection And Welding	6	
<b>Total Credits</b>		<b>32-51</b>	

# Aircraft Maintenance Technology - Powerplant, Associate in Applied Science



**APPLIED  
TECHNOLOGY**

**Associate in Applied Science: AAS 3665**

**75-83 Credits**

**Program Contact**

Bashir Khalil | 480-988-8112 | bashir.khalil@cgc.edu

## Program Description

The Associate in Applied Science (AAS) in Aircraft Maintenance Technology - Powerplant degree is designed to provide students with strong General Education skills in support of their aviation maintenance knowledge. This degree prepares students to enter careers in aircraft (fixed-wing and rotorcraft), powerplant manufacturing and maintenance. Students who complete this degree can potentially work in general, corporate, commercial, manufacturing, and military sectors. Graduates are eligible to apply for relevant Federal Aviation Administration (FAA) written, oral, and practical exams. A Certificate of Completion (CCL) in Aircraft Maintenance Technology - Powerplant is also available.

## Program Notes

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Admission Criteria

Students wishing to enroll in this Aircraft Maintenance Technology - Powerplant program must complete an application process before being officially accepted into the program.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
AMT124	Aircraft Forms and Regulations, Weight and Balance, Drawings, and Ground Operations	5	
AMT126	Fundamentals of Mathematics and Electricity	9	

AMT128	Fundamentals of Aviation Physics, Corrosion Control, Materials and Processes, Fluid Lines and Fittin	5	
AMT263	Aircraft Turbine Engines	5	
AMT264	Aircraft Reciprocating Engines	7	
AMT266	Engine Fuel Systems, Fuel Metering and Induction System	6	
AMT268	Engine Electrical, Ignition and Starter Systems	6	
AMT270	Engine Instruments, Fire Protection And Lubrication, Cooling And Exhaust Systems	5	
AMT272	Propeller Systems and Engine Inspections	4	
FYE101	Introduction to College, Career and Personal Success	1-3	
or FYE103	Exploration of College, Career and Personal Success		
<b>General Education</b>			
<b>Core</b>			
<i>First-Year Composition</i>			
ENG101	First-Year Composition	3	
or ENG107	First-Year Composition for ESL		
ENG102	First-Year Composition	3	
or ENG108	First-Year Composition for ESL		
<i>Oral Communication</i>			
Select one of the following:		3	
COM100	Introduction to Human Communication		
COM110	Interpersonal Communication		
COM225	Public Speaking		
COM230	Small Group Communication		
<i>Critical Reading</i>			
Select one of the following:		0-3	

CRE101	College Critical Reading and Critical Thinking	_____
Or equivalent as indicated by assessment		_____
<i>Mathematics</i>		
Select one of the following:		3-6 _____
MAT120	Intermediate Algebra	_____
MAT121	Intermediate Algebra	_____
MAT122	Intermediate Algebra	_____
MAT126	Intermediate Algebra with Review	_____
<b>Distribution</b>		
<i>Humanities, Arts and Design</i>		
Any approved general education course(s) from the Humanities, Arts and Design area		3 _____
<i>Social and Behavioral Sciences</i>		
Any approved general education course(s) in the Social and Behavioral Sciences area		3 _____
<i>Natural Sciences</i>		
PHY101	Introduction to Physics	4 _____
<b>Total Credits</b>		<b>75-83</b> _____

## Aircraft Maintenance Technology - Powerplant, Certificate of Completion



**APPLIED  
TECHNOLOGY**

**Certificate of Completion: CCL 5669**

**33-52 Credits**

**Program Contact**

Bashir Khalil | 480-988-8112 | bashir.khalil@cgc.edu

### Program Description

The Certificate of Completion (CCL) in Aircraft Maintenance Technology - Powerplant is designed to prepare students to enter careers in aircraft (fixed-wing and rotorcraft) powerplant manufacturing and maintenance. Graduates can potentially work in general, corporate, commercial, manufacturing, and military sectors. Students who complete the certificate are eligible to apply for relevant Federal Aviation Administration written, oral, and practical exams. An Associates in Applied Science (AAS) in Aircraft Maintenance Technology - Powerplant is also available.

### Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

### Admission Criteria

Students wishing to enroll in this certificate program must complete an application process before being officially accepted into the program.

### Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-19	_____
AMT124 & AMT126 & AMT128	Aircraft Forms and Regulations, Weight and Balance, Drawings, and Ground Operations and Fundamentals of Mathematics and Electricity and Fundamentals of Aviation Physics, Corrosion Control, Materials and Processes, Fluid Lines and Fittin		_____
Hold a valid FAA Airframe or Powerplant Certificate			
AMT263	Aircraft Turbine Engines	5	_____
AMT264	Aircraft Reciprocating Engines	7	_____
AMT266	Engine Fuel Systems, Fuel Metering and Induction System	6	_____
AMT268	Engine Electrical, Ignition and Starter Systems	6	_____
AMT270	Engine Instruments, Fire Protection And Lubrication, Cooling And Exhaust Systems	5	_____

AMT272	Propeller Systems and Engine Inspections	4	
<b>Total Credits</b>		<b>33-52</b>	

## Airway Science Technology - Flight Emphasis, Associate in Applied Science



**Associate in Applied Science: AAS 3707**

**65-85 Credits**

**Program Contact**

Bashir Khalil | 480-988-8112 | bashir.khalil@cgc.edu

### Program Description

The Associate in Applied Science (AAS) in Airway Science Technology, Flight Emphasis program is designed to prepare students to apply technical knowledge and skills to the flying of commercial, corporate, or private aircraft. Program content includes private, instrument, commercial single-engine, commercial multi-engine, and flight instructor certifications. The program develops students' willingness to learn, critical thinking, organizational skills, initiative, reliability, accountability, communication, and resource management skills. During the program, students will be provided the resources and training required for Federal Aviation Administration (FAA) written and practical examinations.

### Program Notes

#### Flight Policies

Flight and simulator training costs are the responsibility of the student. These include hourly costs for aircraft and flight instruction, tuition, fees, and other expenses. Once students have commenced flight training within the CGCC Airway Science, Flight Emphasis program, they will not receive college credit for flight instruction received at flight schools other than the school or schools with which Maricopa County Community College District has currently contracted for such instruction.

Students must meet FAA Aviation English Language Standards and complete Transportation Security Administration (TSA) Citizenship Verification (United States citizens) or Alien Flight School Program Application (non-United States citizens). By enrolling in this program, students agree to submit to random drug testing. Students must complete a security threat assessment for airport apron access.

#### Medical Certificates

A current medical certificate is required for all students planning to begin flight training. The physical examination must be performed by a medical doctor who is a designated Aviation Medical Examiner. Students are advised to obtain their medical certificates well in advance of beginning the flight program. This will ensure that medical problems or physical limitations that may alter career plans can be addressed before entering flight courses.

There are three types of medical certificates - Class III, Class II, and Class I, but students are advised to obtain a Class I certificate if they are planning a career in professional flight.

Students using Veteran Affairs education benefits must have at least a Class II medical certificate, but Class I is recommended, before beginning 200-level flight courses.

Flight labs must be taken concurrently with the appropriate ground courses. Attendance is mandatory in the aviation ground school courses in accordance with Federal Aviation Regulation (FAA) Part 141. Failure to meet these attendance requirements will disqualify the student for FAA pilot certification.

Aviation and related courses from other colleges and universities may transfer to CGCC. All aviation courses, flight or non-flight, are reviewed by the Aviation Program Coordinator for applicability.

#### Transfer of Pilot Ratings

Students who have pilot certificates or ratings from a college level program may apply for prior learning assessment. Students should complete this process before enrolling in any 200-level ground or flight courses.

In all cases, it is the responsibility of the student to initiate the process.

After three failed attempts in any flight or ground course, excluding withdrawals, students must seek division approval for re-enrollment.

Students must earn a grade of C or better for all courses required within the program. Overall program minimum GPA = 2.50.

### Admission Criteria

All students must currently possess a Valid FAA Medical Certificate

### Program Prerequisites

Students must consult with a Program Director, as the program prerequisites may be waived as requirements to the program for those students who have FAA Private Pilot Certificates and/or have course equivalents as indicated by assessment.

Code	Title	Credits	Semester
A division/program approved FAA Pilot Certificate OR		0	
AET107 & AET110	Private Pilot Ground School and Private Pilot Flight	5-6	
or AET112	Private Pilot Flight-Test Course		

### Program Requirements

Code	Title	Credits	Semester
<b>Required Courses</b>			
AET115	Aviation Meteorology	3	

AET207 & AET210 & AET217 & AET220	Attitude Instruments and Navigation and Commercial Flight Lab I and Instrument Procedures and Instrument Flight Lab	8	_____	PSY101 & SOC101 & POS140 & COM263	Introduction to Psychology and Introduction to Sociology and Comparative Government and Elements of Intercultural Communication	_____
AET208	Aviation Safety	3	_____	<b>General Education</b>		
AET213 & AET221	Aerodynamics and Performance and Commercial Flight Lab II	4	_____	<b>Core</b>		
AET203 & AET222	Basic Airplane Systems and Commercial Flight Lab III	4	_____	First-Year Composition	6	_____
AET229	Crew Resource Management	3	_____	Select two of the following:		
AET237 & AET240	Multiengine Airplane Pilot Ground School and Multiengine Airplane Pilot Flight Lab	3	_____	ENG101	First-Year Composition (Select two of the following:)	_____
AET227 & AET230	Certified Flight Instructor: Airplane, Single Engine Land Ground School and Certified Flight Instructor: Airplane, Single Engine Land Flight Lab	6	_____	or ENG107	First-Year Composition for ESL	_____
AET225	Advanced Aircraft Systems	4	_____	ENG102	First-Year Composition	_____
AET239	Commercial Flight Lab IV	1	_____	or ENG108	First-Year Composition for ESL	_____
UAS107	Unmanned Aircraft Systems Operator Certification	3	_____	<b>Oral Communication</b>		
FYE101	Introduction to College, Career and Personal Success	1-3	_____	Select one of the following:	3	_____
or FYE103	Exploration of College, Career and Personal Success		_____	COM100	Introduction to Human Communication	_____
Recommended for Transfer: University of North Dakota		0-12	_____	COM110	Interpersonal Communication	_____
				COM225	Public Speaking	_____
				COM230	Small Group Communication	_____
				<b>Critical Reading</b>		
				Select one of the following:	0-3	_____
				CRE101	College Critical Reading and Critical Thinking	_____
				Or equivalent as indicated by assessment		
				<b>Mathematics</b>		
				Select one of the following:	3-6	_____
				MAT120	Intermediate Algebra	_____
				MAT121	Intermediate Algebra	_____
				MAT122	Intermediate Algebra	_____
				MAT126	Intermediate Algebra with Review	_____
				<b>Distribution</b>		
				<i>Humanities, Arts and Design</i>		
				Any approved general education course(s) from the Humanities, Arts and Design area	3	_____
				<i>Social and Behavioral Sciences</i>		



Any approved general education course(s) in the Social and Behavioral Sciences area	3	
<i>Natural Sciences</i>		
PHY101 Introduction to Physics	4	
<b>Total Credits</b>	<b>65-85</b>	

## Certified Flight Instructor Instrument Airplane Rating, Certificate of Completion



**APPLIED  
TECHNOLOGY**

**Certificate of Completion: CCL 5825N**

**4 Credits**

**Program Contact**

Bashir Khalil | 480-988-8112 | bashir.khalil@cgc.edu

### Program Description

The Certificate of Completion (CCL) in Certified Flight Instructor Instrument Airplane Rating program in Airway Science Technology, Flight Emphasis is designed to prepare students to apply technical knowledge and skills to the flying of airplanes as a Certified Flight Instructor-Instrument Rated, and to prepare students to sit for the Federal Aviation Administration (FAA) written and practical examinations.

### Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

### Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
AET258	Certified Flight Instructor: Instrument Airplane Ground School	3	
AET270	Certified Flight Instructor: Instrument Airplane Flight Lab	1	
<b>Total Credits</b>		<b>4</b>	

## Unmanned Aircraft Systems, Associate in Applied Science



**APPLIED  
TECHNOLOGY**

**Associate in Applied Science: AAS 3184**

**61-68 Credits**

**Program Contact**

Bashir Khalil | 480-988-8112 | bashir.khalil@cgc.edu

### Program Description

The Associate in Applied Science (AAS) in Unmanned Aircraft Systems (UAS) program prepares students for entry level positions in the UAS industry by providing foundational knowledge and skills in UAS mission planning, applications, maintenance, laws and regulations, data analytics, and project management using UAS platforms. Program content includes an introduction to UAS flight, history, avionics, sensors, communications systems and selectable paths including data analysis and applications such as emergency responders, geographic information systems, precision agriculture, and in commercial and government sectors. Students will prepare for and conduct unmanned flights similar to those commonly performed in the industry observing Federal Aviation Administration's (FAA) regulations that govern sUAS operations. This program helps prepare students for the FAA Part 107 Certification.

### Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

### Admission Criteria

Students wishing to enroll in the Unmanned Aircraft Systems program must complete an application process before being officially accepted into the program.

### Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
AET208	Aviation Safety	3	
FYE101	Introduction to College, Career and Personal Success	1-3	
or FYE103	Exploration of College, Career and Personal Success		
PHY111	General Physics I	4	
UAS100	sUAS Batteries and Electronics	5	

UAS101	Introduction to Unmanned Aircraft Systems Operation	3	_____
UAS107	Unmanned Aircraft Systems Operator Certification	3	_____
UAS205	sUAS Instruments and Autopilot Programming and Uses	3	_____
UAS206	sUAS Instrument and Autopilot Flight Lab	2	_____
UAS207	sUAS Dynamics and Design	5	_____
UAS208	sUAS Dynamics and Design Lab	2	_____
UAS211	sUAS Ground Control Stations, Telemetry, and Communications	3	_____
UAS212	sUAS Maintenance Lab	2	_____
UAS215	sUAS Commercial Flight Training	3	_____
<b>General Education</b>			
<b>Core</b>			
<i>First-Year Composition</i>			
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
<i>Oral Communication</i>			
Select one of the following:		3	_____
COM100	Introduction to Human Communication		_____
COM110	Interpersonal Communication		_____
COM225	Public Speaking		_____
COM230	Small Group Communication		_____
<i>Critical Reading</i>			
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Or equivalent as indicated by assessment			_____
<i>Mathematics</i>			
Select one of the following:		3-5	_____

MAT187	Precalculus	_____
Any approved General Education course in the Mathematical Applications (MA) area <sup>1</sup>		_____
<b>Distribution</b>		
<i>Humanities, Arts and Design</i>		
Any approved general education course(s) from the Humanities, Arts and Design area	3	_____
<i>Social and Behavioral Sciences</i>		
Any approved general education course(s) in the Social and Behavioral Sciences area	3	_____
<i>Natural Sciences</i>		
Any approved general education course(s) in the Natural Sciences area	4	_____
<b>Total Credits</b>	<b>61-68</b>	_____

<sup>1</sup> for which MAT187 Precalculus is a prerequisite

## Unmanned Aircraft Systems, Certificate of Completion



**APPLIED  
TECHNOLOGY**

**Certificate of Completion: CCL 5982**

**34 Credits**

**Program Contact**

Bashir Khalil | 480-988-8112 | bashir.khalil@cgc.edu

### Program Description

The Certificate of Completion (CCL) in Unmanned Aircraft Systems (UAS) program prepares students for entry level positions in the UAS industry by providing foundational knowledge and skills in UAS mission planning, applications, maintenance, laws and regulations, data analytics, and project management using UAS platforms. Program content includes an introduction to UAS flight, history, avionics, sensors, communications systems and selectable paths including data analysis and applications such as emergency responders, geographic information systems, precision agriculture, and in commercial and government sectors. Students will prepare for and conduct unmanned flights similar to those commonly performed in the industry observing Federal Aviation Administration's (FAA) regulations that govern UAS operations. This program helps prepare students for the FAA Part 107 Certification.

### Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Admission Criteria

Students wishing to enroll in the Unmanned Aircraft Systems program must complete an application process before being officially accepted into the program.

## Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
<b>Required Courses</b>			
AET208	Aviation Safety	3	
UAS100	sUAS Batteries and Electronics	5	
UAS101	Introduction to Unmanned Aircraft Systems Operation	3	
UAS107	Unmanned Aircraft Systems Operator Certification	3	
UAS205	sUAS Instruments and Autopilot Programming and Uses	3	
UAS206	sUAS Instrument and Autopilot Flight Lab	2	
UAS207	sUAS Dynamics and Design	5	
UAS208	sUAS Dynamics and Design Lab	2	
UAS211	sUAS Ground Control Stations, Telemetry, and Communications	3	
UAS212	sUAS Maintenance Lab	2	
UAS215	sUAS Commercial Flight Training	3	
<b>Total Credits</b>		<b>34</b>	

## Biological Sciences

Jacqueline Cala, Division Chair  
(480) 732-7083 | jacqueline.cala@cgc.edu

### Courses

Prefix	Course
BIO	Biology
ENV	Environmental Sciences
SSH	Sustainability Social Sciences
SUS	Sustainability/Natural Sciences

## Career Programs

Sustainability

## Academic Certificate

- Sustainability, Academic Certificate (p. 101)

## General Biology

**Cala, Jacqueline**

*Division Chair*

- B.S., University of Arizona
- M.S., Arizona State University

**Konatske, Jamie**

- B.S., M.Ed., Arizona State University

**Patterson, Kimberley**

- B.S., Arizona State University
- D.V.M., Oklahoma State University

**Ramakrishna, Pushpa**

- B.S., M.S., Bangalore University
- M.N.S., Ed.D., Arizona State University

## Human Anatomy & Physiology

**Discala, Camille**

- B.A., Herbert H. Lehman College of the City University of New York
- M.D., Albert Einstein College of Medicine

**Fouremann, Polly**

- A.B., Brown University
- M.S., Ph.D., University of Wisconsin-Madison
- D.V.M., Cornell University

**Greer, Kimberly**

- B.S., University of Tennessee
- M.S., Brigham Young University

**Howard, Justin**

- B.S., D.C., Logan College

**Rauhalammi, Samuli**

- M.S. Anatomy & M.S. Medical Visualisation and Anatomy, University of Glasgow

## Microbiology

**Orozco, Myrna (Estela)**

- B.S., M.S., University of Texas at El Paso
- B.S., D.V.M., Texas A&M University

**Wellner, Karen**

- B.S., State University of New York at Oneonta
- M.S., Ph. D., Arizona State University
- M.A., Ph.D., University of Iowa

## Biology (BIO)

### BIO100 / Biology Concepts

#### 4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture

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.

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Biological Sciences

### BIO105 / Environmental Biology

#### 4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture

Fundamentals of ecology and their relevance to human impact on natural ecosystems. Prerequisites: None.

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Biological Sciences

### BIO108 / Plants and Society

#### 4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture

A global study of plants in relation to humans; as a source of food, fiber, drugs, and other products; for aesthetic value, survival, and energy.

Prerequisites: None.

**Division:** Biological Sciences

### BIO156 / Introductory Biology for Allied Health

#### 4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture

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: A grade of C or better in RDG100, or RDG100LL, or higher, or eligibility for CRE101. One year of high school or one-semester of college level chemistry is strongly recommended.

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Biological Sciences

### BIO160 / Introduction to Human Anatomy and Physiology

#### 4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture

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.

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Biological Sciences

### BIO181 / General Biology (Majors) I

#### 4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture

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: A grade of C or better in RDG100, or RDG100LL, or higher, or eligibility for CRE101. One year of high school or one semester of college-level biology and chemistry is strongly recommended.

**Division:** Biological Sciences

### BIO182 / General Biology (Majors) II

#### 4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture

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, or BIO181XT, or permission of Department or Division. Course Notes: BIO182 may require field trips.

**Division:** Biological Sciences

### BIO201 / Human Anatomy and Physiology I

#### 4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture

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 BIO181, or BIO181XT, or one year of high school biology) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101). CHM130 or higher or one year of high school chemistry suggested but not required.

 SUN# BIO 2201

**Fulfills:** Natural Sciences General [SG]; Natural Sciences General [SG]-in combo

**Division:** Biological Sciences

### BIO202 / Human Anatomy and Physiology II

#### 4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture

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 or BIO201XT.

**Division:** Biological Sciences

### BIO205 / Microbiology

#### 4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture

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 (RDG100, or RDG100LL, or higher, or eligibility for CRE101). CHM130 or higher or one year of high school chemistry suggested but not required.

**Division:** Biological Sciences

### BIO220 / Biology of Microorganisms

#### 4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture

Detailed study of microbial cells, their structure, genetics, physiology and taxonomy. Prerequisites: A grade of C or better in BIO181. Corequisites: (CHM152 and CHM152LL) or (CHM154 and CHM154LL).

**Division:** Biological Sciences

## Environmental Sciences (ENV)

### ENV101 / Introduction to Environmental Science

#### 4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture

Introduces the interconnected nature of environmental science and solutions to environmental issues. Prerequisites: None.

**Division:** Biological Sciences

## Sustainability/Social Science and Humanities (SSH)

### SSH111 / Sustainable Cities

#### 3 Credits / 3.0 Periods for Lecture

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. Prerequisites: None.

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo; Global Awareness [G]; Global Awareness [G]-in combo

**Division:** Biological Sciences

## Sustainability/Natural Science (SUS)

### SUS110 / Sustainable World

#### 3 Credits / 3.0 Periods for Lecture

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.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Biological Sciences

## Sustainability, Academic Certificate



**STEM**

**Academic Certificate: AC 6240N**

**15-18 Credits**

**Program Contact**

Karen Wellner | 480-726-4111 | karen.wellner@cgc.edu

## Program Description

The Academic Certificate (AC) in Sustainability is interdisciplinary and builds a strong academic expertise within a student's desired focus area of Sustainability. The focus areas are established within and among the foundational pillars of Sustainability (social / environmental / economic).

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

Code	Title	Credits	Semester
<b>Required Courses</b>			
SSH111	Sustainable Cities	3	
SUS110	Sustainable World	3	
<b>Restricted Electives</b>			

Select three focus area classes:

9-12

ASM104	Bones, Stones, and Human Evolution	
BIO105	Environmental Biology	
CHM107 & 107LL	Chemistry and Society and Chemistry and Society Laboratory	
COM263	Elements of Intercultural Communication	
FON135	Sustainable Cooking	
ECN212	Microeconomic Principles	
EPS150	Introduction to Entrepreneurship	
ENV101	Introduction to Environmental Science	
GLG110 & GLG111	Geological Disasters and the Environment and Geological Disasters and the Environment Lab	
GPH113	Introduction to Physical Geography	
PHI216	Environmental Ethics	
PSY132	Psychology and Culture	
SBU200	Society and Business	
SUS100	Introduction to Sustainability	
SCT100	Introduction to Sustainable Built Environments	

**Total Credits**

**15-18**

## Business & Computing Studies

Barbara Gonzalez, Division Chair

602-243-8044 | barbara.gonzalez@cgc.edu

### Courses

Prefix	Course
ACC	Accounting
BPC	Business-Personal Computers
CIS	Computer Information Systems
CLD	Cloud Computing
CNT	Cisco Network Technology

CSC	Computer Science
GBS	General Business
IBS	International Business
ITS	Information Technology Security
MGT	Management
MKT	Marketing
MST	Microsoft Technology
SBS	Small Business Management
SBU	Society and Business

## Career Programs

Accounting  
 Administrative Professional  
 Adobe Foundations: Animation and Graphics Production  
 Amazon Web Services Cloud Associate  
 Amazon Web Services Cloud Practitioner  
 Amazon Web Services Cloud Specialist  
 Android App Development  
 Cisco Certified Network Professional Enterprise  
 Cisco Certified Network Professional: Enterprise Advanced Routing and Services  
 Cisco Certified Network Professional: Enterprise Core  
 Cisco Network Administration and Security  
 Cisco Network Administration: CCNA  
 Cisco Network Administration: CCNP  
 Computer System Configuration and Support  
 Computer System Configuration and Support, Linux  
 Computer System Configuration and Support, Network  
 Computer System Configuration and Support, Security  
 Cyber Engineering  
 Cyber Operations  
 Cybersecurity  
 Cybersecurity Fundamentals  
 Data Analytics  
 Desktop Support  
 Enrolled Agent  
 Esports  
 General Business  
 Information Technology  
 iOS App Development  
 Kubernetes Administration  
 Kubernetes Application Development  
 Kubernetes Security  
 Linux Associate  
 Linux System Administration  
 Management  
 Microsoft Desktop Associate  
 Microsoft Office Professional  
 Microsoft Office Specialist  
 Microsoft System Administration  
 Network and Systems Administration  
 Oracle Database Operations  
 Organizational Leadership  
 Organizational Management  
 Programming and Systems Analysis  
 Programming and Systems Analysis Level I  
 Programming and Systems Analysis Level II  
 Python Applications  
 Red Hat Linux Administrator  
 Red Hat Linux Engineer

Retail Management  
 Securities Industry Essentials  
 Securities Industry Essentials: Pre-licensure  
 Small Business Management  
 Small Business Start-Up  
 Social Media Marketing  
 VMware Network Administrator  
 Web App Development  
 Web Design  
 Web Design/Development  
 Web Development  
 Web Foundations

## Associate in Applied Science (AAS)

- Accounting, Associate in Applied Science (p. 114)
- Cybersecurity, Associate in Applied Science (p. 130)
- Data Analytics, Associate in Applied Science (p. 133)
- General Business, Associate in Applied Science (p. 137)
- Information Technology, Associate in Applied Science (p. 140)
- Management, Associate in Applied Science (p. 153)
- Network and Systems Administration, Associate in Applied Science (p. 157)
- Organizational Management, Associate in Applied Science (p. 162)
- Programming and Systems Analysis, Associate in Applied Science (p. 165)
- Web Design/Development, Associate in Applied Science (p. 175)

## Certificate of Completion (CCL)

- Accounting, Certificate of Completion (p. 116)
- Administrative Professional, Certificate of Completion (p. 116)
- Adobe Foundations: Animation and Graphics Production, Certificate of Completion (p. 117)
- Amazon Web Services Cloud Associate, Certificate of Completion (p. 117)
- Amazon Web Services Cloud Practitioner, Certificate of Completion (p. 118)
- Amazon Web Services Cloud Specialist, Certificate of Completion (p. 118)
- Android App Development, Certificate of Completion (p. 119)
- Cisco Certified Network Professional: Enterprise Advanced Routing and Services, Certificate of Completion (p. 120)
- Cisco Certified Network Professional: Enterprise Core, Certificate of Completion (p. 121)
- Cisco Certified Network Professional: Enterprise, Certificate of Completion (p. 122)
- Cisco Network Administration and Security, Certificate of Completion (p. 123)
- Cisco Network Administration: CCNA, Certificate of Completion (p. 123)
- Cisco Network Administration: CCNP, Certificate of Completion (p. 124)
- Computer System Configuration and Support, Certificate of Completion (p. 125)
- Computer System Configuration and Support, Linux, Certificate of Completion (p. 125)



- Computer System Configuration and Support, Network, Certificate of Completion (p. 126)
- Computer System Configuration and Support, Security, Certificate of Completion (p. 127)
- Cyber Engineering, Certificate of Completion (p. 128)
- Cyber Operations, Certificate of Completion (p. 129)
- Cybersecurity Fundamentals, Certificate of Completion (p. 130)
- Data Analytics, Certificate of Completion (p. 134)
- Desktop Support, Certificate of Completion (p. 135)
- Enrolled Agent, Certificate of Completion (p. 136)
- Esports, Certificate of Completion (p. 136)
- General Business, Certificate of Completion (p. 139)
- iOS App Development, Certificate of Completion (p. 149)
- Kubernetes Administration, Certificate of Completion (p. 150)
- Kubernetes Application Development, Certificate of Completion (p. 150)
- Kubernetes Security, Certificate of Completion (p. 151)
- Linux Associate, Certificate of Completion (p. 151)
- Linux System Administration, Certificate of Completion (p. 152)
- Microsoft Desktop Associate, Certificate of Completion (p. 154)
- Microsoft Office Professional, Certificate of Completion (p. 154)
- Microsoft Office Specialist, Certificate of Completion (p. 155)
- Microsoft System Administration, Certificate of Completion (p. 156)
- Oracle Database Operations, Certificate of Completion (p. 160)
- Organizational Leadership, Certificate of Completion (p. 161)
- Programming and Systems Analysis Level I, Certificate of Completion (p. 163)
- Programming and Systems Analysis Level II, Certificate of Completion (p. 163)
- Python Applications, Certificate of Completion (p. 167)
- Red Hat Linux Administrator, Certificate of Completion (p. 168)
- Red Hat Linux Engineer, Certificate of Completion (p. 168)
- Retail Management, Certificate of Completion (p. 169)
- Securities Industry Essentials, Certificate of Completion (p. 169)
- Security Industry Essentials: Pre-licensure, Certificate of Completion (p. 170)
- Small Business Management Level I, Certificate of Completion (p. 170)
- Small Business Management Level II, Certificate of Completion (p. 171)
- Small Business Start-Up, Certificate of Completion (p. 172)
- Social Media Marketing, Certificate of Completion (p. 172)
- VMware Network Administrator, Certificate of Completion (p. 173)
- Web App Development, Certificate of Completion (p. 173)
- Web Design, Certificate of Completion (p. 174)
- Web Development, Certificate of Completion (p. 177)
- Web Foundations, Certificate of Completion (p. 178)

## Microcert

- Amazon Web Services Cloud Practitioner, Certificate of Completion (p. 118)
- Android App Development, Certificate of Completion (p. 119)
- Cisco Certified Network Professional: Enterprise Advanced Routing and Services, Certificate of Completion (p. 120)

- Cisco Certified Network Professional: Enterprise Core, Certificate of Completion (p. 121)
- Cisco Network Administration: CCNA, Certificate of Completion (p. 123)
- Computer System Configuration and Support, Certificate of Completion (p. 125)
- Computer System Configuration and Support, Linux, Certificate of Completion (p. 125)
- Computer System Configuration and Support, Network, Certificate of Completion (p. 126)
- iOS App Development, Certificate of Completion (p. 149)
- Linux Associate, Certificate of Completion (p. 151)
- Microsoft Desktop Associate, Certificate of Completion (p. 154)
- Red Hat Linux Administrator, Certificate of Completion (p. 168)
- Red Hat Linux Engineer, Certificate of Completion (p. 168)
- Web App Development, Certificate of Completion (p. 173)

## Accounting

### Cojanu, Gabriela

- M.B.A., Xavier University

### Gonzalez, Barbara

#### Division Chair

- B.B.A., University of New Mexico
- M.B.A., Regis University
- CPA

### Fisher, Matthew A.

- B.S., Brigham Young University
- M.Acc., University of Arizona; CPA

## Business Personal Computers

### Short, Lana

#### Business and Personal Computers & Computer Information Systems (BPC/CIS)

- AAS, Phoenix College
- M.Ed, St. Petersburg State Pedagogical University
- Ed.D., Northern Arizona University

## Cisco Network Technology

### Miller, Scott

- B.A., American Intercontinental University

## Computer Information Systems

### Cherner, Elliot

- B.S., M.B.A., University of Phoenix
- Ed.D., North Central University

### Grafel, Deidre

- B.A., University of Florida
- M.A., Jacksonville University
- MCSE, MCT, MCSA

## Computer Science

### Rayappa, Prema

*Computer Science & Computer Information Systems*

- OCA Oracle Developer Certified Associate
- B.S., Bangalore University (India)
- M.S., Arizona State University

### Huber, Wade

- M.S., University of Texas at Dallas

## General Business

### Goff, Jamie

- M.Ed., Northern Arizona University

### Lopez, Ann

- B.A., B.S., University of Arizona

### Lynn, Nicki

- B.S., Townson University
- M.B.A., University of Baltimore

### Nuneviller, Beth

- B.S., Arkansas State University
- M.B.A., University of Arkansas

### Swan, Gregory C.

- A.A.S., Mesa Community College
- B.S., M.Acc., Arizona State University
- Ed.D., Northern Arizona University
- CPA, MCP, CDP

## Information Technology Security

### Rahman, Mizan

- B.S., Bangladesh University
- M.S., North Dakota State University
- M.B.A., Arizona State University

## Accounting (ACC)

### ACC105 / Payroll, Sales and Property Taxes

#### 3 Credits / 3.0 Periods for Lecture

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

**Division:** Business and Computing Studies

### ACC111 / Accounting Principles I

#### 3 Credits / 3.0 Periods for Lecture

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

**Division:** Business and Computing Studies

### ACC112 / Accounting Principles II

#### 3 Credits / 3.0 Periods for Lecture

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 or Division.

**Division:** Business and Computing Studies

### ACC115 / Computerized Accounting

#### 3 Credits / 3.0 Periods for Lecture & Lab

Understanding of fundamental accounting principles and mastery of an accounting information systems including the general ledger, accounts receivable, accounts payable and payroll. Prerequisites: None.

**Division:** Business and Computing Studies

### ACC121 / Individual Tax Preparation

#### 3 Credits / 3.0 Periods for Lecture & Lab


Theory and practice of accounting for individual taxation. Prerequisites: None.

**Division:** Business and Computing Studies

### ACC211 / Financial Accounting

#### 3 Credits / 3.0 Periods for Lecture

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

 SUN# ACC 2201

**Division:** Business and Computing Studies

### ACC212 / Managerial Accounting

#### 3 Credits / 3.0 Periods for Lecture

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).

 SUN# ACC 2202

**Division:** Business and Computing Studies

### ACC219 / Intermediate Accounting I

#### 3 Credits / 3.0 Periods for Lecture

Continuation of the theory and practice of financial accounting, applicable to assets, liabilities, equity related problems of income determination and financial reporting. Prerequisites: A grade of C or better in ACC212 or ACC240 or permission of Department or Division.

**Division:** Business and Computing Studies

### ACC221 / Tax Accounting

#### 3 Credits / 3.0 Periods for Lecture

Theory and practice of accounting for personal, corporate, and non-corporate taxation. Prerequisites: A grade of C or better in ACC111 or ACC211 or permission of Department or Division.

**Division:** Business and Computing Studies

### ACC224 / Tax Practice Administration and Business Entity Analysis

#### 3 Credits / 3.0 Periods for Lecture

Federal income tax representation, practices, and procedures, including trust and estate income tax, exempt organizations, and retirement plans. Prerequisites: A grade of C or better in ACC121 or ACC221.

**Division:** Business and Computing Studies

## Business-Personal Computers (BPC)

### BPC110 / Computer Usage and Applications

#### 3 Credits / 4.0 Periods for Lecture & Lab

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.

**Fulfills:** Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo

**Division:** Business and Computing Studies

### BPC111AA / Computer Keyboarding I

#### 1 Credit / 1.7 Periods for Lecture & Lab

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

**Crosslisted:** OAS111AA

**Division:** Business and Computing Studies

### BPC171 / Recycling Used Computer Technology

#### 1 Credit / 2.0 Periods for Lecture & Lab

Use of hardware maintenance knowledge and skills to refurbish used computers. A grade of C or better required in all Prerequisites.

Prerequisites or Corequisites: BPC170 or permission of instructor. Course Notes: BPC171 may be repeated for a total of three (3) credit hours.

**Division:** Business and Computing Studies

### BPC270 / A+ Exam Prep: Operating System Configuration and Support

#### 3 Credits / 4.0 Periods for Lecture & Lab

Explore advanced technical aspects of maintaining and servicing computers. Emphasis placed on OS installation, maintenance, mobile devices, security, software troubleshooting, and on proper usage of tools, safety procedures, and professionalism. Helps prepare students for the CompTIA A+ examinations. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.

**Division:** Business and Computing Studies

## Computer Information Systems (CIS)

### CIS102DA / Customer User Support

#### 3 Credits / 4.0 Periods for Lecture & Lab

Examines skills, tools and strategies necessary for becoming a computer help-desk or end-user support professional. Prerequisites: None.

**Division:** Business and Computing Studies

### CIS103 / Introduction to Social Media

#### 3 Credits / 4.0 Periods for Lecture & Lab

Identify and explain social media and Web 2.0 technologies for personal, academic, professional, and business applications. Create and maintain accounts on various sites to socialize, write, and share multimedia, while understanding the related ethics, privacy and security issues.

Prerequisites: None. Course Notes: Students must be 13 years or older to enroll in CIS103 as students are required to create social media accounts for course participation.

**Division:** Business and Computing Studies

### CIS105 / Survey of Computer Information Systems

#### 3 Credits / 4.0 Periods for Lecture & Lab

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.

 SUN# CIS 1120

**Fulfills:** Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo

**Division:** Business and Computing Studies

### CIS111 / Ethics in Information Technology

#### 3 Credits / 3.0 Periods for Lecture

Ethical issues that arise as a result of increasing use of computers, and the responsibilities of those who work with computers, either as computer science professionals or end users. Critical inquiry and review of ethical challenges in information technology business, including professional and corporate responsibility, government regulation, fiduciary responsibilities of information, infringement of intellectual property, security risk assessment, Internet crime, identity theft, employee surveillance, privacy, compliance, social networking, and the ethics of IT corporations. Prerequisites: None.

**Division:** Business and Computing Studies

### CIS113DE / Microsoft Word: Word Processing

#### 3 Credits / 4.0 Periods for Lecture & Lab

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.

**Division:** Business and Computing Studies

### CIS114DE / Excel Spreadsheet

#### 3 Credits / 4.0 Periods for Lecture & Lab

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.

**Division:** Business and Computing Studies

### CIS117DM / Microsoft Access: Database Management

#### 3 Credits / 4.0 Periods for Lecture & Lab

Introduction to Microsoft Access. Emphasis on features, design, and database management. Prerequisites: None. Course Notes: CIS117DM combines the contents of CIS117AM, CIS117BM and CIS117CM.

CIS117DM may be repeated for a total of nine (9) credit hours.

**Division:** Business and Computing Studies

### CIS118DB / Desktop Presentation: PowerPoint

#### 3 Credits / 4.0 Periods for Lecture & Lab

Use of PowerPoint to produce professional-quality presentation visuals with animation and sound. Prerequisites: None.

**Division:** Business and Computing Studies

**CIS119DO / Introduction to Oracle: SQL****3 Credits / 4.0 Periods for Lecture & Lab**

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. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CIS105 or permission of Instructor.

**Division:** Business and Computing Studies

**CIS119DP / Oracle: Database Administration****3 Credits / 4.0 Periods for Lecture & Lab**

Basic administrative tasks performed by a database administrator (DBA). Conceptual understanding and hands-on applications of the Oracle database architecture and interaction of its components. Prerequisites: A grade of C or better in CIS119DO, or permission of Instructor. (CIS126++ or CIS121++ or MST152++) is recommended.

**Division:** Business and Computing Studies

**CIS120DB / Introduction to Adobe Illustrator****3 Credits / 4.0 Periods for Lecture & Lab**

Provides students with the knowledge and skills 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.

**Division:** Business and Computing Studies

**CIS120DC / Introduction to Adobe Animate****3 Credits / 4.0 Periods for Lecture & Lab**

Focuses on entry-level skill expectations for digital animation using Adobe Animate. Covers basic animation techniques used in the creation, manipulation, and editing of animation graphics. Prepares students for the Adobe certifications related to Adobe Animate. Prerequisites: None.

**Division:** Business and Computing Studies

**CIS120DF / Introduction to Adobe Photoshop****3 Credits / 4.0 Periods for Lecture & Lab**

Focuses on entry-level skills and knowledge for digital imaging using Adobe Photoshop. Prepares students for the Adobe Certifications related to Photoshop. Prerequisites: None.

**Division:** Business and Computing Studies

**CIS121AB / Microsoft Command Line Operations****1 Credit / 2.0 Periods for Lecture & Lab**

Use of the Microsoft command line interface: basic concepts, internal and external commands, subdirectories, and editor. Prerequisites: None.

**Division:** Business and Computing Studies

**CIS121AE / Windows Operating System: Level I****1 Credit / 2.0 Periods for Lecture & Lab**

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.

**Division:** Business and Computing Studies

**CIS121AH / Microsoft PowerShell/Command Line Operations****3 Credits / 4.0 Periods for Lecture & Lab**

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.

**Division:** Business and Computing Studies

**CIS126DL / Linux Operating System****3 Credits / 4.0 Periods for Lecture & Lab**

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.

**Division:** Business and Computing Studies

**CIS126RH / Red Hat System Administration I****3 Credits / 4.0 Periods for Lecture & Lab**

Introduction to core administration skills needed to manage a Red Hat Enterprise Linux system. This Red Hat Academy course helps prepare for the Red Hat certification exams using a hands-on, task-focused curriculum. Prerequisites: None.

**Division:** Business and Computing Studies

**CIS133DA / Internet/Web Development Level I****3 Credits / 4.0 Periods for Lecture & Lab**

Overview of the Internet/World Wide Web (WWW) and its resources. Hands-on experience with various Internet/WWW resource discovery, information retrieval, and social media tools. Design and Development of multi-page websites using current Hyper Text Markup Language (HTML) and Cascading Style Sheets (CSS) standards. Prerequisites: None.

**Division:** Business and Computing Studies

**CIS150AB / Object-Oriented Programming Fundamentals****3 Credits / 4.0 Periods for Lecture & Lab**

Structured and Object-Oriented design and logic tools. Use of computer problems to demonstrate and teach concepts using an appropriate programming language. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CIS105 or permission of Instructor.

**Division:** Business and Computing Studies

**CIS151 / Computer Game Development -Level I****3 Credits / 4.0 Periods for Lecture & Lab**

Introduction to object-oriented game development, game design, and game theory. Use of computer software to demonstrate and teach concepts using an appropriate game development platform to model real-time simulations and create computer games using object oriented tools. Introduction to developing PC games, educational software, and training software using windows based object oriented developments tools. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.

**Division:** Business and Computing Studies

**CIS154 / Database Modeling and Design****3 Credits / 4.0 Periods for Lecture & Lab**

Top-down, systematic approach to defining a database design based on analysis of business information and requirements. Identifying and evaluating standard data model and design patterns. Developing an entity-relationship (ER) diagram that accurately reflects the business. Mapping the ER diagram to an initial database design and revising for complex entities, attributes, and relationships. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.

**Division:** Business and Computing Studies

**CIS156 / Python Programming: Level I****3 Credits / 4.0 Periods for Lecture & Lab**

Introduction to Python programming. Includes 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: A grade of C or better in CIS105 or permission of Instructor.

**Division:** Business and Computing Studies

**CIS159 / Visual Basic Programming I****3 Credits / 4.0 Periods for Lecture & Lab**

Use of the Visual Basic programming language to solve problems using suitable examples from business or other disciplines. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.

**Division:** Business and Computing Studies

**CIS162 / C Programming I****3 Credits / 4.0 Periods for Lecture & Lab**

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: A grade of C or better in CIS105 or permission of Instructor.

**Fulfills:** Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo

**Division:** Business and Computing Studies

**CIS162AB / C++: Level I****3 Credits / 4.0 Periods for Lecture & Lab**

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: A grade of C or better in CIS105 or permission of Instructor.

**Fulfills:** Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo

**Division:** Business and Computing Studies

**CIS162AD / C#: Level I****3 Credits / 4.0 Periods for Lecture & Lab**

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: A grade of C or better in CIS105 or permission of Instructor.

**Fulfills:** Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo

**Division:** Business and Computing Studies

**CIS163AA / Java Programming: Level I****3 Credits / 4.0 Periods for Lecture & Lab**

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: A grade of C or better in CIS105 or permission of Instructor.

**Fulfills:** Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo

**Division:** Business and Computing Studies

**CIS164AB / Oracle: PL/SQL Programming****3 Credits / 4.0 Periods for Lecture & Lab**

Writing PL/SQL procedures, functions, and packages. Creating and managing PL/SQL program units and database triggers in Oracle development environment. Managing dependencies and manipulating large objects. Prerequisites: A grade of C or better in CIS119DO, or permission of the Instructor.

**Division:** Business and Computing Studies

**CIS165 / Introduction to IOS Application Development****3 Credits / 4.0 Periods for Lecture & Lab**

Introduction to iOS device programming utilizing the XCode application, and the programming languages Objective-C and/or Swift, utilizing various iOS frameworks. Understand iOS hardware and feature basics. Go through the entire design process from concept to final product delivery. Prerequisites: A grade of C or better in CIS150++, or CIS156, or CIS159, or CIS162++, or CIS163AA, or permission of Instructor.

**Division:** Business and Computing Studies

**CIS165DA / Introduction to Android Application Development****3 Credits / 4.0 Periods for Lecture & Lab**

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 services, to debugging and publishing applications. Prerequisites: A grade of C or better in CIS150++, or CIS156, or CIS159, or CIS162++, or CIS163AA, or permission of Instructor.

**Division:** Business and Computing Studies

**CIS166AA / Introduction to Javascript****3 Credits / 4.0 Periods for Lecture & Lab**

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: A grade of C or better in CIS133DA or permission of Instructor.

**Division:** Business and Computing Studies

**CIS190 / Introduction to Networking****3 Credits / 4.0 Periods for Lecture & Lab**

Overview of networks. Emphasis on the elements of a network, current issues and products, and use of a network. Includes terminology, hardware and software components, connectivity, resource monitoring and sharing, electronic mail and messaging, and security issues. Helps prepare students for the CompTIA Network+ examination. Prerequisites: None. Corequisites: CIS105 or permission of Instructor.

**Division:** Business and Computing Studies

**CIS213DE / Advanced Microsoft Word: Word Processing****3 Credits / 4.0 Periods for Lecture & Lab**

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: A grade of C or better in CIS113DE or (CIS113AE and CIS113BE and CIS113CE), or permission of Instructor.

**Division:** Business and Computing Studies

**CIS214DE / Advanced Excel Spreadsheet: Level II****3 Credits / 4.0 Periods for Lecture & Lab**

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: A grade of C or better in CIS114DE, or permission of Instructor.

**Division:** Business and Computing Studies

**CIS217AM / Advanced Microsoft Access: Database Management****3 Credits / 4.0 Periods for Lecture & Lab**

Advanced database concepts including database design, primary and secondary key selection and relationships between tables. Queries, sub forms, macros, events, Visual Basic modules and Access Internet features also covered. Prerequisites: A grade of C or better in CIS117DM or CIS117CM.

**Division:** Business and Computing Studies

**CIS225AB / Object-Oriented Analysis and Design****3 Credits / 4.0 Periods for Lecture & Lab**

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 programming language or permission of Instructor.

**Division:** Business and Computing Studies

**CIS233DA / Internet/Web Development Level II****3 Credits / 4.0 Periods for Lecture & Lab**

Plan, design and create web sites using HTML and Advanced Cascading Style Sheets (CSS). Expedite the development process using CSS frameworks and libraries. Enhance user experience and web site functionality using supporting technologies. Exploration of User Interface (UI) and User Experience (UX), best practices, accessibility, strategies, and careers in web design and development. Prerequisites: A grade of C or better in CIS133DA or permission of Instructor.

**Division:** Business and Computing Studies

**CIS235 / E-Commerce****3 Credits / 4.0 Periods for Lecture & Lab**

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: A grade of C or better in CIS133DA or permission of Instructor.

**Division:** Business and Computing Studies

**CIS238DL / Linux System Administration****3 Credits / 4.0 Periods for Lecture & Lab**

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 CompTIA Linux+, the Red Hat Certified System Administrator (RHCSA), the Red Hat Certified Engineer (RHCE) and the Linux Professional Institute (LPIC-1). Prerequisites: A grade of C or better in CIS126DL or CIS126RH or permission of Instructor.

**Division:** Business and Computing Studies

**CIS238RH / Red Hat System Administration II****3 Credits / 4.0 Periods for Lecture & Lab**

Continue to develop core administration skills needed to manage a Red Hat Enterprise Linux system. This Red Hat Academy course helps to prepare students for the Red Hat certification exams using a hands-on, task-focused curriculum. Prerequisites: A grade of C or better in CIS126RH, or permission of Instructor.

**Division:** Business and Computing Studies

**CIS239DL / Linux Shell Scripting****3 Credits / 4.0 Periods for Lecture & Lab**

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: A grade of C or better in CIS238DL or CIS238RH or permission of Instructor.

**Division:** Business and Computing Studies

**CIS240DL / Linux Network Administration****3 Credits / 4.0 Periods for Lecture & Lab**

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 CompTIA Linux+, the Red Hat Certified System Administrator (RHCSA), the Red Hat Certified Engineer (RHCE) and the Linux Professional Institute (LPIC-1). Prerequisites: A grade of C or better in CIS238DL or permission of Instructor.

**Division:** Business and Computing Studies

**CIS240RH / Red Hat System Administration III****3 Credits / 4.0 Periods for Lecture & Lab**

Provides solid understanding of how to automate services on a Linux system. Covers use of Ansible to automate provisioning, configuration, application deployment, and orchestration on Red Hat Enterprise Linux 8. Content aligns with the Red Hat Certified Engineer (RHCE - EX294) exam, a professional certification. Prerequisites: A grade of C or better in CIS238RH or permission of Instructor.

**Division:** Business and Computing Studies

**CIS250 / Management of Information Systems****3 Credits / 4.0 Periods for Lecture & Lab**

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: A grade of C or better in CIS105.

**Division:** Business and Computing Studies

**CIS259 / Visual Basic Programming II****3 Credits / 4.0 Periods for Lecture**

Use of the Visual Basic programming language to identify and solve advanced problems using suitable examples from business or other disciplines. Prerequisites: A grade of C or better in CIS159, or permission of Instructor.

**Division:** Business and Computing Studies



**CIS263AA / Java Programming: Level II****3 Credits / 4.0 Periods for Lecture & Lab**

Intermediate Java programming. Includes features needed to construct object-oriented programming, multithreading, multimedia, files, streams and data structure. Prerequisites: A grade of C or better in CIS163AA or permission of Instructor.

**Division:** Business and Computing Studies

**CIS271DL / Linux Security****3 Credits / 4.0 Periods for Lecture & Lab**

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: A grade of C or better in CIS240DL or permission of Instructor.

**Division:** Business and Computing Studies

**CIS290AA / Computer Information Systems Internship****1 Credit / 6.0 Periods for Laboratory**

Work experience in business or industry. Prerequisites: Permission of Instructor.

**Division:** Business and Computing Studies

**CIS290AB / Computer Information Systems Internship****2 Credits / 12.0 Periods for Laboratory**

Work experience in business or industry. Prerequisites: Permission of Instructor.

**Division:** Business and Computing Studies

**CIS290AC / Computer Information Systems Internship****3 Credits / 18.0 Periods for Laboratory**

Work experience in business or industry. Prerequisites: Permission of Instructor.

**Division:** Business and Computing Studies

**CIS296WB / Cooperative Education****2 Credits / 10.0 Periods for Laboratory**

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 concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.

**Division:** Business and Computing Studies

**CIS296WC / Cooperative Education****3 Credits / 15.0 Periods for Laboratory**

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 concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.

**Division:** Business and Computing Studies

**Cloud Computing (CLD)****CLD110 / Amazon Web Services Cloud Foundations****3 Credits / 4.0 Periods for Lecture & Lab**

Provides a detailed overview of cloud concepts, Amazon Web Services (AWS) core services, security, architecture, pricing, and support. Intended for students who seek an overall understanding of cloud computing concepts, independent of specific technical roles. Helps to prepare students for the AWS Certified Cloud Practitioner exam. Prerequisites: None. CIS105 suggested but not required.

**Division:** Business and Computing Studies

**CLD120 / Amazon Web Services Cloud Architect Associate****3 Credits / 4.0 Periods for Lecture & Lab**

Fundamentals of building IT infrastructure on Amazon Web Services (AWS). Focus on how to optimize use of the AWS Cloud by understanding AWS services and best practices for the AWS Cloud and how they fit into cloud-based solutions. Covers design patterns for architecting optimal IT solutions on AWS, as well as strategies and services implemented on AWS. Prerequisites: A grade of C or better in CLD110 or permission of Instructor.

**Division:** Business and Computing Studies

**Cisco Network Technology (CNT)****CNT140AB / Introduction to Networks****4 Credits / 6.0 Periods for Lecture & Lab**

Focus on the architecture, structure, functions, components, and models of the Internet and other computer networks. 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.

**Division:** Business and Computing Studies

**CNT150AB / Switching, Routing, and Wireless Essentials****4 Credits / 6.0 Periods for Lecture & Lab**

Focus on configuring switches and routers for use in small and medium size networks. Including Virtual Local Area Networks (VLANs), VLAN trunking, Inter-VLAN routing, Spanning Tree Protocol (STP), EtherChannel, Dynamic Host Configuration Protocol (DHCP), First Hop Redundancy, Local area Network (LAN) and Switch security, and Static routing. Knowledge and skills needed to implement a Wireless Local Area Network (WLAN) is also covered. Preparation for Cisco certification examination. Prerequisites: A grade of C or better in CNT140AB or permission of Instructor.

**Division:** Business and Computing Studies

**CNT160AB / Enterprise Networking, Security, and Automation****4 Credits / 6.0 Periods for Lecture & Lab**

Focus on the configuration of routers and switches within small and medium size networks for advanced functionality including Open Shortest Path First (OSPF), Network security, Access Control Lists (ACLs), Network Address Translation (NAT), Wide Area Network (WAN) concepts, Virtual Private Networks (VPNs), Quality of Service (QoS), network management, design, troubleshooting, virtualization, and automation. Preparation for Cisco certification examination. Prerequisites: A grade of C or better in CNT150AB or permission of Instructor.

**Division:** Business and Computing Studies

**CNT202 / Cisco Secure Firewall Appliance Configuration****4 Credits / 5.0 Periods for Lecture & Lab**

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: A grade of C or better in CNT160AB or permission of Instructor.

**Division:** Business and Computing Studies

**CNT205 / Cisco Certified Network Associate Security****4 Credits / 6.0 Periods for Lecture & Lab**

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: A grade of C or better in CNT160AB, or Cisco Certified Network Associate (CCNA) certification, or permission of Instructor.

**Division:** Business and Computing Studies

**CNT206 / Cisco Certified Network Associate Wireless****4 Credits / 6.0 Periods for Lecture & Lab**

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: A grade of C or better in CNT160AB 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.

**Division:** Business and Computing Studies

**Computer Science (CSC)****CSC100AA / Introduction to Computer Science (C++)****3 Credits / 4.0 Periods for Lecture & Lab**

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: A grade of C or better in MAT095, or MAT096, or MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair.

**Fulfills:** Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo

**Division:** Business and Computing Studies

**CSC110AA / Introduction to Computer Science (Java)****3 Credits / 4.0 Periods for Lecture & Lab**

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: A grade of C or better in MAT095, or MAT096, or MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair.

**Fulfills:** Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo

**Division:** Business and Computing Studies

**CSC110AB / Introduction to Computer Science (Java)****4 Credits / 4.0 Periods for Lecture & Lab**

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: A grade of C or better in MAT095, or MAT096, or MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair.

**Fulfills:** Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo

**Division:** Business and Computing Studies

**CSC120 / Digital Design Fundamentals****4 Credits / 6.0 Periods for Lecture & Lab**

Number systems, conversion methods, binary and complement arithmetic, Boolean switching algebra and circuit minimization techniques. Analysis and design of combinational logic, flip-flops, simple counters, registers, ROMs, PLDs, synchronous and asynchronous sequential circuits, and state reduction techniques. Building physical circuits. Prerequisites: None. Corequisites: CSC100 or CSC110 or permission of Instructor or Division or Department Chair.

**Crosslisted:** EEE120

**Fulfills:** Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo

**Division:** Business and Computing Studies

**CSC180AA / Computer Literacy****3 Credits / 4.0 Periods for Lecture & Lab**

Introduction to computers and technology and their impact on society. Explores technology, current topics in computing, applications and related issues. Students gain fluency in integrating technology to solve problems using computational thinking. Use of application software to create documents, spreadsheets, databases, e-mail and text files, and use of Internet browsers. Prerequisites: None.

**Fulfills:** Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo

**Division:** Business and Computing Studies

**CSC180AB / Computer Literacy****4 Credits / 4.0 Periods for Lecture**

Introduction to computers and technology and their impact on society. Explores technology, current topics in computing, applications and related issues. Students gain fluency in integrating technology to solve problems using computational thinking. Use of application software to create documents, spreadsheets, databases, e-mail and text files, and use of Internet browsers. Prerequisites: None.

**Fulfills:** Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo

**Division:** Business and Computing Studies

**CSC181AA / Applied Problem Solving With Visual Basic****3 Credits / 4.0 Periods for Lecture & Lab**

Introduction to systematic definition of problems, solution formulation, and testing. Visual BASIC programming language applied to problems in mathematics, science, and business. Prerequisites: None.

**Division:** Business and Computing Studies

**CSC181AB / Applied Problem Solving With Visual Basic****4 Credits / 4.0 Periods for Lecture**

Introduction to systematic definition of problems, solution formulation, and testing. Visual BASIC programming language applied to problems in mathematics, science, and business. Prerequisites: None.

**Fulfills:** Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo

**Division:** Business and Computing Studies

**CSC182AA / Principles Of Programming With C#.NET****3 Credits / 4.0 Periods for Lecture & Lab**

Introduction to object-oriented program analysis, design, and development using Visual C#.NET. Includes general concepts, data types, expressions, flow control, methods, classes, arrays, event-driven models, Windows applications, and Web applications. Prerequisites: None.

**Fulfills:** Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo

**Division:** Business and Computing Studies

**CSC205AA / Object Oriented Programming and Data Structures****3 Credits / 4.0 Periods for Lecture & Lab**

Covers Object-Oriented design and programming; elementary data structures; arrays; lists; stacks; queues; binary trees; recursion; searching and sorting algorithms. Prerequisites: A grade of C or better in CSC110 or permission of Instructor.

**Fulfills:** Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo

**Division:** Business and Computing Studies

**CSC220 / Programming for Computer Engineering****3 Credits / 5.0 Periods for Lecture & Lab**

Introduction to procedural programming (C/C++) and hardware description language (VHDL). Prerequisites: A grade of C or better in (CSC/EEE120 and CSC205), or permission of Instructor or Division or Department Chair.

**Division:** Business and Computing Studies

**CSC230 / Computer Organization and Assembly Language****4 Credits / 5.0 Periods for Lecture & Lab**

Assembly language programming including input/output (I/O) programming and exception/interrupt handling. Register-level computer organization, I/O interfaces, assemblers, and linkers. Processor organization and design, data path, control, pipelining, and input/output. Memory organization with cache and virtual memory. Prerequisites: A grade of C or better in [(CSC100 or CSC110) and CSC/EEE120], or permission of Instructor or Division or Department Chair.

**Crosslisted:** EEE230

**Division:** Business and Computing Studies

**CSC240 / Introduction to Different Programming Languages****3 Credits / 5.0 Periods for Lecture & Lab**

Introduction to procedural (C/C++), applicative (LISP), and declarative (Prolog) languages.

**Division:** Business and Computing Studies

**General Business (GBS)****GBS109 / Introduction to Esports Management****3 Credits / 3.0 Periods for Lecture**

Introduction to Esports will introduce the business, economics, operations and marketing of the Esports industry. Historical and cultural implications will be examined from the early days of competitive video gaming, to today's billion dollar industry. Global awareness and diverse cultural viewpoints and trends will be studied as they relate to the Esports industry. This course will introduce students to the numerous business opportunities to work and grow in the dynamic Esports industry. Prerequisites: None.

**Division:** Business and Computing Studies

**GBS120 / Workplace Communication Skills****3 Credits / 3.0 Periods for Lecture & Lab**

Reviews planning, organization, development, and evaluation of written and oral communication in business settings, including informative and persuasive messages. Prerequisites: None.

**Division:** Business and Computing Studies

**GBS131 / Business Calculations****3 Credits / 3.0 Periods for Lecture**

Review of basic arithmetic and application of mathematics to business problems, includes percentage, interest, discount, and markups. Prerequisites: None.

**Division:** Business and Computing Studies

**GBS132 / Personal and Family Financial Security****3 Credits / 3.0 Periods for Lecture**

Principles and practices of personal and family financial planning, includes savings, budgeting, credit, buying versus renting, and general principles of consumerism. Prerequisites: None.

**Division:** Business and Computing Studies

**GBS151 / Introduction to Business****3 Credits / 3.0 Periods for Lecture**

Characteristics and activities of current local, national, and international business. An overview of economics, marketing, management and finance. Prerequisites: None.

**Division:** Business and Computing Studies

**GBS205 / Legal, Ethical, and Regulatory Issues in Business****3 Credits / 3.0 Periods for Lecture**

Legal theories, ethical issues and regulatory climate affecting business policies and decisions. Prerequisites: None.

**Division:** Business and Computing Studies

**GBS220 / Quantitative Methods in Business****3 Credits / 3.0 Periods for Lecture**

Business applications of quantitative optimization methods in operations management decisions. Prerequisites: (A grade of C or better in MAT150 or MAT151 or MAT152) or satisfactory District math placement.

**Division:** Business and Computing Studies

**GBS221 / Business Statistics****3 Credits / 3.0 Periods for Lecture**

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: A grade of C or better in GBS220 or MAT217 or MAT218.



SUN# BUS 2201

**Fulfills:** Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo

**Division:** Business and Computing Studies

**GBS233 / Business Communication****3 Credits / 3.0 Periods for Lecture**

Internal and external business communications, including verbal and nonverbal techniques. Prerequisites: ENG101 or ENG107 with grade of "C" or better, or permission of Department or Division.

**Fulfills:** Literacy & Critical Inquiry [L]; Literacy & Critical Inquiry [L]-in combo

**Division:** Business and Computing Studies

**GBS261 / Investments I****3 Credits / 3.0 Periods for Lecture**

Evaluation of various investment forms including study of inflation, taxation, government securities, stocks and bonds, real estate and retirement plans. Securities industry knowledge and skills for individuals to prepare for careers in Financial Services. Includes capital markets, types of products and their risks, trading, customer accounts, prohibited activities, and regulatory agencies and their functions. Helps to prepare students for the Financial Industry Regulatory Authority (FINRA) Securities Industry Essentials (SIE) Examination required for entry-level positions in the security industry. Prerequisites: None. Corequisites: Concurrent enrollment in GBS261LL recommended but not required. Course Notes: Students interested in taking the Financial Industry Regulatory Authority (FINRA) Securities Industry Essentials (SIE) Examination should also enroll in the GBS261LL Securities Industry Essentials (SIE) Exam Prep course.

**Division:** Business and Computing Studies

**GBS261LL / Securities Industry Essentials (SIE) Exam Prep****1 Credit / 1.0 Periods for Lecture & Lab**

Helps to prepare students for the Financial Industry Regulatory Authority (FINRA) Securities Industry Essentials (SIE) Examination required for prospective securities industry professionals. Focuses on reviewing key concepts, practicing skills, and preparing to successfully demonstrate existing knowledge on the SIE certification exam. The course is designed to provide an overview of exam topics and study and test-taking strategies. It also will include structured study time, group discussions, and the use of practice exams to assess test readiness. Prerequisites: None. Corequisites: Concurrent enrollment in GBS261 recommended but not required. Course Notes: GBS261 is recommended for students who are not already employed in the financial services industry and need more in-depth content related to the SIE exam.

**Division:** Business and Computing Studies

**International Business (IBS)****IBS101 / Introduction to International Business****3 Credits / 3.0 Periods for Lecture**

A basic overview of international business to introduce students to international trade concepts. Focus of the course is on international business environment issues that influence global business practices, decisions and applications. Prerequisites: None.

**Fulfills:** Global Awareness [G]; Global Awareness [G]-in combo

**Division:** Business and Computing Studies

**Information Technology Security (ITS)****ITS110 / Information Security Fundamentals****3 Credits / 4.0 Periods for Lecture & Lab**

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: A grade of C or better in CIS126DL, or CIS126RH, or permission of Program Director. Corequisites: BPC270 or MST150++.

**Division:** Business and Computing Studies

**ITS120 / Legal, Ethical and Regulatory Issues****3 Credits / 3.0 Periods for Lecture**

Exploration of legal and ethical issues unique to information security. Analysis of professional ethical codes and their application to information security practitioners. Federal and state laws as they relate to information security. Prerequisites: None.

**Division:** Business and Computing Studies

**ITS240 / Ethical Hacking and Network Defense****3 Credits / 4.0 Periods for Lecture & Lab**

Preparation for the EC-Council Certified Ethical Hacking examination. In-depth exploration of how to effectively protect computer networks from risks ranging from malicious infiltration to cyber-warfare. Includes examination of ethical hacking, relevant tools and methodologies, and its importance to network security. Resources to identify new computer network vulnerabilities and counter security strategies will be discussed as well as an overview of relevant computer crime laws and penalties. Prerequisites: A grade of C or better in ITS110, or CNT205, or CIS270, or CIS271DB, or CIS272DB, or permission of Instructor.

**Division:** Business and Computing Studies

**ITS291 / Computer Forensics Foundations****4 Credits / 5.0 Periods for Lecture & Lab**

Development of foundational computer forensic skills. Introduction to preserving, identifying, extracting, interpreting, and documenting computer data as part of a forensically sound analysis. Examination of the physical and logical structure of hard drives. Study of the logical structure of Windows-based file systems and common applications. Introduction to the logical structure of Unix/Linux-based file systems and common applications of commercial forensic tools. Prerequisites: A grade of C or better in BPC170 and ITS110 or permission of Instructor.

**Division:** Business and Computing Studies

**ITS292 / Advanced Computer Forensics****4 Credits / 5.0 Periods for Lecture & Lab**

Advanced computer forensics analysis techniques with commercial tools. Introduction to open-source forensic tools. Emphasis on data recovery from complex applications and media types. Study of the logical structure of Unix/Linux-based file systems. Advanced search techniques. Analysis of unallocated space, compound files, and NTFS artifacts. Prerequisites: A grade of C or better in ITS291 or permission of Instructor.

**Division:** Business and Computing Studies

## Management (MGT)

### **MGT101 / Techniques of Supervision**

#### **3 Credits / 3.0 Periods for Lecture**

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.

**Division:** Business and Computing Studies

### **MGT126 / Customer Service Skills and Strategies**

#### **3 Credits / 3.0 Periods for Lecture & Lab**

Explores strategies to help improve job performance and develop a service-oriented philosophy. Uses practical training concepts and techniques to demonstrate how superior customer service can lead to competitive advantage and profitability in business. Focuses on both internal and external customers, interactions among people, processes, and systems within the organization and how to integrate these areas into a total quality delivery program. Prerequisites: None.

**Division:** Business and Computing Studies

### **MGT175 / Business Organization and Management**

#### **3 Credits / 3.0 Periods for Lecture**

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.

**Division:** Business and Computing Studies

### **MGT229 / Management and Leadership I**

#### **3 Credits / 3.0 Periods for Lecture**

Covers management concepts and applications for business, industry, and government organizations. Prerequisites: None.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Business and Computing Studies

### **MGT251 / Human Relations in Business**

#### **3 Credits / 3.0 Periods for Lecture**

Analysis of motivation, leadership, communications, and other human factors. Cultural differences that may create conflict and affect morale individually and within organizations. Prerequisites: None. MGT101 or MGT175 or MGT229 suggested, but not required.

**Division:** Business and Computing Studies

### **MGT253 / Owning and Operating a Small Business**

#### **3 Credits / 3.0 Periods for Lecture**

Starting, organizing, and operating a small business, including location, finance management processes, advertisement and promotion, credit, inventory control and ethics. Prerequisites: None.

**Division:** Business and Computing Studies

## Marketing (MKT)

### **MKT101 / Introduction to Public Relations**

#### **3 Credits / 3.0 Periods for Lecture**

Emphasizes public relations techniques used both within and outside the business organization, including operation of a PR counseling firm. Prerequisites: None.

**Division:** Business and Computing Studies

### **MKT110 / Marketing and Social Networking**

#### **3 Credits / 3.0 Periods for Lecture**

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.

**Division:** Business and Computing Studies

### **MKT111 / Applied Marketing and Social Networking**

#### **3 Credits / 4.0 Periods for Lecture & Lab**

Examination of the strategic use of digital and social media marketing platforms and tools for global communication and networking, including analysis of various digital and social media platforms and tools for developing brands, creating professional networks and creating engaging content. Hands-on use of social media platforms and tools to conduct research, develop strategies for creating, integrating, and evaluating social media marketing campaigns, and development of metrics to measure effectiveness. Prerequisites: A grade of C or better in MKT110.

**Division:** Business and Computing Studies

### **MKT112 / Retail Customer Service**

#### **1 Credit / 1.0 Periods for Lecture**

Introduction to the field of retail sales. Emphasis on customer service and sales techniques. Prerequisites: None.

**Division:** Business and Computing Studies

### **MKT114 / Retail Inventory Control**

#### **1 Credit / 1.0 Periods for Lecture**

Retail inventory control procedures. Emphasis on the role of the professional sales associate within a retail company and in the handling of merchandise. Prerequisites: A grade of C or better in MKT112.

**Division:** Business and Computing Studies

### **MKT267 / Principles of Sales**

#### **3 Credits / 3.0 Periods for Lecture**

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.

**Division:** Business and Computing Studies

### **MKT271 / Principles of Marketing**

#### **3 Credits / 3.0 Periods for Lecture**

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.

**Division:** Business and Computing Studies

### **MKT280AB / Marketing Internship**

#### **2 Credits / 2.0 Periods for Lecture & Lab**

Marketing work experience in a business or industry. 80 hours of designated work per credit. Prerequisites: Permission of Department or Division.

**Division:** Business and Computing Studies

## Microsoft Technology (MST)

### MST150WT / Installing and Configuring Microsoft Windows 10 3 Credits / 4.0 Periods for Lecture & Lab

In-depth exploration of how to effectively install and configure Windows 10. Includes features of Windows 10, virtualization improvements, network connectivity, access to resources, monitor and maintain Windows clients and backup and recovery. Designed to prepare students for the Microsoft Windows 10 certification examination. Prerequisites: None. CIS190 or CNT140AB suggested but not required.

**Division:** Business and Computing Studies

## Small Business Management (SBS)

### SBS200 / Small Business Operations

#### 2 Credits / 2.0 Periods for Lecture

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.

**Division:** Business and Computing Studies

### SBS213 / Hiring and Managing Employees

#### 1 Credit / 1.0 Periods for Lecture

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.

**Division:** Business and Computing Studies

### SBS214 / Small Business Customer Relations

#### 1 Credit / 1.0 Periods for Lecture

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.

**Division:** Business and Computing Studies

### SBS220 / Internet Marketing For Small Business

#### 2 Credits / 2.0 Periods for Lecture

Focuses on "e-Commerce"-doing business on the Internet and planning a web site. Topics include: how the Internet can help growth and success of business; examples of successful marketing on the Internet; availability of Internet services; necessary hardware and software for marketing on the Internet; determining products/services appropriate for Internet marketing; budget constraints and ongoing operations of the Internet site. Prerequisites: None.

**Division:** Business and Computing Studies

### SBS230 / Financial and Tax Management for Small Business

#### 2 Credits / 2.0 Periods for Lecture

An overview of accounting and recordkeeping 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.

**Division:** Business and Computing Studies

## Society and Business (SBU)

### SBU200 / Society and Business

#### 3 Credits / 3.0 Periods for Lecture

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.

**Fulfills:** Global Awareness [G]; Global Awareness [G]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Business and Computing Studies

## Accounting, Associate in Applied Science



## BUSINESS, ENTREPRENEURIALISM, AND MANAGEMENT

**Associate in Applied Science: AAS 3149**

**62-73 Credits**

**Program Contacts**

Barbara Gonzalez | 602-243-8044 | barbara.gonzalez@cgc.edu

## Program Description

The Associate in Applied Science (AAS) in Accounting program is designed to provide fundamental skills for individuals planning to enter the field of accounting. Possible entry-level jobs for this program include accounting clerk, accounts payable/receivable clerk, claims clerk, payroll clerk, credit clerk, bookkeeper, accounting intern, tax preparation or comparable positions. This program may prepare students for certification in Certified Bookkeeper (CB), Enrolled Agent (EA), and Certified Payroll Professional (CPP). Certificates of Completion (CCL) in Accounting and Enrolled Agent are available.

## Program Notes

Students must earn a grade of "C" or better in all courses in the program. Overall program minimum GPA = 2.00.

Consultation with an academic advisor is recommended for course selection.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		6-9	
ACC111 & ACC230 & ACC240	Accounting Principles I and Uses of Accounting Information I and Uses of Accounting Information II		

ACC111 & ACC112 & ACC212	Accounting Principles I and Accounting Principles II and Managerial Accounting		
ACC211 & ACC212	Financial Accounting and Managerial Accounting		
ACC105 or ACC222	Payroll, Sales and Property Taxes Payroll Accounting	3	
ACC115	Computerized Accounting	3	
ACC121 or ACC221	Individual Tax Preparation Tax Accounting	3	
ACC219	Intermediate Accounting I	3	
CIS114DE	Excel Spreadsheet	3	
CIS105	Survey of Computer Information Systems	3	
FYE101 or FYE103	Introduction to College, Career and Personal Success Exploration of College, Career and Personal Success	1-3	
GBS151	Introduction to Business	3	
GBS205	Legal, Ethical, and Regulatory Issues in Business	3	
GBS120 or GBS233	Workplace Communication Skills Business Communication	3	
<b>Restricted Electives</b>			
Select six (6) credits from the following:		6	
ACC+++	Any ACC Accounting course(s) <sup>1</sup>		
GBS131	Business Calculations		
GBS220	Quantitative Methods in Business		
GBS221	Business Statistics		
GBS261	Investments I		

MGT101	Techniques of Supervision	
or MGT175	Business Organization and Management	
or MGT229	Management and Leadership I	

**General Education***First-Year Composition*

ENG101	First-Year Composition	3	
or ENG107	First-Year Composition for ESL		
ENG102	First-Year Composition	3	
or ENG108	First-Year Composition for ESL		

*Oral Communication*

Select one of the following: 3

COM100	Introduction to Human Communication	
COM110	Interpersonal Communication	
COM225	Public Speaking	
COM230	Small Group Communication	

*Critical Reading*

Select one of the following: 0-3

CRE101	College Critical Reading and Critical Thinking	
--------	--	--

Equivalent by assessment

*Mathematics*

Any approved general education course from the Mathematics area 3-6

**Distribution***Humanities, Arts and Design*

Any approved general education course(s) from the Humanities, Arts and Design area 3

*Social and Behavioral Sciences*

Select one of the following: 3

ECN211	Macroeconomic Principles	
ECN212	Microeconomic Principles	
SBU200	Society and Business	

*Natural Sciences*

Any approved general education course(s) in the Natural Sciences area 4

**Total Credits 62-73**

<sup>1</sup> Except ACC111 Accounting Principles I, ACC112 Accounting Principles II, ACC211 Financial Accounting, ACC212 Managerial Accounting,



ACC230 Uses of Accounting Information I, ACC240 Uses of Accounting Information II

## Accounting, Certificate of Completion



**BUSINESS,  
ENTREPRENEURIALISM,  
AND MANAGEMENT**

**Certificate of Completion: CCL 5665**

**24-27 Credits**

**Program Contact**

Barbara Gonzalez | 602-243-8044 | barbara.gonzalez@cgc.edu

### Program Description

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

### Program Notes

Students must earn a grade of "C" or better in all courses in the program. Overall program minimum GPA = 2.00.

Consultation with an Academic Advisor is recommended for course selection.

++ indicates any suffixed course may be selected.

### Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		6-9	
ACC111 & ACC230 & ACC240	Accounting Principles I and Uses of Accounting Information I and Uses of Accounting Information II		
ACC111 & ACC112 & ACC212	Accounting Principles I and Accounting Principles II and Managerial Accounting		
ACC211 & ACC212	Financial Accounting and Managerial Accounting		
ACC105	Payroll, Sales and Property Taxes	3	

or ACC222	Payroll Accounting		
ACC121	Individual Tax Preparation	3	
or ACC221	Tax Accounting		
ACC115	Computerized Accounting	3	
CIS114DE	Excel Spreadsheet	3	
CIS105	Survey of Computer Information Systems	3	
GBS151	Introduction to Business	3	
<b>Total Credits</b>		<b>24-27</b>	

## Administrative Professional, Certificate of Completion



**BUSINESS,  
ENTREPRENEURIALISM,  
AND MANAGEMENT**

**Certificate of Completion: CCL 5677**

**18 Credits**

**Program Contact**

Lana Short | 480-732-7191 | lana.short@cgc.edu

### Program Description

The Certificate of Completion (CCL) in the Administrative Professional program is designed to provide students with basic office skills. This program is recommended for students with little or no office-related work experience or college experience. Includes instruction in business communications, office procedures, and report preparation. An Associate in Applied Science (AAS) in Administrative Professional is available.

### Program Notes

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

### Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
BPC110	Computer Usage and Applications	3	
or CIS105	Survey of Computer Information Systems		
CIS113DE	Microsoft Word: Word Processing	3	
GBS120	Workplace Communication Skills	3	

GBS131	Business Calculations	3	_____
GBS151	Introduction to Business	3	_____
Select three of the following:		3	_____
BPC101AA	Introduction to Computers I		_____
BPC/OASOR111AA	Computer Keyboarding I		_____
CIS121AE	Windows Operating System: Level I		_____
CIS121AI	Mac Operating System		_____
CIS122AE	Windows Operating System: Level II		_____
CIS133AA	Internet/Web Development Level I-A		_____
<b>Total Credits</b>		<b>18</b>	_____

## Adobe Foundations: Animation and Graphics Production, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5167N**

**9 Credits**

**Program Contact**

Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

### Program Description

The Certificate of Completion (CCL) in Adobe Foundations: Animation and Graphics Production program helps prepare students to create, edit, and enhance digital images, graphics, and animation for use in web, print, and video. A Certificate of Completion in Adobe Foundations: Video and Audio Production and an Associate in Applied Science (AAS) in Web Design and Development are also available.

### Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
CIS120DB	Introduction to Adobe Illustrator	3	_____
CIS120DC	Introduction to Adobe Animate	3	_____
CIS120DF	Introduction to Adobe Photoshop	3	_____
<b>Total Credits</b>		<b>9</b>	_____

## Amazon Web Services Cloud Associate, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5330N**

**3-6 Credits**

**Program Contact**

Scott Miller | 480-857-5536 | scott.miller@cgc.edu

### Program Description

The Certificate of Completion (CCL) in Amazon Web Services (AWS) Cloud Associate builds the knowledge and skills to design, plan, and implement a cloud solution architecture. Students will be introduced to concepts and hands-on opportunities to manage cloud systems/architectures for real world-applications. Students with the requisite experience in the field who complete this CCL can pursue employment in a variety of information technology jobs. This CCL also helps to prepare students for the AWS Certified Solutions Architect – Associate examination, which is the second level of the AWS certifications.

### Program Notes

This program is not eligible for Title IV Federal Financial Aid.

This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience such as database, Linux, information security, networking, programming, and DevOps who are interested in expanding their knowledge in the area of cloud computing to enhance their employment opportunities. Speak to a program director for additional information.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: BPC, CIS, CLD, CNT, ITS, and MST.

Students must earn a grade of C<sup>++</sup> or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites:** None

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-3	
CLD110	Amazon Web Services Cloud Foundations		
Certificate of Completion in Amazon Web Services Cloud Practitioner (5141N)			
AWS Certified Cloud Practitioner certification badge			
Permission of Program Director			
CLD120	Amazon Web Services Cloud Architect Associate	3	
<b>Total Credits</b>		<b>3-6</b>	

## Amazon Web Services Cloud Practitioner, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion:** CCL 5141N

**3 Credits**

**Program Contact**

Scott Miller | 480-857-5536 | scott.miller@cgic.edu  
(scott.miller@cgic.edu)

## Program Description

The Certificate of Completion (CCL) in Amazon Web Services Cloud Practitioner builds the practical knowledge and skills of cloud computing. Cloud computing provides reliable, scalable, secure, and flexible technology solutions for personal and business use. This CCL will introduce students new to or interested in cloud computing to the fundamental concepts of cloud services as well as hands-on opportunities to apply these concepts to real-world applications. Students with the requisite experience in the field who complete this CCL can pursue employment in a variety of information technology jobs. This CCL also helps to prepare students for the Amazon Web Services (AWS) Certified Cloud Practitioner exam, which is the first level of the AWS certification.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C<sup>'''</sup> or better for all courses required within the program. Overall program minimum GPA = 2.00.

This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience such as database, Linux, information security, networking, programming, and DevOps who are interested in expanding their knowledge in the area of cloud computing to enhance their employment opportunities. Speak to a program director for additional information.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites:** None

Code	Title	Credits	Semester
<b>Required Courses</b>			
CLD110	Amazon Web Services Cloud Foundations	3	
<b>Total Credits</b>		<b>3</b>	

## Amazon Web Services Cloud Specialist, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion:** CCL 5331N

**3-9 Credits**

**Program Contact**

Scott Miller | 480-857-5536 | scott.miller@cgic.edu

## Program Description

The Certificate of Completion (CCL) in Amazon Web Services (AWS) Cloud Specialist builds the requisite knowledge and skills to perform core Amazon Web Services (AWS) services in a manner that is based on compute, data, security and requirements as well as AWS best practices. Students select a specialization in either Developer or SysOps. Developer focuses on developing, deploying and debugging cloud based applications using AWS. SysOps focuses on deploying, managing and operating scalable, highly available, and fault tolerant systems on AWS.

Students will have hands-on opportunities to manage cloud systems/architectures for real world-scenarios. Students with the requisite prior experience in the field who complete this CCL can pursue employment in a variety of information technology jobs.

This CCL also helps to prepare students for industry-standard certification as either AWS Certified Developer - Associate or AWS Certified SysOps Administrator - Associate based on their emphasis.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience such as database, Linux, information

security, networking, programming, and DevOps who are interested in expanding their knowledge in the area of cloud computing to enhance their employment opportunities. Speak to a program director for additional information.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the CCL to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Students must earn a grade of C<sup>+</sup> or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-3	
CLD110	Amazon Web Services Cloud Foundations		
AWS Cloud Practitioner Certification			
Permission of Program Director			
Select one of the following:		0-3	
CLD120	Amazon Web Services Cloud Architect Associate		
AWS Certified Solutions Architect - Associate certification			
Permission of Program Director			
Complete all courses in the specialization below that best aligns with your academic and professional goals. Consult with an academic, faculty, or program advisor.			
<i>Specialization 1: AWS Certified Developer - Associate</i>			
CLD130	Amazon Web Services Cloud Developing	3	
<i>Specialization 2: AWS Certified SysOps Administrator - Associate</i>			
CLD140	Amazon Web Services Cloud Operations	3	
<b>Total Credits</b>		<b>3-9</b>	

## Android App Development, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5834N**

**9-12 Credits**

**Program Contact**

Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Android App Development prepares students for employment in entry-level coding, programming, and software development positions with an emphasis on Android mobile apps. This CCL will help prepare students to take the Associate Android Developer industry certification. Courses in this certificate can apply toward the Associate in Applied Science (AAS) in Mobile App Development and Certificate of Completion (CCL) in Mobile App Development, and Certificate of Completion (CCL) in Native Mobile App Development.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

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

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Complete one of the following:		0-3	
CIS105	Survey of Computer Information Systems		
Permission of Program Director, Department or Division Chair			
Select one of the following:		3	
CIS150	Programming Fundamentals <sup>1</sup>		
CIS150AB	Object-Oriented Programming Fundamentals <sup>1</sup>		

CIS156	Python Programming: Level I	_____
CIS159	Visual Basic Programming I	_____
CIS162AD	C#: Level I	_____
CIS163AA	Java Programming: Level I	_____
CIS165DA	Introduction to Android Application Development	3 _____
CIS265DA	Advanced Android Application Development	3 _____
<b>Total Credits</b>		<b>9-12</b> _____

<sup>1</sup> Recommended for students with no programming experience or who plan to complete the AAS 3099 or CCL 5193 in Mobile App Development.

## Cisco Certified Network Professional: Enterprise Advanced Routing and Services, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5187N**

**8 Credits**

**Program Contact**

Scott Miller | 480-857-5536 | scott.miller@cgc.edu

### Program Description

The Certificate of Completion (CCL) in Cisco Certified Network Professional: Enterprise Advanced Routing and Services builds the advanced knowledge and skills needed for professional-level networking technologies and architecture. This CCL includes concepts of implementation and troubleshooting of advanced routing technologies and services including Layer 3 VPN services, infrastructure security, and infrastructure services, as well as hands-on opportunities to apply these concepts to real-world applications. Students with the requisite experience in the field who complete this CCL can pursue employment in a variety of information technology jobs. This CCL also helps to prepare students for the Implementing Cisco Enterprise Network Advanced Routing and Services (ENARSI) certification exam aligned with the CCNP Enterprise, Cisco Certified Specialist - Advanced Infrastructure Implementation certifications. Additional Certificates of Completion (CCLs) in Cisco Certified Network Security (CCNA Security), Cisco Certified Network Professional: Enterprise Core, Cisco Certified Network Professional: Enterprise, Cisco Network Administration: CCNP, as well as an Associate in Applied Science (AAS) in Network and Systems Administration, are also available.

### Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

This Certificate of Completion (CCL) is intended for industry professionals with the requisite skills aligned with the Cisco Certified Network Associate (CCNA) industry certification who are interested in expanding their knowledge in the area in professional-level networking or to enhance their employment opportunities. Speak to a program director for additional information.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

### Admission Criteria

This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience. To pursue this CCL, students must complete the following prerequisites to the courses within the Required Course area as follows with a C or better OR have a Cisco Certified Network Associate (CCNA) industry certification OR receive permission of the Program Director:

Code	Title	Credits	Semester
CNT140AB	Introduction to Networks	4	_____
CNT150AB	Switching, Routing, and Wireless Essentials	4	_____
CNT160AB	Enterprise Networking, Security, and Automation	4	_____
<b>Total Credits</b>		<b>12</b>	_____

Students also have the option to complete the full CCL in this program, Cisco Network Administration: CCNP (major code 5037), that includes the prerequisites and required courses.

### Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		8	_____
CNT250	Cisco Certified Network Professional: Enterprise Advanced Routing and Services		_____

CNT250AA & CNT250AB Cisco Certified Network Professional: Enterprise Advanced Routing and Services I and Cisco Certified Network Professional: Enterprise Advanced Routing and Services II

Total Credits

8

## Cisco Certified Network Professional: Enterprise Core, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5189N**

**8 Credits**

**Program Contact**

Scott Miller | 480-857-5536 | scott.miller@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Cisco Certified Network Professional: Enterprise Core builds the knowledge and skills needed for professional-level networking technologies and architecture. This CCL includes the fundamental concepts of virtualization, network assurance, security, and automation, as well as hands-on opportunities to apply these concepts to real-world applications. Students with the requisite experience in the field who complete this CCL can pursue employment in a variety of information technology jobs. This CCL also helps to prepare students for the Cisco Enterprise Network Core Technologies (ENCOR) certification exam aligned with the CCNP Enterprise, CCIE Enterprise Infrastructure, CCIE Enterprise Wireless, and Cisco Certified Specialist - Enterprise core certifications.

Additional Certificates of Completion (CCLs) in Cisco Certified Network Security (CCNA Security), Cisco Certified Network Professional: Enterprise, Cisco Certified Network Professional: Enterprise Core and Advanced Routing and Services, Cisco Network Administration: CCNP, as well as an Associate in Applied Science (AAS) in Network and Systems Administration, are also available.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

This Certificate of Completion (CCL) is intended for industry professionals with the requisite skills aligned with the Cisco Certified Network

Associate (CCNA) industry certification who are interested in expanding their knowledge in the area in professional-level networking or to enhance their employment opportunities. Speak to a program director for additional information.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Admission Criteria

This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience. To pursue this CCL, students must complete the following prerequisites to the courses within the Required Course area as follows with a C or better OR have a Cisco Certified Network Associate (CCNA) industry certification OR receive permission of the Program Director.

Code	Title	Credits	Semester
CNT140AB	Introduction to Networks	4	
CNT150AB	Switching, Routing, and Wireless Essentials	4	
CNT160AB	Enterprise Networking, Security, and Automation	4	
<b>Total Credits</b>		<b>12</b>	

Students also have the option to complete the full CCL in this program, Cisco Network Administration: CCNP (major code 5037), that includes the prerequisites and required courses.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		8	
CNT240	Cisco Certified Network Professional: Enterprise Core		
CNT240AA & CNT240AB	Cisco Certified Network Professional: Enterprise Core I and Cisco Certified Network Professional: Enterprise Core II		
<b>Total Credits</b>		<b>8</b>	



# Cisco Certified Network Professional: Enterprise, Certificate of Completion



## COMPUTER AND INFORMATION TECHNOLOGY

**Certificate of Completion: CCL 5190**

**16 Credits**

**Program Contact**

Scott Miller | 480-857-5536 | scott.miller@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Cisco Certified Network Professional: Enterprise builds the advanced knowledge and skills needed for professional-level networking technologies and architecture. This CCL includes fundamental concepts of virtualization, network assurance, security, automation, and the implementation and troubleshooting of advanced routing technologies, as well as hands-on opportunities to apply these concepts to real-world applications. Students with the requisite experience in the field who complete this CCL can pursue employment in a variety of information technology jobs. This CCL also helps to prepare students for the Cisco Enterprise Network Core Technologies (ENCOR) certification and Implementing Cisco Enterprise Network Advanced Routing and Services (ENARSI) exams aligned with the CCNP Enterprise, CCIE Enterprise Infrastructure, CCIE Enterprise Wireless, and Cisco Certified Specialist - Enterprise core, CCNP Enterprise, Cisco Certified Specialist - Advanced Infrastructure Implementation certifications.

Additional Certificates of Completion (CCLs) in Cisco Certified Network Security (CCNA Security), Cisco Certified Network Professional: Enterprise Core, Cisco Certified Network Professional: Enterprise Advanced Routing and Services, Cisco Network Administration: CCNP, as well as an Associate in Applied Science (AAS) in Network and Systems Administration, are also available.

## Program Notes

The Certificate of Completion in Cisco Certified Network Professional: Enterprise is currently not Title IV Federal Financial Aid eligible.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

This Certificate of Completion (CCL) is intended for industry professionals with the requisite skills aligned with the Cisco Certified Network Associate (CCNA) industry certification who are interested in expanding their knowledge in the area in professional-level networking or to enhance their employment opportunities. Speak to a program director for additional information.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Admission Criteria

This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience. To pursue this CCL, students must complete the following prerequisites to the courses within the Required Course area as follows with a C or better OR have a Cisco Certified Network Associate (CCNA) industry certification OR receive permission of the Program Director:

Code	Title	Credits	Semester
CNT140AB	Introduction to Networks	4	_____
CNT150AB	Switching, Routing, and Wireless Essentials	4	_____
CNT160AB	Enterprise Networking, Security, and Automation	4	_____
<b>Total Credits</b>		<b>12</b>	_____

Students also have the option to complete the full CCL in this program, Cisco Network Administration: CCNP (major code 5037), that includes the prerequisites and required courses.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			_____
Select one of the following:		8	_____
CNT240	Cisco Certified Network Professional: Enterprise Core		_____
CNT240AA & CNT240AB	Cisco Certified Network Professional: Enterprise Core I and Cisco Certified Network Professional: Enterprise Core II		_____
Select one of the following:		8	_____
CNT250	Cisco Certified Network Professional: Enterprise Advanced Routing and Services		_____



CNT250AA Cisco Certified  
& CNT250AB Network  
Professional:  
Enterprise  
Advanced  
Routing and  
Services I  
and Cisco  
Certified Network  
Professional:  
Enterprise  
Advanced  
Routing and  
Services II

**Total Credits****16**

## Cisco Network Administration and Security, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5036****16-19 Credits****Program Contact**

Scott Millerr 480-857-5536 | scott.miller@cgc.edu

### Program Description

The Certificate of Completion (CCL) in Cisco Network Administration and Security provides training for those interested in working with Cisco network and Internet hardware with a particular emphasis on securing networks from threats and vulnerabilities. Knowledge and skills are developed to install, configure, and maintain Cisco routers and switches; configure routing protocols, and Local Area Networks (LANs); troubleshoot problems with various hardware and software configurations; perform administrative tasks in a network. Specific skills in maintaining integrity, accountability, and confidentiality of data are also developed. Taught by Cisco Certified professionals using the Cisco Network Academy program curriculum, courses are designed to help prepare students for the Cisco Certified Network Associate (CCNA) and Security examinations. Students who complete this program may seek employment in a variety of environments. An additional Certificate of Completion (CCL) in Cisco Certified Network Professional (CCNP), as well as an Associate in Applied Science (AAS) in Network and Systems Administration, are also available.

### Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 as indicated in the required courses. Students with the requisite skills may have the CIS105 requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Complete one of the following:		0-3	
CIS105	Survey of Computer Information Systems		
Permission of the Program Director			
CNT140AB	Introduction to Networks	4	
CNT150AB	Switching, Routing, and Wireless Essentials	4	
CNT160AB	Enterprise Networking, Security, and Automation	4	
CNT202	Cisco Secure Firewall Appliance Configuration	4	
or CNT205	Cisco Certified Network Associate Security		
<b>Total Credits</b>		<b>16-19</b>	

## Cisco Network Administration: CCNA, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5969N****12-15 Credits****Program Contact**

Scott Miller | 480-857-5536 | scott.miller@cgc.edu

### Program Description

The Certificate of Completion (CCL) in Cisco Network Administration: CCNA provides training for those interested in working with network and Internet hardware. Knowledge and skills are developed to install, configure, and maintain Cisco routers and switches; configure advanced routing protocols, and Local Area Networks (LANs); troubleshoot hardware and software configurations; perform administrative tasks in a network. Taught by Cisco Certified professionals using the Cisco Networking Academy program curriculum, courses are designed to

help prepare students for the Cisco Certified Network Associate (CCNA) examination. Students who complete this program may seek employment in a variety of environments. Additional Certificates of Completion (CCLs) in Cisco Network Administration and Security and Cisco Network Administration: CCNP, as well as an Associate in Applied Science (AAS) in Network and Systems Administration, are available.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 as indicated in the required courses. Students with the requisite skills may have the CIS105 requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Complete one of the following:		0-3	
CIS105	Survey of Computer Information Systems		
Permission of Program Director			
CNT140AB	Introduction to Networks	4	
CNT150AB	Switching, Routing, and Wireless Essentials	4	
CNT160AB	Enterprise Networking, Security, and Automation	4	
<b>Total Credits</b>		<b>12-15</b>	

## Cisco Network Administration: CCNP, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5037**

**28-31 Credits**

**Program Contact**

Scott Miller | 480-857-5536 | scott.miller@cgc.edu

### Program Description

The Certificate of Completion (CCL) in Network Administration: Cisco Network Professional (CCNP) provides students with advanced knowledge and skills to install, configure, and maintain Cisco routers and switches; configure advanced routing protocols, Local Area Networks (LANs), and Wide Area Networks (WANs); troubleshoot complex hardware and software configurations; and perform administrative tasks in a network at the professional level. Taught by Cisco Certified professionals using the Cisco Network Academy program curriculum, courses are designed to help prepare students for the Cisco Certified Network Associate (CCNA) and Cisco Certified Network Professional Certifications (CCNP) examinations. Students who complete this program may seek employment in a variety of environments. An additional Certificate of Completion (CCL) in Cisco Network Administration and Security, as well as an Associate in Applied Science (AAS) in Network and Systems Administration, are also available.

## Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 as indicated in the required courses. Students with the requisite skills may have the CIS105 requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Complete one of the following:		0-3	
CIS105	Survey of Computer Information Systems		
Permission of program director			
CNT140AB	Introduction to Networks	4	
CNT150AB	Switching, Routing, and Wireless Essentials	4	
CNT160AB	Enterprise Networking, Security, and Automation	4	
Select one of the following:		8	

CNT240	Cisco Certified Network Professional: Enterprise Core	_____
CNT240AA & CNT240AB	Cisco Certified Network Professional: Enterprise Core I and Cisco Certified Network Professional: Enterprise Core II	_____
Select one of the following:		8 _____
CNT250	Cisco Certified Network Professional: Enterprise Advanced Routing and Services	_____
CNT250AA & CNT250AB	Cisco Certified Network Professional: Enterprise Advanced Routing and Services I and Cisco Certified Network Professional: Enterprise Advanced Routing and Services II	_____
<b>Total Credits</b>		<b>28-31</b> _____

## Computer System Configuration and Support, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5038N**

**6-9 Credits**

**Program Contact**

Scott Miller | 480-857-5536 | scott.miller@cgc.edu

### Program Description

The Certificate of Completion (CCL) in Computer System Configuration and Support program is designed to prepare students for entry-level computer maintenance, help desk, and network technician jobs.

The classes focus on the development of knowledge and skills in computer technologies including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis is placed on hardware installation, maintenance, mobile devices, hardware troubleshooting, proper use of tools, safety procedures, and professionalism. This program helps prepare students for the CompTIA

A+ certification exams. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCL) in a variety of specializations within the information technology field to deepen their knowledge and skills and help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 Survey of Computer Information Systems as indicated in the required courses. Students with the requisite skills may have the CIS105 Survey of Computer Information Systems requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			_____
Complete one of the following:		0-3	_____
CIS105	Survey of Computer Information Systems		_____
Permission of program director			_____
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	_____
BPC270	A+ Exam Prep: Operating System Configuration and Support	3	_____
<b>Total Credits</b>		<b>6-9</b>	_____

## Computer System Configuration and Support, Linux, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5039N****9-12 Credits****Program Contact**

Scott Miller | 480-857-5536 | scott.miller@cgsc.edu

## Program Description

The Certificate of Completion (CCL) in Computer System Configuration and Support, Linux program is designed to prepare students for entry-level computer maintenance, help desk, and network technician jobs with an emphasis on Linux. The classes focus on the development of knowledge and skills in computer and network technologies including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis is placed on the Linux Operating system including knowledge and skills required to install, configure and troubleshoot a Linux-based workstation. This program helps prepare students for the CompTIA A+ and Linux+ certification exams. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 Survey of Computer Information Systems as indicated in the required courses. Students with the requisite skills may have the CIS105 Survey of Computer Information Systems requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-3	
CIS105	Survey of Computer Information Systems		
Permission of program director			
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	

BPC270	A+ Exam Prep: Operating System Configuration and Support	3	
CIS126DL	Linux Operating System	3	
or CIS126RH	Red Hat System Administration I		
<b>Total Credits</b>		<b>9-12</b>	

## Computer System Configuration and Support, Network, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5044N****9-13 Credits****Program Contact**

Scott Miller | 480-857-5536 | scott.miller@cgsc.edu

## Program Description

The Certificate of Completion (CCL) in Computer System Configuration and Support, Network program is designed to prepare students for entry-level computer maintenance, help desk, and network technician jobs with an emphasis on networking. The courses focus on the development of knowledge and skills in computer and network technologies including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis is placed on elements of a data network, network components, and use of a network. This program helps prepare students for the CompTIA A+ and Network+ certification exams. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 Survey of Computer Information Systems as indicated in the required courses. Students with the requisite skills may have the CIS105 Survey of Computer Information Systems requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-3	
CIS105	Survey of Computer Information Systems		
Permission of program director			
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	
BPC270	A+ Exam Prep: Operating System Configuration and Support	3	
CIS190	Introduction to Networking	3-4	
or CNT140AB	Introduction to Networks		
<b>Total Credits</b>		<b>9-13</b>	

## Computer System Configuration and Support, Security, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

Certificate of Completion: CCL 5040N

9-19 Credits

Program Contact

Scott Miller | 480-857-5536 | scott.miller@cg.edu

## Program Description

The Certificate of Completion (CCL) in Computer System Configuration and Support, Security program is designed to prepare students for entry-level computer maintenance, help desk, and network technician jobs with an emphasis on security. The courses focus on the development of knowledge and skills in computer and security technologies including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis is placed on preventing, identifying, and mitigating threats to the security of information systems and utilizing the basic tools for information security. This program helps prepare participants for the CompTIA A+, Security+, and certification exams. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and help prepare

them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses within the program. Overall program minimum GPA = 2.00.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 Survey of Computer Information Systems as indicated in the required courses. Students with the requisite skills may have the CIS105 Survey of Computer Information Systems requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-3	
CIS105	Survey of Computer Information Systems		
Permission of Program Director			
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	
BPC270	A+ Exam Prep: Operating System Configuration and Support	3	

### Specializations

Select from one of the following areas of specialization:		3-10	
<i>Specialization 1 (3-6 Credits)</i>			
Select one of the following:			
CIS270	Essentials of Network and Information Security		
or ITS110	Information Security Fundamentals & CIS126DL and Linux Operating System		
or CIS126RHR	Red Hat System Administration I		
<i>Specialization 2 (9-10 Credits)</i>			
CNT140AB	Introduction to Networks		

or CIS190	Introduction to Networking	
CIS250	Management of Information Systems	
CIS271DB	Information Security Essentials	
<b>Total Credits</b>		<b>9-19</b>

## Cyber Engineering, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5149**

**42-46 Credits**

**Program Contact**

Mizan Rahman | 480-732-7109 | mizan.rahman@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Cyber Engineering program is designed to focus on the necessary skills required to secure, protect and identify vulnerabilities in a network, including various operating systems and network devices. Emphasis is placed on developing the theoretical, legal, ethical 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 technologies and structured languages. The Cyber Engineering 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) in Cybersecurity is also available.

## Program Notes

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
The following courses are required and included in the CCL in Cybersecurity Fundamentals			
Select one of the following:		3	

BPC270	A+ Exam Prep: Operating System Configuration and Support	
MST150++	Any Microsoft Windows course	
CIS105	Survey of Computer Information Systems	3
CIS111	Ethics in Information Technology	3
or ITS120	Legal, Ethical and Regulatory Issues	
CIS126DL	Linux Operating System	3
or CIS126RH	Red Hat System Administration I	
CIS156	Python Programming: Level I	3
CIS190	Introduction to Networking	3-4
or CNT140AB	Introduction to Networks	
Select one of the following options:		3-6
<b>Option 1</b>		
CIS270	Essentials of Network and Information Security	
<b>Option 2</b>		
CIS271DB	Information Security Essentials	
CIS272DB	Information Security Principles	
<b>Option 3</b>		
ITS110	Information Security Fundamentals	
ITS240	Ethical Hacking and Network Defense	3
The following courses are required in the CCL in Cyber Engineering.		
Select one of the following:		3
CIS119DO	Introduction to Oracle: SQL	
CIS276++	Any SQL Database course	
CIS162++	Any C Programming: Level I course	3
CIS227	Assembly Language	3



CIS238DL	Linux System Administration	3	_____
or CIS238RH	Red Hat System Administration II		_____
CIS250	Management of Information Systems	3	_____
CIS262++	Any C Programming: Level II course	3	_____
<b>Total Credits</b>		<b>42-46</b>	_____

## Cyber Operations, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5165**

**41-42 Credits**

**Program Contact**

Mizan Rahman | 480-732-7109 | mizan.rahman@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Cyber Operations program is designed to focus on the necessary skills required to secure, protect and identify vulnerabilities in a network, including various operating systems and network devices. Emphasis is placed on developing the theoretical, legal, ethical 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 technologies and structured languages. The Cyber Operations 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) in Cybersecurity is also available.

## Program Notes

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
The following courses are required and included in the CCL in Cybersecurity Fundamentals:			
Select one of the following:		3	_____

BPC270	A+ Exam Prep: Operating System Configuration and Support		_____
MST150++	Any Microsoft Windows course		_____
CIS105	Survey of Computer Information Systems	3	_____
CIS111	Ethics in Information Technology	3	_____
or ITS120	Legal, Ethical and Regulatory Issues		_____
CIS126DL	Linux Operating System	3	_____
or CIS126RH	Red Hat System Administration I		_____
CIS156	Python Programming: Level I	3	_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
ITS110	Information Security Fundamentals	3	_____
ITS240	Ethical Hacking and Network Defense	3	_____
The following courses are required in the CCL in Cyber Operations:			
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	_____
CIS238DL	Linux System Administration	3	_____
or CIS238RH	Red Hat System Administration II		_____
CIS290AC	Computer Information Systems Internship	3	_____
or CIS298AC	Special Projects		_____
ITS291	Computer Forensics Foundations	4	_____
ITS292	Advanced Computer Forensics	4	_____
<b>Total Credits</b>		<b>41-42</b>	_____



# Cybersecurity Fundamentals, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5154**

**24-31 Credits**

**Program Contact**

Mizan Rahman | 480-732-7109 | mizan.rahman@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Cybersecurity Fundamentals is designed to focus on the necessary skills required to secure, protect and identify vulnerabilities in a network, including various operating systems and network devices. Emphasis is placed on developing the theoretical, legal, ethical and practical skills needed to maintain security on mission-critical networking and server systems. The program is designed to provide applied skills necessary for government and industry employees. The program covers a variety of information security technologies and structured languages. The Cybersecurity 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) in Cybersecurity is also available.

## Program Notes

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		3	
BPC270	A+ Exam Prep: Operating System Configuration and Support		
MST150++	Any Microsoft Windows courses		
CIS105	Survey of Computer Information Systems	3	
CIS111	Ethics in Information Technology	3	
or ITS120	Legal, Ethical and Regulatory Issues		

CIS126DL	Linux Operating System	3	
or CIS126RH	Red Hat System Administration I		
CIS156	Python Programming: Level I	3	
CIS190	Introduction to Networking	3-4	
or CNT140AB	Introduction to Networks		
Select one of the following:		0-3	
CIS250	Management of Information Systems		
Only students taking CIS271DB would be required to take CIS250.			
Select one of the following:		3-6	
CIS270	Essentials of Network and Information Security		
CIS272DB & CIS271DB	Information Security Principles and Information Security Essentials <sup>1</sup>		
ITS110	Information Security Fundamentals		
ITS240	Ethical Hacking and Network Defense	3	
<b>Total Credits</b>		<b>24-31</b>	

## Cybersecurity, Associate in Applied Science



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Associate in Applied Science : AAS 3197**

**62-77 Credits**

**Program Contact**

Mizan Rahman | 480-732-7109 | mizan.rahman@cgc.edu

## Program Description

The Associate in Applied Science (AAS) in Cybersecurity is designed to focus on the necessary skills required to secure, protect and identify vulnerabilities in a network, including various operating systems and network devices. Emphasis is placed on developing the theoretical, legal, ethical 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 technologies and structured

languages. The Cybersecurity program also focuses on the skills needed for internationally recognized IT certifications and high demands in business, industry, and government. Certificates of Completion (CCLs) are also available in the following areas: Cybersecurity Fundamentals, Cyber Operations, Linux System Administration, Microsoft, Cisco Networking CCNA Security, Cyber Engineering, and Critical Infrastructure.

## Program Notes

Students must earn a grade of “C” or better in all courses required within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites:** None

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		3	
BPC270	A+ Exam Prep: Operating System Configuration and Support		
MST150++	Any Microsoft Windows course <sup>1</sup>		
CIS105	Survey of Computer Information Systems	3	
CIS111	Ethics in Information Technology	3	
or ITS120	Legal, Ethical and Regulatory Issues		
CIS126DL	Linux Operating System	3	
or CIS126RH	Red Hat System Administration I		
CIS156	Python Programming: Level I	3	
Select one of the following:		3-4	
CIS190	Introduction to Networking		
CNT140AB	Introduction to Networks <sup>2</sup>		
Select one of the following:		3-6	
CIS271DB & CIS272DB	Information Security Essentials and Information Security Principles <sup>3</sup>		

CIS270	Essentials of Network and Information Security		
ITS110	Information Security Fundamentals <sup>4</sup>		
FYE101	Introduction to College, Career and Personal Success	1-3	
or FYE103	Exploration of College, Career and Personal Success		
ITS240	Ethical Hacking and Network Defense	3	
<b>Restricted Electives</b>			
Students must complete 12-18 credits from the following list of courses. Courses cannot be repeated for credit.		12-18	
Courses that are required for a specialization in Cyber Operations, Linux System Administration, Microsoft System Administration, Cisco Network Administration and Security, Cyber Engineering, and/or Critical Infrastructure are noted.			
<i>Specialization I: Cyber Operations (17 Credits)</i>			
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support		
CIS238DL	Linux System Administration		
or CIS238RHR	Red Hat System Administration II		
CIS290AC	Computer Information Systems Internship		
or CIS298AC	Special Projects		
ITS291	Computer Forensics Foundations		
ITS292	Advanced Computer Forensics		
<i>Specialization II: Linux System Administration (15 Credits)</i>			
CIS238DL	Linux System Administration		
or CIS238RHR	Red Hat System Administration II		
CIS239DL	Linux Shell Scripting		
CIS240DL	Linux Network Administration		

CIS271DL	Linux Security	_____
or CIS271RH	Red Hat System Administration IV	_____
CIS275DL	Linux Capstone	_____
<i>Specialization III: Cloud System Administration (15-16 Credits)</i>		
BPC274	Advanced Server Computer Maintenance: Server+ Prep	_____
CIS121AH	Microsoft PowerShell/Command Line Operations	_____
CIS239DL	Linux Shell Scripting	_____
MST160	Azure Administrator	_____
CLD110	Amazon Web Services Cloud Foundations	_____
MST260	Microsoft Azure Cloud Development and Operations	_____
CLD120	Amazon Web Services Cloud Architect Associate	_____
<i>Specialization IV: Cisco Network Administration and Security (12 Credits)</i>		
CNT150AB	Switching, Routing, and Wireless Essentials	_____
CNT160AB	Enterprise Networking, Security, and Automation	_____
CNT202	Cisco Secure Firewall Appliance Configuration	_____
or CNT205	Cisco Certified Network Associate Security	_____
<i>Specialization V: Cyber Engineering (18 Credits)</i>		
CIS162++	Any C Programming: Level I course <sup>5</sup>	_____
CIS227	Assembly Language	_____
CIS238DL	Linux System Administration	_____
or CIS238RH	Red Hat System Administration II	_____
CIS250	Management of Information Systems	_____

CIS262++	Any C Programming: Level II course	_____
Select one of the following:		
CIS119DO	Introduction to Oracle: SQL	_____
CIS276++	Any SQL Database course	_____
<i>Specialization VI: Critical Infrastructure (16 Credits)</i>		
CIS143	Introduction to Critical Infrastructure Protection	_____
CIS201	Introduction to Operational Technology	_____
CIS202	Introduction to Smart Grid Security	_____
CIS203	Principles of the Risk Management Framework	_____
CNT150AB	Switching, Routing, and Wireless Essentials	_____
<b>General Electives</b>		
Select additional courses 100-level or higher to complete a minimum of 61-semester credits. It is recommended to select from the restricted elective options. <sup>6</sup>		0-3
<b>General Education</b>		
<b>Core</b>		
<i>First-Year Composition</i>		
ENG101	First-Year Composition	3
or ENG107	First-Year Composition for ESL	_____
ENG102	First-Year Composition	3
or ENG108	First-Year Composition for ESL	_____
<i>Oral Communication</i>		
Select one of the following:		3
COM100	Introduction to Human Communication <sup>7</sup>	_____
COM110	Interpersonal Communication	_____
COM225	Public Speaking	_____
COM230	Small Group Communication	_____
<i>Critical Reading</i>		
Select one of the following:		0-3

CRE101	College Critical Reading and Critical Thinking	_____
Or equivalent as indicated by assessment		
<i>Mathematics</i>		
Any approved general education course(s) in the Mathematics area	3-6	_____
<b>Distribution</b>		
<i>Humanities, Arts and Design</i>		
Any approved general education course(s) from the Humanities, Arts and Design area	3	_____
<i>Social and Behavioral Sciences</i>		
Any approved general education course(s) in the Social and Behavioral Sciences area	3	_____
<i>Natural Sciences</i>		
Any approved general education course(s) in the Natural Sciences area	4	_____

<sup>1</sup> MST150++ required for Microsoft System Administration specialization and Critical Infrastructure specialization

<sup>2</sup> CNT140AB Introduction to Networks required for Cisco Network Administration and Security specialization and Critical Infrastructure specialization

<sup>3</sup> CIS271DB Information Security Essentials **and** CIS272DB Information Security Principles required for Critical Infrastructure specialization

<sup>4</sup> ITS110 Information Security Fundamentals required for Cyber Operations specialization

<sup>5</sup> Students intending to transfer to U of A South should take CIS162 C Programming I

<sup>6</sup> Consult with a faculty advisor, program director, and/or academic advisor to identify coursework that best aligns with academic and professional goals.

<sup>7</sup> COM100 Introduction to Human Communication required for students intending to transfer to ASU West to earn a Bachelor of Science in Applied Computing (Cybersecurity).

## Data Analytics, Associate in Applied Science



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Associate in Applied Science: AAS 3212**

**62-70 Credits**

**Program Contact**

Lana Short | 480-732-7191 | lana.short@cgc.edu

## Program Description

The Associate in Applied Science (AAS) in Data Analytics is designed to prepare students to apply principles and concepts in data analytics and model, synthesize, analyze, and present large data sets for business

decision making. Courses will focus on the software development techniques and computer applications used in industry to extract data from various data sources, model and integrate that data, and then visualize this data for business decision making and intelligence gathering. This program prepares students for industry recognized certifications such as the Microsoft Power BI Data Analyst, Tableau Certified Analyst, and Microsoft Office Specialist for Excel and Access. Graduates may pursue employment in a variety of information technology environments.

## Program Notes

Students must earn a grade of C or better in each course in the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Students who have completed GBS221 can use this course in lieu of GBS220.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
Required Courses			
CIS105	Survey of Computer Information Systems	3	_____
CIS111	Ethics in Information Technology	3	_____
CIS114DE	Excel Spreadsheet	3	_____
CIS117DM	Microsoft Access: Database Management	3	_____
CIS156	Python Programming: Level I	3	_____
CIS215	Foundations of Data Analytics and Programming	3	_____
CIS214DA	Advanced Excel for Data Analytics	3	_____
CIS276DA or CIS276DB	MySQL Database SQL Server Database	3	_____
CIS224	Project Management Microsoft Project for Windows	3	_____
CIS256DA	Python for Data Analysis	3	_____

CIS260BI	Data Visualization: Power Business Intelligence (BI)	3	_____
or CIS260TB	Data Visualization: Tableau		_____
COM225	Public Speaking	3	_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
GBS151	Introduction to Business	3	_____
GBS220	Quantitative Methods in Business	3	_____
or GBS221	Business Statistics		_____
PHI103	Introduction to Logic	3	_____
SBU200	Society and Business	3	_____
<b>General Education</b>			
<i>First-Year Composition</i>			
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
Select one of the following:		3	_____
ENG102	First-Year Composition		_____
or ENG108	First-Year Composition for ESL		_____
ENG111	Technical and Professional Writing		_____
<i>Oral Communication</i>			
Met by COM225 in Required Courses.		0	_____
<i>Critical Reading</i>			
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Equivalent as indicated by assessment			_____
<i>Mathematics</i>			
Select one of the following:		3-6	_____
MAT150	College Algebra/ Functions		_____
MAT151	College Algebra/ Functions		_____
MAT152	College Algebra/ Functions		_____
MAT155	College Algebra/ Functions with Review		_____

MAT156	College Algebra/ Functions with Review		_____
Any higher approved general education course in the Mathematics area			_____
<b>Distribution</b>			
<i>Humanities, Arts and Design</i>			
Met by PHI103 Introduction to Logic in Required Courses.		0	_____
<i>Social and Behavioral Sciences</i>			
Met by SBU200 Society and Business in Required Courses.		0	_____
<i>Natural Sciences</i>			
Any approved course in the Natural Sciences area.		4	_____
<b>Total Credits</b>		<b>62-70</b>	_____

## Data Analytics, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5884**

**18-24 Credits**

**Program Contact**

Lana Short | 480-732-7191 | lana.short@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Data Analytics is designed to prepare students to model, synthesize, analyze, and present large data sets for business decision making. Courses will focus on the techniques and computer software used in industry to extract data from various data sources, model and integrate that data, and then visualize this data for business decision making and intelligence gathering. This program prepares students for industry certification and is embedded (can be used to fulfill requirements) in the Associate of Applied Science (AAS) in Data Analytics available at MCCC.

## Program Notes

Students must earn a grade of C or better in all courses within the program. Overall program minimum GPA = 2.00.

CIS214DE is not equivalent to CIS214DA for the purposes of this certificate and should not be used to complete program requirements. Students who have completed GBS221 can use this course in lieu of GBS220.

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 program of study. Consult with an Academic Advisor for complete information.

## Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
<b>Required Courses</b>			
CIS114DE	Excel Spreadsheet	3	_____
CIS117DM	Microsoft Access: Database Management	3	_____
CIS214DA	Advanced Excel for Data Analytics	3	_____
CIS217AM	Advanced Microsoft Access: Database Management	3	_____
or CIS276DA	MySQL Database		_____
or CIS276DB	SQL Server Database		_____
GBS151	Introduction to Business	3	_____
GBS220	Quantitative Methods in Business	3	_____
or GBS221	Business Statistics		_____
Select one of the following:		0-6	_____
MAT150	College Algebra/ Functions		_____
MAT151	College Algebra/ Functions		_____
MAT152	College Algebra/ Functions		_____
MAT155	College Algebra/ Functions with Review		_____
MAT156	College Algebra/ Functions with Review		_____
Satisfactory District math placement			_____
<b>Total Credits</b>		<b>18-24</b>	_____

## Desktop Support, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

Certificate of Completion: CCL 5043

19-22 Credits

Program Contact

Scott Miller | 480-857-5536 | scott.miller@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Desktop Support program is designed to prepare students for entry-level computer maintenance, help desk, and network technician jobs. The classes focus on the development of knowledge and skills in computer, network, and security technologies, as well as the interpersonal skills in customer service/technical support needed to be successful within the industry. Depending on course selection, this program helps prepare students for the CompTIA A+, CompTIA Network+, and/or CompTIA Linux+ certification exams. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

## Program Notes

Students must earn a grade of "C" or better in all courses in the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
<b>Required Courses</b>			
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	_____
BPC270	A+ Exam Prep: Operating System Configuration and Support	3	_____
CIS102DA	Customer User Support	3	_____
CIS105	Survey of Computer Information Systems	3	_____
CIS126DL	Linux Operating System	3	_____
or CIS126RH	Red Hat System Administration I		_____
Select one of the following:		3-4	_____
CIS190	Introduction to Networking		_____
CNT140AB	Introduction to Networks <sup>1</sup>		_____
<b>Restricted Electives</b>			_____

Select one to three credits from the following: 1-3 \_\_\_\_\_

BPC171	Recycling Used Computer Technology	_____
CIS290AA	Computer Information Systems Internship	_____
CIS290AB	Computer Information Systems Internship	_____
CIS290AC	Computer Information Systems Internship	_____
CIS296WB	Cooperative Education	_____
CIS296WC	Cooperative Education	_____
CIS298AA	Special Projects	_____
CIS298AB	Special Projects	_____
CIS298AC	Special Projects	_____
<b>Total Credits</b>		<b>19-22</b> _____

<sup>1</sup> CNT140AB Introduction to Networks is recommended for students interested in pursuing their Cisco Network Administration Certification

## Enrolled Agent, Certificate of Completion



**BUSINESS,  
ENTREPRENEURIALISM,  
AND MANAGEMENT**

**Certificate of Completion: CCL 5958**

**17-18 Credits**

**Program Contact**

Barbara Gonzalez | 602-243-8044 | barbara.gonzalez@cgcc.edu

## Program Description

The Certificate of Completion (CCL) in Enrolled Agent program helps to prepare students for the Enrolled Agent Examination. The Internal Revenue Service (IRS) Enrolled Agent credential allows tax practitioners to represent taxpayers before the IRS when it comes to collections, audits, and appeals. Enrolled Agents' expertise in the continually changing field of taxation enables them to effectively represent taxpayers at all administrative levels within the IRS. Students who successfully complete this CCL may also seek employment as tax preparers.

## Program Notes

Students must earn a grade of "C" or better in all courses in the program. Overall program minimum GPA = 2.00.

Consultation with an Academic Advisor is recommended for course selection. The Volunteer Income Tax Assistance (VITA) program internship is only available in the spring semester- Contact a program adviser for more information.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
ACC111	Accounting Principles I	3	_____
or ACC211	Financial Accounting		_____
ACC121	Individual Tax Preparation	3	_____
ACC221	Tax Accounting	3	_____
ACC224	Tax Practice Administration and Business Entity Analysis	3	_____
CIS105	Survey of Computer Information Systems	3	_____
<b>Restricted Electives</b>			
Select two to three credits from the list below:		2-3	_____
ACC105	Payroll, Sales and Property Taxes		_____
ACC112	Accounting Principles II		_____
ACC115	Computerized Accounting		_____
ACC222	Payroll Accounting		_____
ACC230	Uses of Accounting Information I		_____
ACC270AB	Accounting Internship		_____
ACC270AC	Accounting Internship		_____
<b>Total Credits</b>		<b>17-18</b>	_____

## Esports, Certificate of Completion



**BUSINESS,  
ENTREPRENEURIALISM,  
AND MANAGEMENT**

**Certificate of Completion: CCL 5335**

**18 Credits**

**Program Contact**

Barbara Gonzalez | 602-243-8044 | barbara.gonzalez@cgcc.edu



## Program Description

The Certificate of Completion (CCL) in Esports is designed for students pursuing careers in hospitality, marketing, business, management, event management, creative writing, computer technology, and/or video game production who are interested in utilizing those skills to gain entry level employment in the field of esports. Students completing this certificate will acquire specialized knowledge of the field of esports that will enhance the ability to gain entry level employment in the world of esports.

## Program Notes

Students must earn a grade of "C" or better in all courses in the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites:** None

Code	Title	Credits	Semester
<b>Required Courses</b>			
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	
CIS120DA	Introduction to Adobe Premiere	3	
	or CIS120DK Introduction to Digital Video Editing		
COM100	Introduction to Human Communication	3	
	or COM110 Interpersonal Communication		
	or COM230 Small Group Communication		
GBS109	Introduction to Esports Management	3	
MKT110	Marketing and Social Networking	3	
<b>Restricted Electives</b>			
Complete courses as directed, choosing options that best align with your academic and professional goals. Consult with an academic, faculty, or program advisor to prevent exceeding your award's maximum credits.			
Select one of the following:			
ACC105	Payroll, Sales and Property Taxes	3	
ACC111	Accounting Principles I		
CIS111	Ethics in Information Technology		

CRW150	Introduction to Creative Writing	
CRW176	Writing Narrative for Video Games	
CRW190	Introduction to Screenwriting	
ENH110	Introduction to Literature	
ENH140AA	Sports in Literature and Film	
GBS151	Introduction to Business	
MGT175	Business Organization and Management	
MGT229	Management and Leadership I	
MGT253	Owning and Operating a Small Business	
MKT101	Introduction to Public Relations	
MKT111	Applied Marketing and Social Networking	
MKT271	Principles of Marketing	
<b>Total Credits</b>		<b>18</b>

## General Business, Associate in Applied Science



**BUSINESS,  
ENTREPRENEURIALISM,  
AND MANAGEMENT**

**Associate in Applied Science: AAS 3148**

**62-69 Credits**

**Program Contact**

Ann Lopez | 480-726-4179 | ann.lopez@cg.edu

## Program 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. A Certificate of Completion (CCL) is also available.

## Program Notes

Students must earn a grade of "C" or better in all courses in the program.  
Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites:** None

Code	Title	Credits	Semester
<b>Required Courses</b>			
ACC111	Accounting Principles I	3	
CIS105	Survey of Computer Information Systems	3	
FYE101	Introduction to College, Career and Personal Success	1-3	
or FYE103	Exploration of College, Career and Personal Success		
GBS120	Workplace Communication Skills	3	
or GBS233	Business Communication		
GBS151	Introduction to Business	3	
GBS205	Legal, Ethical, and Regulatory Issues in Business	3	
MGT175	Business Organization and Management	3	
or MGT251	Human Relations in Business		
MKT271	Principles of Marketing	3	
<b>Restricted Electives</b>			
Students should select eighteen credits from the following courses.		18	
Any 100/200 level prefixed courses may be selected, except courses used to satisfy the Required Courses area.			
ACC+++	Any ACC Accounting course(s)		
CIS114DE	Excel Spreadsheet		
CIS117DM	Microsoft Access: Database Management		

CIS133DA	Internet/Web Development Level I	
EPS+++	Any EPS Entrepreneurial Studies course(s)	
GBS+++	Any GBS General Business course(s)	
IBS+++	Any IBS International Business course(s)	
MGT+++	Any MGT Management course(s)	
MKT+++	Any MKT Marketing course(s)	
REA+++	Any REA Real Estate course(s)	
SBS+++	Any SBS Small Business Management course(s)	
TQM+++	Any TQM Total Quality Management course(s)	

### General Education

#### Core

##### First-Year Composition

ENG101	First-Year Composition	3
or ENG107	First-Year Composition for ESL	
ENG102	First-Year Composition	3
or ENG108	First-Year Composition for ESL	

##### Oral Communication

Select one of the following:		3
COM100	Introduction to Human Communication	
COM110	Interpersonal Communication	
COM225	Public Speaking	
COM230	Small Group Communication	

##### Critical Reading

Select one of the following:		0-3
CRE101	College Critical Reading and Critical Thinking	
Or equivalent as indicated by assessment		

##### Mathematics

Any approved general education course from the Mathematics area. 3-5 \_\_\_\_\_

#### Distribution

##### Humanities, Arts and Design

Any approved general education course in the Humanities, Arts and Design area 3 \_\_\_\_\_

##### Social and Behavioral Sciences

Select one of the following: 3 \_\_\_\_\_

ECN211 Macroeconomic Principles \_\_\_\_\_

ECN212 Microeconomic Principles \_\_\_\_\_

SBU200 Society and Business \_\_\_\_\_

##### Natural Sciences

Any approved general education course in the Natural Sciences area 4 \_\_\_\_\_

**Total Credits** 62-69 \_\_\_\_\_

## General Business, Certificate of Completion



## BUSINESS, ENTREPRENEURIALISM, AND MANAGEMENT

**Certificate of Completion: CCL 5683**

**21 Credits**

#### Program Contact

Ann Lopez | 480-726-4179 | a (ann.lopez@cgic.edu) nn.lopez@cgic.edu (ann.lopez@cgic.edu)

## Program 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

Students must earn a grade of "C" or better in all courses in the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
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

Select nine credits from the following: 9 \_\_\_\_\_

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

ACC+++ Any ACC Accounting courses(s) \_\_\_\_\_

CIS114DE Excel Spreadsheet \_\_\_\_\_

CIS117DM Microsoft Access: Database Management \_\_\_\_\_

CIS133DA Internet/Web Development Level I \_\_\_\_\_

EPS+++ Any EPS Entrepreneurial Studies 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) \_\_\_\_\_

TQM+++ Any TQM Total Quality Management course(s) \_\_\_\_\_

**Total Credits** 21 \_\_\_\_\_

# Information Technology, Associate in Applied Science



## COMPUTER AND INFORMATION TECHNOLOGY

Associate in Applied Science: AAS 3196

61-68 Credits

### Program Contacts

Scott Miller | 480-857-5536 | scott.miller@cgc.edu

## Program Description

The Associate in Applied Science (AAS) in Information Technology (IT) program is designed to provide students with skills to meet information technology needs across industries. This program includes instruction in the principles of computer hardware components and business software, programming, databases, networking, customer service, web development, and information systems and project management. Coursework helps prepare students for a variety of industry-recognized examinations and certifications. Students will earn one or more of the following Certificates of Completion (CCLs):

- CCL/5154 Cybersecurity Fundamentals
- CCL/5083 Database Development
- CCL/5043 Desktop Support
- CCL/5793 Foundations of Mobile App Development
- CCL/5132 Microsoft Office Professional
- CCL/5031 Microsoft System Administration
- CCL/5048 Programming and Systems Analysis Level I
- CCL/5183N Oracle Database Operations
- CCL/5050N Red Hat Linux Engineer
- CCL/5984 Web Foundations

## Program Notes

CCL 5183N, and 5050N are not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites:** None

**Required Courses:** 33-41 Credits

Complete all courses in the specialization below that best aligns with your academic and professional goals. Consult with an academic, faculty, or program advisor.

Code	Title	Credits	Semester
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____

## Specialization 1: Cybersecurity Fundamentals

Credits: 33-38

Code	Title	Credits	Semester
<b>Information Technology Core</b>			
Select one of the following:		3	_____
BPC270	A+ Exam Prep: Operating System Configuration and Support		_____
MST150++	Any Microsoft Windows course		_____
CIS105	Survey of Computer Information Systems	3	_____
Select one of the following:		3	_____
CIS117DM	Microsoft Access: Database Management		_____
CIS119DO	Introduction to Oracle: SQL		_____
CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
CIS126DL	Linux Operating System	3	_____
or CIS126RH	Red Hat System Administration I		_____
CIS133DA	Internet/Web Development Level I	3	_____
CIS156	Python Programming: Level I	3	_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
Select one of the following:		3	_____
CIS224	Project Management Microsoft Project for Windows		_____
CIS250	Management of Information Systems <sup>1</sup>		_____
<b>Cybersecurity Fundamentals</b>			

CIS111	Ethics in Information Technology	3	_____
or ITS120	Legal, Ethical and Regulatory Issues		_____
CIS270	Essentials of Network and Information Security	3-6	_____
or CIS271DB & CIS272DB	Information Security Essentials and Information Security Principles		_____
or ITS110	Information Security Fundamentals		_____
ITS240	Ethical Hacking and Network Defense	3	_____
<b>Related Area Credits</b>			
Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:		0-5	_____
BPC+++++	Any BPC Business-Personal Computers courses		_____
CIS+++++	Any CIS Computer Information Systems courses		_____
CLD+++++	Any CLD Cloud Computing courses		_____
CNT+++++	Any CNT Cisco Network Technology courses		_____
ITS+++++	Any ITS Information Technology Security courses		_____
MST+++++	Any MST Microsoft Technology courses		_____

<sup>1</sup> Students taking CIS271DB Information Security Essentials would be required to take CIS250 Management of Information Systems.

## Specialization 2: Database Development

Credits: 36-38

Code	Title	Credits	Semester
<b>Information Technology Core</b>			
Select one of the following:		3	_____

BPC270	A+ Exam Prep: Operating System Configuration and Support		_____
CIS126DL	Linux Operating System		_____
CIS126RH	Red Hat System Administration I		_____
MST150++	Microsoft Windows		_____
CIS105	Survey of Computer Information Systems	3	_____
CIS119DO	Introduction to Oracle: SQL	3	_____
CIS133DA	Internet/Web Development Level I	3	_____
Select one of the following:		3	_____
CIS156	Python Programming: Level I		_____
CIS162++	Any C Programming: Level I course		_____
CIS163AA	Java Programming: Level I		_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
CIS224	Project Management Microsoft Project for Windows	3	_____
or CIS250	Management of Information Systems		_____
<b>Database Development</b>			
CIS117DM	Microsoft Access: Database Management	3	_____
or CIS154	Database Modeling and Design		_____
CIS150++	Programming Fundamentals	3	_____
Select one of the following:		3	_____
CIS164AB	Oracle: PL/SQL Programming		_____
CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____

CIS217AM	Advanced Microsoft Access: Database Management	3	_____
or CIS276DB	SQL Server Database		_____
CIS225AB	Object-Oriented Analysis and Design	3	_____
<b>Related Area Credits</b>			
Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:		0-2	_____
BPC+++++	Any BPC Business-Personal Computers courses		_____
CIS+++++	Any CIS Computer Information Systems courses		_____
CLD+++++	Any CLD Cloud Computing courses		_____
CNT+++++	Any CNT Cisco Network Technology courses		_____
ITS+++++	Any ITS Information Technology Security courses		_____
MST+++++	Any MST Microsoft Technology courses		_____

### Specialization 3: Desktop Support

Credits: 32-38

Code	Title	Credits	Semester
<b>Information Technology Core</b>			
BPC270	A+ Exam Prep: Operating System Configuration and Support	3	_____
CIS105	Survey of Computer Information Systems	3	_____
Select one of the following:		3	_____
CIS117DM	Microsoft Access: Database Management		_____

CIS119DO	Introduction to Oracle: SQL		_____
CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
CIS126DL	Linux Operating System	3	_____
or CIS126RH	Red Hat System Administration I		_____
CIS133DA	Internet/Web Development Level I	3	_____
Select one of the following:		3	_____
CIS150AB	Object-Oriented Programming Fundamentals		_____
CIS156	Python Programming: Level I		_____
CIS162++	Any C Programming: Level I course		_____
CIS163AA	Java Programming: Level I		_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
CIS224	Project Management Microsoft Project for Windows	3	_____
or CIS250	Management of Information Systems		_____
<b>Desktop Support</b>			
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	_____
CIS102DA	Customer User Support	3	_____
<b>Related Area Credits</b>			
Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:		2-8	_____
BPC+++++	Any BPC Business-Personal Computers courses		_____
CIS+++++	Any CIS Computer Information Systems courses		_____

CLD+++++	Any CLD Cloud Computing courses	_____
CNT+++++	Any CNT Cisco Network Technology courses	_____
ITS+++++	Any ITS Information Technology Security courses	_____
MST+++++	Any MST Microsoft Technology courses	_____

## Specialization 4: Foundations of Mobile App Development

Credits: 33-38

Code	Title	Credits	Semester
<b>Information Technology Core</b>			
CIS105	Survey of Computer Information Systems	3	_____
Select one of the following:		3	_____
BPC270	A+ Exam Prep: Operating System Configuration and Support		_____
CIS126DL	Linux Operating System		_____
CIS126RH	Red Hat System Administration I		_____
MST150++	Microsoft Windows		_____
Select one of the following:		3	_____
CIS117DM	Microsoft Access: Database Management		_____
CIS119DO	Introduction to Oracle: SQL		_____
CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
CIS133DA	Internet/Web Development Level I	3	_____
CIS162++	Any C Programming: Level I course	3	_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____

CIS224	Project Management Microsoft Project for Windows	3	_____
or CIS250	Management of Information Systems		_____

### Foundations of Mobile App Development

CIS120DF	Introduction to Adobe Photoshop	3	_____
CIS165	Introduction to IOS Application Development	3	_____
CIS165DA	Introduction to Android Application Development	3	_____
CIS165DB	C#/VB.NET: Windows 8 App Development	3	_____
or CIS165DC	Xamarin/C# Cross-Platform Development		_____

### Related Area Credits

Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:

BPC+++++	Any BPC Business-Personal Computers courses		_____
CIS+++++	Any CIS Computer Information Systems courses		_____
CLD+++++	Any CLD Cloud Computing courses		_____
CNT+++++	Any CNT Cisco Network Technology courses		_____
ITS+++++	Any ITS Information Technology Security courses		_____
MST+++++	Any MST Microsoft Technology courses		_____

## Specialization 5: Microsoft Office Professional

Credits: 31-38



Code	Title	Credits	Semester
<b>Information Technology Core</b>			
CIS105	Survey of Computer Information Systems	3	
CIS117DM	Microsoft Access: Database Management	3	
CIS133DA	Internet/Web Development Level I	3	
Select one of the following:		3	
CIS150AB	Object-Oriented Programming Fundamentals		
CIS156	Python Programming: Level I		
CIS162++	Any C Programming: Level I course		
CIS163AA	Java Programming: Level I		
CIS190	Introduction to Networking	3-4	
or CNT140AB	Introduction to Networks		
Select one of the following:		3	
MST150++	Microsoft Windows		
BPC270	A+ Exam Prep: Operating System Configuration and Support		
<b>Microsoft Office Professional</b>			
Select one of the following:		0-1	
BPC/OASOR111AA	Computer Keyboarding I		
or Permission from Program Director			
CIS113DE	Microsoft Word: Word Processing	3	
CIS114DE	Excel Spreadsheet	3	
CIS118DB	Desktop Presentation: PowerPoint	3	
CIS124AA & CIS124BA	Project Management Software: Level I and Project Management Software: Level II	2-3	

or CIS224	Project Management Microsoft Project for Windows	
<b>Related Area Credits</b>		
Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:		0-8
BPC+++++	Any BPC Business-Personal Computers courses	
CIS+++++	Any CIS Computer Information Systems courses	
CLD+++++	Any CLD Cloud Computing courses	
CNT+++++	Any CNT Cisco Network Technology courses	
ITS+++++	Any ITS Information Technology Security courses	
MST+++++	Any MST Microsoft Technology courses	

## Specialization 6: Microsoft Server

Credits: 36-38

Code	Title	Credits	Semester
<b>Information Technology Core</b>			
CIS105	Survey of Computer Information Systems	3	
Select one of the following:		3	
CIS117DM	Microsoft Access: Database Management		
CIS119DO	Introduction to Oracle: SQL		
CIS276DA	MySQL Database		
CIS276DB	SQL Server Database		
CIS133DA	Internet/Web Development Level I	3	
Select one of the following:		3	

CIS150AB	Object-Oriented Programming Fundamentals		
CIS156	Python Programming: Level I		
CIS162++	Any C Programming: Level I course		
CIS163AA	Java Programming: Level I		
CIS190	Introduction to Networking	3-4	
or CNT140AB	Introduction to Networks		
CIS224	Project Management Microsoft Project for Windows	3	
or CIS250	Management of Information Systems		
MST150++	Microsoft Windows	3	
<b>Microsoft Server</b>			
CIS121AH	Microsoft PowerShell/ Command Line Operations	3	
MST155DC	Installation, Storage, and Compute with Windows Server	4	
MST157DC	Networking with Windows Server	4	
MST158DC	Identity Management with Windows Server 2016	4	
<b>Related Area Credits</b>			
Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:		0-2	
BPC+++++	Any BPC Business-Personal Computers courses		
CIS+++++	Any CIS Computer Information Systems courses		
CLD+++++	Any CLD Cloud Computing courses		

CNT+++++	Any CNT Cisco Network Technology courses		
ITS+++++	Any ITS Information Technology Security courses		
MST+++++	Any MST Microsoft Technology courses		

## Specialization 7: Oracle Database Operations

Credits: 32-38

Code	Title	Credits	Semester
<b>Information Technology Core</b>			
Select one of the following:		3	
BPC270	A+ Exam Prep: Operating System Configuration and Support		
CIS126DL	Linux Operating System		
CIS126RH	Red Hat System Administration I		
MST150++	Microsoft Windows		
CIS105	Survey of Computer Information Systems	3	
CIS119DO	Introduction to Oracle: SQL	3	
CIS133DA	Internet/Web Development Level I	3	
Select one of the following:		3	
CIS150AB	Object-Oriented Programming Fundamentals		
CIS156	Python Programming: Level I		
CIS162++	Any C Programming: Level I course		
CIS163AA	Java Programming: Level I		
CIS190	Introduction to Networking	3-4	
or CNT140AB	Introduction to Networks		

CIS224	Project Management Microsoft Project for Windows	3	_____
or CIS250	Management of Information Systems		_____
<b>Oracle Database Operations</b>			
CIS119DP	Oracle: Database Administration	3	_____
CIS154	Database Modeling and Design	3	_____
CIS164AB	Oracle: PL/SQL Programming	3	_____
<b>Related Area Credits</b>			
Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:		2-8	_____
BPC+++++	Any BPC Business- Personal Computers courses		_____
CIS+++++	Any CIS Computer Information Systems courses		_____
CLD+++++	Any CLD Cloud Computing courses		_____
CNT+++++	Any CNT Cisco Network Technology courses		_____
ITS+++++	Any ITS Information Technology Security courses		_____
MST+++++	Any MST Microsoft Technology courses		_____

## Specialization 8: Programming and Systems Analysis Level 1

Credits: 32-38

Code	Title	Credits	Semester
<b>Information Technology Core</b>			
CIS105	Survey of Computer Information Systems	3	_____
Select one of the following:		3	_____
CIS119DO	Introduction to Oracle: SQL		_____

CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
Select one of the following:		3	_____
CIS126DL	Linux Operating System		_____
CIS126RH	Red Hat System Administration I		_____
MST150++	Microsoft Windows		_____
CIS133DA	Internet/Web Development Level I	3	_____
CIS150AB	Object-Oriented Programming Fundamentals	3	_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
CIS224	Project Management Microsoft Project for Windows	3	_____
or CIS250	Management of Information Systems		_____

### Programming and Systems Analysis

Select one of the following:		3	_____
CIS159	Visual Basic Programming I		_____
CIS162++	Any C Programming: Level I course		_____
CIS163AA	Java Programming: Level I		_____
CIS165++	Any Mobile Application Development course		_____
CIS166++	Any Web Scripting course	3	_____
GBS151	Introduction to Business	3	_____

### Related Area Credits

Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:		1-8	_____
BPC+++++	Any BPC Business- Personal Computers courses		_____

CIS+++++	Any CIS Computer Information Systems courses	_____
CLD+++++	Any CLD Cloud Computing courses	_____
CNT+++++	Any CNT Cisco Network Technology courses	_____
ITS+++++	Any ITS Information Technology Security courses	_____
MST+++++	Any MST Microsoft Technology courses	_____

### Specialization 9: Redhat Linux Engineer

Credits: 32-38

Code	Title	Credits	Semester
<b>Information Technology Core</b>			
CIS105	Survey of Computer Information Systems	3	_____
Select one of the following:		3	_____
CIS117DM	Microsoft Access: Database Management		_____
CIS119DO	Introduction to Oracle: SQL		_____
CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
CIS126RH	Red Hat System Administration I	3	_____
CIS133DA	Internet/Web Development Level I	3	_____
Select one of the following:		3	_____
CIS150AB	Object-Oriented Programming Fundamentals		_____
CIS156	Python Programming: Level I		_____
CIS162++	Any C Programming: Level I course		_____
CIS163AA	Java Programming: Level I		_____

CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
CIS224	Project Management Microsoft Project for Windows	3	_____
or CIS250	Management of Information Systems		_____

#### Redhat Linux Engineer

CIS238RH	Red Hat System Administration II	3	_____
CIS240RH	Red Hat System Administration III	3	_____

#### Related Area Credits

Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:	5-11	_____
---	------	-------

BPC+++++	Any BPC Business-Personal Computers courses	_____
CIS+++++	Any CIS Computer Information Systems courses	_____
CLD+++++	Any CLD Cloud Computing courses	_____
CNT+++++	Any CNT Cisco Network Technology courses	_____
ITS+++++	Any ITS Information Technology Security courses	_____
MST+++++	Any MST Microsoft Technology courses	_____

### Specialization 10: Web Foundations

Credits: 36-38

Code	Title	Credits	Semester
<b>Information Technology Core</b>			
Select one of the following:		3	_____
BPC270	A+ Exam Prep: Operating System Configuration and Support		_____
CIS126DL	Linux Operating System		_____

CIS126RH	Red Hat System Administration I		
MST150++	Microsoft Windows		
CIS105	Survey of Computer Information Systems	3	
Select one of the following:		3	
CIS117DM	Microsoft Access: Database Management		
CIS119DO	Introduction to Oracle: SQL		
CIS276DA	MySQL Database		
CIS276DB	SQL Server Database		
CIS133DA	Internet/Web Development Level I	3	
Select one of the following:		3	
CIS150AB	Object-Oriented Programming Fundamentals		
CIS156	Python Programming: Level I		
CIS162++	Any C Programming: Level I course		
CIS163AA	Java Programming: Level I		
CIS190	Introduction to Networking	3-4	
or CNT140AB	Introduction to Networks		
CIS224	Project Management Microsoft Project for Windows	3	
or CIS250	Management of Information Systems		
<b>Web Foundation</b>			
CIS120DF	Introduction to Adobe Photoshop	3	
CIS136	Content Management Systems: WordPress	3	
CIS166AA	Introduction to Javascript	3	
CIS233DA	Internet/Web Development Level II	3	
CIS235	E-Commerce	3	

**Related Area Credits**

Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:

0-2

BPC+++++	Any BPC Business-Personal Computers courses	
CIS+++++	Any CIS Computer Information Systems courses	
CLD+++++	Any CLD Cloud Computing courses	
CNT+++++	Any CNT Cisco Network Technology courses	
ITS+++++	Any ITS Information Technology Security courses	
MST+++++	Any MST Microsoft Technology courses	

### Specialization 11: A Related Certificate of Completion (CCL) At the Discretion of the Program Director

Credits: 32-33

A related Certificate of Completion (CCL) at the discretion of the Program Director (minimum of 11 credits) AND the following core courses with permission of the Program Director.

Code	Title	Credits	Semester
<b>Information Technology Core</b>			
CIS105	Survey of Computer Information Systems	3	
Select one of the following:		3	
CIS117DM	Microsoft Access: Database Management		
CIS119DO	Introduction to Oracle: SQL		
CIS276DA	MySQL Database		
CIS276DB	SQL Server Database		
Select one of the following:		3	

BPC270	A+ Exam Prep: Operating System Configuration and Support	_____
CIS126DL	Linux Operating System	_____
CIS126RH	Red Hat System Administration I	_____
MST150++	Microsoft Windows	_____
Select one of the following:		3 _____
CIS150AB	Object-Oriented Programming Fundamentals	_____
CIS156	Python Programming: Level I	_____
CIS162++	Any C Programming: Level I course	_____
CIS163AA	Java Programming: Level I	_____
CIS190	Introduction to Networking	3-4 _____
or CNT140AB	Introduction to Networks	_____
CIS133DA	Internet/Web Development Level I	3 _____
CIS224	Project Management Microsoft Project for Windows	3 _____
or CIS250	Management of Information Systems	_____

## General Education

Code	Title	Credits	Semester
<b>General Education</b>			
<b>Core</b>			
<i>First-Year Composition</i>			
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
<i>Oral Communication</i>			
Select one of the following:		3	_____
COM100	Introduction to Human Communication		_____
COM110	Interpersonal Communication		_____
COM225	Public Speaking		_____

COM230	Small Group Communication	_____
<i>Critical Reading</i>		_____
Select one of the following:		0-3 _____
CRE101	College Critical Reading and Critical Thinking	_____
Or equivalent as indicated by assessment		_____
<i>Mathematics</i>		_____
Select one of the following:		3-6 _____
MAT140	College Mathematics	_____
MAT141	College Mathematics	_____
MAT142	College Mathematics	_____
MAT145	College Mathematics with Review	_____
MAT146	College Mathematics with Review	_____
Equivalent or higher level mathematics course in the Mathematical Applications (MA) area		_____
<b>Distribution</b>		_____
<i>Humanities, Arts and Design</i>		_____
Any approved general education course(s) from the Humanities, Arts and Design (HU) area		3 _____
<i>Social and Behavioral Sciences</i>		_____
Any approved general education course from the Social and Behavioral Sciences (SB) area		3 _____
<i>Natural Sciences</i>		_____
Any approved general education course from the Natural Science (SG) or (SQ) area		4 _____
<b>Total Credits</b>		<b>22-28</b> _____

## iOS App Development, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5914N**

**9-12 Credits**

**Program Contact**

Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

## Program Description

The Certificate of Completion (CCL) in iOS App Development prepares students for positions in app development for the Apple iPad, iPhone, and Apple Watch series. The program emphasizes knowledge and skills required to design, develop, test, and document structured and object-oriented programs utilizing Swift and Xcode. Courses in this certificate can apply toward the Associate in Applied Science (AAS) in Mobile App Development and Certificates of Completion (CCLs) in Native App Development and Mobile App Development.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-3	
CIS105	Survey of Computer Information Systems		
Permission of Program Director, Department or Division Chair			
CIS150AB	Object-Oriented Programming Fundamentals	3	
CIS165	Introduction to iOS Application Development	3	
CIS265	Advanced iOS Application Development	3	
<b>Total Credits</b>		<b>9-12</b>	

## Kubernetes Administration, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5933N**

**4-10 Credits**

**Program Contact**

Mizan Rahman | 480-732-7109 | mizan.rahman@cgcc.edu

## Program Description

The Certificate of Completion (CCL) in Kubernetes Administration is designed to provide students with the knowledge and skills to perform the responsibilities of administering cluster architecture, installation, configuration, storage and troubleshooting. This program helps prepare students for the Certified Kubernetes Administrator certification (CKA). Industry professionals in the field of systems administration will benefit from adding a specialization in Kubernetes administration to their skill sets.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-6	
CIS126DL & CIS238DL	Linux Operating System and Linux System Administration		
CIS126RH & CIS238RH	Red Hat System Administration I and Red Hat System Administration II		
Permission of Instructor or Department			
CIS252	Introduction to Kubernetes Administration	4	
<b>Total Credits</b>		<b>4-10</b>	

## Kubernetes Application Development, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5935N**

**3-6 Credits**

**Program Contact**

Mizan Rahman | 480-732-7109 | mizan.rahman@cgcc.edu

## Program Description

The Certificate of Completion (CCL) in Kubernetes Application Development is designed to provide students with the knowledge and skills to define application resources and use core primitives to build,



monitor and troubleshoot scalable applications and tools in Kubernetes. This program helps prepare students for the Kubernetes Security Specialist (CKAD) certification exam. Industry professionals in the field of application development will enhance their skill set by adding this specialization.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-3	
CIS126DL	Linux Operating System		
CIS126RH	Red Hat System Administration I		
permission of instructor or department			
CIS254	Introduction to Kubernetes Application Development	3	
<b>Total Credits</b>		<b>3-6</b>	

## Kubernetes Security, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

Certificate of Completion: CCL 5937N

7-13 Credits

Program Contact

Mizan Rahman | 480-732-7109 | mizan.rahman@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Kubernetes Security provides students the knowledge and skills to perform a broad range of best practices for securing container-based applications and Kubernetes platforms during build, deployment and runtime. This program helps prepare students for the Kubernetes Security Specialist (CKS) certification exam. Industry professionals in the field of information technology security will benefit from adding a specialization in Kubernetes security to their skill sets.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-6	
CIS126DL & CIS238DL	Linux Operating System and Linux System Administration		
CIS126RH & CIS238RH	Red Hat System Administration I and Red Hat System Administration II		
Permission of Instructor or Department			
CIS252	Introduction to Kubernetes Administration	4	
CIS255	Introduction to Kubernetes Security	3	
<b>Total Credits</b>		<b>7-13</b>	

## Linux Associate, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

Certificate of Completion: CCL 5046N

6-9 Credits

Program Contact

Mizan Rahman | 480-732-7109 | mizan.rahman@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Linux Associate program is designed to help prepare students for employment or to improve current professional skills. The program includes Linux operating system basics and management 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. This program helps prepare students for the Linux Professional Institute Certification (LPIC-1) and CompTIA Linux + certification exams. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and to help prepare

them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of “C” or better for all courses required within the program. Overall program minimum GPA = 2.00.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 Survey of Computer Information Systems as indicated in the required courses. Students with the requisite skills may have the CIS105 Survey of Computer Information Systems requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Complete one of the following:		0-3	
CIS105	Survey of Computer Information Systems		
Permission of program director			
CIS126DL	Linux Operating System	3	
CIS238DL	Linux System Administration	3	
<b>Total Credits</b>		<b>6-9</b>	

## Linux System Administration, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5052N**

**15-18 Credits**

**Program Contact**

Mizan Rahman | 480-732-7109 | mizan.rahman@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Linux System Administration program is designed to help prepare students for a variety of industry-recognized Linux certification exams as well as provide practical hands-on skills for the workplace. The program includes a core of Linux classes including Linux operating system basics, system administration, network

administration and network security. The courses in the program will help develop a student's knowledge and skill level in preparation for employment or to improve current professional skills. Students who complete this program may seek employment in a variety of environments. The program helps prepare students for the Red Hat Certified System Administrator (RHCSA), Red Hat Certified Engineer (RHCE), and CompTIA Linux+ certification exams. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of “C” or better for all courses required within the program. Overall program minimum GPA = 2.00.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 Survey of Computer Information Systems as indicated in the required courses. Students with the requisite skills may have the CIS105 Survey of Computer Information Systems requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-3	
CIS105	Survey of Computer Information Systems		
Permission of program director			
<b>Tracks</b>			
Select from one of the following two tracks:		15	
<i>Linux Track</i>			
CIS126DL	Linux Operating System		
CIS238DL	Linux System Administration		
CIS239DL	Linux Shell Scripting		
CIS240DL	Linux Network Administration		
CIS275DL	Linux Capstone		
<i>Red Hat Enterprise Linux Track</i>			
CIS126RH	Red Hat System Administration I		
CIS238RH	Red Hat System Administration II		
CIS239DL	Linux Shell Scripting		

CIS240RH	Red Hat System Administration III	_____
CIS275DL	Linux Capstone	_____
<b>Total Credits</b>		<b>15-18</b>

## Management, Associate in Applied Science



**BUSINESS,  
ENTREPRENEURIALISM,  
AND MANAGEMENT**

**Associate in Applied Science: AAS 3070**

**62-69 Credits**

**Program Contacts**

Barbara Gonzalez | 602-243-8044 | barbara.gonzalez@cg.edu

### Program Description

The Associate in Applied Science (AAS) 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. The Certificate of Completion (CCL) in Management is fully embedded in this AAS. The following Certificates of Completion (CCL) are also available based on chosen restricted electives: Human Resources Management, Project Management, Business Administration, Supervision and Management, and Organizational Leadership.

### Program Notes

Students must earn a grade of "C" or better in all courses in the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

### Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
ACC111	Accounting Principles I	3	_____
BPC110	Computer Usage and Applications	3	_____
or CIS105	Survey of Computer Information Systems		_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
GBS120	Workplace Communication Skills	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	_____

#### Restricted Electives

Students should select eighteen (18) credits from the following courses in consultation with a Department Advisor. Courses cannot be shared with Required Courses.

ACC110 & ACC112	Understanding And Using Accounting Systems and Accounting Principles II	_____
CIS114DE	Excel Spreadsheet	_____
CIS224	Project Management Microsoft Project for Windows	_____
GBS131	Business Calculations	_____
IBS101	Introduction to International Business	_____
MKT271	Principles of Marketing	_____
MGT+++	Any MGT Management course(s) (except courses used to satisfy Required Courses area)	_____
TQM230	Teamwork Dynamics	_____
TQM240	Project Management In Quality Organizations	_____

#### General Education

##### Core

##### First-Year Composition

ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____

##### Oral Communication

Select one of the following:		3	_____
COM100	Introduction to Human Communication	_____	_____
COM110	Interpersonal Communication	_____	_____
COM225	Public Speaking	_____	_____
COM230	Small Group Communication	_____	_____
<b>Critical Reading</b>		_____	_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking	_____	_____
Equivalent as indicated by assessment		_____	_____
<b>Mathematics</b>		_____	_____
Any approved general education course from the Mathematics <sup>MA</sup> area.		3-5	_____
<b>Humanities, Arts and Design</b>		_____	_____
Any approved general education course from the Humanities, Arts and Design <sup>HU</sup> area.		3	_____
<b>Social and Behavioral Sciences</b>		_____	_____
SBU200	Society and Business	3	_____
<b>Natural Sciences</b>		_____	_____
Any approved general education course in the Natural Sciences (Quantitative) <sup>SQ</sup> area or the Natural Sciences (General) <sup>SG</sup> area.		4	_____
<b>Total Credits</b>		<b>62-69</b>	_____

## Microsoft Desktop Associate, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5030N**

**3 Credits**

**Program Contact**

Ann Lopez | 480-726-4179 | ann.lopez@cgcc.edu

### Program Description

The Certificate of Completion (CCL) in Microsoft Desktop Associate program is designed to provide students with background knowledge and skills required for learning the specific tasks and industry recognized standards associated with how to effectively install and configure Windows operating systems. The course includes basic features of the Windows operating system, virtualization improvements, network connectivity, access to resources, monitor and maintain Windows clients and backup and recovery. It is designed to prepare students for the Microsoft 365 Certified: Modern Desktop Administrator Associate

certification exam. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCL) in a variety of specializations within the information technology field to deepen their knowledge and skills and to help prepare them for multiple industry certification exams. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

### Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Students are encouraged, but not required, to complete CIS105 Survey of Computer Information Systems, or CIS190 Introduction to Networking, or CNT140AB Introduction to Networks prior to beginning this CCL. Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 Survey of Computer Information Systems.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

### Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
MST150WT	Installing and Configuring Microsoft Windows 10	3	_____
<b>Total Credits</b>		<b>3</b>	_____

## Microsoft Office Professional, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5132**

**16-22 Credits**

**Program Contact**

Lana Short | 480-732-7191 | lana.short@cgcc.edu

### Program Description

The Certificate of Completion (CCL) in Microsoft Office Professional emphasizes training on word processing, spreadsheet, database, and presentation software for business purposes. This certificate provides students with the knowledge and skills requisite of various business settings. This certificate helps with initial preparation for the Microsoft examinations for certification as a Microsoft Office Specialist (MOS). This certificate embeds into the Associate in Applied Science (AAS) degree in

Information Technology and Certificate of Complete (CCL) in Microsoft Office Specialist.

## Program Notes

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites:** None

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-1	
BPC/ OASOR111AA	Computer Keyboarding I		
Permission of Program Director			
Select one of the following:		0-3	
CIS105	Survey of Computer Information Systems		
Permission of Program Director			
CIS113DE	Microsoft Word: Word Processing	3	
CIS114DE	Excel Spreadsheet	3	
CIS117DM	Microsoft Access: Database Management	3	
CIS118DB	Desktop Presentation: PowerPoint	3	
Select one of the following:		2-3	
BPC270	A+ Exam Prep: Operating System Configuration and Support		
CIS121AE & CIS122AE	Windows Operating System: Level I and Windows Operating System: Level II		
MST150++	Microsoft Windows		
Select one of the following:		2-3	

CIS124AA  
& CIS124BA

Project  
Management  
Software: Level I  
and Project  
Management  
Software: Level II

CIS224

Project  
Management  
Microsoft Project  
for Windows

**Total Credits**

**16-22**

## Microsoft Office Specialist, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5137**

**25-31 Credits**

**Program Contact**

Lana Short | 480-732-7191 | lana.short@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Microsoft Office Specialist emphasizes advanced training on word processing, spreadsheet, and database software for business purposes. This certificate builds upon the knowledge and skills gained by the CCL in Microsoft Office Professional for use in various business settings. This certificate helps prepare students for the Microsoft Office Specialist (MOS) certification examinations. This certificate embeds into the Associate in Applied Science (AAS) degree in Information Technology.

## Program Notes

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites:** None

Code	Title	Credits	Semester
<b>Required Courses</b>			
The following courses are required and included in Microsoft Office Professional CCL			
Select one of the following:		0-1	
BPC/ OASOR111AA	Computer Keyboarding I		
Permission of Program Director			
Select one of the following:		0-3	

CIS105	Survey of Computer Information Systems		
Permission of Program Director			
CIS113DE	Microsoft Word: Word Processing	3	
CIS114DE	Excel Spreadsheet	3	
CIS117DM	Microsoft Access: Database Management	3	
CIS118DB	Desktop Presentation: PowerPoint	3	
Select one of the following:		2-3	
BPC270	A+ Exam Prep: Operating System Configuration and Support		
CIS121AE & CIS122AE	Windows Operating System: Level I and Windows Operating System: Level II		
MST150++	Microsoft Windows		
Select one of the following:		2-3	
CIS124AA & CIS124BA	Project Management Software: Level I and Project Management Software: Level II		
CIS224	Project Management Microsoft Project for Windows		
The following courses are required in Microsoft Office Specialist CCL.			
CIS213DE	Advanced Microsoft Word: Word Processing	3	
CIS214DE	Advanced Excel Spreadsheet: Level II	3	
CIS217AM	Advanced Microsoft Access: Database Management	3	
<b>Total Credits</b>		<b>25-31</b>	

## Microsoft System Administration, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5031**

**18-21 Credits**

**Program Contact**

Scott Miller | 480-857-5536 | scott.miller@cgc.edu

### Program Description

The Certificate of Completion (CCL) in Microsoft System Administration program is designed to provide students with background knowledge and skills required for learning the specific tasks and industry recognized standards associated with computer networks and data communications. The program includes a core of Microsoft courses to develop professionals who implement, manage, and troubleshoot existing network and system environments based on current Microsoft operating systems including active directory, messaging services, file and print servers, and firewalls. The courses in the program are also designed to help prepare students for the Microsoft 365 Certified: Modern Desktop Administrator Associate and Microsoft Certified Solutions Associate (MCSA) - Windows Server 2016 certification exams. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCL) in a variety of specializations within the information technology field to deepen their knowledge and skills and to help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

### Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 Survey of Computer Information Systems as indicated in the required courses. Students with the requisite skills may have the CIS105 Survey of Computer Information Systems requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

### Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-3	



CIS105	Survey of Computer Information Systems		
OR may be waived by permission of the Program Director			
CIS121AH	Microsoft PowerShell/Command Line Operations	3	
MST150++	Any Microsoft Windows course	3	
MST155DC	Installation, Storage, and Compute with Windows Server	4	
MST157DC	Networking with Windows Server	4	
MST158DB	Installing and Configuring Windows Server	4	
<b>Total Credits</b>		<b>18-21</b>	

## Network and Systems Administration, Associate in Applied Science



### COMPUTER AND INFORMATION TECHNOLOGY

Associate in Applied Science: AAS 3189

61-74 Credits

#### Program Contact

Scott Miller | 480-726-4131 | scott.miller@cgc.edu  
(scott.miller@cgc.edu)

## Program Description

The Associate in Applied Science (AAS) in Network and Systems Administration program provides students with a solid, hands-on skill set of computer, networking, and internetworking systems technology principles and desktop support. Students gain an understanding of the interaction between microcomputer software and hardware, network and internetworking operating systems software and hardware, local area network administration and management, the use of troubleshooting techniques, troubleshooting hardware and software tools, as well as interpersonal/customer service skills. Students have the opportunity to specialize in specific information technology areas based on their interests and professional goals and leading to industry recognized certifications through an embedded Certificate of Completion (CCL) including, but not limited to, Desktop (Desktop Support, Computer System Configuration and Support, Computer System Configuration and Support, Network, Computer System Configuration and Support, Security, Computer System Configuration and Support, Linux), Cisco (Cisco Network CCNA, Cisco Network CCNP, Cisco Network CCNA Security), Linux (Red Hat Linux Engineer, Linux Associate, Red Hat Linux Administrator, Linux System Administration), Microsoft (Microsoft

System Administration, Microsoft Desktop Associate), and VMware (VMware Network Administrator, VMware Foundations, VMware System Administrator). Graduates may pursue employment in a variety of information technology environments and/or transfer to a university.

## Program Notes

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Students may receive credit for courses within the program based on current industry certifications.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

### Required Courses

Code	Title	Credits	Semester
<b>Required Courses</b>			
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	
BPC270	A+ Exam Prep: Operating System Configuration and Support	3	
CIS102DA	Customer User Support	3	
CIS105	Survey of Computer Information Systems	3	
CIS126DL	Linux Operating System	3	
or CIS126RH	Red Hat System Administration I		
Select one of the following:		3-4	
CIS190	Introduction to Networking		
CNT140AB	Introduction to Networks <sup>1</sup>		
FYE101	Introduction to College, Career and Personal Success	1-3	
or FYE103	Exploration of College, Career and Personal Success		
<b>Total Credits</b>		<b>19-22</b>	

<sup>1</sup> CNT140AB Introduction to Networks is required for students on the Cisco emphasis



## Specializations

### 12-24 Credits

Students must also select from one of the following areas of emphasis based on their career goals.

### Specialization 1: Cisco System Administration (CCNA) and Security

Code	Title	Credits	Semester
CNT150AB	Switching, Routing, and Wireless Essentials	4	_____
CNT160AB	Enterprise Networking, Security, and Automation	4	_____
CNT202	Cisco Secure Firewall Appliance Configuration	4	_____
or CNT205	Cisco Certified Network Associate Security		_____
<b>Total Credits</b>		<b>12</b>	_____

### Specialization 2: Cisco System Administration (CCNP)

Code	Title	Credits	Semester
CNT150AB	Switching, Routing, and Wireless Essentials	4	_____
CNT160AB	Enterprise Networking, Security, and Automation	4	_____
CNT240	Cisco Certified Network Professional: Enterprise Core	8	_____
or CNT240AA & CNT240AB	Cisco Certified Network Professional: Enterprise Core I and Cisco Certified Network Professional: Enterprise Core II		_____
CNT250	Cisco Certified Network Professional: Enterprise Advanced Routing and Services	8	_____
or CNT250AA & CNT250AB	Cisco Certified Network Professional: Enterprise Advanced Routing and Services I and Cisco Certified Network Professional: Enterprise Advanced Routing and Services II		_____
<b>Total Credits</b>		<b>24</b>	_____

### Specialization 3: Linux System Administration

Code	Title	Credits	Semester
CIS238DL	Linux System Administration	3	_____
CIS239DL	Linux Shell Scripting	3	_____
CIS240DL	Linux Network Administration	3	_____
CIS275DL	Linux Capstone	3	_____
<b>Total Credits</b>		<b>12</b>	_____

### Specialization 4: Red Hat Enterprise Linux Administration

Code	Title	Credits	Semester
CIS238RH	Red Hat System Administration II	3	_____
CIS239DL	Linux Shell Scripting	3	_____
CIS240RH	Red Hat System Administration III	3	_____
CIS271RH	Red Hat System Administration IV	3	_____
CIS275DL	Linux Capstone	3	_____
<b>Total Credits</b>		<b>15</b>	_____

### Specialization 5: Microsoft System Administration

Code	Title	Credits	Semester
CIS121AH	Microsoft PowerShell/Command Line Operations	3	_____
MST150	Any Microsoft Windows Operating System course	3	_____
MST155DC	Installation, Storage, and Compute with Windows Server	4	_____
MST157DC	Networking with Windows Server	4	_____
MST158DC	Identity Management with Windows Server 2016	4	_____
<b>Total Credits</b>		<b>18</b>	_____

### Specialization 6: VMware Network Administrator

Code	Title	Credits	Semester
CIS189	Virtualization and IT Solutions for Digital Businesses	3	_____
CIS197	VMware ESXi Server Enterprise	3	_____

CIS198	VMware vSphere: Optimize and Scale	3	_____
CIS200	VMware NSX: Install, Configure, Manage	3	_____
<b>Total Credits</b>		<b>12</b>	_____

## Restricted Electives

### 0-8 Credits

Students are to select enough Restricted Elective credits to meet a minimum of 60 credits not used to satisfy Required Courses or selected area of emphasis within the Required Courses. Consult with an Academic, Program, or Faculty Advisor to pick courses that align with your career goals.

### Cisco Electives

Code	Title	Credits	Semester
CNT140AB	Introduction to Networks <sup>1</sup>	4	_____
CNT150AB	Switching, Routing, and Wireless Essentials	4	_____
CNT160AB	Enterprise Networking, Security, and Automation	4	_____
CNT171	CCNA Exam Prep	1	_____
CNT202	Cisco Secure Firewall Appliance Configuration	4	_____
or CNT205	Cisco Certified Network Associate Security		_____
CNT206	Cisco Certified Network Associate Wireless	4	_____

<sup>1</sup> CNT140AB Introduction to Networks is required for students on the Cisco emphasis

### Linux Electives

Code	Title	Credits	Semester
CIS238DL	Linux System Administration	3	_____
CIS238RH	Red Hat System Administration II	3	_____
CIS239DL	Linux Shell Scripting	3	_____
CIS240DL	Linux Network Administration	3	_____
CIS240RH	Red Hat System Administration III	3	_____
CIS275DL	Linux Capstone	3	_____

### Microsoft Electives

Code	Title	Credits	Semester
MST	Any MST Microsoft Technology Course		_____
CIS121AB	Microsoft Command Line Operations	1	_____
CIS121AH	Microsoft PowerShell/Command Line Operations	3	_____

### Security Electives

Code	Title	Credits	Semester
CIS270	Essentials of Network and Information Security	3	_____
CIS271DB	Information Security Essentials	3	_____
CIS272DB	Information Security Principles	3	_____
ITS110	Information Security Fundamentals	3	_____

### VMware Electives

Code	Title	Credits	Semester
CIS189	Virtualization and IT Solutions for Digital Businesses	3	_____
CIS197	VMware ESXI Server Enterprise	3	_____
CIS198	VMware vSphere: Optimize and Scale	3	_____
CIS200	VMware NSX: Install, Configure, Manage	3	_____

### Other Information Technology Electives

Code	Title	Credits	Semester
BPC171	Recycling Used Computer Technology	1	_____
CIS111	Ethics in Information Technology	3	_____
CIS124AA	Project Management Software: Level I	1	_____

CIS124BA	Project Management Software: Level II	1	_____
CIS156	Python Programming: Level I	3	_____
CIS190	Introduction to Networking	3	_____
CIS224	Project Management Microsoft Project for Windows	3	_____
CIS240	Local Area Network Planning and Design	3	_____
CIS250	Management of Information Systems	3	_____
CIS266	Network Integration Capstone	4	_____
CIS290	Computer Information Systems Internship	1-3	_____
CIS296	Cooperative Education	1-4	_____
CIS298	Special Projects	1-3	_____
ITS120	Legal, Ethical and Regulatory Issues	3	_____

## General Education

### Core and Distribution

Code	Title	Credits	Semester
<b>Core</b>			
<i>First-Year Composition</i>			
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
Select one of the following:		3	_____
ENG102	First-Year Composition		_____
or ENG108	First-Year Composition for ESL		_____
ENG111	Technical and Professional Writing (does not count as an ENG Transfer option)		_____
<i>Oral Communication</i>			
Select one of the following:		3	_____
COM100	Introduction to Human Communication		_____
COM110	Interpersonal Communication		_____

COM225	Public Speaking (recommended for students transferring to Northern Arizona University)		_____
COM230	Small Group Communication		_____
<i>Critical Reading</i>			
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Or equivalent as indicated by assessment			_____
<i>Mathematics</i>			
Select one of the following:		3-6	_____
MAT140	College Mathematics		_____
MAT141	College Mathematics		_____
MAT142	College Mathematics		_____
MAT145	College Mathematics with Review		_____
MAT146	College Mathematics with Review		_____
Equivalent or higher level mathematics course in the Mathematical Applications (MA) area			_____
<b>Distribution</b>			
<i>Humanities, Arts and Design</i>			
Any approved general education course(s) from the Humanities, Arts and Design (HU) area		3	_____
<i>Social and Behavioral Sciences</i>			
Any approved general education course from the Social and Behavioral Sciences (SB) area		3	_____
<i>Natural Sciences</i>			
Any approved general education course from the Natural Sciences (SG) or (SQ) area		4	_____
<b>Total Credits</b>		<b>22-28</b>	_____

## Oracle Database Operations, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5183N****12 Credits****Program Contact**

Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Oracle Database Operations program provides training for students seeking professional positions in designing, creating, and maintaining databases. This program allows students to create PL/SQL application code that can be shared by multiple forms, reports, and data management tools. As an Oracle Academic Initiative institution, this program is designed to prepare students for industry-recognized certifications. Courses in the program also help prepare students wanting to pursue Oracle Application Developer Certified Associate and Oracle Database Administrator Certified Associate industry-certified examinations (Oracle Corporation OCA certifications). This certificate can embed into the Associate of Applied Science (AAS) degree in Information Technology.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience of foundational knowledge in word processing, spreadsheets, databases, presentation software, operating systems, and networking.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
CIS119DO	Introduction to Oracle: SQL	3	
CIS119DP	Oracle: Database Administration	3	
CIS154	Database Modeling and Design	3	
CIS164AB	Oracle: PL/SQL Programming	3	
<b>Total Credits</b>		<b>12</b>	

## Organizational Leadership, Certificate of Completion



## BUSINESS, ENTREPRENEURIALISM, AND MANAGEMENT

**Certificate of Completion: CCL 5731****18 Credits****Program Contact**

Jamie Goff | 480-726-4377 | jamie.goff@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Organizational Leadership is designed to prepare students with knowledge and skills needed in today's changing workplace. The program provides leadership and communication skills for planning, organizing, leading and controlling business situations. This program also emphasizes procedures for effective resource allocation. The CCL in Organizational Leadership is fully embedded in an Associate in Applied Science (AAS) in Organizational Management.

## Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
BPC110	Computer Usage and Applications	3	
or CIS105	Survey of Computer Information Systems		
GBS110	Human Relations in Business and Industry	3	
or MGT251	Human Relations in Business		
GBS120	Workplace Communication Skills	3	
GBS151	Introduction to Business	3	
MGT175	Business Organization and Management	3	
or TQM240	Project Management In Quality Organizations		
MGT101	Techniques of Supervision	3	
or MGT229	Management and Leadership I		
<b>Total Credits</b>		<b>18</b>	

# Organizational Management, Associate in Applied Science



## BUSINESS, ENTREPRENEURIALISM, AND MANAGEMENT

Associate in Applied Science: AAS 3727

61-68 Credits

Program Contact

Jamie Goff | 480-726-4377 | jamie.goff@cgc.edu

## Program Description

The Associate in Applied Science (AAS) in Organizational Management program is designed with a customized curriculum specific to the student's individual needs in addition to the knowledge and skills needed in today's changing workplace. The program provides leadership and communication skills and techniques for planning, organizing, leading and controlling business situations. This program also emphasizes procedures for effective resource allocation. A Certificate of Completion (CCL) in Organizational Leadership is fully embedded in this AAS.

## Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
<b>Required Courses</b>			
FYE101	Introduction to College, Career and Personal Success	1-3	
or FYE103	Exploration of College, Career and Personal Success		
Certificate of Completion in Organizational Leadership (5731) Requirements listed below.			
BPC110	Computer Usage and Applications	3	
or CIS105	Survey of Computer Information Systems		
GBS110	Human Relations in Business and Industry	3	
or MGT251	Human Relations in Business		
GBS120	Workplace Communication Skills	3	
GBS151	Introduction to Business	3	

MGT175	Business Organization and Management	3	
or TQM240	Project Management In Quality Organizations		
MGT101	Techniques of Supervision	3	
or MGT229	Management and Leadership I		
<b>Restricted Electives</b>			
Students must choose 20 industry/ job related course credits from any MCCCDC occupational program and/ or Academic Certificate.		20	
Industry/job related course credits must include a minimum of 9 credits with a common subject or theme. Program of study must be approved by the business department chair or designee.			
<b>General Education</b>			
<b>Core</b>			
<i>First-Year Composition</i>			
ENG101	First-Year Composition	3	
or ENG107	First-Year Composition for ESL		
ENG102	First-Year Composition	3	
or ENG108	First-Year Composition for ESL		
<i>Oral Communication</i>			
Any approved General Education course from the Oral Communication area		3	
<i>Critical Reading</i>			
Select one of the following:		0-3	
CRE101	College Critical Reading and Critical Thinking		
Or equivalent by assessment			
<i>Mathematics</i>			
Any approved general education course(s) in the Mathematics area		3-5	
<b>Distribution</b>			
<i>Humanities, Arts and Design</i>			
Any approved general education course(s) from the Humanities, Arts and Design area		3	
<i>Social and Behavioral Sciences</i>			
Any approved general education course from the Social and Behavioral Sciences (SB) area		3	
<i>Natural Sciences</i>			

Any approved general education course(s) in the Natural Sciences (Quantitative) (SQ) area or the Natural Sciences (General) (SG) area.

**Total Credits** **61-68**

## Programming and Systems Analysis Level I, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5048**

**24 Credits**

**Program Contact**

Prema Rayappa | 480-732-7230 | prema.rayappa@cg.edu

### Program Description

The Certificate of Completion (CCL) in Programming and Systems Analysis Level I provides an exploration of different computer language and technical skills. The CCL includes, but is not limited to the following: operating systems, local area networks, business communication, team roles, and dynamics. A Certificate of Completion (CCL) in Programming and Systems Analysis Level II, Certificate of Completion (CCL) in iOS App Development and an Associate in Applied Science (AAS) in Programming and Systems Analysis are also available.

### Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Consultation with an Academic Advisor is recommended for course selection.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

### Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
CIS105	Survey of Computer Information Systems	3	
Select one of the following:		3	
CIS119DO	Introduction to Oracle: SQL		
CIS276DA	MySQL Database		
CIS276DB	SQL Server Database		

Select one of the following: 3

CIS126DL	Linux Operating System		
CIS126RH	Red Hat System Administration I		
MST150++	Any Microsoft Windows course		
CIS133DA	Internet/Web Development Level I	3	
CIS150	Programming Fundamentals	3	
or CIS150AB	Object-Oriented Programming Fundamentals		
CIS166++	Any Web Scripting course(s)	3	
GBS151	Introduction to Business	3	

Select a programming language from below that best aligns with academic and professional goals in one of the following areas: 3

CIS156	Python Programming: Level I		
CIS159	Visual Basic Programming I		
CIS162++	Any C Programming: Level I course		
CIS163AA	Java Programming: Level I		
CIS165++	Any Mobile Application Development course		

**Total Credits** **24**

## Programming and Systems Analysis Level II, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5962**

**36-37 Credits**

**Program Contact**

Prema Rayappa | 480-732-7230 | prema.rayappa@cg.edu

### Program Description

The Certificate of Completion (CCL) in Programming and Systems Analysis Level II provides an in-depth exploration of different computer language and technical skills. This CCL includes, but is not limited to the

following: local area networks, team roles, and dynamics. A Certificate of Completion (CCL) in iOS App Development and an Associate in Applied Science (AAS) in Programming and Systems Analysis are available.

## Program Notes

Students must earn a grade of “C” or better for all courses required within the program. Overall program minimum GPA = 2.00.

Consultation with an Academic Advisor is recommended for course selection.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

### Program Prerequisites: None

Code	Title	Credits	Semester
<b>Required Courses</b>			
The following courses are required and included in CCL Programming and Systems Analysis Level I			
CIS105	Survey of Computer Information Systems	3	
Select one of the following:			
CIS119DO	Introduction to Oracle: SQL		
CIS276DA	MySQL Database		
CIS276DB	SQL Server Database		
Select one of the following:			
CIS126DL	Linux Operating System		
CIS126RH	Red Hat System Administration I		
MST150++	Any Microsoft Windows course		
CIS133DA	Internet/Web Development Level I	3	
CIS150	Programming Fundamentals	3	
or CIS150AB	Object-Oriented Programming Fundamentals		
Select one of the following:			
CIS156	Python Programming: Level I		
CIS159	Visual Basic Programming I		
CIS162++	Any C Programming: Level I course		

CIS163AA	Java Programming: Level I		
CIS165++	Any Mobile Application Development course		
CIS166++	Any Web Scripting course(s)	3	
GBS151	Introduction to Business	3	
The following courses are required for CCL Programming and Systems Level II			
Select one of the following:			
CIS190	Introduction to Networking	3-4	
CNT140AB	Introduction to Networks		
MST140	Microsoft Networking Essentials		
Select one of the following:			
CIS225	Business Systems Analysis and Design	3	
CIS225AB	Object-Oriented Analysis and Design		
CIS250	Management of Information Systems		
Select a programming language from below that best aligns with academic and professional goals in one of the following areas:			
CIS256	Python Programming Level II		
CIS259	Visual Basic Programming II		
CIS262++	Any C Programming: Level II course		
CIS263AA	Java Programming: Level II		
CIS265	Advanced iOS Application Development		
<b>Restricted Electives</b>			
Select one of the courses below that best aligns with academic and professional goals :			
Students may not choose courses they have taken from the Required Courses area			



CIS151	Computer Game Development - Level I	_____
CIS156	Python Programming: Level I	_____
CIS159	Visual Basic Programming I	_____
CIS162++	Any C Programming: Level I course	_____
CIS163AA	Java Programming: Level I	_____
CIS165++	Any Mobile Application Development course	_____
CIS224	Project Management Microsoft Project for Windows	_____
CIS251	Computer Game Development - Level II	_____
CIS256	Python Programming Level II	_____
CIS259	Visual Basic Programming II	_____
CIS262++	Any C Programming: Level II course	_____
CIS263AA	Java Programming: Level II	_____
CIS265	Advanced iOS Application Development	_____
CIS267	Pega System Architect Essentials	_____
GBS211	Legal, Ethical and Regulatory Issues of the Internet Studies	_____

Total Credits

36-38

## Programming and Systems Analysis, Associate in Applied Science



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

Associate in Applied Science: AAS 3844

### 62-71 Credits

#### Program Contact

Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

## Program Description

The Associate in Applied Science (AAS) in Programming and Systems Analysis program provides an in-depth exploration of different computer language and technical skills. The AAS includes, but is not limited to the following: operating systems, local area networks, business communication, team roles, and dynamics. Certificate of Completions (CCLs) in Programming and Systems Analysis Level I and Level II and iOS App Development are also available.

## Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Consultation with an Academic Advisor is recommended for course selection.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

#### Program Prerequisites: None

Code	Title	Credits	Semester
<b>Required Courses</b>			
CIS105	Survey of Computer Information Systems	3	_____
GBS151	Introduction to Business	3	_____
Select one of the following:		3	_____
CIS126DL	Linux Operating System		_____
CIS126RH	Red Hat System Administration I		_____
MST150++	Any Microsoft Windows course		_____
CIS133DA	Internet/Web Development Level I	3	_____
Select one of the following:		3	_____
CIS150	Programming Fundamentals		_____
CIS150AB	Object-Oriented Programming Fundamentals <sup>1</sup>		_____
CIS166++	Any Web Scripting course(s)	3	_____
Select one of the following:		3-4	_____
CIS190	Introduction to Networking		_____

CNT140AB	Introduction to Networks	_____
MST140	Microsoft Networking Essentials	_____
Select one of the following:		3 _____
CIS225	Business Systems Analysis and Design	_____
CIS225AB	Object-Oriented Analysis and Design	_____
CIS250	Management of Information Systems	_____
Select one of the following:		3 _____
CIS119DO	Introduction to Oracle: SQL	_____
CIS276DA	MySQL Database	_____
CIS276DB	SQL Server Database	_____
FYE101	Introduction to College, Career and Personal Success	1-3 _____
or FYE103	Exploration of College, Career and Personal Success	_____
Select a programming language from below that best aligns with academic and professional goals (2 courses for a total of 6 credits) in one of the following areas:		6 _____
CIS156 & CIS256	Python Programming: Level I and Python Programming Level II	_____
CIS159 & CIS259	Visual Basic Programming I and Visual Basic Programming II	_____
CIS162++	Any C Programming: Level I course	_____
& CIS262++	Any C Programming: Level II course	_____
CIS163AA & CIS263AA	Java Programming: Level I and Java Programming: Level II	_____
CIS265	Advanced iOS Application Development	_____

& CIS165++ Any Mobile Application Development course		_____
<b>Restricted Electives</b>		_____
Students may not use courses from the Required Courses Area.		_____
Select two of the following:		6 _____
CIS224	Project Management Microsoft Project for Windows	_____
CIS151	Computer Game Development - Level I	_____
CIS156	Python Programming: Level I	_____
CIS159	Visual Basic Programming I	_____
CIS162++	Any C Programming: Level I course	_____
CIS163AA	Java Programming: Level I	_____
CIS165++	Any Mobile Application Development course	_____
CIS251	Computer Game Development - Level II	_____
CIS256	Python Programming Level II	_____
CIS259	Visual Basic Programming II	_____
CIS262++	Any C Programming: Level II course	_____
CIS263AA	Java Programming: Level II	_____
CIS265	Advanced iOS Application Development	_____
GBS211	Legal, Ethical and Regulatory Issues of the Internet Studies	_____
<b>General Electives</b>		_____
<b>Core</b>		_____
<i>First-Year Composition</i>		_____
ENG101	First-Year Composition	3 _____
or ENG107	First-Year Composition for ESL	_____
ENG102	First-Year Composition	3 _____

or ENG108	First-Year Composition for ESL	_____
<b>Oral Communication</b>		
Any approved General Education course from the Oral Communication area	3	_____
<b>Critical Reading</b>		
Select one of the following:	0-3	_____
CRE101	College Critical Reading and Critical Thinking	_____
Or equivalent as indicated by assessment		_____
<b>Mathematics</b>		
Select one of the following:	3-6	_____
MAT150	College Algebra/ Functions	_____
MAT151	College Algebra/ Functions	_____
MAT152	College Algebra/ Functions	_____
MAT155	College Algebra/ Functions with Review	_____
MAT156	College Algebra/ Functions with Review	_____
<b>Distribution</b>		
<b>Humanities, Arts and Design</b>		
Any approved general education course(s) from the Humanities, Arts and Design (HU) area	3	_____
<b>Social and Behavioral Sciences</b>		
Select one of the following:	3	_____
ECN211	Macroeconomic Principles	_____
ECN212	Microeconomic Principles	_____
SBU200	Society and Business	_____
<b>Natural Sciences</b>		
Any approved general education course(s) in the Natural Sciences (Quantitative) (SQ) area or the Natural Sciences (General) (SG) area.	4	_____
<b>Total Credits</b>	<b>62-71</b>	_____

<sup>1</sup> Students interested in pursuing an iOS Certificate of Completion (CCL) are recommended to take CIS150AB Object-Oriented Programming Fundamentals

## Python Applications, Certificate of Completion



### COMPUTER AND INFORMATION TECHNOLOGY

**Certificate of Completion: CCL 5340N**

**12-22 Credits**

**Program Contact**

Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Python Applications is designed to provide students with a set of skills necessary to successfully perform Python related programming projects. The courses consist of both practical knowledge and hands-on experience with the Python language and the programming techniques used in the industry. Through the elective courses, students will be able to apply the knowledge obtained to specific areas of interest using Python.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Required Courses and Restricted Electives must be taken within five (5) years prior to completion of the program to be applied toward this award.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-3	_____
CIS105	Survey of Computer Information Systems		_____
Permission of Program Director			
Select one of the following:		0-3	_____
CIS150AB	Object-Oriented Programming Fundamentals		_____
Permission of Program Director			
CIS119DO	Introduction to Oracle: SQL	3	_____
or CIS276DA	MySQL Database		_____
or CIS276DB	SQL Server Database		_____
CIS156	Python Programming: Level I	3	_____

CIS256	Python Programming Level II	3	_____
<b>Restricted Electives</b>			
Select one of the following:		3-7	_____
<i>Specialization 1: Cybersecurity and Networking</i>			
CNT140AB	Introduction to Networks		_____
CIS256CN	Python for Cybersecurity and Networking		_____
<i>Specialization 2: Data Analytics</i>			
CIS256DA	Python for Data Analysis		_____
<b>Total Credits</b>		<b>12-22</b>	_____

## Red Hat Linux Administrator, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5049N**

**6-9 Credits**

**Program Contact**

Mizan Rahman | 480-732-7109 | mizan.rahman@cg.cgc.edu

### Program Description

The Certificate of Completion (CCL) in Red Hat Linux Administrator program is designed to help prepare students for employment or to improve current professional skills. The program includes Red Hat Enterprise Linux system basics and management including sophisticated manipulation of file structures, backup systems, troubleshooting, user account management, hard disk maintenance and configuration, process monitoring and prioritizing, and system resource control. This program helps prepare students for the Red Hat Certified System Administrator (RHCSA) certification exam. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

### Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 Survey of Computer Information Systems as indicated in the required courses. Students with the requisite

skills may have the CIS105 Survey of Computer Information Systems requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-3	_____
CIS105	Survey of Computer Information Systems		_____
Permission of Program Director			
CIS126RH	Red Hat System Administration I	3	_____
CIS238RH	Red Hat System Administration II	3	_____
<b>Total Credits</b>		<b>6-9</b>	_____

## Red Hat Linux Engineer, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5050N**

**9-12 Credits**

**Program Contact**

Mizan Rahman | 480-732-7109 | mizan.rahman@cg.cgc.edu

### Program Description

The Certificate of Completion (CCL) in Red Hat Linux Engineer program is designed to help prepare students for employment or to improve current professional skills. The program includes in depth Red Hat Enterprise Linux system networking including integrating Linux servers and workstations into a network environment with multi-platform network operating systems with a variety of open-standard and proprietary protocols. This program helps prepare students for the Red Hat Certified System Administrator (RHCSA) and Red Hat Certified Engineer (RHCE) certification exams. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCL) in a variety of specializations within the information technology field to deepen their knowledge and skills and help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

### Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 Survey of Computer Information Systems as indicated in the required courses. Students with the requisite skills may have the CIS105 Survey of Computer Information Systems requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-3	
CIS105	Survey of Computer Information Systems		
Permission of Program Director			
CIS126RH	Red Hat System Administration I	3	
CIS238RH	Red Hat System Administration II	3	
CIS240RH	Red Hat System Administration III	3	
<b>Total Credits</b>		<b>9-12</b>	

## Retail Management, Certificate of Completion



**BUSINESS,  
ENTREPRENEURIALISM,  
AND MANAGEMENT**

**Certificate of Completion: CCL 5286**

**24 Credits**

**Program Contact**

Jamie Goff | jamie.goff@cg.edu

## Program 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

Students must earn a grade of "C" or better required for all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
ACC111	Accounting Principles I	3	
or ACC211	Financial Accounting		
BPC110	Computer Usage and Applications	3	
or CIS105	Survey of Computer Information Systems		
COM100	Introduction to Human Communication	3	
MGT101	Techniques of Supervision	3	
or MGT229	Management and Leadership I		
MGT251	Human Relations in Business	3	
MGT180	Retail Management	3	
MGT276	Human Resources Management	3	
MKT271	Principles of Marketing	3	
<b>Total Credits</b>		<b>24</b>	

## Securities Industry Essentials, Certificate of Completion



**BUSINESS,  
ENTREPRENEURIALISM,  
AND MANAGEMENT**

**Certificate of Completion: CCL 5907**

**16 Credits**

**Program Contacts**

Ann Lopez | ann.lopez@cg.edu

## Program Description

The Certificate of Completion (CCL) in Securities Industry Essentials builds the industry knowledge and skills for individuals to prepare for careers in Financial Services. This CCL will introduce students new to or interested in financial services to the fundamental concepts of capital markets, types of products and their risks, trading, customer accounts, prohibited activities, and regulatory agencies and their functions. Students with the requisite experience in the field who complete this CCL can pursue employment in a variety of security industry jobs. This

CCL also helps to prepare students for the Financial Industry Regulatory Authority (FINRA) Securities Industry Essentials (SIE). A Certificate of Completion (CCL) and Associate in Applied Science (AAS) in Banking and Finance are also available.

## Program Notes

Students must earn a grade of "C" or better for all courses in the program. Overall program minimum GPA = 2.00.

This Certificate of Completion (CCL) is intended for current or prospective securities industry professionals who are interested in expanding their knowledge in the area of financial securities to enhance their employment opportunities.

++ indicates any suffixed course may be selected.

## Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
<b>Required Courses</b>			
GBS120	Workplace Communication Skills	3	
GBS151	Introduction to Business	3	
GBS261	Investments I	3	
GBS261LL	Securities Industry Essentials (SIE) Exam Prep	1	
MGT126	Customer Service Skills and Strategies	3	
MKT267	Principles of Sales <sup>1</sup>	3	
or MKT271	Principles of Marketing		
<b>Total Credits</b>		<b>16</b>	

<sup>1</sup> Recommend MKT267 Principles of Sales if career goal in the field of finance is sales

## Security Industry Essentials: Pre-licensure, Certificate of Completion



**BUSINESS,  
ENTREPRENEURIALISM,  
AND MANAGEMENT**

Certificate of Completion: CCL 5931N

4 Credits

Program Contacts

Ann Lopez | ann.lopez@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Security Industry Essentials: Pre-licensure is designed to prepare students for the Financial Industry Regulatory Authority (FINRA) Securities Industry Essentials (SIE) Examination required for entry-level positions in the security industry.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses in the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
<b>Required Courses</b>			
GBS261	Investments I	3	
GBS261LL	Securities Industry Essentials (SIE) Exam Prep	1	
<b>Total Credits</b>		<b>4</b>	

## Small Business Management Level I, Certificate of Completion



**BUSINESS,  
ENTREPRENEURIALISM,  
AND MANAGEMENT**

Certificate of Completion: CCL 5153N

10-12 Credits

Program Contacts

Jamie Goff | 480-726-4377 | jamie.goff@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Small Business Management Level I program is designed to meet the needs of individuals who wish to own and/or manage a small business. Prepares students to acquire the skills, tools and knowledge necessary for successful start-up and operations of a business.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses in the program. Overall program minimum GPA = 2.00.

+ indicates course has prerequisites and/or corequisites

## Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
<b>Required Courses</b>			
EPS195	Business Start-Up and Planning	2-3	
or SBS216	Planning for a Small Business		
or MGT253	Owning and Operating a Small Business		
SBS200	Small Business Operations	2	
SBS202 & SBS203	Small Business Bookkeeping And Tax Preparation and Financing And Cash Management For A Small Business	2	
or SBS230	Financial and Tax Management for Small Business		
SBS204	Small Business Marketing And Advertising	2-3	
or SBS220	Internet Marketing For Small Business		
or MKT271	Principles of Marketing		
SBS213	Hiring and Managing Employees	1	
SBS214	Small Business Customer Relations	1	
<b>Total Credits</b>		<b>10-12</b>	

## Small Business Management Level II, Certificate of Completion



**BUSINESS,  
ENTREPRENEURIALISM,  
AND MANAGEMENT**

**Certificate of Completion: CCL 5978**

**16-18 Credits**

**Program Contacts**

Jamie Goff | 480-726-4377 | jamie.goff@cg.edu

## Program Description

The Certificate of Completion (CCL) in Small Business Management Level II program is designed to focus on aspects critical to a specific individual's small business. Prepares students to acquire additional skills, tools and knowledge necessary for successful start-up and operations of a business. A Certificate of Completion (CCL) in Small Business Management Level I is also available and fully embedded in this program.

## Program Notes

Students must earn a grade of "C" or better for all courses in the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
EPS195	Business Start-Up and Planning	2-3	
or SBS216	Planning for a Small Business		
or MGT253	Owning and Operating a Small Business		
SBS200	Small Business Operations	2	
SBS202 & SBS203	Small Business Bookkeeping And Tax Preparation and Financing And Cash Management For A Small Business	2	
or SBS230	Financial and Tax Management for Small Business		
SBS204	Small Business Marketing And Advertising	2-3	
or SBS220	Internet Marketing For Small Business		
or MKT271	Principles of Marketing		
SBS213	Hiring and Managing Employees	1	
SBS214	Small Business Customer Relations	1	
<b>Restricted Electives</b>			
Choose 6 credits from the restricted electives below. Courses cannot be shared with Required Courses.		6	
EPS150	Introduction to Entrepreneurship		
EPS195	Business Start-Up and Planning		
MGT253	Owning and Operating a Small Business		
MKT271	Principles of Marketing		
SBS202	Small Business Bookkeeping And Tax Preparation		



SBS203	Financing And Cash Management For A Small Business	_____
SBS204	Small Business Marketing And Advertising	_____
SBS216	Planning for a Small Business	_____
SBS217	Starting/ Managing A Home Business	_____
SBS220	Internet Marketing For Small Business	_____
SBS221	Social Media Marketing for Small Business	_____
SBS230	Financial and Tax Management for Small Business	_____
<b>Total Credits</b>		<b>16-18</b>

## Small Business Start-Up, Certificate of Completion



**BUSINESS,  
ENTREPRENEURIALISM,  
AND MANAGEMENT**

**Certificate of Completion: CCL 5706N**

**12 Credits**

**Program Contacts**

Jamie Goff | 480-726-4377 | jamie.goff@cgcc.edu

### Program 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

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses in the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

### Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
MGT253	Owning and Operating a Small Business	3	_____
MKT271	Principles of Marketing	3	_____
SBS213	Hiring and Managing Employees	1	_____
SBS214	Small Business Customer Relations	1	_____
SBS220	Internet Marketing For Small Business	2	_____
SBS230	Financial and Tax Management for Small Business	2	_____
<b>Total Credits</b>		<b>12</b>	_____

## Social Media Marketing, Certificate of Completion



**BUSINESS,  
ENTREPRENEURIALISM,  
AND MANAGEMENT**

**Certificate of Completion: CCL 5830**

**17-18 Credits**

**Program Contacts**

Nicki Lynn | 480-732-7394 | nicki.lynn@cgcc.edu

### Program Description

The Certificate of Completion (CCL) in Social Media Marketing is designed to provide useful skills important in a variety of strategic marketing areas, e.g., social media, digital communications, integrated marketing, media relations, and brand management. An Associate in Applied Science (AAS) in Marketing and Sales is also available.

### Program Notes

Students must earn a grade of "C" or better for all courses in the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

### Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
CIS103	Introduction to Social Media	3	_____
GBS120	Workplace Communication Skills	3	_____



MKT110	Marketing and Social Networking	3	_____
MKT111	Applied Marketing and Social Networking	3	_____
MKT271	Principles of Marketing	3	_____
<b>Restricted Electives</b>			
Select one of the following:		2-3	_____
MKT101	Introduction to Public Relations		_____
MKT280AB	Marketing Internship		_____
MKT298AB	Special Projects		_____
<b>Total Credits</b>		<b>17-18</b>	_____

## VMware Network Administrator, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5032**

**24-28 Credits**

**Program Contact**

Mizan Rahman | 480-732-7109 | mizan.rahman@cg.edu

## Program Description

The Certificate of Completion (CCL) in VMware Network Administrator program is designed to help students prepare for VMware industry certifications and work in a variety of information technology environments including software-defined data centers. Courses will build the knowledge and skills for students to design, install, configure, troubleshoot, and manage virtual environments and help prepare students for the CompTIA A+, CompTIA Linux +, CompTIA Network +; VMware VCA, VCP, and/or VCAP-NV Deploy certification exams. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and to help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

## Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 Survey of Computer Information Systems as indicated in the required courses. Students with the requisite skills may have the CIS105 Survey of Computer Information Systems requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	_____
BPC270	A+ Exam Prep: Operating System Configuration and Support	3	_____
Select one of the following:		0-3	_____
CIS105	Survey of Computer Information Systems		_____
<b>Permission of Program Director</b>			
CIS126DL	Linux Operating System	3	_____
or CIS126RH	Red Hat System Administration I		_____
CIS189	Virtualization and IT Solutions for Digital Businesses	3	_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
CIS197	VMware ESXI Server Enterprise	3	_____
CIS198	VMware vSphere: Optimize and Scale	3	_____
CIS200	VMware NSX: Install, Configure, Manage	3	_____
<b>Total Credits</b>		<b>24-28</b>	_____

## Web App Development, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5835N**

**9-12 Credits**

**Program Contact**

Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

**Program Description**

The Certificate of Completion (CCL) in Web App Development prepares students for employment in entry-level coding, programming, and software development positions with an emphasis on web apps. Courses in this certificate can apply toward the Associate in Applied Science (AAS) in Mobile App Development and Certificates of Completion (CCL) in Mobile App Development and Cross-Platform App Development.

**Program Notes**

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses within the program. Overall program minimum GPA = 2.00.

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

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

**Program Requirements****Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-3	
CIS105	Survey of Computer Information Systems		
Permission of Program Director, Department or Division Chair			
CIS133DA	Internet/Web Development Level I	3	
CIS166AA	Introduction to Javascript	3	
CIS233DA	Internet/Web Development Level II	3	
<b>Total Credits</b>		<b>9-12</b>	

**Web Design, Certificate of Completion**

**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5986**

**38-43 Credits**

**Program Contact**

Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

**Program Description**

The Certificate of Completion (CCL) in Web Design provides students with comprehensive and focused studies in web design, including advanced image manipulation, vector graphics, page layout, video editing and design principles. An Associate in Applied Science (AAS) in Web Design/ Development and CCL's in Web Foundations and Web Development are also available.

**Program Notes**

Students must earn a grade of "C" or better in each course in the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

**Program Requirements****Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
The following courses are required for the CCL in Web Foundations:			
CIS105	Survey of Computer Information Systems	3	
CIS120DF	Introduction to Adobe Photoshop	3	
CIS133DA	Internet/Web Development Level I	3	
CIS136	Content Management Systems: WordPress	3	
CIS166AA	Introduction to Javascript	3	
CIS233DA	Internet/Web Development Level II	3	
CIS235	E-Commerce	3	
The following courses are required for the CCL in Web Design :			
Select one of the following:		3-4	
AVC183	Digital Graphic Arts I		
AVC100 & AVC181	Introduction to Digital Arts and Graphic Design I		
ART112	Two-Dimensional Design		

CIS120DA	Introduction to Adobe Premiere	3	_____
or CIS120DK	Introduction to Digital Video Editing		_____
CIS120DB	Introduction to Adobe Illustrator	3	_____
CIS120DC	Introduction to Adobe Animate	3	_____
or CIS220DF	Adobe Photoshop Level II: Advanced Digital Imaging		_____
CIS138DA	Desktop Design and Publishing Using Adobe InDesign	3	_____

**Restricted Electives**

Select two to six (2-6) credits in consultation with your program advisor to further develop skills in the areas of Adobe, Art, Social Media, Marketing, Business, and/or Multimedia.	2-6	_____
---	-----	-------

**Total Credits****38-43**

## Web Design/Development, Associate in Applied Science



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Associate in Applied Science : AAS 3185****61-74 Credits****Program Contact**

Prema Rayappa | 480-732-7230 | prema.rayappa@cg.edu

### Program Description

The Associate in Applied Science (AAS) in Web Design/Development prepares students to design, create, and administer interactive and professional web sites. Courses focus on "hands-on" experience with web publishing, web graphics preparation, scripting, content management systems and e-commerce solutions. The program provides students a pathway to either develop advanced skills in Web Design or Web Development. Certificates of Completion (CCLs) in Foundational Web Technologies, Web Design and Web Development are also available.

### Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

### Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
In addition to the required course work students must consult with a program advisor to select one of the specializations within the Restricted Electives area.			
CIS105	Survey of Computer Information Systems	3	_____
CIS120DF	Introduction to Adobe Photoshop	3	_____
CIS133DA	Internet/Web Development Level I	3	_____
CIS136	Content Management Systems: WordPress	3	_____
CIS166AA	Introduction to Javascript	3	_____
CIS233DA	Internet/Web Development Level II	3	_____
CIS235	E-Commerce	3	_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____

**Restricted Electives**

Complete all courses in the specialization below that best aligns with your academic and professional goals. Consult with an academic, faculty, or program advisor.	17-22	_____
---	-------	-------

Specialization I: Web Design (17-22 Credits) (p. 176)

Specialization II: Web Development (18 Credits) (p. 176)

**General Education****Core***First-Year Composition*

ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____

*Oral Communication*

Any approved General Education course from the Oral Communication area	3	_____
--	---	-------

<b>Critical Reading</b>		_____
Select one of the following:	0-3	_____
CRE101	College Critical Reading and Critical Thinking	_____
Or equivalent as indicated by assessment		_____
<b>Mathematics</b>		_____
Any approved general education course(s) in the Mathematics area <sup>1</sup>	3-6	_____
<b>College Mathematics:</b>		_____
MAT140	College Mathematics	_____
MAT141	College Mathematics	_____
MAT142	College Mathematics	_____
MAT145	College Mathematics with Review	_____
MAT146	College Mathematics with Review	_____
<b>College Algebra/Functions:</b>		_____
MAT150	College Algebra/Functions	_____
MAT151	College Algebra/Functions	_____
MAT152	College Algebra/Functions	_____
MAT155	College Algebra/Functions with Review	_____
MAT156	College Algebra/Functions with Review	_____
<b>Higher Math Course:</b>		_____
Higher math course with the Mathematical Applications (MA) general education designation recommended for students intending to transfer to a four-year institution.		_____
<b>Distribution</b>		_____
<b>Humanities, Arts and Design</b>		_____
Any approved general education course(s) from the Humanities, Arts and Design area	3	_____
<b>Social and Behavioral Sciences</b>		_____
Any approved general education course(s) in the Social and Behavioral Sciences area <sup>2</sup>	3	_____
<b>Natural Sciences</b>		_____

Any approved general education course(s) in the Natural Sciences area	4	_____
<b>Total Credits</b>	<b>61-74</b>	_____

<sup>1</sup> MAT187 Precalculus is recommended for students intending to transfer to ASU (Tempe campus) to earn a BS in Graphic Information Technology.

<sup>2</sup> PSY101 Introduction to Psychology is recommended for students intending to transfer to ASU (Polytechnic campus) to earn a BS in Technical Communication (User Experience) or to ASU (Tempe campus) to earn a BS in Graphic Information Technology

## Specializations

### Specialization I: Web Design

Code	Title	Credits	Semester
Select one of the following:			
AVC183	Digital Graphic Arts I	3-4	_____
AVC181 & AVC100	Graphic Design I and Introduction to Digital Arts		_____
ART112	Two-Dimensional Design		_____
CIS120DA	Introduction to Adobe Premiere	3	_____
or CIS120DK	Introduction to Digital Video Editing		_____
CIS120DB	Introduction to Adobe Illustrator	3	_____
CIS120DC	Introduction to Adobe Animate	3	_____
or CIS220DF	Adobe Photoshop Level II: Advanced Digital Imaging		_____
CIS138DA	Desktop Design and Publishing Using Adobe InDesign	3	_____
Students must select 2 to 6 credits in consultation with your program advisor to further develop skills in the areas of Adobe, Art, Social Media, Marketing, Business and/or Multimedia.		2-6	_____
<b>Total Credits</b>		<b>17-22</b>	_____

### Specialization II: Web Development

Code	Title	Credits	Semester
CIS119DO	Introduction to Oracle: SQL (or CIS276++ Any Database Management Systems course)	3	_____
CIS126DL	Linux Operating System	3	_____
or CIS126RH	Red Hat System Administration I		_____

CIS166AE	Web Scripting with PHP: Hypertext Preprocessor (PHP)	3	_____
Programming Language: Select two of the following:		6	_____
CIS150AB	Object-Oriented Programming Fundamentals		_____
CIS156	Python Programming: Level I		_____
CIS159	Visual Basic Programming I		_____
CIS162++	Any C Programming course		_____
CIS163AA	Java Programming: Level I		_____
CIS165++	Any Mobile Application Development course		_____
CIS256	Python Programming Level II		_____
CIS262AD	C# Level II		_____
CIS263AA	Java Programming: Level II		_____
CIS265++	Advanced iOS Application Development		_____
Students must select 3 credits of any course with a CIS prefix in consultation with their program advisor to further develop skills in the areas of Databases, Information Systems, Programming, and/or Operating Systems.		3	_____
<b>Total Credits</b>		<b>18</b>	_____

## Web Development, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5988**

**39 Credits**

**Program Contact**

Prema Rayappa | 480-732-7230 | prema.rayappa@cgic.edu

## Program Description

The Certificate of Completion (CCL) in Web Development prepares students to create and administer interactive and professional websites. The program provides students with knowledge and skills in developing dynamic websites, client and server side programs, database structures, and object-oriented design. A Certificate of Completion (CCL) in Web Design and an Associate in Applied Science (AAS) in Web Design/Development are also available.

## Program Notes

Students must earn a grade of "C" or better in each course in the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
The following courses are required and included in the CCL in Web Foundations:			
CIS105	Survey of Computer Information Systems	3	_____
CIS120DF	Introduction to Adobe Photoshop	3	_____
CIS133DA	Internet/Web Development Level I	3	_____
CIS136	Content Management Systems: WordPress	3	_____
CIS166AA	Introduction to Javascript	3	_____
CIS233DA	Internet/Web Development Level II	3	_____
CIS235	E-Commerce	3	_____
The following courses are required for the CCL in Web Development:			
CIS166AE	Web Scripting with PHP: Hypertext Preprocessor (PHP)	3	_____
Select one of the following:		3	_____
CIS119DO	Introduction to Oracle: SQL		_____

CIS276++	Any Database Management Systems course	
CIS126DL	Linux Operating System	3
or CIS126RH	Red Hat System Administration I	
<b>Programming Language</b>		
Select two of the following:		6
CIS150AB	Object-Oriented Programming Fundamentals	
CIS156	Python Programming: Level I	
CIS159	Visual Basic Programming I	
CIS162++	Any C Programming course	
CIS163AA	Java Programming: Level I	
CIS165++	Any Mobile Application Development course	
CIS256	Python Programming Level II	
CIS262AD	C# Level II	
CIS263AA	Java Programming: Level II	
CIS265++	Any Advanced Application Development course	
<b>Restricted Electives</b>		
Students should select any course with a CIS prefix in consultation with their program advisor to further develop skills in the areas of Databases, Information Systems, Programming, and/or Operating Systems.		3
<b>Total Credits</b>		<b>39</b>

## Web Foundations, Certificate of Completion



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

**Certificate of Completion: CCL 5984**  
**21 Credits**

### Program Contact

Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Web Foundations introduces students to designing and developing web pages. This CCL prepares students for entry level web positions. Certificates of Completion (CCL) in Web Design and Web Development are available. An Associate in Applied Science (AAS) degree in Web Design/Development is also available.

## Program Notes

Students must earn a grade of "C" or better in each course in the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
CIS105	Survey of Computer Information Systems	3	
CIS120DF	Introduction to Adobe Photoshop	3	
CIS133DA	Internet/Web Development Level I	3	
CIS136	Content Management Systems: WordPress	3	
CIS166AA	Introduction to Javascript	3	
CIS233DA	Internet/Web Development Level II	3	
CIS235	E-Commerce	3	
<b>Total Credits</b>		<b>21</b>	

## Communication & Fine Arts

Micaela Church, Division Chair  
480-732-7136 | micaela.church@cgc.edu

### Courses

Prefix	Course
ARH	Art Humanities
ART	Art
AVC	Art and Visual Communication
COM	Communication

DAH	Dance Humanities
DAN	Dance
MCO	Mass Communications
MHL	Music: History/Literature
MTC	Music: Theory/Composition
MUC	Music: Commercial/Business
MUE	Music: Education
MUP	Music: Performance
STO	Storytelling
THE	Theatre
THF	Theatre and Film
THP	Theater Performance/Production

## Career Programs

Illustration  
Illustration and Sequential Art  
Photography  
Sequential Art

## Associate in Applied Science (AAS)

- Illustration and Sequential Art, Associate in Applied Science (p. 201)
- Photography, Associate in Applied Science (p. 202)

## Certificate Of Completion (CCL)

- Illustration, Certificate of Completion (p. 200)
- Sequential Art, Certificate of Completion (p. 205)

## Art

**Ceschiat, Michael**  
*Ceramics*

- B.F.A., Columbus College of Art and Design
- M.F.A., University of New Mexico

**Mendoza, Louis**  
*Studio Art*

- B.F.A, M.F.A., Arizona State University

**Sullivan, Ryan (Buzzy)**  
*Photography*

- B.F.A., Oregon College
- M.F.A., Arizona State University

## Art History

**Najafi, Roja**

- B.Tech, Tehran University of Art
- M.A., Brooklyn College
- Ph.D., University of Texas at Austin

## Communication

**Braaten, Anthony**

- B.S., M.Ed., Northern Arizona University

**Bryant, Michael**

- M.S E.D Northern Arizona University

**Sanchez, Aaron**

- Ph.D., Arizona State University

**Sandoval, Vanessa**

- B.A., University of Arizona
- M.Ed., M.A., Northern Arizona University

**Williams, Jade**

- Ph.D., Arizona State University

**Zamila, Mariam**

- B.A., M.A., Texas State University

## Dance

**Church, Micaela**  
*Division Chair*

- B.A., B.M., Alma College
- M.F.A., Arizona State University

## Music Performance

**Johnston, Joseph**

- B.A., M.A., Northern Arizona University

**Kalo, Michele**

- M.A., Arizona State University

**Roberts, Adam**

- B.M., Northern Arizona University
- M.M., New England Conservatory of Music

## Theatre Performance/Production

**Reynolds, Shalyn**

- M.A., Arizona State University

## Art Humanities (ARH)

**ARH100 / Introduction to Art**

**3 Credits / 3.0 Periods for Lecture**

Understanding and enjoyment of art and visual culture through study of two-dimensional and three-dimensional works of art, design elements, media and processes, and cultural contexts. Emphasis on contemporary topics and cultural diversity in the arts. Prerequisites: None.

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Communication & Fine Arts

**ARH101 / Art from Prehistory Through Middle Ages**

**3 Credits / 3.0 Periods for Lecture**

History of art from the Paleolithic period through the Middle Ages.

**Division:** Communication & Fine Arts



**ARH102 / Art from Renaissance to Modernism****3 Credits / 3.0 Periods for Lecture**

History of art from the Renaissance through Modernism.

**Division:** Communication & Fine Arts

**ARH112 / History of Modern Art****3 Credits / 3.0 Periods for Lecture**

Development of and significant aspects of modern art since the mid-nineteenth century. Emphasis on modern art's relationship to socio-political and aesthetic developments, new media and the rise of mass culture. Prerequisites: None.

**Division:** Communication & Fine Arts

**ARH115 / History of Photography****3 Credits / 3.0 Periods for Lecture**

Survey of history of photography from beginning to present. Emphasizes the reciprocal relationship between the medium's development and reception, society, and other visual arts. Technical developments, photographic practices, and sociocultural themes are studied.

**Division:** Communication & Fine Arts

**ARH203 / Art of Ancient Egypt****3 Credits / 3.0 Periods for Lecture**

The art and culture of ancient Egypt from prehistoric through the Greco-Roman period. Prerequisites: None.

**Fulfills:** Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Communication & Fine Arts

**ARH217 / Mexican Art History****3 Credits / 3.0 Periods for Lecture**

Art of Mexico and related cultures, from the prehistoric to the contemporary period. Prerequisites: None.

**Fulfills:** Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Communication & Fine Arts

**(ART)****ART111 / Drawing I****3 Credits / 6.0 Periods for Lecture & Lab**

Fundamental principles of drawing. Emphasis on composition and facility in objective and expressive representation, using variety of drawing media. Prerequisites: None.

 SUN# ART 1111

**Division:** Communication & Fine Arts

**ART112 / Two-Dimensional Design****3 Credits / 6.0 Periods for Lecture & Lab**

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

 SUN# ART 1112

**Division:** Communication & Fine Arts

**ART113 / Color****3 Credits / 6.0 Periods for Lecture & Lab**

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. Prerequisites: None.

**Division:** Communication & Fine Arts

**ART115 / Three-Dimensional Design****3 Credits / 6.0 Periods for Lecture & Lab**

Fundamental principles of three-dimensional design. Prerequisites: None.

 SUN# ART 1115

**Division:** Communication & Fine Arts

**ART116 / Life Drawing I****3 Credits / 6.0 Periods for Lecture & Lab**

Use of form, structure and anatomy of draped and undraped human figure to develop basic principles of sound draftsmanship. Prerequisites: None.

**Division:** Communication & Fine Arts

**ART117 / Life Drawing II****3 Credits / 6.0 Periods for Lecture & Lab**

Further study of form, structure, and anatomy of the draped and undraped human figure with emphasis on composition. Prerequisites: ART116.

**Division:** Communication & Fine Arts

**ART122 / Drawing and Composition II****3 Credits / 6.0 Periods for Lecture & Lab**

Emphasis on composition and exploration of drawing media.

Prerequisites: A grade of C or better in ART111.

**Division:** Communication & Fine Arts

**ART131 / Photography I****3 Credits / 6.0 Periods for Lecture & Lab**

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.

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Communication & Fine Arts

**ART132 / Photography II****3 Credits / 6.0 Periods for Lecture & Lab**

Advanced camera and darkroom techniques. Aesthetic awareness with personal expression. Prerequisites: A grade of C or better in ART131 or permission of Instructor.

**Division:** Communication & Fine Arts

**ART133 / Photography III****3 Credits / 6.0 Periods for Lecture & Lab**

Refinement of aesthetic and technical aspects producing convincing images of highest quality. Prerequisites: A grade of C or better in ART132 or permission of Instructor.

**Division:** Communication & Fine Arts

**ART137 / Alternative Photographic Processes****3 Credits / 6.0 Periods for Lecture & Lab**

This course focuses on the 19th-century photographic processes including new picture-making technologies. Discussing the history of photography in relation with techniques taught in class. Students encouraged to explore historical processes in combination with contemporary technologies. Through technical demonstrations, hands-on workshops, and technical assignments, students develop a working knowledge of a range of processes while developing their own visual language. Prerequisites: None.

**Division:** Communication & Fine Arts



**ART151 / Sculpture I****3 Credits / 6.0 Periods for Lecture & Lab**

Exploration of sculptural form and expression in clay, plaster, stone, wood and metal. Prerequisites: None.

**Division:** Communication & Fine Arts

**ART161 / Ceramics I****3 Credits / 6.0 Periods for Lecture & Lab**

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

**Division:** Communication & Fine Arts

**ART162 / Ceramics II****3 Credits / 6.0 Periods for Lecture & Lab**

Major emphasis on wheel throwing, glaze making and decorating techniques. Prerequisites: A grade of C or better in ART161.

**Division:** Communication & Fine Arts

**ART165 / Watercolor Painting I****3 Credits / 6.0 Periods for Lecture & Lab**

Transparent and Gouache watercolor painting. Prerequisites: A grade of C or better in (ART111 and ART112), or permission of Instructor.

**Division:** Communication & Fine Arts

**ART166 / Watercolor Painting II****3 Credits / 6.0 Periods for Lecture & Lab**

Painting in water soluble media. Emphasis on individual techniques and design. Prerequisites: A grade of C or better in ART165.

**Division:** Communication & Fine Arts

**ART167 / Painting I****3 Credits / 6.0 Periods for Lecture & Lab**

Exploration of technical and expressive possibilities of various media in painting. Prerequisites: A grade of C or better in (ART111 and ART112), or permission of Instructor.

**Division:** Communication & Fine Arts

**ART168 / Painting II****3 Credits / 6.0 Periods for Lecture & Lab**

Continued refinement of painting skills and investigation of new possibilities in painting. Prerequisites: A grade of C or better in ART167 or permission of Instructor.

**Division:** Communication & Fine Arts

**ART234 / Color Photography****3 Credits / 6.0 Periods for Lecture & Lab**

Basic principles of color theory, camera and input and output techniques using analog or digital photography. Prerequisites: A grade of C or better in ART131, or AVC142, or permission of Instructor. Course Notes: Film or digital camera is required.

**Division:** Communication & Fine Arts

**ART255 / Art Marketing****3 Credits / 3.0 Periods for Lecture**

Career goals, presentation of artist and art work (portfolio, resume, business cards, catalog), pricing and selling works, networking, establishing a studio, promotion and publicity, writing press releases, proposal writing, business ethics, artist rights, copyright law, contracts and agreements, royalties, record keeping, and communication skills. Prerequisites: None.

**Division:** Communication & Fine Arts

**ART290AC / Studio Art****3 Credits / 6.0 Periods for Lecture & Lab**

Studio course for art majors allowing continuation in a subject field. Prerequisites: Permission of Instructor. Course Notes: ART290AC students must have completed advanced courses in the subject field. ART290AC may be repeated for credit.

**Division:** Communication & Fine Arts

**ART290BC / Studio Art: Drawing****3 Credits / 6.0 Periods for Lecture & Lab**

Studio course for art majors allowing continuation in a subject field. Prerequisites: A grade of C or better in ART111 or permission of Instructor. Course Notes: ART290BC may be repeated for credit.

**Division:** Communication & Fine Arts

**ART290DC / Studio Art: Life Drawing****3 Credits / 6.0 Periods for Lecture & Lab**

Studio course for art majors allowing continuation in a subject field. Prerequisites: A grade of C or better in ART117 or permission of Instructor. Course Notes: ART290DC may be repeated for credit.

**Division:** Communication & Fine Arts

**ART290EC / Studio Art: Photography****3 Credits / 6.0 Periods for Lecture & Lab**

Studio course for art majors allowing continuation in a subject field. Prerequisites: A grade of C or better in ART132 or permission of Instructor. Course Notes: ART290EC may be repeated for credit.

**Division:** Communication & Fine Arts

**ART290GC / Studio Art: Ceramics****3 Credits / 6.0 Periods for Lecture & Lab**

Studio course for art majors allowing continuation in a subject field. Prerequisites: A grade of C or better in ART162 or permission of Instructor. Course Notes: ART290GC may be repeated for credit.

**Division:** Communication & Fine Arts

**ART290JC / Studio Art: Color****3 Credits / 6.0 Periods for Lecture & Lab**

Studio course for art majors allowing continuation in a subject field. Prerequisites: A grade of C or better in ART113 or permission of Instructor. Course Notes: ART290JC may be repeated for credit.

**Division:** Communication & Fine Arts

**ART290MC / Studio Art: Digital Photography****3 Credits / 6.0 Periods for Lecture & Lab**

Studio course for art majors allowing continuation in a subject field. Prerequisites: A grade of C or better in AVC143 or permission of Instructor. Course Notes: ART290MC may be repeated for credit.

**Division:** Communication & Fine Arts

**ART290PC / Studio Art: Painting****3 Credits / 6.0 Periods for Lecture & Lab**

Studio course for art majors allowing continuation in a subject field. Prerequisites: A grade of C or better in ART168 or permission of Instructor. Course Notes: ART290PC may be repeated for credit.

**Division:** Communication & Fine Arts

**Art and Visual Communication (AVC)****AVC100 / Introduction to Digital Arts****1 Credit / 2.0 Periods for Lecture & Lab**

Foundation course in digital arts and design, with emphasis in the production of art using the computer. Prerequisites: None.

**Division:** Communication & Fine Arts

**AVC120 / Inking for Sequential Art****3 Credits / 6.0 Periods for Lecture & Lab**

Development of inking materials and techniques used in sequential art. Emphasis on the types of tools used in the industry and the various means of employing them. Understanding the duties of the inker and the process of computer finishing. Prerequisites: None.

**Division:** Communication & Fine Arts

**AVC142 / Introduction to Digital Photography****3 Credits / 6.0 Periods for Lecture & Lab**

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

**Division:** Communication & Fine Arts

**AVC143 / Intermediate Digital Photography****3 Credits / 6.0 Periods for Lecture & Lab**

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: A grade of C or better in AVC142 or permission of Instructor. Course Notes: Semi-adjustable, high-resolution digital camera is required.

**Division:** Communication & Fine Arts

**AVC169 / 2D Media Design****3 Credits / 6.0 Periods for Lecture & Lab**

Generation of two-dimensional (2D) images, designs, and media using digital and traditional methods of visual problem solving. Understanding digital and design-based techniques and workflows. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.

**Division:** Communication & Fine Arts

**AVC177 / Digital Photographic Imaging I****3 Credits / 6.0 Periods for Lecture & Lab**

Introduction to multiple elements of digital imaging. Basic foundation in photographic manipulation of images, with special attention to aesthetic foundations underlying photographic composition. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.

**Division:** Communication & Fine Arts

**AVC178 / Digital Arts Studies****3 Credits / 6.0 Periods for Lecture & Lab**

Designed for broad overview of the digital arts. Experience in digital based media, creative problem solving, design and aesthetics. Prerequisites: A grade of C or better in AVC100 or permission of Instructor.

**Division:** Communication & Fine Arts

**AVC181 / Graphic Design I****3 Credits / 6.0 Periods for Lecture & Lab**

Basic understanding of design principles and the stages of graphic design, with an emphasis on final product and presentation. Prerequisites: A grade of C or better in AVC100 or permission of Instructor.

**Division:** Communication & Fine Arts

**AVC183 / Digital Graphic Arts I****3 Credits / 6.0 Periods for Lecture & Lab**

Graphic design use in microcomputer; black and white graphics, standard and color brushes, lines, shapes, area fills and fonts. Application to illustration, advertising graphics, typography, and video interaction. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.

**Division:** Communication & Fine Arts

**AVC219 / Coloring, Toning and Lettering for Sequential Art****3 Credits / 6.0 Periods for Lecture & Lab**

Understanding of the digital rules and programs used in coloring, toning and lettering comics, and the problems presented therein within the sequential narrative. Emphasis on rules and guidelines within the industry, and digital coloring and lettering. Prerequisites: A grade of C or better in (AVC100 and AVC119) or permission of Instructor. AVC120 recommended.

**Division:** Communication & Fine Arts

**AVC270 / Digital Photographic Imaging II****3 Credits / 6.0 Periods for Lecture & Lab**

Intermediate digital photographic imaging techniques. Refinement of aesthetic awareness and personal expression. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC177.

**Division:** Communication & Fine Arts

**AVC274 / Digital Photographic Imaging III****3 Credits / 6.0 Periods for Lecture & Lab**

Advanced digital photographic imaging techniques. Advanced manipulation techniques of photographic images and time-based media. Continued development of aesthetic awareness and personal expression. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC270.

**Division:** Communication & Fine Arts

**AVC280AA / Digital Media Arts and Design Capstone****1 Credit / 2.0 Periods for Lecture & Lab**

Focus on design, art, and development skills for a problem taken from business or industry. Includes practice-based capstone project focusing on a specific issue or need in digital media arts and design. Prerequisites: Permission of Program Director or Instructor. Course Notes: ART280AA requires 80 clock hours of designated work per credit hour.

**Division:** Communication & Fine Arts

**Communication (COM)****COM095 / Basic Oral Communication Skills****3 Credits / 3.0 Periods for Lecture**

Listening, speaking, and related academic performance skills, including note taking. Emphasis on activities designed to improve and synthesize these skills. Prerequisites: None.

**Division:** Communication & Fine Arts

**COM100 / Introduction to Human Communication****3 Credits / 3.0 Periods for Lecture**

Introduces the theory and practice of human communication. Surveys communication topics related to interpersonal, small group, and public communication. Prerequisites: None.

 SUN# COM 1100

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Communication & Fine Arts

**COM110 / Interpersonal Communication****3 Credits / 3.0 Periods for Lecture**

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.

 SUN# COM 1110

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Communication & Fine Arts

**COM207 / Introduction to Communication Inquiry****3 Credits / 3.0 Periods for Lecture**

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: A grade of C or better in ENG101 or ENG107 or equivalent, and COM100 or equivalent, or permission of Instructor. Course Notes: Recommended for the communication major.

**Division:** Communication & Fine Arts

**COM225 / Public Speaking****3 Credits / 3.0 Periods for Lecture**

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: A grade of C or better in ENG101, or ENG107, or equivalent.

**Fulfills:** Literacy & Critical Inquiry [L]; Literacy & Critical Inquiry [L]-in combo

**Division:** Communication & Fine Arts

**COM230 / Small Group Communication****3 Credits / 3.0 Periods for Lecture**

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.

 SUN# COM 2271

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Communication & Fine Arts

**COM250 / Introduction to Organizational Communication****3 Credits / 3.0 Periods for Lecture**

Introduction to the study of communication in organizations including identification of variables, roles and patterns influencing communication in organizations. Prerequisites: None.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Communication & Fine Arts

**COM259 / Communication in Business and Professions****3 Credits / 3.0 Periods for Lecture**

Interpersonal, organizational, intercultural, group, and public communication in business and professional organizations. Emphasis on oral communication and the effective use of technology and new media. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.

**Division:** Communication & Fine Arts

**COM263 / Elements of Intercultural Communication****3 Credits / 3.0 Periods for Lecture**

Diverse cultural contexts are explored through basic concepts, principles, and theories of intercultural communication. Discovering effective interaction and appropriate communication in a global community is emphasized. Prerequisites: None.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Global Awareness [G]; Global Awareness [G]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Communication & Fine Arts

**Dance Humanities (DAH)****DAH100 / Introduction to Dance****3 Credits / 3.0 Periods for Lecture**

Overview of the field of dance focusing on origins, historical development, and cultural characteristics of the various styles of dance. Prerequisites: None.

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Communication & Fine Arts

**DAH201 / Dance, Culture, and Global Contexts****3 Credits / 3.0 Periods for Lecture**

Introduction to the study of dance as culture in diverse global contexts.

**Division:** Communication & Fine Arts

**DAH250 / Dance in Popular Culture****3 Credits / 3.0 Periods for Lecture**

Interdisciplinary approach investigating diverse cultural dance practices that have shaped American popular culture from the late 19th century to the present. Highlights issues of power, class, race, ethnicity, gender, age and sexuality. Emphasis is on revealing diverse cultural influences in U.S. popular culture. Prerequisites: None.

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]

**Division:** Communication & Fine Arts

**DAH255 / Hip Hop: Arts, Aesthetic and Culture****3 Credits / 3.0 Periods for Lecture**

Selective survey and historico-cultural analysis of hip hop arts, aesthetics and culture organized around the founding elements of DJing, MCing, B-boy and B-girling, graffiti arts and knowledge. Prerequisites: A grade of C or better in ENG101 or ENG107.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Literacy & Critical Inquiry [L]; Literacy & Critical Inquiry [L]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Communication & Fine Arts

**Dance (DAN)****DAN129 / Musical Theatre Dance I****1 Credit / 3.0 Periods for Lecture & Lab**

Introduction to the theory and practice of musical theatre dance at the beginning level. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN129 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN130 / Musical Theatre Dance II****1 Credit / 3.0 Periods for Lecture & Lab**

Theory and practice of musical theatre dance at the advanced beginning level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN129 or permission of Instructor. Course Notes: DAN130 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN131 / Ballet I****1 Credit / 3.0 Periods for Lecture & Lab**

Introduction to the theory and practice of ballet at the beginning level. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN131 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN131PA / Ballet Basic Level****0.5 Credits / 1.5 Periods for Lecture & Lab**

Dance training for personal skill development and interest. Introduction to the theory and practice of ballet at the basic level. Prerequisites: None. Prior dance experience suggested but not required. Course Notes: DAN131PA may be repeated for credit. Course is not intended for dance majors.

**Division:** Communication & Fine Arts

**DAN132 / Modern Dance I****1 Credit / 3.0 Periods for Lecture & Lab**

Introduction to the theory and practice of modern dance at the beginning level. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN132 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN133 / Jazz Dance I****1 Credit / 3.0 Periods for Lecture & Lab**

Introduction to the theory and practice of jazz dance at the beginning level. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN133 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN134 / Ballet II****1 Credit / 3.0 Periods for Lecture & Lab**

Theory and practice of ballet at the advanced beginning level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN131 or permission of Instructor. Course Notes: DAN134 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN134PA / Ballet Beginning Level****0.5 Credits / 1.5 Periods for Lecture & Lab**

Dance training for personal skill development and interest. Theory and practice of ballet at the beginning level. Prerequisites: A grade of C or better in DAN131PA or permission of Department or Division. Course Notes: DAN134PA may be repeated for credit. Course is not intended for dance majors.

**Division:** Communication & Fine Arts

**DAN135 / Modern Dance II****1 Credit / 3.0 Periods for Lecture & Lab**

Theory and practice of modern dance at the advanced beginning level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN132 or permission of Instructor. Course Notes: DAN135 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN136 / Jazz Dance II****1 Credit / 3.0 Periods for Lecture & Lab**

Theory and practice of jazz dance at the advanced beginning level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN133 or permission of Instructor. Course Notes: DAN136 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN140 / Tap Dance I****1 Credit / 3.0 Periods for Lecture & Lab**

An introduction to the theory and practice of tap dance. Prerequisites: None. Course Notes: DAN140 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN141 / Dance Workshop****1 Credit / 3.0 Periods for Lecture & Lab**

An intensive experience in the process of choreography, performance, and production elements. Prerequisites: None. Course Notes: DAN141 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN145 / Tap Dance II****1 Credit / 3.0 Periods for Lecture & Lab**

Theory and practice of tap dance at an advanced beginning level. Prerequisites: A grade of C or better in DAN140 or permission of Instructor. Course Notes: DAN145 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN150 / Dance Performance I****1 Credit / 3.0 Periods for Lecture & Lab**

An introduction to the process and practice of dance performance. Prerequisites: None. Corequisites: Any level of any of the following dance technique courses with a DAN prefix: ballet, modern, jazz, hip hop, tap, social, or world dance. Course Notes: DAN150 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN155 / Dance Performance II****1 Credit / 3.0 Periods for Lecture & Lab**

Continued study of the process and practice of dance performance at advanced beginning level. Prerequisites: A grade of C or better in DAN150 or permission of Instructor. Corequisites: Any level of any of the following dance technique courses with a DAN prefix: ballet, modern, jazz, hip hop, tap, social, or world dance. Course Notes: DAN155 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN210 / Dance Production I****3 Credits / 3.0 Periods for Lecture & Lab**

Introduction to the elements of pre-production and production, including but not limited to production organization, production management, lighting design, and sound design as they relate to the art of dance. Prerequisites: None.

**Division:** Communication & Fine Arts

**DAN221 / Rhythmic Awareness I****3 Credits / 3.0 Periods for Lecture**

Exploration of rhythm in dance performance, choreography and pedagogy. Emphasis on the basic understanding of rhythm and cultivating awareness of rhythm in everyday life. Prerequisites: None.

**Division:** Communication & Fine Arts

**DAN229 / Musical Theatre Dance III****1 Credit / 3.0 Periods for Lecture & Lab**

Theory and practice of musical theatre dance at the beginning intermediate level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN130 or permission of Instructor. Course Notes: DAN229 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN230 / Musical Theatre Dance IV****1 Credit / 3.0 Periods for Lecture & Lab**

Theory and practice of musical theatre dance at the intermediate level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN229 or permission of Instructor. Course Notes: DAN230 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN231 / Ballet III****1 Credit / 3.0 Periods for Lecture & Lab**

Theory and practice of ballet at the beginning intermediate level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN134 or permission of Instructor. Course Notes: DAN231 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN232 / Modern Dance III****1 Credit / 3.0 Periods for Lecture & Lab**

Theory and practice of modern dance at the beginning intermediate level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN135 or permission of Instructor. Course Notes: DAN232 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN233 / Jazz Dance III****1 Credit / 3.0 Periods for Lecture & Lab**

Theory and practice of jazz dance at the beginning intermediate level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN136 or permission of Instructor. Course Notes: DAN233 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN234 / Ballet IV****1 Credit / 3.0 Periods for Lecture & Lab**

Theory and practice of ballet at the intermediate level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN231 or permission of Instructor. Course Notes: DAN234 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN235 / Modern Dance IV****1 Credit / 3.0 Periods for Lecture & Lab**

Theory and practice of modern dance at the intermediate level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN232 or permission of Instructor. Course Notes: DAN235 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN236 / Jazz Dance IV****1 Credit / 3.0 Periods for Lecture & Lab**

Theory and practice of jazz dance at the intermediate level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN233 or permission of Instructor. Course Notes: DAN236 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN237 / Ballet Pointe I****1 Credit / 1.0 Periods for Lecture & Lab**

An introduction to the theory and practice of pointe work at the beginning level. Development of strength and movement quality. Prerequisites: A grade of C or better in DAN134 or permission of Instructor. Corequisites: DAN231 or DAN234. Course Notes: DAN237 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN240 / Tap Dance III****1 Credit / 3.0 Periods for Lecture & Lab**

Theory and practice of tap dance at a beginning intermediate level. Prerequisites: A grade of C or better in DAN145 or permission of Instructor. Course Notes: DAN240 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN245 / Tap Dance IV****1 Credit / 3.0 Periods for Lecture & Lab**

Theory and practice of tap dance at an intermediate level. Prerequisites: A grade of C or better in DAN240 or permission of Instructor. Course Notes: DAN245 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN250 / Dance Performance III****1 Credit / 3.0 Periods for Lecture & Lab**

Continued study of the process and practice of dance performance at beginning intermediate level. Prerequisites: A grade of C or better in DAN155 or permission of Instructor. Corequisites: Any level of any of the following dance technique courses with a DAN prefix: ballet, modern, jazz, hip hop, tap, social, or world dance. Course Notes: DAN250 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN255 / Dance Performance IV****1 Credit / 3.0 Periods for Lecture & Lab**

Continued study of the process and practice of dance performance at the intermediate level. Prerequisites: A grade of C or better in DAN250 or permission of Instructor. Corequisites: Any level of any of the following dance technique courses with a DAN prefix: ballet, modern, jazz, hip hop, tap, social, or world dance. Course Notes: DAN255 may be repeated for credit.

**Division:** Communication & Fine Arts

**DAN264 / Choreography I****3 Credits / 3.0 Periods for Lecture & Lab**

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.

**Division:** Communication & Fine Arts

**DAN265 / Choreography II****3 Credits / 3.0 Periods for Lecture & Lab**

Exploration of choreography at the intermediate level. Experimentation with the various approaches to creative practice as established by 20th and 21st century artists. Prerequisites: A grade of C or better in DAN264 or permission of Instructor.

**Division:** Communication & Fine Arts

**DAN280 / Dance Practicum****2 Credits / 3.0 Periods for Lecture & Lab**

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.

**Division:** Communication & Fine Arts

## Mass Communications (MCO)

### MCO120 / Media and Society

#### 3 Credits / 3.0 Periods for Lecture

Study of historical and contemporary roles of media and its pervasiveness in society as it relates to culture, politics and education. Prerequisites: Eligibility for ENG101 or ENG107 or permission of Instructor.

**Division:** Communication & Fine Arts

## Music History/Literature (MHL)

### MHL140 / Survey of Music History

#### 3 Credits / 3.0 Periods for Lecture

Study of composers, compositions, styles, and periods in music history. Prerequisites: None.

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Communication & Fine Arts

### MHL143 / Music in World Cultures

#### 3 Credits / 3.0 Periods for Lecture

Non-European musical traditions including the study of music in rituals, musical instruments and the impact of cultures on musical styles. Prerequisites: None.

**Fulfills:** Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Communication & Fine Arts

### MHL145 / American Jazz and Popular Music

#### 3 Credits / 3.0 Periods for Lecture

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.

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]

**Division:** Communication & Fine Arts

### MHL153 / Rock Music and Culture

#### 3 Credits / 3.0 Periods for Lecture

History of Rock music and how cultural, social, political, and economic conditions have shaped its evolution. Prerequisites: None.

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo

**Division:** Communication & Fine Arts

### MHL155 / Survey of American Music

#### 3 Credits / 3.0 Periods for Lecture

History of the music of North America from the earliest American Indian music to the present. Introduction to the musical trends, composers, socioeconomic developments and trends, musical forms and styles that influence our modern American musical sense. Prerequisites: None.

**Fulfills:** Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]

**Division:** Communication & Fine Arts

### MHL204 / Hip-Hop Music and Culture

#### 3 Credits / 3.0 Periods for Lecture

A history of Hip-Hop's musical and artistic elements and how cultural, social, political, and economic conditions have shaped its evolution. Prerequisites: A grade of C or better in ENG101 or ENG107, or permission of Instructor.

**Fulfills:** Literacy & Critical Inquiry [L]; Literacy & Critical Inquiry [L]-in combo; Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Communication & Fine Arts

### MHL242 / Music History and Literature 1750 to Present

#### 3 Credits / 3.0 Periods for Lecture

In-depth study of music history from the Classical period through the Contemporary period. Prerequisites: A grade of C or better in MHL241 or permission of instructor.

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Communication & Fine Arts

## Music Theory/Composition (MTC)

### MTC101 / Introduction to Music Theory

#### 3 Credits / 3.0 Periods for Lecture

Designed to develop written and aural skills necessary for advanced study of music theory and skills. Recommended for music majors. Prerequisites: None.

**Division:** Communication & Fine Arts

### MTC105 / Music Theory I

#### 3 Credits / 3.0 Periods for Lecture

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: A grade of C or better in MTC101 or permission of instructor. Corequisites: MTC106.

**Division:** Communication & Fine Arts

### MTC106 / Aural Perception I

#### 1 Credit / 2.0 Periods for Lecture & Lab

The development of listening and performing skills through dictation, sight-singing and keyboard harmony. Prerequisites: None. Corequisites: MTC105.

**Division:** Communication & Fine Arts

### MTC130 / Jazz Theory

#### 2 Credits / 2.0 Periods for Lecture

Develop written and aural theory skills necessary in the jazz idiom. Prerequisites: A grade of C or better in (MTC101 and MTC103), or permission of Instructor. Course Notes: MTC130 is recommended for students taking jazz improvisation, jazz composition and jazz combo.

**Division:** Communication & Fine Arts

### MTC155 / Music Theory II

#### 3 Credits / 3.0 Periods for Lecture

A continuation of Music Theory I with emphasis on harmony and part-writing procedures. Prerequisites: A grade of C or better in MTC105. Corequisites: MTC156.

**Division:** Communication & Fine Arts

### MTC156 / Aural Perception II


#### 1 Credit / 2.0 Periods for Lecture & Lab

A continuation of Aural Perception I, including harmonic practices. Prerequisites: A grade of C or better in MTC106. Corequisites: MTC155.

**Division:** Communication & Fine Arts

**MTC205 / Music Theory III****3 Credits / 3.0 Periods for Lecture**

The study of chromatic harmony and melody, modulation techniques and expanded chords. The analysis of formal structure. Prerequisites: A grade of C or better in MTC155. Corequisites: MTC206.

 SUN# MUS 2222

**Division:** Communication & Fine Arts

**MTC206 / Aural Perception III****1 Credit / 2.0 Periods for Lecture & Lab**

A development of listening and performing skills, including an introduction of chromatic harmonic techniques and concepts of style. Prerequisites: A grade of C or better in MTC156. Corequisites: MTC205.

 SUN# MUS 2222

**Division:** Communication & Fine Arts

**MTC240 / Composition****3 Credits / 0.6 Periods for Lecture & Lab**

Introduction to the basics of music composition, stressing techniques and procedures for developing original ideas. Prerequisites: A grade of C or better in (MTC105 and MTC106, or equivalent), and permission of Instructor. Course Notes: MTC240 may be repeated for a total of twelve (12) credit hours.

**Division:** Communication & Fine Arts

**MTC255 / Music Theory IV****3 Credits / 3.0 Periods for Lecture**


A continuation of Music Theory III, including 20th century theories and techniques. Prerequisites: A grade of C or better in MTC205. Corequisites: MTC256.

 SUN# MUS 2223

**Division:** Communication & Fine Arts

**MTC256 / Aural Perception IV****1 Credit / 2.0 Periods for Lecture & Lab**

A continuation of Aural Perception III, including extended chords. Prerequisites: A grade of C or better in MTC206. Corequisites: MTC255.

 SUN# MUS 2223

**Division:** Communication & Fine Arts

**Music Commercial/Business (MUC)****MUC109 / Music Business: Content Creation and Copyright****3 Credits / 3.0 Periods for Lecture**

Designed to provide an overview of content creation and copyright considerations within the Music Industry. Topics include songwriting and music creation, copyright, publishing and licensing, studio production, media applications of music, business ownership and operations, and emerging technologies. Prerequisites: None.

**Division:** Communication & Fine Arts

**MUC110 / Music Business: Marketing and Monetization****3 Credits / 3.0 Periods for Lecture**

Designed to provide an overview of the marketing and monetization of music. Topics include music label operations; contracts; marketing, promotion, and merchandising; agents, managers, and attorneys; concert promotion and touring; and unions and guilds. Prerequisites: None.

**Division:** Communication & Fine Arts

**MUC111 / Digital Audio Workstation I (DAW I)****3 Credits / 5.0 Periods for Lecture & Lab**

Use of digital mixing and automation software in conjunction with editing and recording. Includes computer operation, troubleshooting, and file management. Prerequisites: A grade of C or better in MUC195, or MUC195AA, or FMP105, or permission of Instructor.

**Division:** Communication & Fine Arts

**MUC112 / Digital Audio Workstation II (DAW II)****3 Credits / 5.0 Periods for Lecture & Lab**

Use of digital mixing and automation software in conjunction with editing and recording. Includes computer operation, troubleshooting, and file management. Prerequisites: A grade of C or better in MUC111, and (MUC195 or MUC195AA).

**Division:** Communication & Fine Arts

**MUC140 / Songwriting****3 Credits / 3.0 Periods for Lecture**

An introduction to the art and craft of songwriting through the study and analysis of diverse songwriters and musical styles, and creation of original songs. Prerequisites: A grade of C or better in MTC101, or MTC105, or permission of Instructor. Course Notes: MTC140 may be repeated for a total of six (6) credits.

**Division:** Communication & Fine Arts

**MUC180 / Computer Literacy for the Music Business****3 Credits / 3.0 Periods for Lecture & Lab**

Basic computer literacy, including business applications used in the Music Industry, with hands-on experience. Prerequisites: A grade of C or better in MUC109, or permission of Instructor or Department or Division Chair.

**Fulfills:** Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo

**Division:** Communication & Fine Arts

**MUC195 / Studio Music Recording I****3 Credits / 5.0 Periods for Lecture & Lab**

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.

**Division:** Communication & Fine Arts

**Music Performance (MUP)****MUP101AA / Private Instruction: Voice****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: None. Course Notes: MUP101AA may be repeated for credit.

**Division:** Communication & Fine Arts



**MUP101AD / Private Instruction: Piano****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: None. Course Notes: MUP101AD may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP101AM / Private Instruction: Guitar****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: None. Course Notes: MUP101AM may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP101AP / Private Instruction: Trumpet****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: None. Course Notes: MUP101AP may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP101AS / Private Instruction: French Horn****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: None. Course Notes: MUP101AS may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP101AV / Private Instruction: Trombone****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: None. Course Notes: MUP101AV may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP101AY / Private Instruction: Euphonium****1 Credit / 0.6 Periods for Lecture & Lab**

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, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101AY may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP101BB / Private Instruction: Tuba****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: None. Course Notes: MUP101BB may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP101BE / Private Instruction: Flute****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: None. Course Notes: MUP101BE may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP101BH / Private Instruction: Oboe****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: None. Course Notes: MUP101BH may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP101BK / Private Instruction: Clarinet****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: None. Course Notes: MUP101BK may be repeated for credit.

**Division:** Communication & Fine Arts



**MUP101BN / Private Instruction: Bassoon****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: None. Course Notes: MUP101BN may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP101BQ / Private Instruction: Saxophone****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: None. Course Notes: MUP101BQ may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP101BT / Private Instruction: Violin****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: None. Course Notes: MUP101BT may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP101BW / Private Instruction: Viola****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: None. Course Notes: MUP101BW may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP101BZ / Private Instruction: Violoncello****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: None. Course Notes: MUP101BZ may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP101CC / Private Instruction: Contrabass****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: None. Course Notes: MUP101CC may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP101CF / Private Instruction: Popular Music Bass Guitar****1 Credit / 0.6 Periods for Lecture & Lab**

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, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP101CF may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP101CI / Private Instruction: Percussion****1 Credit / 0.6 Periods for Lecture & Lab**

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. Course Notes: MUP101CI may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP101CJ / Private Instruction: Harp****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: None. Course Notes: MUP101CJ may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP101CM / Private Instruction: Popular Music Guitar****1 Credit / 0.6 Periods for Lecture & Lab**

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, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP101CM may be repeated for credit.

**Division:** Communication & Fine Arts



**MUP102BQ / Private Instruction: Saxophone****2 Credits / 1.2 Periods for Lecture & Lab**

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: None. Course Notes: MUP102BQ may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP102BT / Private Instruction: Violin****2 Credits / 1.2 Periods for Lecture & Lab**

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: None. Course Notes: MUP102BT may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP102BW / Private Instruction: Viola****2 Credits / 1.2 Periods for Lecture & Lab**

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: None. Course Notes: MUP102BW may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP102BZ / Private Instruction: Violoncello****2 Credits / 1.2 Periods for Lecture & Lab**

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: None. Course Notes: MUP102BZ may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP102CC / Private Instruction: Contrabass****2 Credits / 1.2 Periods for Lecture & Lab**

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: None. Course Notes: MUP102CC may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP102CF / Private Instruction: Popular Music Bass Guitar****2 Credits / 1.2 Periods for Lecture & Lab**

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, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP102CF may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP102CI / Private Instruction: Percussion****2 Credits / 1.2 Periods for Lecture & Lab**

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: None. Course Notes: MUP102CI may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP102CJ / Private Instruction: Harp****2 Credits / 1.2 Periods for Lecture & Lab**

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: None. Course Notes: MUP102CJ may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP102CM / Private Instruction: Popular Music Guitar****2 Credits / 1.2 Periods for Lecture & Lab**

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, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP102CM may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP102CN / Private Instruction: Popular Music Drum****2 Credits / 1.2 Periods for Lecture & Lab**

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, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP102CN may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP127 / Class Guitar I****1 Credit / 3.0 Periods for Lecture & Lab**

Emphasis on note-reading and folk-style harmonic accompaniment. Includes finger-style playing. Stresses development of efficient practice techniques and proper sitting and hand positions. Prerequisites: None.

**Division:** Communication & Fine Arts

**MUP128 / Class Guitar II****1 Credit / 3.0 Periods for Lecture & Lab**

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: A grade of C or better in MUP127 or permission of Instructor.

**Division:** Communication & Fine Arts

**MUP131 / Class Piano I****1 Credit / 3.0 Periods for Lecture & Lab**

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 harmonizations including the I, IV, V7 chords. Prerequisites: None.

**Division:** Communication & Fine Arts

**MUP132 / Class Piano II****1 Credit / 3.0 Periods for Lecture & Lab**

Continuation of Piano I with emphasis on elementary piano techniques including major and minor scales, transposition, improvisation, and sight reading. Prerequisites: A grade of C or better in MUP131 or permission of Instructor.

**Division:** Communication & Fine Arts

**MUP133 / Class Voice I****1 Credit / 3.0 Periods for Lecture & Lab**

Introduction to the fundamentals of vocal production. Emphasis on breathing techniques, tone production and performances in class of solo vocal literature. Prerequisites: None.

**Division:** Communication & Fine Arts

**MUP134 / Class Voice II****1 Credit / 3.0 Periods for Lecture & Lab**

Continuation of Class Voice I including the elements of stage presence and diction. Prerequisites: A grade of C or better in MUP133 or permission of Instructor.

**Division:** Communication & Fine Arts

**MUP150 / Community Chorus****1 Credit / 3.0 Periods for Lecture & Lab**

A mixed chorus with emphasis on college/community participation and preparation of a variety of choral literature for public performance. Auditions may be required. Prerequisites: None. Course Notes: MUP150 may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP151AA / Private Instruction: Voice****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: A grade of C or better in MUP101AA. Course Notes: MUP151AA may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP151AD / Private Instruction: Piano****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: A grade of C or better in MUP101AD. Course Notes: MUP151AD may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP151AM / Private Instruction: Guitar****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: A grade of C or better in MUP101AM. Course Notes: MUP151AM may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP151BT / Private Instruction: Violin****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: A grade of C or better in MUP101BT. Course Notes: MUP151BT may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP151CF / Private Instruction: Popular Music Bass Guitar****1 Credit / 0.6 Periods for Lecture & Lab**

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, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP101CF. Course Notes: MUP151CF may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP152AA / Private Instruction: Voice****2 Credits / 1.2 Periods for Lecture & Lab**

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: A grade of C or better in MUP102AA. Course Notes: MUP152AA may be repeated for credit.

**Division:** Communication & Fine Arts



**MUP152BZ / Private Instruction: Violoncello****2 Credits / 1.2 Periods for Lecture & Lab**

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: A grade of C or better in MUP102BZ. Course Notes: MUP152BZ may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP152CC / Private Instruction: Contrabass****2 Credits / 1.2 Periods for Lecture & Lab**

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: A grade of C or better in MUP102CC. Course Notes: MUP152CC may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP152CF / Private Instruction: Popular Music Bass Guitar****2 Credits / 1.2 Periods for Lecture & Lab**

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, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP102CF. Course Notes: MUP152CF may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP152CI / Private Instruction: Percussion****2 Credits / 1.2 Periods for Lecture & Lab**

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: A grade of C or better in MUP102CI. Course Notes: MUP152CI may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP152CJ / Private Instruction: Harp****2 Credits / 1.2 Periods for Lecture & Lab**

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: A grade of C or better in MUP102CJ. Course Notes: MUP152CJ may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP153 / Concert Choir****1 Credit / 5.0 Periods for Lecture & Lab**

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.

**Division:** Communication & Fine Arts

**MUP154AA / Jazz Vocal Ensemble****1 Credit / 3.0 Periods for Lecture & Lab**

Practical and performing experience in vocal jazz. Includes music from the 1920's through the present. Prerequisites: Auditions required or permission of Instructor. Course Notes: MUP154AA may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP159 / Community Orchestra****1 Credit / 3.0 Periods for Lecture & Lab**

Emphasis on college/community participation and the preparation of orchestral literature for public performance. Prerequisites: None. Course Notes: MUP159 may be repeated for credit. Auditions may be required.

**Division:** Communication & Fine Arts

**MUP161 / Community Band****1 Credit / 3.0 Periods for Lecture & Lab**

Emphasis on college/community participation and the preparation of band literature for public performance. Prerequisites: None. Course Notes: MUP161 may be repeated for credit. Auditions may be required.

**Division:** Communication & Fine Arts

**MUP163 / Jazz Ensemble****1 Credit / 3.0 Periods for Lecture & Lab**

Practical and performance experience in various jazz styles. Prerequisites: None. Course Notes: MUP163 may be repeated for credit. Open to all students on the basis of auditions. Auditions may be required.

**Division:** Communication & Fine Arts

**MUP164 / Jazz Improvisation I****2 Credits / 3.0 Periods for Lecture & Lab**

Theoretical and performance skills in many styles of jazz improvisation. Prerequisites: None. Course Notes: MUP164 may be repeated for a total of six (6) credit hours.

**Division:** Communication & Fine Arts

**MUP171 / Opera Workshop****2 Credits / 5.0 Periods for Lecture & Lab**

A workshop in the study and performance of operatic literature. Prerequisites: None. Course Notes: MUP171 may be repeated for credit. Open to all students on the basis of auditions. Auditions may be required.

**Division:** Communication & Fine Arts

**MUP181 / Chamber Music Ensembles****1 Credit / 2.0 Periods for Lecture & Lab**

Practical and performance experience in instrumental, vocal, and mixed ensembles. Prerequisites: None. Course Notes: MUP181 may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP182 / Chamber Singers****1 Credit / 3.0 Periods for Lecture & Lab**

Practical and performance experience in various styles of vocal music. Prerequisites: None. Course Notes: MUP182 may be repeated for credit. Open to all students on the basis of auditions. Auditions may be required.

**Division:** Communication & Fine Arts

**MUP183 / Jazz Combo****1 Credit / 2.0 Periods for Lecture & Lab**

Jazz Combo participation provides an opportunity for students to develop improvisational skills in a variety of styles from historical and contemporary jazz practice, while offering a creative outlet for composers and arrangers. Prerequisites: None. Course Notes: MUP183 may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP190 / Percussion Ensemble****1 Credit / 3.0 Periods for Lecture & Lab**

Practical and performance experience in various percussion styles. Percussion literature from a diverse number of world musical traditions. Western European art music, various African traditions, Indian music, Japanese music, Indonesian music, Mexican, Central, and South American music, and percussion compositions from the American Experimental Tradition rehearsed and performed. Concerts presented throughout the semester. Percussion techniques are studied and refined as they relate to the literature performed. Emphasis placed on reading and listening skills, increased aesthetic discrimination. Informed performance practice and skills on all percussion instruments and traditions. Prerequisites: None. Course Notes: MUP190 may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP201AA / Private Instruction: Voice****1 Credit / 0.6 Periods for Lecture & Lab**

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, harp and percussion. Prerequisites: A grade of C or better in MUP151AA. Course Notes: MUP201AA may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP201AD / Private Instruction: Piano****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: A grade of C or better in MUP151AD. Course Notes: MUP201AD may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP201AM / Private Instruction: Guitar****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: A grade of C or better in MUP151AM. Course Notes: MUP201AM may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP202AA / Private Instruction: Voice****2 Credits / 1.2 Periods for Lecture & Lab**

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: A grade of C or better in MUP152AA. Course Notes: MUP202AA may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP202AD / Private Instruction: Piano****2 Credits / 1.2 Periods for Lecture & Lab**

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: A grade of C or better in MUP152AD. Course Notes: MUP202AD may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP202AM / Private Instruction: Guitar****2 Credits / 1.2 Periods for Lecture & Lab**

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: A grade of C or better in MUP152AM. Course Notes: MUP202AM may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP202AP / Private Instruction: Trumpet****2 Credits / 1.2 Periods for Lecture & Lab**

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: A grade of C or better in MUP152AP. Course Notes: MUP202AP may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP202AS / Private Instruction: French Horn****2 Credits / 1.2 Periods for Lecture & Lab**

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: A grade of C or better in MUP152AS. Course Notes: MUP202AS may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP202AV / Private Instruction: Trombone****2 Credits / 1.2 Periods for Lecture & Lab**

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: A grade of C or better in MUP152AV. Course Notes: MUP202AV may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP202AY / Private Instruction: Euphonium****2 Credits / 1.2 Periods for Lecture & Lab**

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, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152AY. Course Notes: MUP202AY may be repeated for credit.

**Division:** Communication & Fine Arts





**MUP202CM / Private Instruction: Popular Music Guitar****2 Credits / 1.2 Periods for Lecture & Lab**

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, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP152CM. Course Notes: MUP202CM may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP209 / Elements of Conducting****2 Credits / 2.0 Periods for Lecture**

Essentials of conducting techniques used in choral and instrumental ensembles including terminology, interpretation, and styles. Prerequisites: None.

**Division:** Communication & Fine Arts

**MUP217 / Music Theatre: Broadway Solos****1 Credit / 3.0 Periods for Lecture & Lab**

Study and in-class performance of scenes and solos from Broadway musical literature. Prerequisites: None.

**Division:** Communication & Fine Arts

**MUP227 / Class Guitar III****1 Credit / 3.0 Periods for Lecture & Lab**

Additional fingerboard positions. Ensemble techniques and performance. Prerequisites: A grade of C or better in MUP128 or permission of Instructor.

**Division:** Communication & Fine Arts

**MUP228 / Class Guitar IV****1 Credit / 3.0 Periods for Lecture & Lab**

Advanced fingerboard positions. Duet and trio performances. Advanced ensemble techniques. Prerequisites: A grade of C or better in MUP227 or permission of Instructor. Course Notes: MUP228 may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP231 / Class Piano III****1 Credit / 3.0 Periods for Lecture & Lab**

Development of intermediate piano techniques including selected solo literature, transposition of harmonic patterns, and secondary dominants. Prerequisites: A grade of C or better in MUP132 or permission of Instructor.

**Division:** Communication & Fine Arts

**MUP232 / Class Piano IV****1 Credit / 3.0 Periods for Lecture & Lab**

Continuation of Piano III including modulation techniques, improvisation of piano accompaniments, advanced chromatic harmony, and sight reading of advanced literature. Prerequisites: A grade of C or better in MUP231 or permission of Instructor.

**Division:** Communication & Fine Arts

**MUP233 / Class Voice III****1 Credit / 3.0 Periods for Lecture & Lab**

Interpretive singing through a closer examination of coloring, tone production, dynamics, and tempo indications. Prerequisites: A grade of C or better in MUP134.

**Division:** Communication & Fine Arts

**MUP234 / Class Voice IV****1 Credit / 3.0 Periods for Lecture & Lab**

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: A grade of C or better in MUP233 or permission of Instructor. Course Notes: MUP234 may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP250AA / Survey Of Diction For Singers (English)****1 Credit / 2.0 Periods for Lecture & Lab**

Introduction to the use of phonetics in the study of English song literature. Prerequisites: None.

**Division:** Communication & Fine Arts

**MUP250AB / Survey Of Diction For Singers (Italian/Latin)****1 Credit / 2.0 Periods for Lecture & Lab**

Introduction to the use of phonetics in the study of Italian/Latin song literature. Prerequisites: None.

**Division:** Communication & Fine Arts

**MUP251AA / Private Instruction: Voice****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: A grade of C or better in MUP201AA. Course Notes: MUP251AA may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP251AD / Private Instruction: Piano****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: A grade of C or better in MUP201AD. Course Notes: MUP251AD may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP251AM / Private Instruction: Guitar****1 Credit / 0.6 Periods for Lecture & Lab**

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. Prerequisites: A grade of C or better in MUP201AM. Course Notes: MUP251AM may be repeated for credit.

**Division:** Communication & Fine Arts



**MUP252CC / Private Instruction: Contrabass****2 Credits / 1.2 Periods for Lecture & Lab**

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: A grade of C or better in MUP202CC. Course Notes: MUP252CC may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP252CI / Private Instruction: Percussion****2 Credits / 1.2 Periods for Lecture & Lab**

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: A grade of C or better in MUP202CI. Course Notes: MUP252CI may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP252CL / Private Instruction: Popular Music Piano****2 Credits / 1.2 Periods for Lecture & Lab**

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, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP202CL. Course Notes: MUP252CL may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP270 / Musical Theatre Workshop****2 Credits / 5.0 Periods for Lecture & Lab**

Workshop in the study and performance of Musical Theatre repertoire. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance. Prerequisites: None. Course Notes: MUP/THP270 may be repeated for credit.

**Division:** Communication & Fine Arts

**MUP270AA / Musical Theatre Workshop****1 Credit / 3.0 Periods for Laboratory**

Workshop in the study and performance of musical theatre repertoire. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance. Prerequisites: None. Course Notes: MUP/THP270AA may be repeated for a total of two (2) credits.

**Division:** Communication & Fine Arts

**MUP273 / Musical Theatre Production****1 Credit / 5.0 Periods for Laboratory**

Principles and techniques for musical theatre production performance. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance. Prerequisites: By audition.

**Crosslisted:** THP273

**Division:** Communication & Fine Arts

**Storytelling (STO)****STO292 / The Art of Storytelling****3 Credits / 3.0 Periods for Lecture**


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.

**Crosslisted:** HUM292, EDU292

**Division:** Communication & Fine Arts

**Theatre (THE)****THE111 / Introduction to Theatre****3 Credits / 3.0 Periods for Lecture**

A survey of theatre, including basic elements and principles of production, styles, and/or historical perspectives of theatre, dramatic literature, and criticism. Prerequisites: None.


 SUN# THE 1100

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Communication & Fine Arts

**THE220 / Modern Drama****3 Credits / 3.0 Periods for Lecture**

Analysis of dramatic literature studied within political, historical, and cultural contexts and examined from the perspective of the playwright's structure and style. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.

 SUN# THE 2220

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]; Literacy & Critical Inquiry [L]-in combo

**Division:** Communication & Fine Arts

**Theater Performance/Production (THP)****THP112 / Acting I****3 Credits / 4.0 Periods for Lecture & Lab**

Fundamental techniques and terminology of acting through physical and vocal expression, improvisation, and monologue and scene work. Emphasis on characterization. Prerequisites: None.

**Division:** Communication & Fine Arts

**THP201AA / Theatre Production I****1 Credit / 2.0 Periods for Laboratory**

Designed to give college credit to the cast and technical production crews of college theatre productions. Prerequisites: None. Course Notes: THP201AA may be repeated for a total of four (4) credit hours.

**Division:** Communication & Fine Arts

**THP201AB / Theatre Production II****2 Credits / 4.0 Periods for Laboratory**

Designed to give college credit to the cast and technical production crews of college theatre productions. Prerequisites: None. Course Notes: THP201AB may be repeated for a total of four (4) credit hours.

**Division:** Communication & Fine Arts

**THP212 / Acting II****3 Credits / 4.0 Periods for Lecture & Lab**

Fundamental techniques of acting through script analysis, rehearsal, and performance. Prerequisites: A grade of C or better in THP112 or permission of Department or Division.

**Division:** Communication & Fine Arts

**THP213 / Introduction to Technical Theatre****4 Credits / 2.0 Periods for Laboratory, 4.0 Periods for Lecture**

Procedures of technical theatre production and demonstration. Topics include design and construction of scenery, lighting, and properties.

Prerequisites: None.

**Division:** Communication & Fine Arts**THP273 / Musical Theatre Production****1 Credit / 5.0 Periods for Laboratory**

Principles and techniques for musical theatre production performance.

Includes audition techniques, stage directions, character role

development, rehearsal techniques, vocal acting styles and vocal

technique, stage movement, crew roles, and performance. Prerequisites:

By audition.

**Crosslisted:** MUP273**Division:** Communication & Fine Arts**Theatre and Film (THF)****THF115 / Makeup for Stage and Screen****3 Credits / 4.0 Periods for Lecture & Lab**

Purposes, materials, and techniques of makeup for stage and screen.

Prerequisites: None.

**Division:** Communication & Fine Arts**THF205 / Introduction to Cinema****3 Credits / 3.0 Periods for Lecture**

Survey of the history and development of the art of motion pictures,

including criticism of aesthetic and technical elements. Prerequisites:

None.

**Crosslisted:** HUM205**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design

[HU]-in combo

**Division:** Communication & Fine Arts**THF206 / Introduction to Television Arts****3 Credits / 3.0 Periods for Lecture**

History and development of electronic media and its impact on popular

arts. Prerequisites: None.

**Crosslisted:** HUM206**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design

[HU]-in combo

**Division:** Communication & Fine Arts**THF209 / Acting for the Camera****3 Credits / 4.0 Periods for Lecture & Lab**

Special technical aspects of acting before a camera. Prerequisites: A

grade of C or better in THP112 or permission of Instructor.

**Division:** Communication & Fine Arts**THF210 / Contemporary Cinema****3 Credits / 3.0 Periods for Lecture**

A study of contemporary films, directors and critics with emphasis on

evaluating film as an art form. Prerequisites: None.

**Crosslisted:** HUM210**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design

[HU]-in combo

**Division:** Communication & Fine Arts**THF219 / Advanced Acting for the Camera****3 Credits / 4.0 Periods for Lecture & Lab**

Focuses on special technical aspects of advanced acting before a

camera. Prerequisites: A grade of C or better in THF209 or permission of

Instructor.

**Division:** Communication & Fine Arts

# Illustration, Certificate of Completion



## VISUAL AND PERFORMING ARTS

**Certificate of Completion:** CCL 5174**31 Credits****Program Contact**

Louis Mendoza | 480-732-7089 | louis.mendoza@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Illustration develops knowledge and skills in creating visual narratives through traditional and digital media. The program emphasizes art principles, knowledge, and skills needed to solve design and compositional problems. Areas of emphasis include graphic arts, publications, and storyboarding for animation, video, and media. This certificate prepares students for employment and upgrades the skills of persons employed in occupations such as freelance artist-designer, concept artist, visual development artist for gaming/film, and storyboarder. Students may also pursue an Associate in Applied Science (AAS) in Illustration and Sequential Art.

## Program Notes

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

Code	Title	Credits	Semester
<b>Required Courses</b>			
AVC169	2D Media Design	3	_____
AVC177	Digital Photographic Imaging I	3	_____
AVC248	Design Self Promotion	3	_____
AVC289	Computer Illustration	3	_____
AVC100	Introduction to Digital Arts	1	_____
ART111	Drawing I	3	_____
ART113	Color	3	_____
or AVC114	Digital Color		_____
ART116	Life Drawing I	3	_____
AVC178	Digital Arts Studies	3	_____
<b>Restricted Electives</b>			
Students must select six credits from the following list of courses.		6	_____
Students may select from one emphasis or may select from different emphases to fulfill the six credit requirement			_____
<i>Animation Emphasis</i>			_____

AVC/ MMTOR184	Digital Animation I	_____
AVC/ MMTOR185	3D Modeling and Animation I	_____
<i>Drawing Emphasis</i>		
ART117	Life Drawing II	_____
ART118	Art Anatomy	_____
ART122	Drawing and Composition II	_____
<i>Painting Emphasis</i>		
ART165	Watercolor Painting I	_____
ART166	Watercolor Painting II	_____
ART167	Painting I	_____
ART168	Painting II	_____
ART263	Figure Painting	_____
<b>Total Credits</b>		<b>31</b>

## Illustration and Sequential Art, Associate in Applied Science



### VISUAL AND PERFORMING ARTS

Associate in Applied Science : AAS 3203

61-74 Credits

Program Contact

Louis Mendoza | 480-732-7089 | louis.mendoza@cgc.edu

## Program Description

The Associate in Applied Science (AAS) in Illustration and Sequential Art is designed for the student who wishes to develop an area of specialization in illustration and comics and sequential art. Students will develop narratives through traditional and digital media. The program emphasizes art principles, knowledge, and skills needed to solve design and compositional problems. Areas of emphasis include comic book and sequential art, illustration for publications, and storyboarding. It allows for the development of an individual's personal interest in this area, prepares students for employment, and upgrades skills of those already employed in this field. Employment opportunities are available in a variety of fields including, but not limited to, freelance artist-designer, concept artist, comics/sequential art, visual development artist for gaming/film, and storyboarder. A Certificate of Completion (CCL) in Illustration and in Sequential Art is also available.

## Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
<b>Required Courses</b>			
ART111	Drawing I	3	_____
AVC100	Introduction to Digital Arts	1	_____
AVC169	2D Media Design	3	_____
AVC177	Digital Photographic Imaging I	3	_____
AVC289	Computer Illustration	3	_____
ART113	Color	3	_____
or AVC114	Digital Color		_____
ART116	Life Drawing I	3	_____
AVC178	Digital Arts Studies	3	_____
<i>Capstone/Internship Course:</i>			
Select one of the following:		1-3	_____
AVC280AA	Digital Media Arts and Design Capstone		_____
or AVC280A	Digital Media Arts and Design Capstone		_____
or AVC280A	Digital Media Arts and Design Capstone		_____
AVC297AA	Commercial Art Internship		_____
or AVC297A	Commercial Art Internship		_____
or AVC297A	Commercial Art Internship		_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
<b>Restricted Electives</b>			
Select from one of the following areas of specialization:		9-18	_____
<i>Specialization 1: Sequential Art (18 credits)</i>			
AVC119	Penciling for Sequential Art		_____
AVC120	Inking for Sequential Art		_____
AVC219	Coloring, Toning and Lettering for Sequential Art		_____
AVC220	Publishing for the Comic Industry		_____
AVC221	Comics Creation		_____
CRW172	Introduction to Comic Book Writing		_____
or CRW176	Writing Narrative for Video Games		_____
or CRW190	Introduction to Screenwriting		_____

<b>Specialization 2: Illustration (9 credits)</b>		
AVC248	Design Self Promotion	
or ART255	Art Marketing	
Students must select six credits from the following list of courses.		
Students may select from one emphasis or may select from different emphases to fulfill the six credit requirement.		
<b>Animation Emphasis</b>		
AVC/	Digital Animation	
MMTOR184	I	
AVC/	3D Modeling and	
MMTOR185	Animation I	
<b>Drawing Emphasis</b>		
ART117	Life Drawing II	
ART118	Art Anatomy	
ART122	Drawing and Composition II	
<b>Painting Emphasis</b>		
ART165	Watercolor Painting I	
ART166	Watercolor Painting II	
ART167	Painting I	
ART168	Painting II	
ART263	Figure Painting	
<b>General Electives</b>		
Select additional courses 100-level or higher to complete the minimum credits required for this degree. Consult with the Program Director or an Academic Advisor.		0-6
<b>General Education</b>		
<b>Core</b>		
<b>First-Year Composition</b>		
ENG101	First-Year Composition	3
or ENG107	First-Year Composition for ESL	
ENG102	First-Year Composition	3
or ENG108	First-Year Composition for ESL	
<b>Oral Communication</b>		
Select one of the following:		3
COM100	Introduction to Human Communication	
COM110	Interpersonal Communication	
COM225	Public Speaking	
COM230	Small Group Communication	
<b>Critical Reading</b>		

Select one of the following:		0-3
CRE101	College Critical Reading and Critical Thinking	
Or equivalent as indicated by assessment		
<b>Mathematics</b>		
Select three to six credits from the following:		3-6
Any approved general education course(s) in the Mathematics area		
MAT140	College Mathematics <sup>1</sup>	
MAT141	College Mathematics <sup>1</sup>	
MAT142	College Mathematics <sup>1</sup>	
MAT145	College Mathematics with Review <sup>1</sup>	
MAT146	College Mathematics with Review <sup>1</sup>	
<b>Distribution</b>		
<b>Humanities, Arts and Design</b>		
ARH101	Art from Prehistory Through Middle Ages	3
or ARH102	Art from Renaissance to Modernism	
<b>Social and Behavioral Sciences</b>		
Any approved general education course(s) in the Social and Behavioral Sciences area		3
<b>Natural Sciences</b>		
Any approved general education course(s) in the Natural Sciences area		4
Total Credits		61-74

<sup>1</sup> Recommended for students planning to transfer to a four-year university.

## Photography, Associate in Applied Science



### VISUAL AND PERFORMING ARTS

Associate in Applied Science : AAS 3195

61-67 Credits

Program Contact

Buzzy Sullivan | 480-732-7291 | buzzy.sullivan@cgc.edu

## Program Description

The Associate in Applied Science (AAS) in Photography program is designed for the student who wishes to pursue a career in photography, either commercial or fine arts. Students will study digital and traditional film-based (darkroom) media, content and image selection, and the theory and practice of visual communication.

## Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

There will be costs for supplies and equipment in this program.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites:** None

Code	Title	Credits	Semester
<b>Required Courses</b>			
ARH101	Art from Prehistory Through Middle Ages	3	
or ARH102	Art from Renaissance to Modernism		
ARH115	History of Photography	3	
AVC100	Introduction to Digital Arts	1	
ART112	Two-Dimensional Design	3	
ART113	Color	3	
ART131	Photography I	3	
ART132	Photography II	3	
AVC142	Introduction to Digital Photography	3	
AVC143	Intermediate Digital Photography	3	
ART255	Art Marketing	1-3	
or ART255AB	The Portfolio		
FYE101	Introduction to College, Career and Personal Success	1-3	
or FYE103	Exploration of College, Career and Personal Success		
<b>Restricted Electives</b>			
Complete all courses in the specialization below that best aligns with your academic and professional goals.		8-20	
Specialization I: Commercial Photography (p. 204)			
Specialization II: Fine Art Photography (p. 204)			

### General Electives

Select courses 100-level or higher to complete the minimum total program credits required for this degree. Consult with the Program Director or an Academic Advisor. <sup>1</sup>	0-7
---	-----

### General Education

#### Core

#### First-Year Composition

ENG101	First-Year Composition	3
or ENG107	First-Year Composition for ESL	

ENG102	First-Year Composition	3
or ENG108	First-Year Composition for ESL	

#### Oral Communication

Select one of the following:	3
------------------------------	---

COM100	Introduction to Human Communication
--------	-------------------------------------

COM110	Interpersonal Communication
--------	-----------------------------

COM225	Public Speaking
--------	-----------------

COM230	Small Group Communication
--------	---------------------------

#### Critical Reading

Select one of the following:	0-3
------------------------------	-----

CRE101	College Critical Reading and Critical Thinking
--------	--

OR Equivalent as indicated by assessment

#### Mathematics

Select one of the following:	3-6
------------------------------	-----

MAT140	College Mathematics
--------	---------------------

MAT141	College Mathematics
--------	---------------------

MAT142	College Mathematics
--------	---------------------

MAT145	College Mathematics with Review
--------	---------------------------------

MAT146	College Mathematics with Review
--------	---------------------------------

Any approved General Education course in the Mathematical Applications (MA) area

#### Distribution

#### Humanities, Arts and Design

Met by Required Courses <sup>2</sup>	0
--------------------------------------	---

#### Social and Behavioral Sciences

Any approved general education course from the Social and Behavioral Sciences (SB) area	3
---	---



**Natural Sciences**

Any approved general education course(s) in the Natural Sciences (Quantitative) (SQ) area or the Natural Sciences (General) (SG) area.	4	
Total Credits	61-67	

<sup>1</sup> Recommend that students interested in transferring to a four-year institution to earn a bachelor's degree take courses that fulfill any unmet Arizona General Education Curriculum (AGEC) requirements

<sup>2</sup> Met by ARH101 Art from Prehistory Through Middle Ages or ARH102 Art from Renaissance to Modernism or ARH115 History of Photography or ART131 Photography I in Required Courses

## Specializations

### Specialization I: Commercial Photography

Code	Title	Credits	Semester
AVC138	Commercial Photography I	3	
AVC139	Commercial Photography II	3	
AVC140	Portrait Photography	3	
or AVC237	Fashion Photography		
SBS200	Small Business Operations	2	
Select one of the following:		2-3	
MKT110	Marketing and Social Networking		
MKT263	Advertising Principles		
MKT271	Principles of Marketing		
SBS204	Small Business Marketing And Advertising		
In consultation with advisor or program coordinator, choose up to six (6) credits of coursework from the following list to best fulfill goals and complete the minimum total program credits required for this degree.		0-6	
AVC169	2D Media Design		
AVC177	Digital Photographic Imaging I		
ART111	Drawing I		
ART116	Life Drawing I		
ART137	Alternative Photographic Processes		
ART234	Color Photography		

ART290AC	Studio Art	
ART290EC	Studio Art: Photography	
ART290MC	Studio Art: Digital Photography	
ART295DA	Art Workshop/Seminar: Photography	
ART295DB	Art Workshop/Seminar: Photography	
ART295DC	Art Workshop/Seminar: Photography	
AVC178	Digital Arts Studies	
AVC181	Graphic Design I	
AVC270	Digital Photographic Imaging II	
AVC297AA	Commercial Art Internship	
AVC297AB	Commercial Art Internship	
FMP108	Video Production	
<b>Total Credits</b>	<b>13-20</b>	

### Specialization II: Fine Art Photography

Code	Title	Credits	Semester
ART133	Photography III	3	
ART137	Alternative Photographic Processes	3	
Select two to nine credits from the following:		2-9	
AVC169	2D Media Design		
AVC177	Digital Photographic Imaging I		
ART111	Drawing I		
ART116	Life Drawing I		
ART234	Color Photography		
ART250	Introduction to Printmaking		
ART134	Photography IV		
ART290AC	Studio Art		
ART290EC	Studio Art: Photography		
ART290MC	Studio Art: Digital Photography		
ART295DA	Art Workshop/Seminar: Photography		

ART295DB	Art Workshop/ Seminar: Photography	_____
ART295DC	Art Workshop/ Seminar: Photography	_____
AVC178	Digital Arts Studies	_____
AVC270	Digital Photographic Imaging II	_____
AVC274	Digital Photographic Imaging III	_____
AVC297AA	Commercial Art Internship	_____
SBS200	Small Business Operations	_____
SBS204	Small Business Marketing And Advertising	_____
<b>Total Credits</b>		<b>8-15</b>

## Sequential Art, Certificate of Completion



### VISUAL AND PERFORMING ARTS

**Certificate of Completion:** CCL 5177

**40 Credits**

**Program Contact**

Louis Mendoza | 480-732-7089 | louis.mendoza@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Sequential Art develops knowledge and skills in the area of sequential art, including but not limited to comics, graphic novels, anime, children's books, self-publishing, digital illustration, and storyboarding for digital media. Students will develop diverse narratives that reflect cultural, historical, and social diversity. The program provides the student with an understanding of writing for sequential art, illustration techniques, and digital media tools for illustration, layout and publication. This certificate prepares students for employment and upgrades the skills of persons employed in occupations such as illustrator, comic book artist, storyboarder, cartoonist, penciler, inker, colorist, letterer, production artist, game designer, and comic book writer. An Associate in Applied Science (AAS) in Illustration and Sequential Art is also available.

## Program Notes

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites:** None

Code	Title	Credits	Semester
<b>Required Courses</b>			
ART111	Drawing I	3	_____
AVC169	2D Media Design	3	_____
AVC177	Digital Photographic Imaging I	3	_____
AVC289	Computer Illustration	3	_____
AVC100	Introduction to Digital Arts	1	_____
ART113 or AVC114	Color Digital Color	3	_____
ART116	Life Drawing I	3	_____
AVC119	Penciling for Sequential Art	3	_____
AVC120	Inking for Sequential Art	3	_____
AVC178	Digital Arts Studies	3	_____
AVC219	Coloring, Toning and Lettering for Sequential Art	3	_____
AVC220	Publishing for the Comic Industry	3	_____
AVC221	Comics Creation	3	_____
Select one of the following:		3	_____
CRW172	Introduction to Comic Book Writing		_____
CRW176	Writing Narrative for Video Games		_____
CRW190	Introduction to Screenwriting		_____
<b>Total Credits</b>		<b>40</b>	_____

## Composition, Creative Writing & Literature

David Finley, Division Chair  
(480) 726-4125 | david.finley@cgc.edu

### Courses

Prefix	Course
CRE	Critical Reading
CRW	Creative Writing
ENG	English
ENH	English Humanities
GST	Game Studies
HUM	Humanities
JRN	Journalism

RDG	Reading
WAC	Writing Across Curriculum

## Career Programs

### Creative Writing

- Creative Writing, Academic Certificate (p. 210)

## Creative Writing

### Finn, Patrick

- A.A., Riverside Community College
- B.A., University of California, Riverside
- M.F.A., University of Arizona

## English

### Chardon, Diane

- B.A., Louisiana State University
- M.A., Ph.D., Arizona State University

### Dean, John

- B.A., Arizona State University
- M.F.A., Texas State University

### Fernandez, Miguel

- B.A., M.A., New York University

### Fields, Gregg

- B.A., M.A., California State University - San Marcos

### Finley, David

#### *Division Chair*

- B.A., Appalachian State University
- M.A., Arizona State University

### Hope, Kate

- M.A., Northern Arizona University

### Horn, Heather

- B.A., Rice University
- M.A., Ph.D., University of Wisconsin-Madison

### Marsee, Michele

- B.A., Chapman University
- M.A., Ph.D., University of New Mexico

### Moser, Teri

- B.A., M.A., Utah State University
- Ph.D., Arizona State University

### Rodriguez, Maria

- M.A., Northern Arizona University

### Rude, Renee

- B.S., M.E., Ph.D., Northern Arizona University

### Soza, Robert

- Ph.D., University of California

### Tinkle-Williams, Keziah

- A.A., Spokane Community College
- B.A., M.A., Eastern Washington University
- Ph.D., Grand Canyon University

### Toms, Malik

- B.A., M.A., Iowa State University

### Wilkowski, Colleen

- M.A., Arizona State University

### Williams, Patrick

- B.A., M.A., Eastern Washington University
- Ed.D., Northern Arizona University

## Reading

### Ohmberger, Maryellen

- B.A., CUNY Queens College
- M.Ed., Arizona State University

### Sindel-Arrington, Tricia

- B.S., University of Arizona
- M.Ed., Northern Arizona University
- Ph.D., Arizona State University

## Critical Reading (CRE)

### CRE101 / College Critical Reading and Critical Thinking

#### 3 Credits / 3.0 Periods for Lecture

Develop and apply critical thinking skills through critically reading varied and challenging materials. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks. Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG095 or RDG100 or RDG100LL or RDG111 or RDG112 or RDG113)] or a grade of B or better in ALT100 or an appropriate district placement or permission of Instructor.

**Fulfills:** Literacy & Critical Inquiry [L]; Literacy & Critical Inquiry [L]-in combo

**Division:** Composition, Creative Writing, and Literature

## Creative Writing (CRW)

### CRW150 / Introduction to Creative Writing

#### 3 Credits / 3.0 Periods for Lecture

Introduction to the basic aesthetics and techniques in contemporary creative writing within a variety of genres. Introduction to the analytical concepts and terminology necessary to understand, interpret, and enact contemporary creative writing. Facilitation of writing practices and evaluation. Introduction to literature's role in society. Prerequisites: None.

**Division:** Composition, Creative Writing, and Literature

**CRW160 / Introduction to Writing Poetry****3 Credits / 3.0 Periods for Lecture**

Prewriting (invention and discovery); writing; analyzing and evaluating (in workshop); and revising to practice manipulating various elements of poetry, critique one's own and the poetry of others, and produce a portfolio of finished, marketable poems. Prerequisites: None. CRW150 recommended but not required.

**Division:** Composition, Creative Writing, and Literature

**CRW170 / Introduction to Writing Fiction****3 Credits / 3.0 Periods for Lecture**

Practice in writing fiction through a process of prewriting (invention and discovery), writing, analysis and evaluation (in workshop), and revision; practice in manipulating various elements and forms of fiction. Prerequisites: None. CRW150 recommended but not required.

**Division:** Composition, Creative Writing, and Literature

**CRW172 / Introduction to Comic Book Writing****3 Credits / 3.0 Periods for Lecture**

Introduction to elements and techniques of comic book writing in its specific form; teaches terminology and concepts needed for the successful participation in writing workshops; focuses on proposal outline, planning, structure facilitates writing practice (including character study) and evaluation; offers individual suggestions in the student's development in this genre. Prerequisites: None.

**Division:** Composition, Creative Writing, and Literature

**CRW176 / Writing Narrative for Video Games****3 Credits / 3.0 Periods for Lecture**

Provides an introduction to narrative theory as it relates to video game production. Delivers a variety of video game storylines, narrative theories, and processes for narrative development in video games. Terminology and video game industry standards are covered. Offers discussion of team building and the role of video games in society. Prerequisites: None.

**Division:** Composition, Creative Writing, and Literature

**CRW180 / Introduction to Writing Nonfiction****3 Credits / 3.0 Periods for Lecture**

Practice in writing creative nonfiction, including autobiography and biography, the essay, reviews, and humor using a process of invention and discovery, writing, analysis, evaluation, and revision. Combines lecture, discussion, and workshop, leading to the production of marketable quality creative nonfiction. Prerequisites: None. CRW150 recommended but not required.

**Division:** Composition, Creative Writing, and Literature

**CRW190 / Introduction to Screenwriting****3 Credits / 3.0 Periods for Lecture**

Overview of screenwriting elements; introduction to screenwriting techniques. Prerequisites: None. CRW150 recommended but not required.

**Division:** Composition, Creative Writing, and Literature

**CRW200 / Readings for Writers****1 Credit / 1.0 Periods for Laboratory**

Close analysis and interpretation of selected literary texts designed to strengthen the students' own writing by extending their familiarity with the genre in which they write and their knowledge of selected literary elements. One-on-one meetings between student and instructor. Prerequisites: A grade of C or better in CRW150 or permission of Instructor.

**Division:** Composition, Creative Writing, and Literature

**CRW201 / Portfolio****1 Credit / 1.0 Periods for Laboratory**

Close analysis of the creative writing portfolio culminating in selection, revision, editing, and compiling of the student's own literary work in a portfolio. Students meet individually with instructor to choose, prepare, and compile their work. Prerequisites: Acceptance to Creative Writing(CRW) program, completion of nine (9) credit hours of CRW course work, or permission of Program Coordinator. Course Notes: CRW201 may be repeated for a total of two (2) credit hours.

**Division:** Composition, Creative Writing, and Literature

**CRW260 / Intermediate Poetry Writing****3 Credits / 3.0 Periods for Lecture**

Emphasis on writing a series of original poems; analysis and evaluation of the functions and effects of established works of poetry; concentration on evaluation and revising students' poetry through intensive workshops. Prerequisites: A grade of C or better in CRW160 or permission of Instructor.

**Division:** Composition, Creative Writing, and Literature

**CRW272 / Planning and Structuring the Novel****3 Credits / 3.0 Periods for Lecture**

Focus on planning, structuring, and beginning a novel; prewriting, writing, analysis, evaluation, and revision of novel plans and excerpts. Prerequisites: A grade of C or better in CRW150 or permission of Instructor.

**Division:** Composition, Creative Writing, and Literature

**English (ENG)****ENG101 / First-Year Composition****3 Credits / 3.0 Periods for Lecture**

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, or WAC101), or (a grade of B or better in ALT100), or (a grade of C in ALT100 and Corequisites: ENG101LL, or ENG107LL, or WAC101, or ENG100A+), or (a grade of C or better in ESL202 and Corequisites: ENG101LL, or ENG107LL, or WAC101, or ENG100A+).

**Division:** Composition, Creative Writing, and Literature

**ENG102 / First-Year Composition****3 Credits / 3.0 Periods for Lecture**

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.

 SUN# ENG 1102

**Fulfills:** First-Year Composition (FYC)

**Division:** Composition, Creative Writing, and Literature

**ENG111 / Technical and Professional Writing****3 Credits / 3.0 Periods for Lecture**

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.

**Division:** Composition, Creative Writing, and Literature

**ENG200 / Reading and Writing About Literature****3 Credits / 3.0 Periods for Lecture**

Emphasis on critical analysis of various genres of literature; includes study of necessary terminology, introduction to methods of literary criticism, and practice in interpretation and evaluation. Prerequisites: A grade of C or better in ENG102.

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]; Literacy & Critical Inquiry [L]-in combo

**Division:** Composition, Creative Writing, and Literature

**ENG217 / Personal and Exploratory Writing****3 Credits / 3.0 Periods for Lecture**

Using writing to explore one's self and the world one lives in; emphasis on journal writing as a source and inspiration for public writing. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.

**Fulfills:** Literacy & Critical Inquiry [L]; Literacy & Critical Inquiry [L]-in combo

**Division:** Composition, Creative Writing, and Literature

**English Humanities (ENH)****ENH110 / Introduction to Literature****3 Credits / 3.0 Periods for Lecture**

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.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Composition, Creative Writing, and Literature

**ENH111 / Literature and the American Experience****3 Credits / 3.0 Periods for Lecture**

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.

**Division:** Composition, Creative Writing, and Literature

**ENH112 / Chicano Literature****3 Credits / 3.0 Periods for Lecture**

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.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Composition, Creative Writing, and Literature

**ENH113 / Writers/Directors and Current Issues****3 Credits / 3.0 Periods for Lecture**

In-depth analysis of literary texts by contemporary writers/directors throughout the world, including essayists, journalists, playwrights, novelists, directors, short story writers, and/or poets. Examines perspectives representing a variety of cultures. Critical responses to current issues of worldwide interest examined, including topics as environment, technology, medicine, economics, politics, education, human rights, law and order. Prerequisites: None.

**Division:** Composition, Creative Writing, and Literature

**ENH242 / American Literature After 1860****3 Credits / 3.0 Periods for Lecture**

Includes literature written after 1860 in the United States. Prerequisites: None.

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Composition, Creative Writing, and Literature

**ENH190 / Introduction to US Ethnic Literature****3 Credits / 3.0 Periods for Lecture**

Introduction to the US ethnic literatures of African Americans, Arab Americans, Asian Americans, Latinas/os, Native Americans, Mixed Race, and other emerging ethnic groups through various expressions. Examines the interconnections of the various experiences of racialized groups living in the US. Provides ethnic US literature a global context through study of the interconnections with the literatures of Africa, Asia, Latin America, and Oceania. Focus on literary production of at least four specific US ethnic groups and relevant international literatures. Prerequisites or Corequisites: ENG101 or ENG107.

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Historical Awareness [H]; Historical Awareness [H]-in combo

**Division:** Composition, Creative Writing, and Literature

**ENH241 / American Literature Before 1860****3 Credits / 3.0 Periods for Lecture**

Includes literature written prior to 1860 in the United States. Prerequisites: A grade of C or better in ENG101.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]; Literacy & Critical Inquiry [L]-in combo

**Division:** Composition, Creative Writing, and Literature

**ENH251 / Mythology****3 Credits / 3.0 Periods for Lecture**

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.

**Fulfills:** Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Composition, Creative Writing, and Literature

**ENH253 / Contemporary Global Literature and Film****3 Credits / 3.0 Periods for Lecture**

Characteristics of literary and cinematic mediums. Challenges of adapting literature to film. Global examination of historical, religious, socioeconomic, political, and colonial/post colonial themes depicted in Western and non-Western literature and film (e. g., Africa, Asia, and Latin America) outside the United States. Use of narrative in each medium and how it translates various global/international perspectives and cultural assumptions. Specific genres present in literature and film. Cultural metaphors and symbols used in literature and film. Prerequisites: A grade of C or better in ENG101.

**Fulfills:** Literacy & Critical Inquiry [L]; Literacy & Critical Inquiry [L]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Global Awareness [G]; Global Awareness [G]-in combo

**Division:** Composition, Creative Writing, and Literature

**ENH255 / Contemporary U.S. Literature and Film****3 Credits / 3.0 Periods for Lecture**

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: A grade of C or better in ENG101.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]; Literacy & Critical Inquiry [L]-in combo

**Division:** Composition, Creative Writing, and Literature

**ENH260 / Literature of the Southwest****3 Credits / 3.0 Periods for Lecture**

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.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Composition, Creative Writing, and Literature

**ENH284 / 19th Century Women Writers****3 Credits / 3.0 Periods for Lecture**

Investigates major themes in literature by women writing in the 19th century including the nature of women's lives in the family, in work situations, and in society. Poetry, prose, essays and drama are examined with an emphasis on common themes. Prerequisites: None.

**Crosslisted:** WST284

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Composition, Creative Writing, and Literature

**ENH285 / Contemporary Women Writers****3 Credits / 3.0 Periods for Lecture**

Explores twentieth century literature (short stories, essays, plays, and poetry) written by women and about women. Focus on themes relevant to women's lives regardless of age, creed, or ethnic background. Prerequisites: None.

**Crosslisted:** WST285

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Composition, Creative Writing, and Literature

**Game Studies (GST)****GST202 / Games, Culture and Aesthetics****3 Credits / 3.0 Periods for Lecture**

Considers games as artifacts and expressions of our basic consciousness, humanity, and potential. Explores through the lens of world cultures such concepts as values, power relations, gender roles, arts, aesthetics, and desire. Compares games across cultural, temporal, geographic, and linguistic divides, for the purpose of examining and appreciating the experiences, contributions, and values of diverse populations, as conveyed through the global phenomenon of games. Prerequisites: A grade of C or better in RDG100, or RDG100LL, or (RDG100AA and RDG100AB and RDG100AC), or RDG111, or RDG112, or RDG113, or eligibility for ENG101 as indicated by appropriate writing assessment test score.

**Fulfills:** Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Composition, Creative Writing, and Literature

**Humanities (HUM)****HUM201 / Humanities: Universal Themes****3 Credits / 3.0 Periods for Lecture**

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.

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Global Awareness [G]; Global Awareness [G]-in combo

**Division:** Composition, Creative Writing, and Literature

**HUM205 / Introduction to Cinema****3 Credits / 3.0 Periods for Lecture**

Survey of the history and development of the art of motion pictures, including criticism of aesthetic and technical elements. Prerequisites: None.

**Crosslisted:** THF205

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Composition, Creative Writing, and Literature

**HUM209 / Women and Films****3 Credits / 3.0 Periods for Lecture**

Analysis of images of women in films from both historical and contemporary perspectives. Prerequisites: None.

**Crosslisted:** WST209

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Composition, Creative Writing, and Literature

**HUM213 / Hispanic Film****3 Credits / 3.0 Periods for Lecture**

Analysis of Hispanic film as art form and as social commentary. Prerequisites: None.

**Fulfills:** Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Composition, Creative Writing, and Literature

**HUM245 / Introduction to Holocaust Studies****3 Credits / 3.0 Periods for Lecture**

Introduction to essential information about the Holocaust. Provides theological, social and political background to establish contexts of anti-Semitism, especially in 19th and 20th centuries, with particular attention to National Socialist ideologies. Ghetto and camp life, including resistance, are explored. Emphasis is on texts of the Holocaust, including historical documents, participant testimonies, fiction, creative non-fiction, and poetry, much of which involves theological and moral debate. Includes analysis of supplementary visual material and some performing arts. Prerequisites: None. CRE101 or equivalent as indicated by appropriate reading placement recommended but not required.

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Composition, Creative Writing, and Literature

**HUM250 / Ideas and Values in the Humanities: Early Civilizations to the Renaissance****3 Credits / 3.0 Periods for Lecture**

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: A grade of C or better in ENG101.

**Fulfills:** Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]; Literacy & Critical Inquiry [L]-in combo

**Division:** Composition, Creative Writing, and Literature

**HUM251 / Ideas and Values in the Humanities: Renaissance to the Contemporary World****3 Credits / 3.0 Periods for Lecture**


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: A grade of C or better in ENG101.

**Fulfills:** Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]; Literacy & Critical Inquiry [L]-in combo

**Division:** Composition, Creative Writing, and Literature

**Journalism (JRN)****JRN201 / News Writing****3 Credits / 3.0 Periods for Lecture**

Writing and producing news for the media. Associated Press (AP) editing style, writing skills, and organizational structure for news. Prerequisites: A grade of C or better in ENG101 or ENG107.

 SUN# JRN 2201

**Fulfills:** Literacy & Critical Inquiry [L]; Literacy & Critical Inquiry [L]-in combo

**Division:** Composition, Creative Writing, and Literature

**Reading (RDG)****RDG100 / Successful College Reading****3 Credits / 3.0 Periods for Lecture**

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 ALT100, or RDG081, or appropriate reading placement or permission of Instructor. Corequisites: Any 100-level course in another content area or permission of Instructor. Course Notes: RDG100 may be repeated for a total of twelve (12) credit hours.

**Division:** Composition, Creative Writing, and Literature

**RDG100LL / Disciplinary Literacy Lab****1 Credit / 3.0 Periods for Laboratory**

Supplemental instruction for college-level discipline courses. Focus on developing effective reading processes to address a range of literacy needs including reading, writing, digital, numerical, financial and informational literacies. Prerequisites: None. Corequisites: Any 100-level course in another content area or permission of Instructor.

**Division:** Composition, Creative Writing, and Literature

**Writing Across Curriculum (WAC)****WAC101 / Writing Across the Curriculum****3 Credits / 3.0 Periods for Lecture**

Expressive, expository, and academic writing experiences to develop students' rhetoric and composition foundation. Experience planning and drafting multi-paragraph essays through a writing process with emphasis on essay and paragraph structure and the elements of sentence structure. Participation in writing workshop, group work, reading to support writing tasks, and writing from sources. A minimum of three multi-paragraph essays and a final reflection paper. Prerequisites: None.

**Division:** Composition, Creative Writing, and Literature

**Creative Writing, Academic Certificate**

**Academic Certificate: AC 6224N**

**24 Credits**

**Program Contact**

Patrick Finn | 480-857-5543 | patrick.finn@cgc.edu

**Program Description**

The Academic Certificate (AC) in Creative Writing program 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 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 aims to serve a diverse community who may be underrepresented in traditional creative writing programs. 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

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Admission Criteria

Students who wish to enroll in the Creative Writing program must complete a formal application; contact Program Director.

## Program Requirements

**Program Prerequisites:** None

Code	Title	Credits	Semester
<b>Required Courses</b>			
CRW150	Introduction to Creative Writing <sup>1</sup>	3	_____
CRW200	Readings for Writers <sup>2</sup>	1	_____
CRW200	Readings for Writers <sup>2</sup>	1	_____
CRW201	Portfolio	1	_____
<b>Series I</b>			
Students must complete six credits from Series I in consultation with a Program Director.			
Select two of the following:		6	_____
CRW120	Introduction to Writing Children's Literature		_____
CRW160	Introduction to Writing Poetry		_____
CRW170	Introduction to Writing Fiction		_____
CRW172	Introduction to Comic Book Writing		_____
CRW180	Introduction to Writing Nonfiction		_____
CRW190	Introduction to Screenwriting		_____
THO118	Playwriting		_____
<b>Series II</b>			
Students must complete nine credits from Series II in consultation with a Program Director.			
Select three of the following:		9	_____
CRW202	The Writer as Witness		_____
CRW203	Dialogue		_____
CRW204	Journaling		_____

CRW220	Intermediate Writing Children's Literature	_____
CRW251	Topics in Creative Writing	_____
CRW260	Intermediate Poetry Writing	_____
CRW261	Topics in Writing: Poetry	_____
CRW270	Intermediate Fiction Writing	_____
CRW271	Topics in Writing: Fiction	_____
CRW272	Planning and Structuring the Novel	_____
CRW273	Writing the Novel	_____
CRW274	Revising the Novel	_____
CRW281	Topics in Writing: Non-Fiction	_____
CRW290	Intermediate Screenwriting	_____
CRW291	Topics in Writing: Plays	_____
<b>Restricted Electives</b>		
Select one of the following:		3
CRW+++++	Any CRW Creative Writing prefixed course (not listed under Required Courses area)	_____
ENG235	Magazine Article Writing	_____
ENH+++++	Any ENH English Humanities prefixed course	_____
THE260	Film Analysis	_____
HUM/THFOR210	Contemporary Cinema	_____
<b>Total Credits</b>		<b>24</b>

<sup>1</sup> ENG210 Creative Writing may be substituted for CRW150 Introduction to Creative Writing with permission of the Program Director.

<sup>2</sup> CRW200 Readings for Writers must be repeated for a total two credits

## Counseling

Audra Wolfe, Program Co-Director  
(480) 857-5135 | counseling (counseling@cgcc.edu)@cgcc.edu  
(counseling@cgcc.edu)

## Courses

Prefix	Course
CAP	Counseling and Applied Psychology
CPD	Counseling and Personal Development
FYE	First Year Experience

### Adams, Ryan

Program Co-Director, Counseling (Services)

- B.S., University of Illinois at Urbana-Champaign
- M.Ed., Ph.D., Arizona State University

### Nieset, Nikki

Counseling Services

- B.A., The Ohio State University
- M.Ed., Ph.D., Arizona State University

### Parsi, Yasaman

Counseling Services

- Master of Counseling & M.Ed., Arizona State University

### Wolfe, Audra

Program Co-Director, Counseling (Academics)

- A.A., Mesa Community College
- B.S., M.C., Arizona State University

## Counseling and Applied Psychology (CAP)

### CAP120 / Introduction to Counseling

#### 3 Credits / 3.0 Periods for Lecture

Introduction to the field of counseling with a focus on skills and competencies needed as a mental health practitioner. Foundations of counseling including counseling theories, ethical considerations, prevention and intervention topics, and multicultural counseling practices. Prerequisites: None.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Counseling

### CAP220 / The Counselor in a Multicultural Society

#### 3 Credits / 3.0 Periods for Lecture

Current theories and research on culture, race and ethnicity, gender and other aspects of cultural diversity in a multicultural society through the lens of counseling. Focus on personal perspectives, will explore themes, theories, topics and research related to power, privilege and oppression in the United States as applied to counseling discipline. Prerequisites: None.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]

**Division:** Counseling

### CAP240 / Introduction to Counseling Skills

#### 3 Credits / 3.0 Periods for Lecture

Introduction to basic skills and techniques used in the counseling field. Focuses on active listening, self-awareness, and other related skills.

Prerequisites: A grade of C or better in CAP120.

**Division:** Counseling

### CAP260 / Career and Professional Preparation for the Helping Professions

#### 3 Credits / 3.0 Periods for Lecture

Overview of the process of career and life planning through self-awareness for students interested in helping fields. Focus on current occupational trends and outlook, the learning models of the individual, the world of work, and decision-making. Emphasis on individual application and workplace diversity. Design materials for use in the professional world such as resumes, online presence, career portfolio. Prerequisites: A grade of C or better in ENG101.

**Fulfills:** Literacy & Critical Inquiry [L]; Literacy & Critical Inquiry [L]-in combo

**Division:** Counseling

## Counseling and Personal Development (CPD)

### CPD115 / Creating College Success

#### 1 Credit / 1.0 Periods for Lecture

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.

**Division:** Counseling

### CPD150 / Strategies for College Success

#### 3 Credits / 3.0 Periods for Lecture

Focus on increasing student success through college orientation and personal growth, study skills development, and educational and career planning. Prerequisites: None.

**Division:** Counseling

### CPD150AC / Educational and Career Planning

#### 1 Credit / 1.0 Periods for Lecture

Emphasis on increasing student success through educational and career planning. Prerequisites: None.

**Division:** Counseling

### CPD160 / Introduction to Multiculturalism

#### 3 Credits / 3.0 Periods for Lecture

Examination of the multiple cultures and subcultures within the contemporary United States. Personal exploration of awareness and appreciation of multiculturalism. Activities for experiencing diverse cultural perspectives. Critical thinking skills for recognizing, analyzing, and mediating cultural and psychological factors impacting conflict and accord between diverse cultures through written and oral discourse. Prerequisites: A grade of C or better in ENG101 or ENG107, or permission of Instructor.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Literacy & Critical Inquiry [L]; Literacy & Critical Inquiry [L]-in combo

**Division:** Counseling

## First Year Experience (FYE)

### FYE101 / Introduction to College, Career and Personal Success

#### 1 Credit / 1.0 Periods for Lecture

Focus on student success through exploration of academic, career and life skills. Includes study of goal-setting/success strategies, academic mindset and financial literacy. Develop an education/career plan utilizing career assessments and other college resources. Prerequisites: None.

**Division:** Counseling

**FYE103 / Exploration of College, Career and Personal Success****3 Credits / 3.0 Periods for Lecture**

Focus on student success through exploration of academic, career, and life skills. Includes study of goal-setting/success strategies, academic mindset, interpersonal skills, financial literacy, self-care strategies, diverse perspectives, and campus tools and resources. Develop an education/career plan utilizing career assessments and other college resources.

Prerequisites: None.

Division: Counseling

## Health Science and Public Service

Andrea Villarreal, Division Chair

480-726-4246 | andrea.villarreal@cgc.edu

### Courses

Prefix	Course
AJS	Administration of Justice Studies
EMT	Emergency Medical Technology
EXS	Exercise Science
FON	Food and Nutrition
HES	Health Science
MSP	Mortuary Science
PED	Physical Education
REC	Recreation
WED	Wellness Education

### Career Programs

Administration of Justice

Administration of Justice Studies

Corrections

Crime Scene Investigation

Emergency Medical Technology

Emergency Medical Technology Comprehensive

Exercise Science: Health, Fitness and Sports Performance

Fingerprint Identification and Photography

Forensic Science

Homeland Security

Law Enforcement

Law Enforcement Training

Law Enforcement Training Academy

Leadership in Public Safety Organizations

Legal Studies

Mortuary Science

Personal Training

Personal Training: Advanced

Victimology

## Associate in Applied Science (AAS)

- Administration of Justice Studies, Associate in Applied Science (p. 219)
- Exercise Science: Health, Fitness and Sports Performance, Associate in Applied Science (p. 225)
- Forensic Science, Associate in Applied Science (p. 227)
- Law Enforcement Training, Associate in Applied Science (p. 231)
- Mortuary Science, Associate in Applied Science (p. 234)

## Certificate of Completion (CCL)

- Administration of Justice, Certificate of Completion (p. 222)
- Corrections, Certificate of Completion (p. 222)
- Crime Scene Investigation, Certificate of Completion (p. 223)
- Emergency Medical Technology Comprehensive, Certificate of Completion (p. 224)
- Emergency Medical Technology, Certificate of Completion (p. 223)
- Fingerprint Identification and Photography, Certificate of Completion (p. 227)
- Forensic Science, Certificate of Completion (p. 229)
- Homeland Security, Certificate of Completion (p. 230)
- Law Enforcement Training Academy, Certificate of Completion (p. 232)
- Law Enforcement, Certificate of Completion (p. 230)
- Leadership in Public Safety Organizations, Certificate of Completion (p. 233)
- Legal Studies, Certificate of Completion (p. 233)
- Personal Training, Certificate of Completion (p. 235)
- Personal Training: Advanced, Certificate of Completion (p. 236)
- Victimology, Certificate of Completion (p. 238)

### Administration of Justice

Jacquin, Gregg

- B.A., M.A., University of Arizona

Ruschak, Lisa

- B.A., Ottawa University
- M.Ed., Northern Arizona University

### Emergency Medical Technology

Bader, Sherrick

- G.S., Mesa Community College
- Certified Emergency Paramedic, Mesa Community College

### Exercise Science

McGee, Kimberly

- B.S., M.S., Ph.D., Arizona State University

### Food and Nutrition

Villarreal, Andrea

Division Chair

- B.S., M.S., Oregon State University

### Health Education

Trone, Gregory

- B.A., University of North Carolina at Wilmington
- M.S., Appalachian State University
- Ph.D., Arizona State University

### Mortuary Science

Backhaus, Donna

- A.A.S., Mesa Community College
- B.S., University of Phoenix
- M.A., University of Phoenix

## **Administration of Justice (AJS)**

### **AJS101 / Introduction to Criminal Justice**

#### **3 Credits / 3.0 Periods for Lecture**

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.

 SUN# AJS 1101

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Health Science and Public Service

### **AJS102 / Peace Officer Certification I**

#### **17 Credits / 30.0 Periods for Lecture & Lab**

Training program for limited authority peace officers, leading to certification by the Arizona Peace Officer Standards and Training Board (AzPOST - The statutory agency for certifying peace officers - all person with arrest powers - in Arizona.) Includes introduction to Law Enforcement, Law and legal matters, patrol procedures, traffic control, and police proficiency skills. Prerequisites: Student must comply with AzPOST employment standards for peace officers.

**Division:** Aviation and Applied Technology

### **AJS109 / Substantive Criminal Law**

#### **3 Credits / 3.0 Periods for Lecture**

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. Prerequisites: None.

**Division:** Health Science and Public Service

### **AJS113 / Criminal Justice Crime Control Policies and Practices**

#### **3 Credits / 3.0 Periods for Lecture**

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, and crime prevention through environmental design. Prerequisites: None.

**Division:** Health Science and Public Service

### **AJS119 / Computer Applications in Justice Studies**

#### **3 Credits / 4.0 Periods for Lecture & Lab**

Provides literacy in microcomputer applications in major areas of the criminal justice system. Examines availability and uses of current software packages in criminal justice work. Provides hands-on experience with appropriate integrated software packages pertaining to justice studies. Prerequisites: None.

**Division:** Health Science and Public Service

### **AJS123 / Ethics and the Administration of Justice**

#### **3 Credits / 3.0 Periods for Lecture**

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. Explores issues of how media/social media shape ethics. Encourages critical thinking and value decision making in criminal justice system situations. Prerequisites: None.

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Health Science and Public Service

### **AJS139 / Emergency Response to Terrorism**

#### **3 Credits / 3.0 Periods for Lecture**

Fundamentals of emergency response to suspected terrorist events. Historical perspective of terrorist activities and methods by which responders can identify and protect themselves and the public from these threats. Coordination of responding agencies. Prerequisites: None.

**Crosslisted:** FSC139

**Division:** Health Science and Public Service

### **AJS195 / International And Domestic Terrorism**

#### **3 Credits / 3.0 Periods for Lecture**

An overview of the history, structure, goals, and activities of domestic and international terrorist groups. Explores theories explaining terrorism and reviews methods used to combat it. Prerequisites: None.

**Division:** Health Science and Public Service

### **AJS200 / Current Issues In Criminal Justice**

#### **3 Credits / 3.0 Periods for Lecture**

Examines current issues, techniques and trends in the Criminal Justice System. Prerequisites: None.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Health Science and Public Service

### **AJS202 / Peace Officer Certification II**

#### **13 Credits / 22.5 Periods for Lecture & Lab**

A continuation of the basic, entry-level training program leading to full authority peace officer certification as required by the Arizona Peace Officer Standards and Training Board I (AzPOST). Subjects to include: Patrol Procedure, Accident Investigation, Records and Report Writing, Community Relations, Criminal Investigations, and Officer Survival. Prerequisites: Grade of "C" or better in AJS/LEO102 or AzPost Limited Authority Peace Officer certification.

**Division:** Aviation and Applied Technology

### **AJS212 / Juvenile Justice Procedures**

#### **3 Credits / 3.0 Periods for Lecture**

Examines the nature and extent of juvenile delinquency to the present. Including but not limited to the history, jurisdictions, terminology, procedures, and institutions of the juvenile justice system. Prerequisites: None.

**Division:** Health Science and Public Service

### **AJS213 / Evidence Technology: Fingerprints**

#### **3 Credits / 3.0 Periods for Lecture**

Covers the fundamental principles of fingerprints, including the history of fingerprint classification, the biology of friction ridge skin, pattern analysis, comparison, and identification as well as their application in significant court cases. Also includes techniques for obtaining inked prints and developing and preserving latent prints. Prerequisites: None.

**Division:** Health Science and Public Service

**AJS215 / Criminalistics: Physical Evidence****3 Credits / 3.0 Periods for Lecture**

The scientific analysis and examination of physical evidence with emphasis on scientific investigation, recognition, collection, and preservation of evidence. Topics include fingerprints, shoe prints, tool marks, firearms identification, paint chips and arson. Prerequisites: None.

**Division:** Health Science and Public Service

**AJS216 / Criminalistics: Biological Evidence****3 Credits / 3.0 Periods for Lecture**

The scientific analysis and examination of biological evidence with emphasis on collection and preservation of evidence. Topics discussed include blood, drugs, blood alcohol, hairs and fibers, and topics of special interest in criminalistics. Prerequisites: None.

**Division:** Health Science and Public Service

**AJS225 / Criminology****3 Credits / 3.0 Periods for Lecture**

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 curriculum. Prerequisites: None.

**Division:** Health Science and Public Service

**AJS230 / The Police Function****3 Credits / 3.0 Periods for Lecture**

Theories of procedures and methods of operations of public police with emphasis on discretionary powers available to the working police officer. Career opportunities and current trends in law enforcement presented. Prerequisites: None.

**Division:** Health Science and Public Service

**AJS240 / The Correction Function****3 Credits / 3.0 Periods for Lecture**

Examines the history and development of correctional theories and institutions. Prerequisites: None.

**Division:** Health Science and Public Service

**AJS241 / Police Photography****3 Credits / 3.0 Periods for Lecture**

Emphasis on proper procedure for photographing crime scenes, accident scenes, and laboratory specimens. Discussion of photographic techniques, equipment, lighting techniques, aerial photography, video and motion pictures, macro and micro photography, filters, and preparation for court presentation using selected simulations. Prerequisites: None.

**Division:** Health Science and Public Service

**AJS258 / Victimology and Crisis Management in Public Safety****3 Credits / 3.0 Periods for Lecture**

Victimology, the criminal justice system, techniques of crisis intervention and management, and the importance of a multicultural and global perspective. Includes violent crimes, sexual assault, family violence, post-traumatic stress disorder, the role of substance abuse, developing effective coping skills of victims and responders, appropriate community resources, and the cultural responsiveness of the justice system.

**Crosslisted:** EMT258, FSC258

**Division:** Health Science and Public Service

**AJS260 / Procedural Criminal Law****3 Credits / 3.0 Periods for Lecture**

Concerned with the understanding of procedural criminal law. Examines the processes and procedures followed by law enforcement, attorneys, and the courts in the apprehension and prosecution of criminal offenders. Examines the rationale underlying major court holdings impacting the criminal justice process, the procedural requirements that stem from these holdings and their effect on the daily operations of the criminal justice system. Prerequisites: None.

**Division:** Health Science and Public Service

**AJS270 / Community Relations****3 Credits / 3.0 Periods for Lecture**

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.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Health Science and Public Service

**AJS275 / Criminal Investigation I****3 Credits / 3.0 Periods for Lecture**

Introduction to the theory of criminal investigation. Examines crime scene procedures, case preparation, interviewing, and basic investigative techniques. Prerequisites: None.

**Division:** Health Science and Public Service

**Emergency Medical Technology (EMT)****EMT101 / Basic Life Support/Cardiopulmonary Resuscitation (CPR) for Health Care Providers****0.5 Credits / 0.5 Periods for Lecture & Lab**

Designed to provide the allied healthcare provider with the knowledge and skills to perform Basic Life Support (BLS) according to current guidelines for emergency cardiovascular care (ECC). Prerequisites: None. Course Notes: EMT101 may be repeated for credit.

**Division:** Health Science and Public Service

**EMT104 / Emergency Medical Technology****10 Credits / 10.0 Periods for Lecture**

Designed as the Emergency Medical Technician (EMT) lecture to prepare students for scope of practice and standard of care with comprehensive assessment, diagnostic technology, patient advocacy, ethical and professional behaviors, critical thinking, decision-making, and patient management of medical and trauma emergencies and non-emergencies. Prerequisites: Appropriate score on Reading placement test to demonstrate minimum tenth grade level reading, or completion of an Associate's degree or higher from an accredited institution. Course Notes: Students must meet National Registry of EMT requirements for certification. Additional information available at [nremt.org](http://nremt.org) EMT104 may be repeated for credit.

**Division:** Health Science and Public Service

**EMT104AB / Applied Practical Studies for Emergency Medical Technology****0.5 Credits / 0.5 Periods for Laboratory**

Simulation of actual emergency responses, with practical application of techniques and skills covered in EMT curricula. Scenario based learning applied to the techniques of emergency medical care in accordance with national and state curriculum. Practical application of anatomy, physiology, patient assessment, and treatment of medically or traumatically compromised patients, special hazards and medical operations. Also includes patient-assisted medication administration, semi-automatic external defibrillator and blood glucose monitoring. Students operate in outside, scenario based environments. Prerequisites: None. Corequisites: EMT104. Course Notes: EMT/FSC104AB may be repeated for credit.

**Division:** Health Science and Public Service

**EMT104LL / Emergency Medical Technology Practicum****2 Credits / 3.5 Periods for Laboratory**

Designed as the simulated Emergency Medical Technician (EMT) practicum in which the student synthesizes standard of care and scope of practice with comprehensive assessment and diagnostic technology, patient advocacy, ethical and professional behaviors, critical thinking, decision-making, and patient management of medical and trauma emergencies. Provides scenario based learning applied to the techniques of emergency medical care in accordance with national and state curriculum. Prerequisites: A grade of C or better in EMT104 or permission of Instructor or Corequisites: EMT104. Course Notes: EMT104LL may be repeated for credit. Students must meet National Registry of EMT requirements for certification. Additional information available at nremt.org

**Division:** Health Science and Public Service

**Exercise Science (EXS)****EXS101 / Introduction to Exercise Science****3 Credits / 3.0 Periods for Lecture**

Introductory course that will provide the student with a general overview of the key theories and concepts, professions, and research areas associated with the field of Exercise Science. Educational pathways and career options will also be examined. Prerequisites: None.

**Division:** Health Science and Public Service

**EXS125 / Introduction to Exercise Physiology****3 Credits / 3.0 Periods for Lecture**

Principles of exercise science applied to fitness instruction. Major factors related to the function of the human body will be examined/introduced with an emphasis on exercise physiology and functional anatomy. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: EXS101 or permission of Instructor.

**Division:** Health Science and Public Service

**EXS146 / Introduction to Exercise Testing****1 Credit / 2.0 Periods for Lecture & Lab**

Introductory course in exercise testing, to include health appraisal, risk stratification, and the selection and administration of common evidence-based assessments for apparently healthy populations. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: EXS101 or permission of Instructor. Prior completion of or concurrent enrollment in EXS125 is recommended.

**Division:** Health Science and Public Service

**EXS215 / Resistance Training and Recovery Techniques****3 Credits / 4.0 Periods for Lecture & Lab**

Fundamental methods for safe and effective instruction of resistance, functional, and athletic conditioning exercises. Application of foundational principles of physiology and kinesiology. Overview of warm-up, cooldown, and recovery techniques. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: EXS101 or permission of Instructor.

**Division:** Health Science and Public Service

**EXS217 / Cardiorespiratory and Flexibility Training****3 Credits / 4.0 Periods for Lecture & Lab**

Fundamental methods for safe and effective instruction of cardiorespiratory and flexibility training exercises. Application of foundational principles of physiology and kinesiology. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: EXS101 or permission of Instructor.

**Division:** Health Science and Public Service

**EXS239 / Practical Applications of Personal Training Skills and Techniques Internship****3 Credits / 5.4 Periods for Lecture & Lab**

A capstone experience in a fitness or health related facility. Eighty (80) hours of designated work per credit. Prerequisites: Completion of a grade of C or better in nine (9) credits of EXS courses, approved by the Department Chair and/or Director, current CPR and AED card, and permission of Department or Division. Course Notes: CPR certification must be current through the duration of the internship. EXS239 may be repeated for a maximum of six (6) credits.

**Division:** Health Science and Public Service

**EXS239AA / Practical Applications of Personal Training Skills and Techniques Internship****1 Credit / 1.8 Periods for Lecture & Lab**

A capstone experience in a fitness or health related facility. Eighty (80) hours of designated work per credit. Prerequisites: Completion of a grade of C or better in nine (9) credits of EXS courses, approved by the Department Chair and/or Director, current CPR and AED card, and permission of Department or Division. Course Notes: CPR certification must be current through the duration of the internship. EXS239AA may be repeated for a maximum of six (6) credits.

**Division:** Health Science and Public Service

**EXS239AB / Practical Applications of Personal Training Skills and Techniques Internship****2 Credits / 3.6 Periods for Lecture & Lab**

A capstone experience in a fitness or health related facility. Eighty (80) hours of designated work per credit. Prerequisites: Completion of a grade of C or better in nine (9) credits of EXS courses, approved by the Department Chair and/or Director, current CPR and AED card, and permission of Department or Division. Course Notes: CPR certification must be current through the duration of the internship. EXS239AB may be repeated for a maximum of six (6) credits.

**Division:** Health Science and Public Service

**EXS246 / Advanced Exercise Testing****2 Credits / 3.0 Periods for Lecture & Lab**

Advanced course in exercise testing, to include health appraisal, risk stratification, and the selection and administration of evidence-based assessments for apparently healthy and athletic populations. Pharmacology, special populations, and environmental conditions are also examined. Prerequisites: A grade of C or better in EXS146 or permission of Instructor.

**Division:** Health Science and Public Service

**EXS255 / Program Design: Muscular Fitness and Performance**  
**3 Credits / 4.0 Periods for Lecture & Lab**

Advanced principles of muscular fitness, sports performance, and recovery techniques including needs analysis, interpretation of assessment outcomes, and evidence-based program design for healthy and athletic populations. Considerations for special populations and environments also examined. Prerequisites: A grade of C or better in (EXS125 and EXS146) or permission of Instructor.

**Division:** Health Science and Public Service

**EXS257 / Program Design: Cardiorespiratory Fitness**  
**3 Credits / 4.0 Periods for Lecture & Lab**

Advanced principles of cardiorespiratory fitness and weight management including needs analysis, interpretation of assessment outcomes, and evidence-based program design for healthy and athletic populations. Considerations for special populations and environments are also examined. Prerequisites: A grade of C or better in (EXS125 and EXS146) or permission of Instructor.

**Division:** Health Science and Public Service

**EXS270 / Exercise Science Internship**  
**3 Credits / 3.0 Periods for Laboratory**

A capstone experience in a fitness or health related facility. Eighty (80) hours of designated work per credit. Prerequisites: Completion of nine (9) credits of EXS courses with a grade of C or better, current CPR and AED card, and permission of Department/Division Chair and/or the Program Director. Course Notes: CPR and AED certifications must be current through the duration of the internship. EXS270 may be repeated for a maximum of six (6) credits.

**Division:** Health Science and Public Service

**EXS270AA / Exercise Science Internship**  
**1 Credit / 1.0 Periods for Laboratory**

A capstone experience in a fitness or health related facility. Eighty (80) hours of designated work per credit. Prerequisites: Completion of nine (9) credits of EXS courses with a grade of C or better, current CPR and AED card, and permission of Department/Division Chair and/or the Program Director. Course Notes: CPR certification must be current through the duration of the internship. EXS270AA may be repeated for a maximum of six (6) credits.

**Division:** Health Science and Public Service

**EXS270AB / Exercise Science Internship**  
**2 Credits / 2.0 Periods for Laboratory**

A capstone experience in a fitness or health related facility. 160 hours of designated work per credit. Prerequisites: Completion of nine (9) credits of EXS courses with a grade of C or better, current CPR and AED card, and permission of Department/Division Chair and/or the Program Director. Course Notes: CPR and AED certifications must be current through the duration of the internship. EXS270AB may be repeated for a maximum of six (6) credits.

**Division:** Health Science and Public Service

**EXS275 / Sport Science Internship**  
**3 Credits / 3.0 Periods for Lecture & Lab**

A capstone experience in a fitness or health related facility supervised by a National Strength and Conditioning Association (NSCA) Certified Strength and Conditioning Specialists (CSCS) professional. Eighty (80) hours of designated work per credit. Prerequisites: Completion of a grade of C or better in nine (9) credits of EXS courses, approved by the Department Chair and/or Director, current CPR and AED card, and permission of Department or Division. Course Notes: EXS275 may be repeated for a maximum of six (6) credits.

**Division:** Health Science and Public Service

**EXS275AA / Sport Science Internship**  
**1 Credit / 1.0 Periods for Lecture & Lab**

A capstone experience in a fitness or health related facility supervised by a National Strength and Conditioning Association (NSCA) Certified Strength and Conditioning Specialists (CSCS) professional. Eighty (80) hours of designated work per credit. Prerequisites: Completion of a grade of C or better in nine (9) credits of EXS courses, approved by the Department Chair and/or Director, current CPR and AED card, and permission of Department or Division. Course Notes: EXS275AA may be repeated for a maximum of six (6) credits.

**Division:** Health Science and Public Service

**EXS275AB / Sport Science Internship**  
**2 Credits / 2.0 Periods for Lecture & Lab**

A capstone experience in a fitness or health related facility supervised by a National Strength and Conditioning Association (NSCA) Certified Strength and Conditioning Specialists (CSCS) professional. Eighty (80) hours of designated work per credit. Prerequisites: Completion of a grade of C or better in nine (9) credits of EXS courses, approved by the Department Chair and/or Director, current CPR and AED card, and permission of Department or Division. Course Notes: EXS275AB may be repeated for a maximum of six (6) credits.

**Division:** Health Science and Public Service

**EXS280AB / Special Topics in Exercise Science****1 Credit / 1.0 Periods for Lecture**

Conceptual and research basis of current topics in exercise science. Prerequisites: A grade of C or better in EXS101, or EXS112, or EXS125, or permission of Instructor. Course Notes: EXS280AB may be repeated for credit.

**Division:** Health Science and Public Service

**EXS290 / Introduction to Evidence-Based Practice****3 Credits / 3.0 Periods for Lecture**

Introduction to best practices in the acquisition, analysis, synthesis, and potential application of research in the discipline of exercise science. Specific emphasis on the application of research-based evidence for applied problem solving in exercise science. Prerequisites: A grade of C or better in ENG101 or ENG107 or permission of Instructor. EXS101 recommended.

**Division:** Health Science and Public Service

**Food and Nutrition (FON)****FON100 / Introductory Nutrition****3 Credits / 3.0 Periods for Lecture**

Introduction to the science of food and human nutrition. Current sustainable dietary recommendations and applications for maximizing well-being and minimizing risk of chronic disease throughout the life cycle. An overview of the nutrients, emphasizing the importance of energy and fluid balance, and optimal functioning of the digestive system. Understanding factors that influence food intake in different cultures. Methods for evaluating credibility of nutrition claims, a focus on modern food safety and technology practices, and a worldview of nutrition are included. Emphasis is on personal dietary behavior change for a holistic life of wellness. Prerequisites: None.

**Division:** Health Science and Public Service

**FON125 / Introduction to Professions in Food, Nutrition, and Dietetics****1 Credit / 1.0 Periods for Lecture**

Overview and discussion of career opportunities in the fields of food, nutrition, and dietetics. Includes information about history, ethics, standards of practice, communication and counseling skills. Emphasis on how to become a Registered Dietitian Nutritionist or a Dietetic Technician Registered. Prerequisites: None.

**Division:** Health Science and Public Service

**FON142AB / Science of Food****3 Credits / 5.0 Periods for Lecture & Lab**

Exploration and Application of Scientific Principles of Food; experiences with ingredient functionality and application in cooking techniques.

Prerequisites: None.

**Division:** Health Science and Public Service

**FON241 / Principles of Human Nutrition****3 Credits / 3.0 Periods for Lecture**

Scientific principles of human nutrition. Emphasis on scientific literacy and the study of nutrients for disease prevention. Includes macronutrients and micronutrients, human nutrient metabolism and nutrition's role in the health of the human body throughout the life cycle. Addresses nutrition principles for prevention of nutrition-related health conditions. Course Notes: General Education Designation: Natural Sciences (General) - [SG] in combination with: FON241LL

**Division:** Health Science and Public Service

**FON241LL / Principles of Human Nutrition Laboratory****1 Credit / 3.0 Periods for Laboratory**

Self-evaluative laboratory experience to complement FON241, Principles of Human Nutrition using anthropometric, biochemical, clinical, and dietary analysis. Includes the use of qualitative and quantitative methodology to determine nutritional status and evaluate methodological applications. Prerequisites: A grade of C or better in FON241 or Corequisites: FON241. Course Notes: General Education Designation: Natural Sciences (General) - [SG] in combination with: FON241

**Division:** Health Science and Public Service

**Health Science (HES)****HES100 / Healthful Living****3 Credits / 3.0 Periods for Lecture**

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.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Health Science and Public Service

**HES210 / Cultural Aspects of Health and Illness****3 Credits / 3.0 Periods for Lecture**

Examines how culture influences health and illness, health care practices, barriers to health care, interactions with health care professionals, and health disparities in the U.S. Prerequisites: None.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Global Awareness [G]; Global Awareness [G]-in combo

**Division:** Health Science and Public Service

**Mortuary Science (MSP)****MSP101 / Introduction to Mortuary Science****1 Credit / 1.0 Periods for Lecture**

Designed to orient prospective students to mortuary science and its history, educational requirements, internships, licensure examination, job descriptions for funeral directors, embalmers and cremationists, and employment outlook. Prerequisites: None.

**Division:** Health Science and Public Service

**MSP105 / Cremation for Mortuary Science****1 Credit / 1.0 Periods for Lecture**

Overview of cremation topics, including proper procedures, legal considerations, services, merchandise, trends, and the history of cremation. Prerequisites: Permission of Instructor. Course Notes: Students must meet all applicable state license requirements to practice as a cremationist. Reference the Arizona State Funeral Board for specific licensing requirements.

**Division:** Health Science and Public Service

**MSP201 / History and Sociology of Funeral Service****3 Credits / 3.0 Periods for Lecture**

Survey of history of funeral service from ancient to modern times. Sociological aspects of how various cultures deal with death.

Prerequisites: Admission to the Mortuary Science program.

**Division:** Health Science and Public Service

**MSP202 / Embalming Laboratory****1 Credit / 2.0 Periods for Laboratory**

Laboratory experience in support of MSP202 lecture course.

Prerequisites: Admission to the Mortuary Science program. Corequisites: MSP202 lecture course.

**Division:** Health Sciences

**MSP202LL / Embalming Lab****1 Credit / 2.0 Periods for Laboratory**

Field experience involving observation and practice of embalming processes in a laboratory setting. Includes writing case study reports.

A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: MSP202 and admission to the Mortuary Science program.

**Division:** Health Science and Public Service

**MSP203 / Microbiology for Mortuary Science****3 Credits / 3.0 Periods for Lecture**

Survey of microbiology as it pertains to mortuary science and the funeral service profession. Review of safety precautions, sanitation practices, and pathogens that can lead to illness or death. Prerequisites: Admission to the Mortuary Science program.

**Division:** Health Science and Public Service

**MSP204 / Chemistry for Mortuary Science****3 Credits / 3.0 Periods for Lecture**

Basic principles of general chemistry, organic chemistry, biochemistry, embalming chemistry, and toxicology as it relates to mortuary science. Safety practices regarding potentially harmful chemicals. Prerequisites: Admission to the Mortuary Science program.

**Division:** Health Science and Public Service

**MSP205 / Mortuary Administration I****3 Credits / 3.0 Periods for Lecture**

Funeral directing and establishing professional relationships with religious leaders and family members. Includes documentation procedures from time of death to funeral. Prerequisites: Admission to the Mortuary Science program.

**Division:** Health Science and Public Service



**MSP206 / Mortuary Administration II****3 Credits / 3.0 Periods for Lecture**

Operation of the established funeral home, including principles and product knowledge in the area of funeral service management and merchandising. Prerequisites: A grade of C or better in MSP205.

**Division:** Health Science and Public Service

**MSP207 / Restorative Art Laboratory****1 Credit / 2.0 Periods for Laboratory**

Laboratory experience in support of MSP207 lecture course.

Prerequisites: Admission to the Mortuary Science program. Corequisites: MSP207 lecture course.

**Division:** Health Sciences

**MSP207LL / Mortuary Science Restorative Art Lab****1 Credit / 2.0 Periods for Laboratory**

Practice care and restoration of the deceased human body to create natural form and appearance in a laboratory setting. Includes anatomical aspects and color theory. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: MSP207 and admission to the Mortuary Science program.

**Division:** Health Science and Public Service

**MSP208 / Legal, Regulatory, and Ethical Issues in Mortuary Science****3 Credits / 3.0 Periods for Lecture**

Mortuary law, regulation by the Federal Trade Commission, and ethical issues in mortuary science. Individual state laws as they pertain to the regulation of funeral establishments and funeral service personnel.

Prerequisites: Admission to the Mortuary Science program.

**Division:** Health Science and Public Service

**MSP209 / Pathology for Mortuary Science****3 Credits / 3.0 Periods for Lecture**

Pathologic conditions which require special treatment and terminology associated with the causes of death. Prerequisites: Admission to the Mortuary Science program.

**Division:** Health Science and Public Service

**MSP210 / Psychology, Counseling, and Mortuary Science****2 Credits / 2.0 Periods for Lecture**

Psychology and grief counseling principles in mortuary science.

Prerequisites: Admission to the Mortuary Science program.

**Division:** Health Science and Public Service

**MSP211 / Compendium for Mortuary Science****2 Credits / 2.0 Periods for Lecture**

Analysis of daily tasks performed by funeral service personnel. Capstone experience based on all previous course work. Prerequisites: Admission to the Mortuary Science program.

**Division:** Health Science and Public Service

**Physical Education (PED)****PED101BS / Body Sculpting****1 Credit / 2.0 Periods for Lecture & Lab**

Stretch and strengthen. Emphasizes increasing fitness, muscle tone, and body flexibility. Great for reducing stress. Prerequisites: None. Course Notes: PED101BS may be repeated for credit.

**Division:** Health Science and Public Service

**PED101FL / Fitness For Life****1 Credit / 2.0 Periods for Lecture & Lab**

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 Notes: PED101FL may be repeated for credit.

**Division:** Health Science and Public Service

**PED101GF / Group Fitness/Aerobics****1 Credit / 2.0 Periods for Lecture & Lab**

Group exercise incorporating a variety of equipment to increase respiration, heart rates, strength, and flexibility. Prerequisites: None.

Course Notes: PED101GF may be repeated for credit.

**Division:** Health Science and Public Service

**PED101SR / Stretch and Relaxation****1 Credit / 2.0 Periods for Lecture & Lab**

A mat-based stretching class with guided meditation. Stretching increases flexibility and relieves stress, promoting an overall sense of well being. Prerequisites: None. Course Notes: PED101SR may be repeated for credit.

**Division:** Health Science and Public Service

**PED101ST / Strength Training****1 Credit / 2.0 Periods for Lecture & Lab**

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.

**Division:** Health Science and Public Service

**PED101YO / Yoga****1 Credit / 2.0 Periods for Lecture & Lab**

Promotion of overall health by strengthening muscles and stimulating glands and organs. Basic postures, breathing and relaxation techniques.

Prerequisites: None. Course Notes: PED101YO may be repeated for credit.

**Division:** Health Science and Public Service

**PED115 / Lifetime Fitness****2 Credits / 4.0 Periods for Lecture & Lab**

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 Notes: PED115 may be repeated for a total of eight (8) credit hours.

**Division:** Health Science and Public Service

**Recreation (REC)****REC120 / Leisure and the Quality of Life****3 Credits / 3.0 Periods for Lecture**

Overview of the historical, psychological, social, and cultural aspects of play, leisure, and recreation and their 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.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Health Science and Public Service

**Administration of Justice Studies,  
Associate in Applied Science**

**BEHAVIORAL SCIENCE  
AND HUMAN SERVICES**

**Associate in Applied Science: AAS 3181**

**61-65 Credits**

**Program Contact**

Lisa Ruschak | 480-726-4078 | lisa.ruschak@cgc.edu

## Program Description

The Associate in Applied Science (AAS) in Administration of Justice Studies provides in-depth preparation for students desiring to be practitioners or pursue continued education and advancement in several fields including local and federal law enforcement, the courts, corrections, security, and investigations. The program also provides criminal justice practitioners with the opportunity to complete the Certificate of Completion (CCL) in Administration of Justice as well as one of five Certificates of Completion (CCLs) in Corrections, Homeland Security, Law Enforcement, Legal Studies, and Victimology. A transfer pathway in Criminal Justice is also available (Associate Arts (AA), Emphasis in Criminal Justice) as well as an Associate in Applied Science (AAS) in Forensics and related Certificates of Completion.

## Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates that any suffixed course may be selected.

## Program Requirements

**Program Prerequisites:** None

Code	Title	Credits	Semester
<b>Required Courses</b>			
AJS101	Introduction to Criminal Justice	3	_____
AJS109	Substantive Criminal Law	3	_____
AJS123	Ethics and the Administration of Justice	3	_____
AJS/EMT/ FSCOR258	Victimology and Crisis Management in Public Safety	3	_____
or AJS200	Current Issues In Criminal Justice		_____
AJS212	Juvenile Justice Procedures	3	_____
AJS225	Criminology	3	_____
AJS230	The Police Function	3	_____
AJS240	The Correction Function	3	_____
AJS260	Procedural Criminal Law	3	_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
<b>Restricted Electives</b>			

Complete twelve to thirteen (12-13) credits from the course options below. Some of these options fulfill requirements for one or more related certificates of completion (CCLs). Consult with an AJS faculty advisor, program director, and/or academic advisor to identify coursework that best aligns with academic and professional goals.

12-13

AJS113	Criminal Justice Crime Control Policies and Practices	_____
AJS119	Computer Applications in Justice Studies	_____
AJS270	Community Relations	_____
The following courses fulfill the requirements for the Corrections certificate (5776N):		
AJS205	Effective Communication and Report Writing in Criminal Justice	_____
AJS255	The Criminal Justice System Handling of the Mentally Ill	_____
AJS275	Criminal Investigation I	_____
The following course fulfills the requirements for the Crime Scene Investigation (5964) and Fingerprint Identification and Photography (5010N):		
AJS290BN	Courtroom Testimony Seminar	_____
The following courses fulfill the requirements for the Homeland Security (5322N):		
AJS/ FSCOR139	Emergency Response to Terrorism	_____
AJS/ FSCOR147	Emergency Preparedness	_____
AJS/ FSCOR148	Fundamentals of Emergency Management	_____
AJS/ FSCOR149	Hazard Mitigation	_____
AJS195	International And Domestic Terrorism	_____

The following courses fulfill the requirements for the Law Enforcement certificate (5987N):

AJS205	Effective Communication and Report Writing in Criminal Justice	
AJS275	Criminal Investigation I	

The following courses fulfill the requirements for the Legal Studies certificate (5966N):

AJS201	Rules of Evidence	
AJS205	Effective Communication and Report Writing in Criminal Justice	
AJS210	Constitutional Law	

The following courses fulfill the requirements for the Victimology certificate (5392N):

AJS162	Domestic Violence	
AJS255	The Criminal Justice System Handling of the Mentally Ill	
AJS+++++	Any AJS Administration of Justice Studies course not listed under the Required Courses area	

#### General Electives

Select additional courses 100-level or higher to complete the minimum total program credits required for this degree.

Select courses not already listed in Required Courses, Restrictive Electives, or General Education requirements. Consult with an AJS faculty advisor, program director, and/or academic advisor to identify coursework that best aligns with academic and professional goals.

#### General Education

##### Core

##### First-Year Composition

ENG101	First-Year Composition	3
or ENG107	First-Year Composition for ESL	
ENG102	First-Year Composition	3

or ENG108 First-Year Composition for ESL

##### Oral Communication

Select one of the following:

3

COM100	Introduction to Human Communication	
COM110	Interpersonal Communication	
COM225	Public Speaking (Recommend for students intending to transfer)	
COM230	Small Group Communication	

##### Critical Reading

Select one of the following:

0-3

CRE101	College Critical Reading and Critical Thinking	
--------	--	--

Or equivalent as indicated by assessment

##### Mathematics

Select one of the following:

3-6

MAT140	College Mathematics	
MAT141	College Mathematics	
MAT142	College Mathematics	
MAT145	College Mathematics with Review	
MAT146	College Mathematics with Review	

Any approved general education course(s) in the Mathematics area

##### Distribution

##### Humanities, Arts and Design

Met by Required Courses <sup>1</sup> 0

##### Social and Behavioral Sciences

Met by Required Courses <sup>2</sup> 0

##### Natural Sciences

Any approved general education course(s) in the Natural Sciences area <sup>3</sup> 4

Total Credits 61-65

<sup>1</sup> Met by AJS123 Ethics and the Administration of Justice in the Required Courses area

<sup>2</sup> Met by AJS101 Introduction to Criminal Justice AJS200 Current Issues In Criminal Justice AJS225 Criminology or AJS258 Victimology and Crisis Management in Public Safety/EMT258 Victimology and Crisis Management in Public Safety/FSC258 Victimology and Crisis Management in Public Safety in the Required Courses area

<sup>3</sup> Recommended: FOR105 Forensic Science: Physical Evidence or FOR106 Forensic Science: Biological Evidence or a course with the [SQ] or [SG] general education designation

# Administration of Justice, Certificate of Completion



**Certificate of Completion: CCL 5007N**  
**15 Credits**  
**Program Contact**  
Lisa Ruschak | 480-726-4078 | lisa.ruschak@cgc.edu

## Program Description

The Certificate of Completion (CCL) in the Administration of Justice program is designed to be interdisciplinary by nature and provides students with foundational knowledge of the criminal justice system and operational processes for addressing crime within society. This program also examines diverse populations and communities, and their effects on relationships with the criminal justice system. In addition, this program allows students to familiarize themselves with and evaluate various career opportunities in the criminal justice field and is one pathway to the Associate in Applied Science (AAS) in Administration of Justice.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of “C” or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
AJS101	Introduction to Criminal Justice	3	_____
AJS109	Substantive Criminal Law	3	_____
or AJS260	Procedural Criminal Law		_____
AJS123	Ethics and the Administration of Justice	3	_____
AJS230	The Police Function	3	_____
AJS240	The Correction Function	3	_____
<b>Total Credits</b>		<b>15</b>	_____

# Corrections, Certificate of Completion



**Certificate of Completion: CCL 5776N**  
**15 Credits**  
**Program Contact**  
Lisa Ruschak | 480-726-4078 | lisa.ruschak@cgc.edu

## Program Description

The Certificate of Completion (CCL) in the Corrections program is designed for students intending to pursue careers in various correctional components of the justice system, including parole, probation, jail, and prisons. Focus is broader learning about the correction function in the context of overall administration of justice system.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of “C” or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
AJS101	Introduction to Criminal Justice	3	_____
AJS123	Ethics and the Administration of Justice	3	_____
or AJS255	The Criminal Justice System Handling of the Mentally Ill		_____
AJS212	Juvenile Justice Procedures	3	_____
AJS240	The Correction Function	3	_____
AJS205	Effective Communication and Report Writing in Criminal Justice	3	_____
or AJS275	Criminal Investigation I		_____
<b>Total Credits</b>		<b>15</b>	_____

## Crime Scene Investigation, Certificate of Completion



### BEHAVIORAL SCIENCE AND HUMAN SERVICES

**Certificate of Completion: CCL 5964**

**16-18 Credits**

**Program Contact**

Lisa Ruschak | 480-726-4078 | lisa.ruschak@cgc.edu

### Program Description

The Certificate of Completion (CCL) in Crime Scene Investigation is designed to develop knowledge and skills required to investigate and reconstruct crime scenes using scientific evidence and logical analysis. The program provides instruction in criminal investigation procedures, collection and preservation of physical and biological evidence, death investigation techniques, crime scene reconstruction methodology and presentation of testimony in court.

### Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

### Program Requirements

Code	Title	Credits	Semester
<b>Required Courses</b>			
AJS213	Evidence Technology: Fingerprints	3	
or AJS243	Crime Scene Reconstruction		
Select one of the following:		3-4	
AJS215	Criminalistics: Physical Evidence		
AJS219	Crime Scene Technology: Physical Evidence		
FOR105	Forensic Science: Physical Evidence		
AJS216	Criminalistics: Biological Evidence	3-4	
or FOR106	Forensic Science: Biological Evidence		
AJS214	Evidence Technology/Photography	3	
AJS275	Criminal Investigation I	3	

AJS290BN	Courtroom Testimony Seminar	1	
<b>Total Credits</b>		<b>16-18</b>	

## Emergency Medical Technology, Certificate of Completion



### HEALTH SCIENCES

**Certificate of Completion: CCL 5643N**

**13 Credits**

**Program Contact**

Sherrick Bader | 480-988-8101 | sherrick.bader@cgc.edu

### Program Description

The Certificate of Completion (CCL) in Emergency Medical Technology curriculum provides the student with the necessary knowledge and skills in accordance with the National EMS Scope of Practice published by National Highway Traffic Safety Administration (NHTSA) and the Arizona Department of Health Services. Successful completion of the curriculum and upon licensure, the candidate can seek employment with ambulance service companies, first responder agencies, fire departments, and hospitals as an Emergency Medical Technician (EMT). Emphasis is on the fundamental principles and skills required to provide emergency medical care for the ill or injured. The primary focus of an EMT is to respond to, assess and triage emergent, urgent, and non-urgent requests for medical care, apply basic knowledge and skills necessary to provide patient care and medical transportation to/from an emergency or health care facility.

### Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

EMT104 Emergency Medical Technology requires students to complete additional hours in a competency-based clinical, vehicular, and/or scenario based experience. Depending on the college, this may be completed through EMT104AB Applied Practical Studies for Emergency Medical Technology or program director-approved rotation.

++ indicates any suffixed course may be selected.

### Program Requirements

**Program Prerequisites: None**

Students who have current validation in Basic Life Support (BLS) are required to receive credit by evaluation.

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0.5	

EMT101	Basic Life Support/ Cardiopulmonary Resuscitation (CPR) for Health Care Providers		
Current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer and Credit By Evaluation			
EMT104AB	Applied Practical Studies for Emergency Medical Technology	0.5	
EMT104LL	Emergency Medical Technology Practicum	2	
EMT104	Emergency Medical Technology	10	
<b>Total Credits</b>		<b>13</b>	

## Emergency Medical Technology Comprehensive, Certificate of Completion



### HEALTH SCIENCES

**Certificate of Completion: CCL 5058**

**16-17 Credits**

**Program Contact**

Sherrick Bader | 480-988-8101 | sherrick.bader@cgc.edu

**Program Description**

The Certificate of Completion (CCL) in Emergency Medical Technology Comprehensive curriculum provides the student with the necessary knowledge and skills in accordance with the National EMS Scope of Practice published by National Highway Traffic Safety Administration (NHTSA) and the Arizona Department of Health Services. This certificate provides students with the expanded knowledge and skills for pre-hospital settings. Successful completion of the curriculum and upon licensure, the candidate can seek employment with ambulance service companies, first responder agencies, fire departments, and hospitals as an Emergency Medical Technician (EMT). Emphasis is on the fundamental principles and skills required to provide emergency medical care for the ill or injured. The primary focus of an EMT is to respond to, assess and triage emergent, urgent, and non-urgent requests for medical care, apply basic knowledge and skills necessary to provide patient care and medical transportation to/from an emergency or health care facility.

## Program Notes

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

EMT104 Emergency Medical Technology requires students to complete additional hours in a competency-based clinical, vehicular, and/or scenario based experience. Depending on the college, this may be completed through EMT104AB Applied Practical Studies for Emergency Medical Technology or program director-approved rotation.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Students who have current validation in Basic Life Support (BLS) are required to receive credit by evaluation.

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0.5	
EMT101	Basic Life Support/ Cardiopulmonary Resuscitation (CPR) for Health Care Providers		
Current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer and Credit By Evaluation			
EMT104AB	Applied Practical Studies for Emergency Medical Technology	0.5	
EMT104	Emergency Medical Technology	10	
EMT104LL	Emergency Medical Technology Practicum	2	
<b>Restricted Electives</b>			
Select one of the following:		3-4	
AJS/EMT/ FSCOR258	Victimology and Crisis Management in Public Safety		
BIO156	Introductory Biology for Allied Health		
HCC145	Medical Terminology for Health Care Professionals		

PME190	Introduction to ECG Rhythm Analysis and Interpretation for EMS Professionals	_____
PME191	Introduction to Pharmacology for EMS Professionals	_____
SWU258	Victimology and Crisis, a Social Services Perspective	_____
<b>Total Credits</b>		<b>16-17</b>

## Exercise Science: Health, Fitness and Sports Performance, Associate in Applied Science



### HEALTH SCIENCES

Associate in Applied Science: AAS 3059

62-74.5 Credits

Program Contact

Kim McGee, ACSM (EP-C) | 480-726-4246 | kimberly.mcgee@cgc.edu

## Program Description

The Associate in Applied Science (AAS) in Exercise Science: Health, Fitness and Sports Performance program prepares students for the American College of Sports Medicine (ACSM), National Strength and Conditioning Association (NSCA), National Academy of Sports Medicine (NASM) and the American Council on Exercise (ACE) personal trainer certifications. The curriculum is designed to prepare students for employment in entry-level positions such as personal training within health and fitness clubs, wellness centers, and public and private recreation facilities. This curriculum also provides good preparation for transfer to a four-year bachelor program.

## Program Notes

Students must earn a grade of "C" or better required for all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-4	_____
BIO181	General Biology (Majors) I	_____	_____
One year of high school biology		_____	_____

BIO160	Introduction to Human Anatomy and Physiology	4	_____
or BIO201	Human Anatomy and Physiology I	_____	_____
Select one of the following:		0-0.5	_____
EMT101	Basic Life Support/ Cardiopulmonary Resuscitation (CPR) for Health Care Providers	_____	_____
WED106	Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED)	_____	_____
Current CPR/AED certification		_____	_____
EXS101	Introduction to Exercise Science	3	_____
EXS125	Introduction to Exercise Physiology	3	_____
EXS146	Introduction to Exercise Testing	1	_____
EXS215	Resistance Training and Recovery Techniques	3	_____
EXS217	Cardiorespiratory and Flexibility Training	3	_____
EXS246	Advanced Exercise Testing	2	_____
EXS255	Program Design: Muscular Fitness and Performance	3	_____
EXS257	Program Design: Cardiorespiratory Fitness	3	_____
Student must complete three (3) credits from the following EXS internship course options:		3	_____
Option 1			
Select one of the following:		_____	_____
EXS270	Exercise Science Internship	_____	_____
or EXS270AAExercise Science Internship		_____	_____
EXS270AB	Exercise Science Internship	_____	_____
Option 2			
Select one of the following:		_____	_____
EXS275	Sport Science Internship	_____	_____
or EXS275AASport Science Internship		_____	_____
EXS275AB	Sport Science Internship	_____	_____
Option 3			

EXS270AA	Exercise Science Internship			Complete one (1) credit from one of the following course options not already selected in the Required Courses area. Choose a course that best aligns with your academic and professional goals. Consult with an academic, faculty, or program advisor as needed.	1	
EXS275AB	Sport Science Internship					
Option 4						
EXS270AB	Exercise Science Internship					
EXS275AA	Sport Science Internship					
EXS290	Introduction to Evidence-Based Practice	3		EXS++++ Any EXS Exercise Science course		
FON100	Introductory Nutrition	3		FON++++ Any FON Food and Nutrition course		
or FON241	Principles of Human Nutrition			HES++++ Any HES Health Science course		
FYE101	Introduction to College, Career and Personal Success	1-3		PED++++ Any PED Physical Education course		
or FYE103	Exploration of College, Career and Personal Success			IFS110 Critical Research for College Success		
HES100	Healthful Living	3		<b>General Education</b>		
HES210	Cultural Aspects of Health and Illness	3		<b>Core</b>		
PED101ST	Strength Training	1		<i>First-Year Composition</i>		
or PED101RT	Resistance Training for Improved Sports Performance			ENG101 First-Year Composition	3	
Select one of the following:				or ENG107 First-Year Composition for ESL		
PED101BC	Boot Camp			ENG102 First-Year Composition	3	
PED101BS	Body Sculpting			or ENG108 First-Year Composition for ESL		
PED101CY	Cycling - Indoor			<i>Oral Communication</i>		
PED101GF	Group Fitness/ Aerobics			Select one of the following:		
PED101KB	Kickboxing			COM100 Introduction to Human Communication	3	
PED101LD	Latin Dancing			COM110 Interpersonal Communication		
PED101PC	Physical Conditioning			COM225 Public Speaking		
PED101PS	Pilates			COM230 Small Group Communication		
PED101SR	Stretch and Relaxation			<i>Critical Reading</i>		
PED101TC	Tai Chi			Select one of the following:		
PED101TX	Suspension Training			CRE101 College Critical Reading and Critical Thinking (or equivalent by assessment)	0-3	
PED101YG	Gentle Yoga			OR Equivalent as indicated by assessment		
PED101YH	Hatha Yoga			<i>Mathematics</i>		
PED101YO	Yoga			Select one of the following options:		
PED101YP	Power Yoga			Option 1	3-6	
PED101YR	Restorative Yoga			Select one of the following:		
PED101ZU	Zumba Fitness			MAT140 College Mathematics		
PSY101	Introduction to Psychology	3		MAT141 College Mathematics		
<b>Restricted Electives</b>				MAT142 College Mathematics		



MAT145	College Mathematics with Review	_____
MAT146	College Mathematics with Review	_____
Option 2		
Select one of the following:		
MAT150	College Algebra/ Functions	_____
MAT151	College Algebra/ Functions	_____
MAT152	College Algebra/ Functions	_____
MAT155	College Algebra/ Functions with Review	_____
MAT156	College Algebra/ Functions with Review	_____
Higher level course in the Mathematical Applications <sup>MA</sup> area		
<b>Distribution</b>		
<i>Humanities, Arts and Design</i>		
Any approved general education course(s) from the Humanities, Arts and Design area	3	_____
<i>Social and Behavioral Sciences</i>		
Met by Required Courses <sup>1</sup>	0	_____
<i>Natural Sciences</i>		
Met by Required Courses <sup>2</sup>	0	_____
<b>Total Credits</b>	<b>62-74.5</b>	_____

<sup>1</sup> Met by HES100 Healthful Living in Required Courses.

<sup>2</sup> Met by BIO201 Human Anatomy and Physiology I in Required Courses.

## Fingerprint Identification and Photography, Certificate of Completion



**BEHAVIORAL SCIENCE  
AND HUMAN SERVICES**

**Certificate of Completion: CCL 5010N**

**10 Credits**

**Program Contact**

Lisa Ruschak | 480-726-4078 | lisa.ruschak@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Fingerprint Identification and Photography is designed to prepare students for entry level positions in

the field of fingerprint classification and identification. It is one pathway to the Associate in Applied Science (AAS) in Forensic Science.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
AJS101	Introduction to Criminal Justice	3	_____
AJS213	Evidence Technology: Fingerprints	3	_____
AJS214	Evidence Technology/ Photography	3	_____
AJS290BN	Courtroom Testimony Seminar	1	_____
<b>Total Credits</b>		<b>10</b>	_____

## Forensic Science, Associate in Applied Science



**BEHAVIORAL SCIENCE  
AND HUMAN SERVICES**

**Associate in Applied Science AAS 3183**

**61-68 Credits**

**Program Contact**

Lisa Ruschak | 480-726-4078 | lisa.ruschak@cgc.edu

## Program Description

The Associate in Applied Science (AAS) in Forensic Science provides the student with a specialization in forensic investigation as it relates to crime. The curriculum presents a specialized scope of knowledge about photography, collection and preservation of evidence, and investigative strategies. The program provides students with an important knowledge base for investigative specialization in a wide range of disciplines and careers. This degree pathway also provides students with the opportunity to complete two Certificates of Completion (CCL) in Crime Scene Investigation, and Fingerprint Identification and Photography.

## Program Notes

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites:** None

Code	Title	Credits	Semester
<b>Required Courses</b>			
AJS101	Introduction to Criminal Justice	3	
AJS123	Ethics and the Administration of Justice	3	
AJS275	Criminal Investigation I	3	
AJS290BN	Courtroom Testimony Seminar	1	
Select one of the following:		3-4	
AJS215	Criminalistics: Physical Evidence		
AJS219	Crime Scene Technology: Physical Evidence		
FOR105	Forensic Science: Physical Evidence		
AJS216	Criminalistics: Biological Evidence	3-4	
or FOR106	Forensic Science: Biological Evidence		
FYE101	Introduction to College, Career and Personal Success	1-3	
or FYE103	Exploration of College, Career and Personal Success		
Students should select courses from one of the following specializations based on career goals.		15-23	
<i>Specialization 1: Crime Scene</i>			
AJS109	Substantive Criminal Law		
AJS210	Constitutional Law		
AJS213	Evidence Technology: Fingerprints		
AJS214	Evidence Technology/Photography		
AJS260	Procedural Criminal Law		
<i>Specialization 2: Lab Science</i>			
ASM/	Forensic		
FOROR275	Anthropology		

CHM151	General Chemistry I	
CHM151LL	General Chemistry I Laboratory	
CHM152	General Chemistry II	
CHM152LL	General Chemistry II Laboratory	
PHY111	General Physics I	
PHY112	General Physics II	
Select one of the following:		
Any course with the HU, C and G general education designations		
Any course with the HU, C and H general education designations		
<b>Restricted Electives</b>		
Students must complete three (3) credits of restricted electives.		3
Students interested in specialization 1: Crime Scene select from one of the following:		
CIS105	Survey of Computer Information Systems	
BPC110	Computer Usage and Applications	
AJS+++++	Any AJS Administration of Justice Studies course (not listed in the required courses area)	
Students interested in Specialization 2: Lab Science select from one of the following:		
CIS105	Survey of Computer Information Systems	
BPC110	Computer Usage and Applications	
<b>General Electives</b>		
Students must choose zero 0-14 additional credits of General Elective courses. Total number of General Electives required will largely depend upon specialization selected.		0-14
<b>General Education</b>		
<b>Core</b>		
<i>First-Year Composition</i>		
ENG101	First-Year Composition	3

or ENG107	First-Year Composition for ESL	_____
ENG102	First-Year Composition	3 _____
or ENG108	First-Year Composition for ESL	_____
<i>Oral Communication</i>		
COM225	Public Speaking	3 _____
<i>Critical Reading</i>		
Select one of the following:		0-3 _____
CRE101	College Critical Reading and Critical Thinking	_____
or equivalent by assessment		
<i>Mathematics</i>		
Crime Scene Emphasis:		
Select one of the following:		3-5 _____
MAT140	College Mathematics	_____
MAT141	College Mathematics	_____
MAT142	College Mathematics	_____
Higher course with an (MA) general education designation		
Lab Science Emphasis:		
Select one of the following:		3-8 _____
MAT150	College Algebra/ Functions	_____
MAT151	College Algebra/ Functions	_____
MAT152 & MAT182	College Algebra/ Functions and Plane Trigonometry	_____
MAT187	Precalculus	_____
Higher course with an (MA) general education designation		
<b>Distribution</b>		
<i>Humanities, Arts and Design</i>		
Met by Required Courses <sup>1</sup>		0 _____
<i>Social and Behavioral Sciences</i>		
Met by Required Courses <sup>2</sup>		0 _____
<i>Natural Sciences</i>		
Recommended for Specialization 1		0-4 _____
Crime Scene:		
Select one of the following:		
CHM130 & 130LL	Fundamental Chemistry and Fundamental Chemistry Laboratory	_____
CHM151 & 151LL	General Chemistry I and General Chemistry I Laboratory	_____

FOR105	Forensic Science: Physical Evidence	_____
FOR106	Forensic Science: Biological Evidence	_____
For Specialization 2 Lab Science: met by <sup>3</sup>		0 _____
CHM151 & 151LL	General Chemistry I and General Chemistry I Laboratory	_____
Total Credits	61-68	_____

- <sup>1</sup> Met by AJS123 Ethics and the Administration of Justice in Required Courses area
- <sup>2</sup> Met by AJS101 Introduction to Criminal Justice in Required Courses area
- <sup>3</sup> Met by CHM151 General Chemistry I and CHM151LL General Chemistry I Laboratory

## Forensic Science, Certificate of Completion



### BEHAVIORAL SCIENCE AND HUMAN SERVICES

**Certificate of Completion: CCL 5326**

**18 Credits**

**Program Contact**

Lisa Ruschak | 480-726-4078 | lisa.ruschak@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Forensic Science is designed to provide students with the technical skills and knowledge necessary to evaluate and process a crime scene for items of evidentiary value, document crime scene evidence, and collect and retain items consistent with forensic procedures.

## Program Notes

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
AJS201	Rules of Evidence	3	_____
AJS213	Evidence Technology: Fingerprints	3	_____

AJS215	Criminalistics: Physical Evidence	3	_____
AJS216	Criminalistics: Biological Evidence	3	_____
AJS241	Police Photography	3	_____
AJS275	Criminal Investigation I	3	_____
<b>Total Credits</b>		<b>18</b>	_____

## Homeland Security, Certificate of Completion



### BEHAVIORAL SCIENCE AND HUMAN SERVICES

**Certificate of Completion: CCL 5322N**

**15 Credits**

**Program Contact**

Lisa Ruschak | 480-726-4078 | lisa.ruschak@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Homeland Security program is designed to provide students with the knowledge and skills needed to conduct a homeland security evaluation and to assess, investigate and respond to terrorism incidents. It also provides criminal justice practitioners with an opportunity for academic growth and the development of specialized skills in homeland security.

**Program Notes**

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
AJS/FSCOR139	Emergency Response to Terrorism	3	_____
AJS/FSCOR147	Emergency Preparedness	3	_____
AJS/FSCOR148	Fundamentals of Emergency Management	3	_____
AJS/FSCOR149	Hazard Mitigation	3	_____

AJS195	International And Domestic Terrorism	3	_____
<b>Total Credits</b>		<b>15</b>	_____

## Law Enforcement, Certificate of Completion



### BEHAVIORAL SCIENCE AND HUMAN SERVICES

**Certificate of Completion: CCL 5987N**

**15 Credits**

**Program Contact**

Lisa Ruschak | 480-726-4078 | lisa.ruschak@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Law Enforcement is designed for students who are interested in pursuing a course of study specifically focused on law enforcement. The certificate program specializes in training and education related to the duties of law enforcement. The program is designed for the student with no Arizona police academy experience and is one pathway to the Associate in Applied Science (AAS) in Administration of Justice.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
AJS101	Introduction to Criminal Justice	3	_____
AJS123	Ethics and the Administration of Justice	3	_____
AJS205	Effective Communication and Report Writing in Criminal Justice	3	_____
AJS230	The Police Function	3	_____
AJS275	Criminal Investigation I	3	_____
<b>Total Credits</b>		<b>15</b>	_____

# Law Enforcement Training, Associate in Applied Science



## BEHAVIORAL SCIENCE AND HUMAN SERVICES

**Associate in Applied Science: AAS 3188**

**63-71 Credits**

**Program Contact**

John Terpay | 480-988-8756 | jonathan.terpay@cgc.edu

## Program Description

The Associate in Applied Science (AAS) in Law Enforcement Training is designed to provide students with up-to-date industry specific training that will enhance their professional opportunities. Courses are also designed to teach students how to handle the challenges of the law enforcement profession. A Certificate of Completion (CCL) in Law Enforcement Training Academy is also available.

## Program Notes

Students must earn a grade of "C" or better for all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Admission Criteria

Must meet AzPOST minimum requirements for a law enforcement officer and meet any physical requirements by the Academy Director.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
AJS101	Introduction to Criminal Justice	3	
AJS109	Substantive Criminal Law	3	
AJS113	Criminal Justice Crime Control Policies and Practices	3	
AJS151	Firearms I	1	
AJS153	Firearms II/ Handguns	1	
AJS154	Firearms III/Long Weapons	1	
AJS162	Domestic Violence	3	
AJS201	Rules of Evidence	3	
AJS205	Effective Communication and Report Writing in Criminal Justice	3	

AJS210	Constitutional Law	3	
AJS215	Criminalistics: Physical Evidence	3	
AJS230	The Police Function	3	
AJS260	Procedural Criminal Law	3	
AJS270	Community Relations	3	
AJS275	Criminal Investigation I	3	
AJS290BN	Courtroom Testimony Seminar	1	
FYE101	Introduction to College, Career and Personal Success	1-3	
or FYE103	Exploration of College, Career and Personal Success		

### General Education

#### Core

#### First-Year Composition

ENG101	First-Year Composition	3	
or ENG107	First-Year Composition for ESL		
Select one of the following:		3	
ENG102	First-Year Composition		
ENG108	First-Year Composition for ESL		
ENG111	Technical and Professional Writing		

Recommend for transfer to a university or MCCC bachelor's program:

ENG101	First-Year Composition		
or ENG107	First-Year Composition for ESL		
ENG102	First-Year Composition		
or ENG108	First-Year Composition for ESL		

#### Oral Communication

Select one of the following:		3	
COM100	Introduction to Human Communication		
COM110	Interpersonal Communication <sup>1</sup>		
COM225	Public Speaking		
COM230	Small Group Communication <sup>1</sup>		

<b>Critical Reading</b>		_____
Select one of the following:	0-3	_____
CRE101	College Critical Reading and Critical Thinking	_____
Or equivalent as indicated by assessment		_____
<b>Mathematics</b>		_____
Any approved general education course(s) in the Mathematics area	3-6	_____
The following courses are recommended for students transferring:		_____
MAT140	College Mathematics	_____
MAT141	College Mathematics	_____
MAT142	College Mathematics	_____
Any higher approved general education course in the Mathematical Applications (MA) area		_____
<b>Distribution</b>		_____
<b>Humanities, Arts and Design</b>		_____
Any approved general education course(s) from the Humanities, Arts and Design area <sup>2</sup>	3	_____
<b>Social and Behavioral Sciences</b>		_____
Any approved general education course(s) in the Social and Behavioral Sciences area	3	_____
<b>Natural Sciences</b>		_____
Any approved general education course(s) in the Natural Sciences area	4	_____
<b>Total Credits</b>	<b>63-71</b>	_____

<sup>1</sup> Recommended: COM110 Interpersonal Communication or COM230 Small Group Communication

<sup>2</sup> Recommended: AJS123 Ethics and the Administration of Justice

## Law Enforcement Training Academy, Certificate of Completion



**BEHAVIORAL SCIENCE  
AND HUMAN SERVICES**

**Certificate of Completion: CCL 5991N**

**40 Credits**

**Program Contact**

Jonathan Terpay | 480-988-8756 | jonathan.terpay@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Law Enforcement Training Academy is designed for students wishing to pursue a career as a law enforcement officer. The student will develop skills in eight functional areas: Introduction to Law Enforcement, Law and Legal Matters, Patrol Procedures, Traffic Control, Crime Scene Management, Community and Police Relations, Report Writing, and Police Proficiency Skills.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

AJS coursework for this program is taught by instructors who are certified police officers in the State of Arizona as required by the Arizona Peace Officer Standards and Training (AzPOST) Board standards. Any AJS coursework that has already been completed but was not taught by a certified police officer with a recognized academy, will not satisfy the requirements of the certificate. Additionally, this Certificate of Completion (CCL) can be awarded to peace officers who complete the AzPOST waiver (lateral transfers) or to out-of-state academies engaged in an Educational Partnership (ESP) or an Educational Service Agreement (ESA) through one of the offering colleges.

This Certificate of Completion (CCL) is offered as an educational partnership at Rio Salado College. Students are advised to meet with the program director, chair and/or faculty advisor. This Certificate of Completion is offered as a closed academy program at Chandler Gilbert Community College and Glendale Community College. Students at these colleges are advised to meet with the program director, chair and/or faculty advisor.

++ indicates any suffixed course may be selected.

## Admission Criteria

Must meet AzPOST minimum requirements for a law enforcement officer and meet any physical requirements by the Academy Director.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
AJS101	Introduction to Criminal Justice	3	_____
AJS109	Substantive Criminal Law	3	_____
AJS113	Criminal Justice Crime Control Policies and Practices	3	_____
AJS151	Firearms I	1	_____
AJS153	Firearms II/ Handguns	1	_____
AJS154	Firearms III/Long Weapons	1	_____
AJS162	Domestic Violence	3	_____

AJS201	Rules of Evidence	3	_____
AJS205	Effective Communication and Report Writing in Criminal Justice	3	_____
AJS210	Constitutional Law	3	_____
AJS215	Criminalistics: Physical Evidence	3	_____
AJS230	The Police Function	3	_____
AJS260	Procedural Criminal Law	3	_____
AJS270	Community Relations	3	_____
AJS275	Criminal Investigation I	3	_____
AJS290BN	Courtroom Testimony Seminar	1	_____
<b>Total Credits</b>		<b>40</b>	_____

## Leadership in Public Safety Organizations, Certificate of Completion



### BEHAVIORAL SCIENCE AND HUMAN SERVICES

**Certificate of Completion: CCL 5211N**

**6 Credits**

**Program Contact**

Jonathan Terpay | 480-988-8756 | jonathan.terpay@cgcc.edu

## Program Description

The Certificate of Completion (CCL) in Leadership in Public Safety Organizations program builds the industry knowledge and skills for individuals to transition to leadership positions in the field of public safety. This CCL will introduce students to the fundamental concepts and skills of professionalism, organizational culture and management, characteristics of effective teams, conflict resolution, motivation, systems-thinking, problem-solving, and leadership as applicable to public safety organizations. Students with the requisite experience in the field who complete this CCL can pursue employment in a variety of front-line leadership positions within the fields of public safety including law enforcement, fire service, and public safety support operations such as communication operators and property and records management.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

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

++ indicates any suffixed course may be selected.

## Admission Criteria

This is a closed program for Public Safety professionals. Please see the Program Advisor for admission requirements.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
LET173	Introduction to Leadership in Public Safety	2	_____
LET174	Organizational Culture and Leadership	3	_____
LET175	Public Safety Leadership Capstone	1	_____
<b>Total Credits</b>		<b>6</b>	_____

## Legal Studies, Certificate of Completion



### BEHAVIORAL SCIENCE AND HUMAN SERVICES

**Certificate of Completion: CCL 5966N**

**15 Credits**

**Program Contacts**

Lisa Ruschak 480-726-4078 | lisa.ruschak@cgcc.edu

## Program Description

The Certificate of Completion (CCL) in Legal Studies is designed for students who are interested in pursuing a course of study specifically focused on legal studies. It is one pathway to the Associate of Applied Science (AAS) in Administration of Justice.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**



Code	Title	Credits	Semester
<b>Required Courses</b>			
AJS109	Substantive Criminal Law	3	_____
AJS201	Rules of Evidence	3	_____
AJS123	Ethics and the Administration of Justice	3	_____
or AJS205	Effective Communication and Report Writing in Criminal Justice		_____
AJS210	Constitutional Law	3	_____
AJS260	Procedural Criminal Law	3	_____
<b>Total Credits</b>		<b>15</b>	_____

## Mortuary Science, Associate in Applied Science



Associate in Applied Science: AAS 3765

67-80 Credits

Program Contact

Donna G. Backhaus | 480-988-8503 | donna.backhaus@cgcc.edu

### Program Description

The Associate in Applied Science (AAS) in Mortuary Science program includes studies in public health; business management; natural sciences; legal, ethical and regulatory concerns; and clinical requirements associated with the mortuary field. The curriculum combines coursework in mortuary science with a general education component. The Mortuary Science associate degree is accredited by the American Board of Funeral Service Education (ABFSE) 992 Mantua Pike, Suite 108, Woodbury Heights, NJ 08097, 816-233-3747, [www.abfse.org](http://www.abfse.org). Completion of the courses in the program prepares the student to sit for the National Board examination and begin state internship requirements.

### Program Notes

Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Students must earn a grade of C or better in each course in the program.

### Admission Criteria

Formal application and admission to the program is required. Prior to applying to the program, students must have proof of high school graduation or GED and must complete the following required coursework with a minimum GPA of 2.75 prior to entry into the Mortuary Science (MSP) cohort coursework: [(ACC107 or ACC111), BIO160 or (BIO201 and BIO202), (BPC++++ or CIS++++), (BPC110 or CIS105 recommended), (COM100 or COM110 or COM225 or COM230), (CRE101 or equivalent), (ENG101 or ENG107), (ENG102 or ENG108), GBS205 or GBS206 or GBS207 or PHI214, GBS151 or MGT175 or MGT251 or MGT253, (PSY101

or PHY132 or PSY156), Mathematics (any approved), and Humanities (REL100 recommended)] or have permission of Program Director

## Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		3-4	_____
ACC107	Bookkeeping Theory And Practice		_____
ACC111	Accounting Principles I		_____
ACC211	Financial Accounting		_____
ACC212	Managerial Accounting		_____
Select one of the following:		4-8	_____
BIO201 & BIO202	Human Anatomy and Physiology I and Human Anatomy and Physiology II		_____
BIO160	Introduction to Human Anatomy and Physiology		_____
Select one of the following:		1-3	_____
BPC	Any BPC Business-Personal Computers course <sup>1</sup>		_____
CIS	Any CIS Computer Information Systems course <sup>1</sup>		_____
Select one of the following:		3	_____
GBS205	Legal, Ethical, and Regulatory Issues in Business		_____
GBS206	Business Law (UCC)		_____
GBS207	Business Law (General Corporate)		_____
PHI214	Business Ethics		_____
Select one of the following:		3	_____
GBS151	Introduction to Business		_____
MGT175	Business Organization and Management		_____
MGT251	Human Relations in Business		_____



MGT253	Owning and Operating a Small Business		
MSP101	Introduction to Mortuary Science	1	
MSP105	Cremation for Mortuary Science	1	
MSP201	History and Sociology of Funeral Service	3	
MSP202	Embalming Laboratory	3	
MSP202LL	Embalming Lab	1	
MSP203	Microbiology for Mortuary Science	3	
MSP204	Chemistry for Mortuary Science	3	
MSP205	Mortuary Administration I	3	
MSP206	Mortuary Administration II	3	
MSP207	Restorative Art Laboratory	3	
MSP207LL	Mortuary Science Restorative Art Lab	1	
MSP208	Legal, Regulatory, and Ethical Issues in Mortuary Science	3	
MSP209	Pathology for Mortuary Science	3	
MSP210	Psychology, Counseling, and Mortuary Science	2	
MSP211	Compendium for Mortuary Science	2	
Select one of the following:		3	
PSY101	Introduction to Psychology <sup>2</sup>		
PSY156	Understanding Death and Dying		
PSY132	Psychology and Culture		
Note that students who desire to transfer should choose PSY101.			
<b>General Education</b>			
<b>Core</b>			
<i>First-Year Composition</i>			
Select two of the following:		6	
ENG101	First-Year Composition		
or ENG107 First-Year Composition for ESL			
ENG102	First-Year Composition		
or ENG108 First-Year Composition for ESL			

ENG111	Technical and Professional Writing		
<i>Oral Communication</i>			
Select one of the following:		3	
COM100	Introduction to Human Communication		
COM110	Interpersonal Communication		
COM225	Public Speaking		
COM230	Small Group Communication		
<i>Critical Reading</i>			
Select one of the following:		0-3	
CRE101	College Critical Reading and Critical Thinking		
OR Equivalent as indicated by assessment			
<i>Mathematics</i>			
Any approved general education course from the Mathematics area with a C or better <sup>3</sup>		3-6	
<b>Distribution</b>			
<i>Humanities, Arts and Design</i>			
Any approved general education course(s) from the Humanities, Arts and Design area <sup>4</sup>		3	
<i>Social and Behavioral Sciences</i>			
Met by Required Courses <sup>5</sup>		0	
<i>Natural Sciences</i>			
Met by Required Courses <sup>6</sup>		0	
<b>Total Credits</b>		<b>67-80</b>	

<sup>1</sup> BPC110 Computer Usage and Applications or CIS105 Survey of Computer Information Systems recommended

<sup>2</sup> Students who desire to transfer should choose PSY101 Introduction to Psychology

<sup>3</sup> Students who desire to transfer should choose from the MAT14+ or MAT15+ options

<sup>4</sup> REL100 World Religions is recommended

<sup>5</sup> Met by PSY101 Introduction to Psychology OR PSY156 Understanding Death and Dying in Required Courses.

<sup>6</sup> Met by BIO160 Introduction to Human Anatomy and Physiology in Required Courses.

## Personal Training, Certificate of Completion



## HEALTH SCIENCES

Certificate of Completion: CCL 5421

18-18.5 Credits

Program Contact

Kim McGee, ACSM (EP-C) | 480-726-4246 | kimberly.mcgee@cgc.edu

Program Description

The Certificate of Completion (CCL) in Personal Training is designed to prepare students for the American College of Sports Medicine (ACSM), National Strength and Conditioning Association (NSCA), National Academy of Sports Medicine (NASM), and the American Council on Exercise (ACE) personal trainer certifications. These certifications are generally required for employment in personal training positions and/or professional advancement within the fitness industry. The curriculum provides students with the foundational skills needed to design and implement fitness programs appropriate to clients' goals and aligned with current industry best practices. A CCL in Personal Training: Advanced, an Associate in Applied Science (AAS) in Exercise Science: Health, Fitness, and Sports Performance, and an Associate in Arts (AA), Emphasis in Exercise Science are also available for students interested in continuing their studies in this field.

Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Select one of the following:		0-0.5	
EMT101	Basic Life Support/ Cardiopulmonary Resuscitation (CPR) for Health Care Providers		
WED106	Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED)		
Current CPR/AED certification			
Required Courses			
EXS101	Introduction to Exercise Science	3	
EXS125	Introduction to Exercise Physiology	3	
EXS146	Introduction to Exercise Testing	1	
EXS215	Resistance Training and Recovery Techniques	3	
EXS217	Cardiorespiratory and Flexibility Training	3	

FON100	Introductory Nutrition	3	
or FON241	Principles of Human Nutrition		
PED101ST	Strength Training	1	
or PED101RT	Resistance Training for Improved Sports Performance		
Restricted Electives			
Complete one (1) credit from one of the following course options not already selected in the Required Courses area. Choose a course that best aligns with your academic and professional goals. Consult with an academic, faculty, or program advisor as needed.		1	
EXS++++ Any EXS Exercise Science course			
FON++++ Any FON Food and Nutrition course			
HES++++ Any HES Health Science course			
PED++++ Any PED Physical Education course			
IFS110 Critical Research for College Success			
Total Credits		18-18.5	

Personal Training: Advanced, Certificate of Completion



Certificate of Completion: CCL 5445  
30-30.5 Credits  
Program Contact  
Kim McGee, ACSM (EP-C) | 480-726-4246 | kimberly.mcgee@cgc.edu

Program Description

The Certificate of Completion (CCL) in Personal Training: Advanced is designed to prepare students for the American College of Sports Medicine (ACSM), National Strength and Conditioning Association (NSCA), National Academy of Sports Medicine (NASM), and the American Council on Exercise (ACE) personal trainer certifications. These certifications are generally required for employment in personal training positions and/or professional advancement within the fitness industry. The curriculum is designed to prepare students for employment in positions such as personal training within health and fitness clubs, wellness centers, and public and private recreation facilities. The curriculum includes the foundational courses required for the CCL in Personal Training coupled with advanced hands-on courses that foster the development of critical thinking and leadership skills important for developing, implementing and leading exercise programs. An Associate in Applied Science (AAS) in Exercise Science: Health, Fitness, and Sports Performance and an Associate in Arts (AA), Emphasis in Exercise Science

are also available for students interested in continuing their studies in this field..

## Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites:** None

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-0.5	
EMT101	Basic Life Support/ Cardiopulmonary Resuscitation (CPR) for Health Care Providers		
WED106	Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED)		
Current CPR/AED certification			
EXS101	Introduction to Exercise Science	3	
EXS125	Introduction to Exercise Physiology	3	
EXS146	Introduction to Exercise Testing	1	
EXS215	Resistance Training and Recovery Techniques	3	
EXS217	Cardiorespiratory and Flexibility Training	3	
EXS246	Advanced Exercise Testing	2	
EXS255	Program Design: Muscular Fitness and Performance	3	
EXS257	Program Design: Cardiorespiratory Fitness	3	
Student must complete three (3) credits from the following EXS internship course options:		3	
<b>Option 1</b>			
Select one of the following:			
EXS270	Exercise Science Internship		

EXS270AA & EXS270AB	Exercise Science Internship and Exercise Science Internship		
<b>Option 2</b>			
Select one of the following:			
EXS275	Sport Science Internship		
EXS275AA & EXS275AB	Sport Science Internship and Sport Science Internship		
<b>Option 3</b>			
EXS270AA & EXS275AB	Exercise Science Internship and Sport Science Internship		
<b>Option 4</b>			
EXS270AB & EXS275AA	Exercise Science Internship and Sport Science Internship		
FON100	Introductory Nutrition	3	
or FON241	Principles of Human Nutrition		
PED101ST or PED101RT	Strength Training or Resistance Training for Improved Sports Performance	1	
Select one of the following:		1	
PED101BC	Boot Camp		
PED101BS	Body Sculpting		
PED101CY	Cycling - Indoor		
PED101GF	Group Fitness/ Aerobics		
PED101KB	Kickboxing		
PED101LD	Latin Dancing		
PED101PC	Physical Conditioning		
PED101PS	Pilates		
PED101SR	Stretch and Relaxation		
PED101TC	Tai Chi		
PED101TX	Suspension Training		
PED101YG	Gentle Yoga		
PED101YH	Hatha Yoga		
PED101YO	Yoga		
PED101YP	Power Yoga		
PED101YR	Restorative Yoga		
PED101ZU	Zumba Fitness		
<b>Restricted Electives</b>			

Complete one (1) credit from one of the following course options not already selected in the Required Courses area. Choose a course that best aligns with your academic and professional goals. Consult with an academic, faculty, or program advisor as needed.	1	_____
EXS+++++ Any EXS Exercise Science course	_____	_____
FON+++++ Any FON Food and Nutrition course	_____	_____
HES+++++ Any HES Health Science course	_____	_____
PED+++++ Any PED Physical Education course	_____	_____
IFS110 Critical Research for College Success	_____	_____
<b>Total Credits</b>	<b>30-30.5</b>	_____

## Victimology, Certificate of Completion



### BEHAVIORAL SCIENCE AND HUMAN SERVICES

**Certificate of Completion: CCL 5392N**

**15 Credits**

**Program Contacts**

Lisa Ruschak | 480-726-4078 | lisa.ruschak@cgc.edu

## Program Description

The Certificate of Completion (CCL) in Victimology is designed for students who are interested in pursuing a course of study specifically focused on crisis intervention, community services, and victim rights. It is one pathway to the Associate in Applied Science (AAS) in Administration of Justice.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
AJS101	Introduction to Criminal Justice	3	_____
AJS162	Domestic Violence	3	_____
AJS225	Criminology	3	_____

AJS255	The Criminal Justice System Handling of the Mentally Ill	3	_____
AJS/EMT/FSCOR258	Victimology and Crisis Management in Public Safety	3	_____
<b>Total Credits</b>		<b>15</b>	_____

## Languages, Humanities, Learning Center & Information Studies

Paul Petrequin, Division Chair  
480-857-5256 | paul.petrequin@cgc.edu

Prefix	Course
AFR	African American Studies
AIS	American Indian Studies
ASL	American Sign Language
CCS	Chicana and Chicano Studies
HIS	History
IFS	Information Studies
PHI	Philosophy
REL	Religious Studies
SPA	Spanish
SPH	Spanish Humanities
WST	Women's Studies

## Careers Programs

Chicana & Chicano Studies  
Language Studies  
Spanish Language & Culture  
Women & Gender Studies

- Chicana and Chicano Studies, Academic Certificate (p. 243)
- Language Studies, Academic Certificate (p. 244)
- Spanish Language and Culture, Academic Certificate (p. 245)
- Women and Gender Studies, Academic Certificate (p. 246)

## American Sign Language

**Yalim, Paulus**

- B.S., Gallaudet University
- M.A., University of Phoenix

## History

**Bilka, Monika**

- B.S., University of Oregon
- M.S., University of Montana
- Ph.D., Arizona State University

**Petrequin, Paul**  
Division Chair

- B.A., University of Oregon
- M.A., Ph.D., University of California, Santa Cruz

## Learning Center

**Falletta, Eva**

*Director*

- B.Acc., New Mexico State University
- M.C., Arizona State University
- M.Ed., Northern Arizona University

## Library Services

**Burgoyne, Mary Beth**

*Librarian*

- B.A., Arizona State University
- M.L.S., University of Arizona

**Chuppa-Cornell, Kim**

*Librarian*

- B.A., M.A., Arizona State University
- M.L.S., University of Arizona
- Ed.D., Northern Arizona University

**Howe, Barbara**

*Librarian*

- B.A., Arizona State University
- J.D., Santa Clara University
- M.L.S., University of Arizona

**Johnson, Monica**

*Librarian*

- B.A., California Lutheran University
- M.A., University of Arizona

**Kilbridge, Christine**

*Librarian*

- B.A., Alma College
- M.A., Kansas State University
- M.L.I.S., Wayne State University

**Martinez, Kelsy**

*Librarian*

- B.A., Arizona State University
- M.L.S., Simmons University

## Philosophy

**Mowad, Nicholas**

- B.A., University of Texas at Austin
- M.A., Ph.D., Loyola University Chicago

## Spanish

**Correa, Fabio**

- M.A., Ph.D., Arizona State University

## Women's Studies

**Thompson, Donna**

- B.A., Yale University
- M.A., Duke University

## African American Studies (AFR)

**AFR110 / Introduction to African-American Studies**

**3 Credits / 3.0 Periods for Lecture**

Introduction to the study of the African-American experience.

Interdisciplinary approach includes historical underpinnings; population and cultural characteristics; social, economic, and political issues; and implications for the future. Prerequisites: None.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**AFR202 / Ethnic Relations in the United States**

**3 Credits / 3.0 Periods for Lecture**

Basic concepts and processes, including historic overview, of inter-ethnic relations in the United States: culture, race, ethnicity, ethnocentrism, prejudice, discrimination, racism, assimilation, acculturation, and individual and group responses to inter-ethnic contact. Cultural knowledge and intercultural communication skills and perspectives as fundamental tools for successful management of social relations in a multicultural world. Prerequisites: None.

**Crosslisted:** CCS202, ASB202

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Historical Awareness [H]; Historical Awareness [H]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

## American Indian Studies (AIS)

**AIS140 / American Indian History**

**3 Credits / 3.0 Periods for Lecture**

Survey of American Indian history with emphasis on the last 200 years.

Focuses on cultural, economic, political and social continuity and changes. Topics include how federal policies impacted and were shaped by Indigenous peoples and how Indigenous individuals, communities, and nations have maintained cultural identity and sovereignty. Prerequisites: None.

**Crosslisted:** HIS140

**Division:** Language, Humanits, Learng Centr&Informtn Studies

## American Sign Language (ASL)

**ASL101 / American Sign Language I**

**4 Credits / 4.0 Periods for Lecture**

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. ASL103 suggested as a corequisite but not required.

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**ASL102 / American Sign Language II****4 Credits / 4.0 Periods for Lecture**

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: A grade of C or better in ASL101 or permission of Department or Division. Completion of prerequisites within the last three years is required.

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**ASL103 / Introduction to the Deaf Community****1 Credit / 1.0 Periods for Lecture**

History and development of American Sign Language (ASL) and English codes. Overview of education for Deaf and Hard of Hearing children. Legal rights and common adaptive devices used by Deaf and Hard of Hearing individuals. Prerequisites: None.

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**ASL110 / Fingerspelling****3 Credits / 3.0 Periods for Lecture**

Introduction to fingerspelling techniques. Focus on methods, theory, and applications on receptive and expressive skills including manual alphabet production and numbers. In addition, skill development in speed, dexterity, clarity, and lexicalized fingerspelling, numeric incorporation, prefixes, suffixes, and polysyllabic words. Prerequisites: A grade of C or better in ASL101 or permission of Department or Division. Completion of prerequisites within the last three years is required.

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**ASL201 / American Sign Language III****4 Credits / 4.0 Periods for Lecture**

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.

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**ASL202 / American Sign Language IV****4 Credits / 4.0 Periods for Lecture**

Advanced American Sign Language skills including continued vocabulary. Emphasis on conversational techniques in a cross-cultural framework. Continued work on conceptual accurate signing of English idioms and words with multiple meanings. Prerequisites: A grade of C or better in ASL201 or permission of Department or Division. (ENG101 or ENG107), ASL200, and (CRE101 or equivalent as indicated by assessment) suggested but not required. Completion of prerequisites within the last three years is required.

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**Chicana and Chicano Studies (CCS)****CCS101 / Chicana and Chicano Studies****3 Credits / 3.0 Periods for Lecture**

Introduction to the wealth and diversity of Chicana and Chicano Studies research from a variety of disciplinary perspectives through the use of a series of historical and social scientific studies, novels, testimonies, and films. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**History (HIS)****HIS101 / History of Western Civilization Middle Ages to 1789****3 Credits / 3.0 Periods for Lecture**

Survey of the history of the Western world from the emergence of Western civilization in the Middle Ages to the start of the French Revolution. Prerequisites: None.

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**HIS102 / History of Western Civilization 1789 to Present****3 Credits / 3.0 Periods for Lecture**

Survey of the history of the Western world from the French Revolution to the present. Prerequisites: None.

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**HIS103 / United States History to 1865****3 Credits / 3.0 Periods for Lecture**

The political, economic, and social development of the United States from the Pre-Columbian period through the end of the Civil War (1865). Prerequisites: None.

 SUN# HIS 1131

**Fulfills:** Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**HIS104 / United States History 1865 to Present****3 Credits / 3.0 Periods for Lecture**

The political, economic, and social development of United States from 1865 to the present time. Prerequisites: None.

 SUN# HIS 1132

**Fulfills:** Historical Awareness [H]; Historical Awareness [H]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**HIS109 / Mexican-American History and Culture****3 Credits / 3.0 Periods for Lecture**

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.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Historical Awareness [H]; Historical Awareness [H]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**HIS110 / World History to 1500****3 Credits / 3.0 Periods for Lecture**

Survey of the economic, social, cultural, and political elements of world history from the beginning of human civilization to 1500. Prerequisites: None.

 SUN#: HIS 1100

**Fulfills:** Global Awareness [G]; Global Awareness [G]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**HIS111 / World History 1500 to the Present****3 Credits / 3.0 Periods for Lecture**

Survey of the economic, social, cultural, and political elements of world history from 1500 to the present. Prerequisites: None.

 SUN#: HIS 1111

**Fulfills:** Global Awareness [G]; Global Awareness [G]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**HIS140 / American Indian History****3 Credits / 3.0 Periods for Lecture**

Survey of American Indian history with emphasis on the last 200 years. Focuses on cultural, economic, political and social continuity and changes. Topics include how federal policies impacted and were shaped by Indigenous peoples and how Indigenous individuals, communities, and nations have maintained cultural identity and sovereignty. Prerequisites: None.

**Crosslisted:** AIS140

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**HIS145 / History of Mexico****3 Credits / 3.0 Periods for Lecture**

Survey of the major forces that shaped the history of Mexico and its culturally diverse communities from pre-Columbian times to the present. Also examines how these historical forces continue to shape contemporary Mexican society and its place within the world. Prerequisites: None.

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**HIS201 / History of Women in America****3 Credits / 3.0 Periods for Lecture**

Introduction to women's history from the colonial period to the present. Explores changes and developments which have influenced the lives of women. Prerequisites: None.

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**HIS204 / African-American History 1865 to Present****3 Credits / 3.0 Periods for Lecture**

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.

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**HIS273 / US Experience in Vietnam 1945 - 1975****3 Credits / 3.0 Periods for Lecture**

Survey of the US experience in Vietnam, 1945-1975, in view of political, economic, and social forces of the Cold War. Prerequisites: None.

**Fulfills:** Historical Awareness [H]; Historical Awareness [H]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**Information Studies (IFS)****IFS110 / Critical Research for College Success****1 Credit / 1.0 Periods for Lecture**

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.

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**IFS201 / Information in a Post-Truth World****3 Credits / 3.0 Periods for Lecture**

Development of critical thinking skills in using information. Exploration of how information can be used as a tool or a weapon. Explanation of the role of information as a consumer and creator. Recognition of the impact of culture and worldview on how information is understood, created, and disseminated. Prerequisites: A grade of "C" or better in ENG101 or ENG107.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo; Literacy & Critical Inquiry [L]; Literacy & Critical Inquiry [L]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**IFS210 / Information Without Borders: Research in a Global Society****3 Credits / 3.0 Periods for Lecture**

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.

**Fulfills:** Global Awareness [G]; Global Awareness [G]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**IFS213 / Hacking and Open Source Culture****3 Credits / 3.0 Periods for Lecture**

Focus on the multi-dimensions of hacking and open source culture, including rule-breaking, innovation, and creative use of programming/technology. Social, economic, cultural, and political implications of hacking and technology, in historical and contemporary contexts will be addressed. Prerequisites: None.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**Philosophy (PHI)****PHI101 / Introduction to Philosophy****3 Credits / 3.0 Periods for Lecture**

General consideration of human nature and the nature of the universe. Knowledge, perception, freedom and determinism, and the existence of God. Prerequisites: None.

 SUN# PHI 1101

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**PHI103 / Introduction to Logic****3 Credits / 3.0 Periods for Lecture**

Informal logic, logical fallacies, elementary symbolic logic, analysis of argument forms, and construction of proofs for validity. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.

 SUN# PHI 1103

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]; Literacy & Critical Inquiry [L]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies



**PHI104 / World Philosophy****3 Credits / 3.0 Periods for Lecture**

Examination of questions such as the meaning of life and death, social justice, appearance and reality, human nature, the identity of the self, freedom and destiny, the ethical life, and the relationship of science and religion. Comparative analysis of diverse Eastern and Western viewpoints. Prerequisites: None.

**Fulfills:** Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**PHI105 / Introduction to Ethics****3 Credits / 3.0 Periods for Lecture**

A survey of ethical theory in Western Philosophy, including the major normative theories and selected metaethical theories. Prerequisites: None.

 SUN# PHI 1105

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**PHI216 / Environmental Ethics****3 Credits / 3.0 Periods for Lecture**

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.

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**PHI218 / Philosophy of Sexuality****3 Credits / 3.0 Periods for Lecture**

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: A grade of C or better in ENG101 or ENG107 or permission of Instructor. Course Notes: Course may contain adult content. All students under 18 years old are required to have a signed parental consent form on file, which is on the back of the "Students Under The Age of 18" Enrollment Form.

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]; Literacy & Critical Inquiry [L]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**Religious Studies (REL)****REL100 / World Religions****3 Credits / 3.0 Periods for Lecture**

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.

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**REL270 / Introduction to Christianity****3 Credits / 3.0 Periods for Lecture**

The nature and content of the Christian tradition developed over time, with overview of the New Testament, major historical trends and figures, major Christian ideas and practices, and survey of denominations.

Prerequisites: None.

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**Spanish (SPA)****SPA101 / Elementary Spanish I****4 Credits / 4.0 Periods for Lecture**

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. Course Notes: General Education Designation: Global Awareness [G] in combination with: SPA102

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**SPA102 / Elementary Spanish II****4 Credits / 4.0 Periods for Lecture**

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 SPA101AA), or permission of Department or Division. Completion of prerequisites within the last three years is required. Course Notes: General Education Designation: Global Awareness [G] in combination with: SPA101

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**SPA111 / Fundamentals of Spanish****4 Credits / 4.0 Periods for Lecture**

Accelerated study of elementary Spanish for students with previous Spanish coursework. Includes basic Spanish grammar, pronunciation, vocabulary and the study of the Spanish-speaking cultures. Emphasis on speaking, listening, reading, and writing skills. Prerequisites: A grade of C or better in SPA101, or SPA101AA, or SPA115, or SPA115AA, or two years of high school Spanish, or permission of Department or Division. Completion of prerequisites within the last three years is required.

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**SPA115 / Beginning Spanish Conversation I****3 Credits / 3.0 Periods for Lecture**

Basic pronunciation, vocabulary, sentence structures, and cultural awareness, necessary to develop speaking and listening skills in Spanish. Prerequisites: None.

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**SPA117 / Health Care Spanish I****3 Credits / 3.0 Periods for Lecture**

Basic conversational Spanish for health care workers or students. Emphasis on basic sentence structure, pronunciation and vocabulary used in health care settings. Prerequisites: None.

**Division:** Language, Humanits, Learng Centr&Informtn Studies



**SPA201 / Intermediate Spanish I****4 Credits / 4.0 Periods for Lecture**

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: A grade of "C" or better in SPA102, or SPA102AA, or SPA111, or permission of Department or Division. Completion of prerequisites within the last three years is required.



**Fulfills:** Global Awareness [G]; Global Awareness [G]-in combo  
**Division:** Language, Humanits, Learng Centr&Informtn Studies

**SPA202 / Intermediate Spanish II****4 Credits / 4.0 Periods for Lecture**

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 SPA201, or permission of Department or Division. Completion of prerequisites within the last three years is required.



**Fulfills:** Global Awareness [G]; Global Awareness [G]-in combo  
**Division:** Language, Humanits, Learng Centr&Informtn Studies

**Spanish Humanities (SPH)****SPH245 / Hispanic Heritage in the Southwest****3 Credits / 3.0 Periods for Lecture**

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.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**Women's Studies (WST)****WST100 / Introduction to Women's and Gender Studies****3 Credits / 3.0 Periods for Lecture**

Introduction to critical issues in women's studies. Prerequisites: None.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**WST120 / Gender, Class, and Race****3 Credits / 3.0 Periods for Lecture**

A feminist discussion of gender, class and race as basic and central social categories that determine how we see ourselves and others and how they circumscribe our opportunities and privileges in American society. Prerequisites: None.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**WST200 / Essential Feminist Writing****3 Credits / 3.0 Periods for Lecture**

Literary tracing of feminism from 18th century to present. Explores major issues related to women in the 20th century. Prerequisites: A grade of C or better in ENG101 or permission of Instructor.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Historical Awareness [H]; Historical Awareness [H]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**WST209 / Women and Films****3 Credits / 3.0 Periods for Lecture**

Analysis of images of women in films from both historical and contemporary perspectives. Prerequisites: None.

**Crosslisted:** HUM209

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**WST284 / 19th Century Women Writers****3 Credits / 3.0 Periods for Lecture**

Investigates major themes in literature by women writing in the 19th century including the nature of women's lives in the family, in work situations, and in society. Poetry, prose, essays and drama are examined with an emphasis on common themes. Prerequisites: None.

**Crosslisted:** ENH284

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**WST285 / Contemporary Women Writers****3 Credits / 3.0 Periods for Lecture**

Explores twentieth century literature (short stories, essays, plays, and poetry) written by women and about women. Focus on themes relevant to women's lives regardless of age, creed, or ethnic background. Prerequisites: None.

**Crosslisted:** ENH285

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Language, Humanits, Learng Centr&Informtn Studies

**Chicana and Chicano Studies,  
Academic Certificate**

**Academic Certificate: AC 6230N**

**12-13 Credits**

**Program Contacts**

Fabio Correa | fabio.correa@cgc.edu

**Program Description**

The Academic Certificate (AC) in Chicana and Chicano Studies explores the unique experiences of the Chicana and Chicano people living in the Southwest. The Certificate provides a study of Mexican-American life in the society of the United States, including Mexican background, social and cultural differences, and experiences of assimilation.

**Program Notes**

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses in the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

### Program Prerequisites:

Code	Title	Credits	Semester
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Equivalent as indicated by assessment			_____
<b>Total Credits</b>		<b>3-6</b>	_____

Code	Title	Credits	Semester
<b>Required Courses</b>			
CCS101	Chicana and Chicano Studies	3	_____
HIS109	Mexican-American History and Culture	3	_____
SPH245	Hispanic Heritage in the Southwest	3	_____
<b>Restricted Electives</b>			
Select one of the following:		3-4	_____
ENH112	Chicano Literature		_____
HIS145	History of Mexico		_____
HUM213	Hispanic Film		_____
SPA101	Elementary Spanish I		_____
SPA102	Elementary Spanish II		_____
SPA103	Elementary Spanish for Spanish Speakers I		_____
SPA104	Elementary Spanish for Spanish Speakers II		_____
SPA201	Intermediate Spanish I		_____
SPA202	Intermediate Spanish II		_____
SPA203	Spanish for Spanish-Speaking Students I		_____
SPA204	Spanish for Spanish-Speaking Students II		_____
<b>Total Credits</b>		<b>12-13</b>	_____

## Language Studies, Academic Certificate



**Academic Certificate: AC 6237N**

**12-18 Credits**

**Program Contacts**

Fabio Correa | fabio.correa@cgc.edu

## Program Description

The Academic Certificate (AC) in Language Studies is designed to provide students with a foundation in the study of culture, language, and linguistic structures. Students will have the opportunity to develop oral and written communication skills in a language other than English.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses in the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Students may qualify to enter higher level Spanish courses by placement or may qualify to exempt out of taking any Spanish courses by assessment. Students wishing to earn credit for any course of which they are exempt by assessment should take the CLEP examination or apply credits earned through the Advanced Placement (AP) or International Baccalaureate (IB) exams.

## Program Requirements

### Program Prerequisites:

Code	Title	Credits	Semester
	201-level proficiency in a language other than English as indicated by assessment or coursework.	0-4	_____
<b>Required Courses</b>			
SLC201	Introduction to Linguistics	3	_____
AND			
Students must choose 3-5 credits in 202 or higher-level coursework in the language used to satisfy the program prerequisites.		3-5	_____
<b>Restricted Electives</b>			
Students must choose two (2) courses from the list below. Prerequisites may not be used to satisfy the Restricted Electives:		6-10	_____

AFR/ASB/ CCSOR202	Ethnic Relations in the United States	_____
or SOC241	Race and Ethnic Relations	_____
COM163	Intercultural Communication in Everyday Life	_____
COM263	Elements of Intercultural Communication	_____
AHU+++	Any AHU Arabic Humanities course(s)	_____
ARB+++	Any ARB Arabic course(s)	_____
ASL+++	Any ASL American Sign Language course(s)	_____
CHI+++	Any CHI Chinese course(s)	_____
FLA+++	Any FLA Foreign Language Acquisition course(s)	_____
FRE+++	Any FRE French course(s)	_____
GER+++	Any GER German course(s)	_____
GRK+++	Any GRK Greek course(s)	_____
HBR+++	Any HBR Hebrew course(s)	_____
HEB+++	Any HEB Hebrew course(s)	_____
IPP+++	Any IPP Interpreter Preparation Program course(s)	_____
ITA+++	Any ITA Italian course(s)	_____
ITH+++	Any ITA Italian Humanities course(s)	_____
JPN+++	Any JPN Japanese course(s)	_____
LAT+++	Any LAT Latin course(s)	_____
NAV+++	Any NAV Navajo course(s)	_____
NVH+++	Any NVH Navajo Humanities course(s)	_____
PIM+++	Any PIM Pima course(s)	_____

POR+++	Any POR Portuguese course(s)	_____
RUS+++	Any RUS Russian course(s)	_____
SLC+++	Any SLC Studies in Language and Culture course(s)	_____
SPA+++	Any SPA Spanish course(s)	_____
SPH+++	Any SPH Spanish Humanities course(s)	_____
TRS+++	Any TRS Translation and Interpretation course(s)	_____
<b>Total Credits</b>		<b>12-18</b>

## Spanish Language and Culture, Academic Certificate



**CULTURE  
AND SOCIETY**

**Academic Certificate: AC 6243N**

**25 Credits**

**Program Contacts**

Fabio Correa | fabio.correa@cgc.edu

## Program Description

The Academic Certificate (AC) in Spanish Language and Culture is designed to provide students with the essential language skills and vocabulary to communicate with confidence in diverse communicative situations. Instruction in the diverse cultural context will help students to understand the complex interdependence of language and culture.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses in the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Students may qualify to enter higher level Spanish courses by placement or may qualify to exempt out of taking any Spanish courses by assessment. Students wishing to earn credit for any course of which they are exempt by assessment should take the CLEP examination.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
SPA101	Elementary Spanish I	4	
SPA102	Elementary Spanish II	4	
SPA201	Intermediate Spanish I	4	
SPA202	Intermediate Spanish II	4	
<b>Restricted Electives</b>			
Select six (6) credits taught in Spanish and three (3) credits taught in English.		9	
ARH217	Mexican Art History		
FLA240	Foreign Language Teaching Methods		
GCU223	Geography of Latin America		
HIS145	History of Mexico		
MHL156	Music in Latin America and the Caribbean		
SLC201	Introduction to Linguistics		
SPA115	Beginning Spanish Conversation I		
SPA116	Beginning Spanish Conversation II		
SPA117	Health Care Spanish I		
SPA118	Health Care Spanish II		
SPA119	Spanish for Educational Settings I		
SPA120	Spanish for Educational Settings II		
SPA205	Spanish for Medical Interpretation I		
SPA206	Spanish for Medical Interpretation II		
SPA217	Spanish for Business Communication		
SPA225	Intermediate Spanish Conversation I		

SPA226	Intermediate Spanish Conversation II	
SPA235	Advanced Spanish Conversation I	
SPA236	Advanced Spanish Conversation II	
SPA241	Spanish and Spanish-American Film I	
SPA242	Spanish and Spanish-American Film II	
SPA251	Spanish Civilization	
SPA265	Advanced Spanish I	
SPA266	Advanced Spanish II	
SPA282++	Volunteerism for Spanish: A Service Learning Experience (any suffixed course)	
SPA298++	Special Projects (any suffixed course)	
SPH245	Hispanic Heritage in the Southwest	
SPH298++	Special Projects (any suffixed course)	
<b>Total Credits</b>		<b>25</b>

## Women and Gender Studies, Academic Certificate



**CULTURE  
AND SOCIETY**

**Academic Certificate: AC 6225N**

**15 Credits**

**Program Contact**

Donna Thompson | 480-857-5534 | donna.thompson@cg.edu

### Program Description

The Academic Certificate (AC) in Women and Gender Studies is an intensive interdisciplinary liberal arts certificate program, which provides students with tools and opportunities to discuss and critique historical and contemporary theories and practices of feminism(s) and gender identities. The curriculum enables students to think critically, analyze problems, and communicate effectively. Using women's experiences and

perspectives, students explore cultural and global issues by completing a variety of courses focusing on gender, history, culture, class, race, ethnicity, and sexuality to foster equality and understanding.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Program Requirements

### Program Prerequisites: None

Code	Title	Credits	Semester
<b>Required Courses</b>			
WST100	Introduction to Women's and Gender Studies	3	_____
<b>Restricted Electives</b>			
Students must complete 12 credits from the list below:		12	_____
ASB211	Women in Other Cultures		_____
ENH/ WSTOR284	19th Century Women Writers		_____
ENH/ WSTOR285	Contemporary Women Writers		_____
HIS201	History of Women in America		_____
WST286	Women and Health: Body/Mind/Spirit/Connection		_____
HUM/ WSTOR209	Women and Films		_____
PSY235	Psychology of Gender		_____
REL/ WSTOR290	Women and World Religions		_____
SOC212	Gender and Society		_____
WST120	Gender, Class, and Race		_____
WST128	Law and Violence Against Women		_____
WST160	Women and the Early American Experience		_____
WST161	American Women Since 1920		_____
WST200	Essential Feminist Writing		_____
<b>Total Credits</b>		<b>15</b>	_____

## Mathematics

Pamela Woodbury, Division Chair  
480-857-5531 | pamela.woodbury@cgc.edu

Prefix	Course
MAT	Mathematics

### Adamson, Scott

- A.A., Itasca Community College
- B.S., M.Ed., Northern Arizona University
- PH.D., Arizona State University

### Beaumont, Jonah

- M.S., Northern Arizona University

### Bishop, Shannon

- B.A., M.A., Arizona State University
- PH.D., Sam Houston State University

### Cox, Frank (Trey)

- B.A., M.S., Concordia University Wisconsin
- PH.D., Arizona State University

### Evangelista, Arlene

- B.S., M.N.S., Arizona State University

### Flores, Alfinio

- PH.D., University of Ohio

### Groseta, Alexandra (Sasha)

- M.A., Arizona State University

### Jeanson, Andrew

- B.S., Elmhurst College
- M.A., University of Arizona

### Joyner, Kacie

- B.B.A., Texas Christian University
- M.N.S., Arizona State University

### Judson-Garcia, Julia G.

- M.A., Arizona State University

### Llamas-Flores, Silvia

- B.S., M.A., University of California
- Los Angeles; PH.D., Arizona State University

### Pardo, Roberta

- B.S., M.Ed., Northern Arizona University
- PH.D., Sam Houston State University

### Podmanik, Milos

- B.A., Arizona State University
- M.S., Northern Arizona University

**Ramirez, Jason**

- B.A., B.S., M.Ed., Northern Arizona University

**Reynolds-Garza, Anne**

- B.A., Eastern Illinois University
- M.A., M.Ed., Framingham State University

**Steele, Arezoo (Sue)**

- B.S., University of Melbourne, Australia
- M.S., Arizona State University

**Strom, April**

- B.A., M.A., Texas Tech University
- PH.D., Arizona State University

**Woodbury, Pamela***Division Chair*

- B.S., University of Miami
- M.S., Lehigh University

**Mathematics (MAT)****MAT051 / Number Sense I****1 Credit / 1.0 Periods for Lecture**

Primary emphasis on conceptual understanding of whole numbers, integers and mathematical operations. Use systems of measure and Pythagorean Theorem. Focus on mathematical language, connections, patterns and reasoning. Prerequisites: None.

**Division:** Mathematics**MAT052 / Number Sense II****1 Credit / 1.0 Periods for Lecture**

Primary emphasis on conceptual understanding of decimals and fractions, and decimal and fraction addition and subtraction. Solving problems involving decimals and fractions. Focus on mathematical language, connections, patterns and reasoning. Prerequisites: A grade of C or better in MAT051, or an appropriate district placement.

**Division:** Mathematics**MAT053 / Multiplicative and Proportional Reasoning****1 Credit / 1.0 Periods for Lecture**

Primary emphasis on conceptual understanding of decimals and fractions, and decimal and fraction multiplication and division. Solving problems involving decimals, fractions, and percentages. Focus on additive and multiplicative reasoning including proportionality and similarity. Prerequisites: A grade of C or better in each of the following courses: (MAT051 and MAT052), or an appropriate district placement.

**Division:** Mathematics**MAT054 / Geometry****1 Credit / 1.0 Periods for Lecture**

Primary emphasis on conceptual understanding of and solving problems involving angles and geometric figures. Use of systems of measure, similarity, proportionality and the Pythagorean theorem. Prerequisites: A grade of "C" or better, or satisfactory Math Diagnostic Assessment Score for MAT051, MAT052 and MAT053. Corequisites: MAT055, or MAT056, or MAT057.

**Division:** Mathematics**MAT055 / Algebraic Structures****1 Credit / 1.0 Periods for Lecture**

Emphasis on meanings related to variable, equality, inequality, equivalence. The use of additive and multiplicative reasoning in solving linear equations and inequalities in one variable. Validation of solution(s) through a reasonable mathematical defense. Transfer and apply knowledge through a process of sense making and reasonableness in mathematical problems and practical application situations.

Prerequisites: A grade of C or better in each of the following courses: (MAT051, MAT052, and MAT053), or a grade of C or better for MAT08+, or an appropriate district placement.

**Division:** Mathematics**MAT056 / Functions I****1 Credit / 1.0 Periods for Lecture**

Recognize patterns and organize data to represent situations where output is related to input. Understand the concept of function and be able to represent functions in multiple ways, including tables, algebraic rules, graphs and contextual situations, and make connections among these representations. Prerequisites: A grade of C or better in each of the following courses: (MAT051, MAT052, MAT053, and MAT055), OR a grade of C or better in (MAT055 and MAT08+), OR an appropriate district placement.

**Division:** Mathematics**MAT057 / Functions II****1 Credit / 1.0 Periods for Lecture**

Read, represent, and interpret linear function relationships numerically, analytically, graphically and verbally and connect the different representations. Model and solve real world problems involving constant rate of change. Prerequisites: A grade of C or better in each of the following courses: (MAT051, MAT052, MAT053, MAT055, and MAT056), OR a grade of C or better in (MAT055, MAT056, and MAT08+), OR an appropriate district placement.

**Division:** Mathematics**MAT112 / Mathematical Concepts and Applications****3 Credits / 3.0 Periods for Lecture**

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: None.

**Division:** Mathematics**MAT121 / Intermediate Algebra****4 Credits / 4.0 Periods for Lecture**

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 each of the following courses: (MAT055, MAT056, and MAT057), OR a grade of C or better in MAT09+, OR an appropriate district placement. Course Notes: Students may receive credit for only one of the following: MAT120, OR MAT121, OR MAT122 OR MAT126.

**Division:** Mathematics

**MAT141 / College Mathematics****4 Credits / 4.0 Periods for Lecture**

Working knowledge of college-level mathematics and its applications to real-life problems. Emphasis on understanding mathematical concepts and their applications. Topics include proportional reasoning, modeling, finance, probability, and statistics. Prerequisites: An appropriate District placement, or a grade of C or better in (MAT052, MAT053, and MAT055), or (MAT055, MAT056, and MAT057), or MAT085, or MAT09+, or MAT103, or MAT114, or MAT115, or MAT12+. Course Notes: MAT141 students may receive credit for only one of the following: MAT140, MAT141, MAT142, MAT145, or MAT146.

 SUN# MAT 1142

**Fulfills:** Mathematics [MA]; Mathematics [MA]-in combo

**Division:** Mathematics

**MAT142 / College Mathematics****3 Credits / 3.0 Periods for Lecture**

Working knowledge of college-level mathematics and its applications to real-life problems. Emphasis on understanding mathematical concepts and their applications. Topics include proportional reasoning, modeling, finance, probability, and statistics. Prerequisites: An appropriate District placement, or a grade of C or better in (MAT052, MAT053, and MAT055), or (MAT055, MAT056, and MAT057), or MAT085, or MAT09+, or MAT103, or MAT114, or MAT115, or MAT12+. Course Notes: MAT142 students may receive credit for only one of the following: MAT140, MAT141, MAT142, MAT145, or MAT146.

 SUN# MAT 1142

**Fulfills:** Mathematics [MA]; Mathematics [MA]-in combo

**Division:** Mathematics

**MAT151 / College Algebra/Functions****4 Credits / 4.0 Periods for Lecture**

Analysis and interpretation of the behavior and nature of functions including linear, quadratic, higher-order polynomials, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, using multiple methods including matrices, and modeling and solving real world problems. Prerequisites: A grade of C or better in MAT095, or MAT096, or MAT114, or MAT115, or MAT12+, OR an appropriate district placement for MAT15+, OR permission of Department or Division Chair. Course Notes: Students may receive credit for only one of the following: MAT150, OR MAT151, OR MAT152, OR MAT155, OR MAT156.

**Division:** Mathematics

**MAT152 / College Algebra/Functions****3 Credits / 3.0 Periods for Lecture**

Analysis and interpretation of the behavior and nature of functions including linear, quadratic, higher-order polynomials, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, using multiple methods including matrices, and modeling and solving real world problems. Prerequisites: A grade of C or better in MAT095, or MAT096, or MAT114, or MAT115, or MAT12+, OR an appropriate district placement for MAT15+, OR permission of Department or Division Chair. Course Notes: Students may receive credit for only one of the following: MAT150, OR MAT151, OR MAT152, OR MAT155, OR MAT156.

**Division:** Mathematics

**MAT187 / Precalculus****5 Credits / 5.0 Periods for Lecture**


Topics in algebra and trigonometry in preparation for calculus.

Prerequisites: A grade of C or better in MAT15+, or an appropriate district placement. Course Notes: Students may receive credit for only one of the following: MAT182 OR MAT187.

**Division:** Mathematics

**MAT212 / Brief Calculus****3 Credits / 3.0 Periods for Lecture**

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: A grade of C or better in MAT15+, or MAT187, or an appropriate District placement. Course Notes: Students may receive credit for only one of the following: MAT212 or MAT213.

 SUN# MAT 2212

**Fulfills:** Mathematics [MA]; Mathematics [MA]-in combo

**Division:** Mathematics

**MAT213 / Brief Calculus****4 Credits / 4.0 Periods for Lecture**

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: A grade of C or better in MAT15+, or MAT187, or an appropriate District placement. Course Notes: Students may receive credit for only one of the following: MAT212 or MAT213.

 SUN# MAT 2212

**Fulfills:** Mathematics [MA]; Mathematics [MA]-in combo

**Division:** Mathematics

**MAT217 / Mathematical Analysis for Business****3 Credits / 3.0 Periods for Lecture**

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: A grade of C or better in MAT212, or MAT213, or MAT220, or MAT221. Course Notes: Students may receive credit for only one of the following: MAT217 or MAT218.

**Division:** Mathematics

**MAT220 / Calculus with Analytic Geometry I****5 Credits / 5.0 Periods for Lecture**

Limits, continuity, differential and integral calculus of functions of one variable. Prerequisites: A grade of C or better in MAT187, or MAT188, or an appropriate District placement. Course Notes: MAT220 students may receive credit for only one of the following: MAT220 or MAT221.

**Division:** Mathematics

**MAT221 / Calculus with Analytic Geometry I****4 Credits / 4.0 Periods for Lecture**

Limits, continuity, differential and integral calculus of functions of one variable. Prerequisites: A grade of C or better in MAT187, or MAT188, or an appropriate District placement. Course Notes: Student may receive credit for only one of the following: MAT220 or MAT221.

**Division:** Mathematics

**MAT225 / Elementary Linear Algebra****3 Credits / 3.0 Periods for Lecture**

Introduction to matrices, systems of linear equations, determinants, vector spaces, linear transformations and eigenvalues. Emphasizes the development of computational skills. Prerequisites: A grade of C or better in MAT212 or MAT213 or MAT220 or MAT221, or equivalent.

**Division:** Mathematics



**MAT227 / Discrete Mathematical Structures****3 Credits / 3.0 Periods for Lecture**

Course emphasizes discrete mathematics connections to computer science by exposing students to foundational concepts of set theory, logic, counting, induction, proof techniques, graph theory, and algorithms. Prerequisites: A grade of C or better in MAT212, or MAT213, or MAT220, or MAT221, or permission of Department or Division Chair.

 SUN# MAT 2227

**Division:** Mathematics

**MAT230 / Calculus with Analytic Geometry II****5 Credits / 5.0 Periods for Lecture**

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: A grade of C or better in MAT220, or MAT221, or equivalent. Course Notes: Student may receive credit for only one of the following: MAT230 or MAT231.

**Division:** Mathematics

**MAT231 / Calculus with Analytic Geometry II****4 Credits / 4.0 Periods for Lecture**

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: A grade of C or better in MAT220, or MAT221, or equivalent. Course Notes: Student may receive credit for only one of the following: MAT230 or MAT231.

**Division:** Mathematics

**MAT240 / Calculus with Analytic Geometry III****5 Credits / 5.0 Periods for Lecture**

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: Student may receive credit for only one of the following: MAT240 or MAT241.

**Fulfills:** Mathematics [MA]; Mathematics [MA]-in combo

**Division:** Mathematics

**MAT241 / Calculus with Analytic Geometry III****4 Credits / 4.0 Periods for Lecture**

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: Student may receive credit for only one of the following: MAT240 or MAT241.

 SUN# MAT 2241

**Fulfills:** Mathematics [MA]; Mathematics [MA]-in combo

**Division:** Mathematics

**MAT256 / Investigating Quantity: Number, Operations and Numeration Systems****4 Credits / 4.0 Periods for Lecture**

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 (MAT15+ or higher), or (MAT12+ and MAT14+), or [MAT14+ and (MAT114 or MAT115)], or (MAT14+ and an appropriate District placement into MAT150, MAT151, or MAT152), or permission of Department/Division Chair. Course Notes: MAT256 is designed to meet requirements for prospective elementary education teachers.

**Division:** Mathematics

**MAT257 / Investigating Geometry, Probability and Statistics****4 Credits / 4.0 Periods for Lecture**

Explores geometry, measurement, probability and statistics. Uses visualization, technologies, problem solving, reasoning and proof to develop a conceptual understanding of these topics. Prerequisites: A grade of C or better in MAT256 or permission of Department/Division Chair. Course Notes: MAT257 is designed to meet the requirements for prospective elementary education teachers.

**Division:** Mathematics

**MAT276 / Modern Differential Equations****4 Credits / 4.0 Periods for Lecture**

Introduces differential equations, theoretical and practical solution techniques with applications. Problem-solving using MATLAB. Prerequisites: A grade of C or better in MAT230 or MAT231 or permission of Department/Division Chair.

**Fulfills:** Mathematics [MA]; Mathematics [MA]-in combo

**Division:** Mathematics

**MAT277 / Modern Differential Equations****3 Credits / 3.0 Periods for Lecture**

Introduces differential equations, theoretical and practical solution techniques with applications. Problem-solving using MATLAB. Prerequisites: A grade of C or better in MAT230 or MAT231 or permission of Department/Division Chair. Course Notes: Students may receive credit for only one of the following: MAT276 or MAT277.

**Fulfills:** Mathematics [MA]; Mathematics [MA]-in combo

**Division:** Mathematics

**MAT280 / Foundational Statistics for Engineers****3 Credits / 5.0 Periods for Lecture & Lab**

Fundamentals of probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, regression analysis, analysis of variance, and design of experiments. Prerequisites: A grade of C or better in MAT220, or MAT221, or equivalent.

**Crosslisted:** ECE280

**Division:** Mathematics

**MAT282AA / Service-Learning Experience in Mathematics****1 Credit / 1.0 Periods for Laboratory**

Unpaid Service-Learning (SL) experience, completed with approved community partner. Prerequisites: Permission of Instructor. Course Notes: MAT282AA may be repeated for a total of six (6) credit hours. Standard grading is available according to procedures outlined in catalog.

**Division:** Mathematics

## Nursing

Jill Anderson, Division Chair  
480-988-8865 | jill.anderson@cgc.edu

### Courses

Prefix	Course
HCC	Health Core Curriculum
HCR	Health Care Related
NUR	Nursing Science: Basic

### Career Programs

Nursing

## Associate in Applied Science (AAS)

- Registered Nurse Pathway, Associate in Applied Science (p. 252)



**Anderson, Jill***Division Chair*

- A.S., A.A., Portland Community College
- B.S.N., Oregon Health Sciences University
- M.S.N., M.B.A., University of Phoenix
- Ph.D., University of Arizona

**Baugham, Catherine**

- M.S.N., Grand Canyon University

**Flanigan, Karen**

- B.S.N., M.S.N., Arizona State University; RN

**Geraghty, Diana**

- B.S., University of Virginia
- M.A., Grand Canyon University

**Gerle, Kerry Lee**

- M.A. Grand Canyon University

**Millstone, Katie**

- B.S.N, M.S.N., University of Phoenix; RNC

**Staggar, William**

- B.S.N., American University of Beirut
- M.S.N., University of Texas
- Ph.D., New Mexico State University

**Voss, Jennifer M.**

- M.S., Grand Canyon University

**Health Care Curriculum (HCC)****HCC130 / Fundamentals in Health Care Delivery****3 Credits / 3.0 Periods for Lecture**

Overview of current and recent development of 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 inter-professional 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.

**Division:** Nursing and Health Sciences

**HCC145AA / Medical Terminology for Health Care Professionals I****1 Credit / 1.0 Periods for Lecture**

Introduction to medical terms used in health care. Body systems approach to selected terms related to structures, functions, diseases, procedures, and diagnostic tests. Building and analyzing selected terms using basic word parts. Selected medical abbreviations and symbols and term spelling. Prerequisites: None.

**Division:** Nursing and Health Sciences

**HCC145AB / Medical Terminology for Health Care Professionals II****1 Credit / 1.0 Periods for Lecture**

Selected medical terms used in health care. Body systems approach to more detailed terms related to structures, functions, diseases, procedures, and diagnostic tests. Building and analyzing selected terms using standard word parts. Selected abbreviations and symbols and term spelling. Prerequisites: A grade of C or better in HCC145AA.

**Division:** Nursing and Health Sciences

**Health Care Related (HCR)****HCR210 / Clinical Health Care Ethics****3 Credits / 3.0 Periods for Lecture**

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: A grade of C or better in ENG102 or ENG108 or permission of Instructor.

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Nursing and Health Sciences

**HCR220 / Introduction to Nursing and Health Care Systems****3 Credits / 3.0 Periods for Lecture**

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.

**Fulfills:** Historical Awareness [H]; Historical Awareness [H]-in combo

**Division:** Nursing and Health Sciences

**HCR230 / Culture And Health****3 Credits / 3.0 Periods for Lecture**

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.

**Division:** Nursing and Health Sciences

**HCR240 / Human Pathophysiology****4 Credits / 4.0 Periods for Lecture**

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: A grade of C or better in BIO202 or BIO205, or permission of Instructor.

**Division:** Nursing and Health Sciences

**Nursing Science: Basic (NUR)****NUR104AB / Structured Nursing Review****1 Credit / 1.0 Periods for Lecture**

Structured nursing tutorial assistance and nursing study skills to help students achieve success in their respective block of nursing courses. Nursing process and critical thinking application skills emphasized.

Prerequisites: None. Corequisites: Concurrent enrollment in the Nursing program or permission of Department Chair. Corequisites: Concurrent enrollment in the Nursing program or permission of Department Chair. Course Notes: Course offered as Credit (P) No credit (Z) basis. NUR104AB may be repeated for a total of eight (8) credits.

**Division:** Nursing and Health Sciences

**NUR152 / Nursing Theory and Science I****9 Credits / 16.88 Periods for Laboratory, 4.0 Periods for Lecture**

Introduction of Nurse of the Future competencies as a foundational framework for development of the professional nurse. Basic care concepts, the nursing process, and clinical reasoning are utilized to meet the needs of adult and older adult patients. Prerequisites: Admission into the Nursing Program.

**Division:** Nursing and Health Sciences

**NUR172 / Nursing Theory and Science II****9 Credits / 11.81 Periods for Laboratory, 5.5 Periods for Lecture**

Utilization of Nurse of the Future competencies and clinical judgment measures to develop knowledge, skills, and attitudes to provide safe, quality patient care across the wellness-illness continuum in selected medical-surgical and mental health patients. Prerequisites: A grade of C or better in (BIO202 and NUR152) or permission of Nursing Department Chair.

**Division:** Nursing and Health Sciences

**NUR252 / Nursing Theory and Science III****9 Credits / 11.81 Periods for Laboratory, 5.5 Periods for Lecture**

Application of critical thinking strategies and clinical judgment measures related to holistic care of the newborn and childbearing patients. Integration of concepts related to holistic care of adults and older adult patients with selected acute and chronic alterations in health. Integration of professional nursing standards in role development. Utilization of previous knowledge of physical, biologic, psycho-social sciences, and the cultural, spiritual aspects of nursing care. Integration of concepts of nutrition, pharmacology, communication, health promotion, and pathophysiology into nursing care. Prerequisites: A grade of C or better in [(CRE101 or appropriate district placement) and NUR172 and PSY101] or permission of Nursing Department Chair.

**Division:** Nursing and Health Sciences

**NUR283 / Nursing Theory and Science IV****9 Credits / 11.81 Periods for Laboratory, 5.5 Periods for Lecture**

Applies Nurse of the Future competencies and clinical judgment measures to practice and manage care for the child/family unit and adults requiring complex care throughout the wellness/illness continuum, and prepare for transition from student to professional nurse. Prerequisites: A grade of C or better in (BIO205 and NUR252) or permission of Nursing Department Chair.

**Division:** Nursing and Health Sciences

**Registered Nurse Pathway, Associate in Applied Science****HEALTH SCIENCES****Nursing**

**Associate in Applied Science: AAS 3812**

**62-75 Credits**

**Program Contacts**

Director of Nursing

Jill Anderson | 480-988-8865 | jill.anderson@cgc.edu

Nursing Advisor

Maria Dela Torre | 480-988-8880 | chuy.delatorre@cgc.edu

Nursing Office

Teresa Hull | 480-988-8881 | teresa.hull@cgc.edu

**Program Description**

The Associate in Applied Science (AAS) in Nursing Program is available at eight of the Maricopa Community Colleges. Clinical experiences are provided in a variety of healthcare settings. Nursing Program graduates are eligible to apply for the national exam for the registered nurse license. Licensing requirements are the exclusive responsibility of the State Board of Nursing.

The Associate in Applied Science (AAS) Nursing Program is approved by the Arizona State Board of Nursing and accredited by the Accreditation Commission for Education in Nursing (ACEN), 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326; (404-975-5000); email: info@acennursing.org

**Program Offerings**

This program is offered at the following sites:

- Chandler-Gilbert Community College
- Estrella Mountain Community College
- Gateway Community College
- Glendale Community College
- Mesa Community College
- Paradise Valley Community College
- Phoenix College
- Scottsdale Community College

**Waiver of Licensure/Certification Guarantee**

Admission or graduation from the Nursing Program does not guarantee obtaining a license to practice nursing. Licensure requirements and the subsequent procedures are the exclusive right and responsibility of the Arizona State Board of Nursing. Students must satisfy the requirements of the Nurse Practice Act: Statutes, Rules and Regulations, independently of any college or school requirements for graduation.

Pursuant to A.R.S. 32-1606(B)(17), an applicant for professional or practical nurse license by examination is not eligible for licensure if the applicant has any felony convictions and has not received an absolute discharge from the sentences for all felony convictions. The absolute

discharge must be received five or more years before submitting this application. If you cannot prove that the absolute discharge date is five or more years, the Board cannot process your application.

Level One Fingerprint Clearance is required for admission into the program. Applicants must present a Level One Fingerprint Clearance Card to be copied by the advisor or designee. For a Department of Public Safety Fingerprint Clearance Card application, contact MCCCDC Healthcare/Nursing Advisor. If there is any question about eligibility for licensure or certification, contact the nursing education consultant at the Arizona State Board of Nursing (602.771.7800).

## Health Declaration

It is essential that nursing students be able to perform a number of physical activities in the clinical portion of the program. At a minimum, students will be required to lift patients, stand for several hours at a time and perform bending activities. Students who have a chronic illness or condition must be maintained on current treatment and be able to implement direct patient care. The clinical nursing experience also places students under considerable mental and emotional stress as they undertake responsibilities and duties impacting patients' lives. Students must be able to demonstrate rational and appropriate behavior under stressful conditions. Individuals should give careful consideration to the mental and physical demands of the program prior to making application. All must provide documentation of compliance with all health and safety requirements required to protect patient safety. Only students in compliance are permitted to enroll in nursing courses. Students will meet these requirements by providing the required documentation for the Health/Safety Requirements Documentation Checklist and the signed Health Declaration Form.

## Health & Safety Requirements for the Maricopa Nursing Program

1. Students must submit a Health and Safety Documentation Checklist verifying completion of all requirements and maintain current status throughout the program.
2. Students must submit the Health Declaration Form signed by a licensed health care provider.
3. Students must test negative on a timed urine drug screen.
4. Admission to an Allied Health program requires that students be in compliance with the Maricopa County Community College District Supplemental Background Check policy. Program applications will not be accepted without a copy of an Arizona Department of Public Safety Level One Fingerprint Clearance Card. Upon conditional program admission, the student must comply with all requirements of the current MCCCDC background check policy.

## University Transfer Students

Students who are planning to earn the Bachelor of Science in Nursing may obtain their prerequisite courses at the Maricopa Community Colleges. For information on courses that meet requirements for admission into a baccalaureate program, please contact a program advisor.

## Registered Nurse Pathway

### Associate in Applied Science Degree in Nursing Program

The Associate in Applied Science (AAS) degree in Nursing graduate is eligible to apply for licensure as a Registered Nurse (RN). The RN is educated as a generalist who delivers health care to clients and family groups and has competencies related to the art and science

of nursing. The RN may be employed in a variety of acute, long term, and community-based healthcare settings. The AAS degree in Nursing provides the graduate with an educational foundation for articulation into the university setting.

## Program Notes

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

## Course Fee Information

Please see class schedule for information regarding course fees.

Maricopa Nursing is aligned with Nurse of the Future Competencies: Person-Centered Care, Professionalism, Leadership, Systems-Based Practice, Informatics and Technology, Communication, Teamwork and Collaboration, Safety, Quality Improvement, and Evidence-Based Practice. These competencies focus on key stakeholders of healthcare clients, colleagues and communities. Demonstration of the competencies will signify preparation for successful transition into nursing practice and further professional development.

## Admission Criteria

High school diploma or GED is required for the Associate in Applied Science degree in Nursing. Applicants must signify that they meet this requirement by providing high school diploma/transcripts or GED completion OR by signing the nursing application page containing the 'Declaration of High School Graduation or GED Completion.' In some instances, high school diploma/transcripts or proof of GED completion may be required.

Formal application and admission to the program is required. There are limited spaces available in the Nursing program. Only students who have completed all of the general education and introductory courses noted above may have their name added to the queue of those waiting for an available space in a cohort. A passing score on a nursing program admission test is required to complete an application.

Successful completion of a nurse assistant course (course must include an in-person clinical component) or certification or licensure as a Nurse Assistant is required to complete an application. The Nurse Assistant course does not have to be completed at a Maricopa college and certification or licensure is not required to apply. There is currently no time limit on when the Nurse Assistant course was taken.

Applicants for Advanced Placement must receive a passing score on a practical nursing content exam for placement into Block 3. The final placement decision rests with the Nursing Program Chair at the college to which the student is accepted. Advanced placement applications are maintained for two years from the date of application. After two years, the applicant is required to review, update, and resubmit the application.

The Nursing Program Chair reserves the right to deny acceptance of an admission application if the applicant was previously dismissed for issues relating to academic integrity, unsafe patient care, and/or two (2) or more failures from any nursing program.

All applicants holding or receiving a certificate or license as a Nursing Assistant and/or license as a Practical Nurse must remain in good standing with the Regulatory Board. Once enrolled, students receiving any disciplinary actions against their certificate or license must notify the Nursing Program Chair within five (5) school days. The Nursing Program

Chair reserves the right to restrict the student's participation in clinical experiences and involvement in patient care until the certificate and/or license is valid and unrestricted.

## Program Requirements

Code	Title	Credits	Semester
<b>Required Courses</b>			
Select one of the following:		0-4	
BIO156	Introductory Biology for Allied Health		
BIO181	General Biology (Majors) I		
One year of high school biology			
BIO201	Human Anatomy and Physiology I	4	
Select one of the following:		0-4	
CHM130 & 130LL	Fundamental Chemistry and Fundamental Chemistry Laboratory		
CHM130AA	Fundamental Chemistry with Lab		
One year of high school chemistry			
NUR152	Nursing Theory and Science I	9	
NUR172	Nursing Theory and Science II	9	
NUR252	Nursing Theory and Science III	9	
NUR283	Nursing Theory and Science IV	9	
<b>General Education</b>			
<b>Core</b>			
<i>First-Year Composition</i> <sup>1</sup>			
ENG101	First-Year Composition	3	
or ENG107	First-Year Composition for ESL		
ENG102	First-Year Composition	3	
or ENG108	First-Year Composition for ESL		
<i>Oral Communication</i>			
Waived		0	
<i>Critical Reading</i>			
Select one of the following:		0-3	
CRE101	College Critical Reading and Critical Thinking		
OR Equivalent as indicated by assessment			
<i>Mathematics</i>			
Select one of the following:		3-5	

MAT140	College Mathematics	
MAT141	College Mathematics	
MAT142	College Mathematics	
Satisfactory completion of higher level math course		
<b>Distribution</b>		
<i>Humanities, Arts and Design</i>		
Any approved general education course(s) from the Humanities, Arts and Design area	2	
<i>Social and Behavioral Sciences</i>		
PSY101	Introduction to Psychology	3
<i>Natural Sciences</i>		
BIO202 & BIO205	Human Anatomy and Physiology II and Microbiology	8
<b>Total Credits</b>		<b>62-75</b>

<sup>1</sup> Three credits of First Year Composition are met by ENG101 First-Year Composition or ENG107 First-Year Composition for ESL in Program Prerequisites area

## Physical Sciences & Engineering

Arlisa Richardson, Division Chair  
623-988-8017 | arlisa.richardson@cgc.edu

### Courses

Prefix	Course
AIM	Artificial Intelligence and Machine Learning
AST	Astronomy
CHM	Chemistry
ECE	Engineering Science
EEE	Electrical Engineering
ELE	Electronics
ELT	Electronics Technology
GLG	Geology
GPH	Physical Geography
PHY	Physics

### Career Programs

Artificial Intelligence  
Artificial Intelligence and Machine Learning

## Associate in Applied Science (AAS)

- Artificial Intelligence and Machine Learning, Associate in Applied Science (p. 261)

## Certificate Of Completion (CCL)

- Artificial Intelligence and Machine Learning, Certificate of Completion (p. 262)

## Artificial Intelligence and Machine Learning

Matar, Habib

- M.A. Arizona State University

## Astronomy

Viola, Donna

- Ph.D., University of Arizona

## Chemistry

Bowles, Joachim

- B.S., Oregon State
- M.S., University of Oregon

Krishnaswamy, Sujatha

- B.S., University of Madras
- M.S., Indian Institute of Technology
- M.S., Ph.D., Vanderbilt University

McFavilen, Michael

- B.S., M.S., University of California at San Diego
- M.S., Arizona State University

Schnobelen, Carly

- B.S., University of Arizona
- Ph.D., Purdue University

Woodrum, Brian

- B.S., Elmhurst College
- Ph.D., Arizona State University

## Engineering

Matar, Bassam

- B.S., Oklahoma State University
- M.S., Northern Arizona University

Neal, Nichole

- M.S., Kettering University

Silvestri, Fanny

- B.A., Ecole Supérieure des Techniques Aéronautiques et de Construction Automobile
- M.A., University of Montreal

## Geology

Michel, Carolina

- Ph.D

## Geography

Santoro, Michael

- B.S., M.A., Ph.D., Arizona State University

## Physics

Flaherty, Sean

- B.S., California Lutheran University
- M.N.S., Arizona State University

Pauls, Jennifer

- B.A., B.S., Bethel College
- Ph.D., University of Kansas

Richardson, Arlisa

*Division Chair*

- B.S., M.A., Grambling State University
- M.S., University of Texas at Dallas
- M.S., Ph.D., Arizona State University

Roman, Kathryn

- M.S.N., Arizona State University

## Artificial Intelligence and Machine Learning (AIM)

**AIM100 / Introduction to Artificial Intelligence**

**3 Credits / 3.0 Periods for Lecture**

Basic concepts and applications of artificial intelligence (AI), including AI project cycles. Focus on issues surrounding AI including ethics, bias, culture, regulations, and professional expectations. Prerequisites: None.

**Division:** Physical Sciences and Engineering

**AIM110 / Introduction to Machine Learning**

**3 Credits / 4.0 Periods for Lecture & Lab**

Introduction to machine learning concepts and Python applications, including data acquisition, supervised and unsupervised learning, and data modeling. Prerequisites: A grade of C or better in AIM100, CIS156, and MAT206.

**Division:** Physical Sciences and Engineering

**AIM210 / Natural Language Processing**

**3 Credits / 4.0 Periods for Lecture & Lab**

Fundamental concepts in Natural Language Processing (NLP) and text processing. Focus on knowledge and skills necessary to create a language recognition application. Prerequisites: A grade of C or better in AIM110.

**Division:** Physical Sciences and Engineering

**AIM220 / Artificial Intelligence for Computer Vision**

**3 Credits / 4.0 Periods for Lecture & Lab**

Understand and apply the basic techniques to process images using OpenCV and Python libraries. Prerequisites: A grade of C or better in AIM110.

**Division:** Physical Sciences and Engineering

**AIM230 / Artificial Intelligence for Business Solutions**

**3 Credits / 4.0 Periods for Lecture & Lab**

Fundamentals of artificial intelligence (AI) and machine learning to support business solutions. Prerequisites: A grade of C or better in AIM210 and AIM220.

**Division:** Physical Sciences and Engineering

**AIM240 / Artificial Intelligence Capstone Project****3 Credits / 4.0 Periods for Lecture & Lab**

Focus on how a social issue is explored, brought through the Artificial Intelligence (AI) Project cycle, and delivered as a solution using the different domains of AI, including computer vision and natural language processing. Prerequisites: A grade of C or better in AIM210 and AIM220.

**Division:** Physical Sciences and Engineering

**Astronomy (AST)****AST101 / Survey of Astronomy****4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

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.

**Division:** Physical Sciences and Engineering

**AST106 / Life in the Universe****4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

Introduction to the search for life in the universe for the non-science major. Earth's location in space and time, nature of life, light and the spectrum, origin and history of the universe, origin of life on Earth and the possibility of life on other planets. Prerequisites: A grade of C or better in MAT090 or MAT091 or MAT092 or completion of higher level mathematics course, or satisfactory placement.

**Crosslisted:** GLG106

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering

**AST111 / Introduction to Solar System Astronomy****4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

Introduction to astronomy for the non-science major. The scientific method, properties of light, astronomical instruments, our Solar System and solar systems around other stars. Includes hands-on astronomical observations and laboratory exercises. Prerequisites: A grade of C or better in MAT092 or higher, or satisfactory district placement.

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering

**AST112 / Introduction to Stars, Galaxies, and Cosmology****4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

Introduction to astronomy for the non-science major. Structure and evolution of stars; supernovae, black holes, and quasars; nebulae; star clusters; galaxies; cosmology, including the birth and death of the universe. Prerequisites: A grade of C or better in MAT092 or higher, or satisfactory district placement. Course Notes: Note that AST111 is not a prerequisite for this course.

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering

**AST114 / Introduction to Stars, Galaxies, and Cosmology Laboratory****1 Credit / 3.0 Periods for Laboratory**

Hands-on astronomical observations and exercises to supplement AST112. Prerequisites: A grade of C or better in AST112 and permission of Instructor or Department or Division. Course Notes: AST114 is a course intended for those students who have previously completed the corresponding lecture course. Current MCCC students should enroll in AST112 only.

**Division:** Physical Sciences and Engineering

**AST294AB / Special Topics in Astronomy****1 Credit / 1.0 Periods for Lecture**

Conceptual, experimental, and computational aspects of a special topic in astronomy. Prerequisites: Permission of Department or Division.

Course Notes: AST294AB may be repeated for credit.

**Division:** Physical Sciences and Engineering

**Chemistry (CHM)****CHM107 / Chemistry and Society****3 Credits / 3.0 Periods for Lecture**

A survey of chemistry and its impact on society and the environment.

Prerequisites: None. Course Notes: General Education Designation:

Natural Sciences (Quantitative) - [SQ] in combination with: CHM107LL

**Division:** Physical Sciences and Engineering

**CHM107LL / Chemistry and Society Laboratory****1 Credit / 3.0 Periods for Laboratory**

Laboratory experience in support of CHM107. Prerequisites or

Corequisites: CHM107. Course Notes: General Education Designation:


Natural Sciences (Quantitative) - [SQ] in combination with: CHM107

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering

**CHM130 / Fundamental Chemistry****3 Credits / 3.0 Periods for Lecture**

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: A grade of C or better in [(CHM100, or MAT090, or MAT091, or MAT092, or higher level mathematics course, or satisfactory math placement) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101 as indicated by appropriate reading placement)], or permission of the Instructor, or Department or Division Chair. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM130LL

 SUN# CHM 1130

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering

**CHM130AA / Fundamental Chemistry with Lab****4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

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: A grade of C or better in [(CHM100, or MAT090, or MAT091, or MAT092, or higher level mathematics course, or satisfactory math placement) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101 as indicated by appropriate reading placement)], or permission of the Instructor, or Department or Division Chair. Course Notes: Student may receive credit for only one of the following: CHM130 and CHM130LL, or CHM130AA.

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering

**CHM130LL / Fundamental Chemistry Laboratory****1 Credit / 3.0 Periods for Laboratory**

Laboratory experience in support of CHM130. Prerequisites or

Corequisites: A grade of "C" or better in CHM130. Course Notes:

General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM130

 SUN# CHM 1130

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering

**CHM138 / Chemistry for Allied Health****3 Credits / 3.0 Periods for Lecture**

Elements of fundamental and organic chemistry. Includes the general chemical behavior of inorganic matter and the structure of organic and biochemical systems. Course designed for specific allied health programs at MCCD. May not be applicable to other allied health programs or transferable. Prerequisites: A grade of C or better in (CHM100 or MAT090 or MAT091 or MAT092 or higher or satisfactory math placement), or one year of high school chemistry taken within the last five years with a grade of C or better, or permission of the Instructor, or Department or Division Chair.

**Division:** Physical Sciences and Engineering

**CHM138LL / Chemistry for Allied Health Laboratory****1 Credit / 3.0 Periods for Laboratory**

Laboratory experience in support of CHM138, Chemistry for Allied Health.

Prerequisites: None. Corequisites: CHM138.

**Division:** Physical Sciences and Engineering

**CHM151 / General Chemistry I****3 Credits / 3.0 Periods for Lecture**

Detailed study of principles of chemistry for science majors and students in pre-professional curricula. Prerequisites: A grade of C or better in [(CHM130 and CHM130LL), or CHM130AA, or one year of high school chemistry taken within the last five years] and (a grade of C or better in MAT151 or higher level mathematics course, or satisfactory placement), or permission of the Instructor, or Department or Division Chair. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM151LL. Arizona Shared Unique Number SUN#: CHM 1151. Completion of all prerequisites within the last two years is recommended. Student may receive credit for only one of the following: CHM150 and CHM151LL, or CHM151 and CHM151LL, or CHM150AA, or CHM151AA.

 SUN# CHM 1151

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering

**CHM151AA / General Chemistry I****4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**


Detailed study of principles of chemistry for science majors and students in pre-professional curricula. Prerequisites: A grade of C or better in [(CHM130 and CHM130LL), or CHM130AA, or one year of high school chemistry taken within the last five years] and (a grade of C or better in MAT151 or higher level mathematics course, or satisfactory placement), or permission of the Instructor, or Department or Division Chair. Course Notes: Completion of all prerequisites within the last two years is recommended. Student may receive credit for only one of the following: CHM150 and CHM151LL, or CHM151 and CHM151LL, or CHM150AA, or CHM151AA.

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering

**CHM151LL / General Chemistry I Laboratory****1 Credit / 3.0 Periods for Laboratory**

Laboratory experience in support of CHM150 or CHM151. Prerequisites: A grade of C or better in CHM150 or CHM151 or Corequisites: CHM150 or CHM151. Course Notes: Student may receive credit for only one of the following: CHM150 and CHM151LL, or CHM151 and CHM151LL, or CHM150AA, or CHM151AA. General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM150 or CHM151

 SUN# CHM 1151

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering

**CHM152 / General Chemistry II****3 Credits / 3.0 Periods for Lecture**

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) and CHM151LL], or CHM150AA, or CHM151AA, or permission of the Instructor, or Department or Division Chair. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM152LL. Arizona Shared Unique Number SUN# CHM1152. Completion of prerequisites within the last two years recommended. 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.

 SUN# CHM 1152

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering

**CHM152AA / General Chemistry II****4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

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) and CHM151LL], or CHM150AA, or CHM151AA, or permission of the Instructor, or Department or Division Chair. Course Notes: Completion of prerequisites within the last two years recommended. Student may receive credit for only one of the following: CHM152 and CHM152LL, or CHM152AA.

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering



**CHM152LL / General Chemistry II Laboratory****1 Credit / 3.0 Periods for Laboratory**

Laboratory experience in support of CHM152. Prerequisites: A grade of C or better in CHM152 or Corequisites: CHM152. 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

 SUN# CHM 1152

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering

**CHM230 / Fundamental Organic Chemistry****3 Credits / 3.0 Periods for Lecture**

Chemistry of representative groups of organic compounds, emphasizing biological applications. Prerequisites: A grade of C or better in (CHM130 and CHM130LL) or (CHM150 or CHM151 and CHM151LL), or permission of the Instructor, or Department or Division Chair. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM230LL. Arizona Shared Unique Number SUN#: CHM 2230. Completion of prerequisites within the last two years recommended. 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.

**Division:** Physical Sciences and Engineering

**CHM230LL / Fundamental Organic Chemistry Laboratory****1 Credit / 3.0 Periods for Laboratory**

Laboratory experience in support of CHM230. Prerequisites: A grade of C or better in CHM130LL or CHM151LL, or equivalent. Prerequisites or Corequisites: CHM230. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM230

**Division:** Physical Sciences and Engineering

**CHM235 / General Organic Chemistry I****3 Credits / 3.0 Periods for Lecture**

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 CHM152AA, or (CHM154 and CHM154LL), or permission of the Instructor, or Department or Division Chair. Course Notes: Completion of prerequisites within the last two years recommended.

 SUN# CHM 2235

**Division:** Physical Sciences and Engineering

**CHM235LL / General Organic Chemistry I Laboratory****1 Credit / 4.0 Periods for Laboratory**

Laboratory experience in support of CHM235. Prerequisites: A grade of C or better in CHM235 or Corequisites: CHM235. Completion of prerequisites within the last two years recommended.

 SUN# CHM 2235

**Division:** Physical Sciences and Engineering

**CHM236 / General Organic Chemistry IIA****3 Credits / 3.0 Periods for Lecture**

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) or CHM235AA, or permission of the Instructor, or Department or Division Chair. Course Notes: Completion of prerequisites within the last two years recommended.

**Division:** Physical Sciences and Engineering

**CHM236LL / General Organic Chemistry IIA Laboratory****1 Credit / 4.0 Periods for Laboratory**

Laboratory experience in support of CHM236. Prerequisites: A grade of C or better in CHM236 or Corequisites: CHM236. Completion of prerequisites within the last two years recommended.

 SUN# CHM 2236

**Division:** Physical Sciences and Engineering

**CHM260 / Fundamental Biochemistry****3 Credits / 3.0 Periods for Lecture**

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. Prerequisites: A grade of C or better in [(CHM230 and CHM230LL) or CHM230AA], or [(CHM235 and CHM235LL) or CHM235AA], or permission of the Instructor, or Department or Division Chair. Course Notes: Completion of prerequisites within the last two years recommended. Designed for students in agriculture, dental hygiene, home economics, nursing, and physical therapy.

**Division:** Physical Sciences and Engineering

**Engineering Science (ECE)****ECE102 / Engineering Analysis Tools and Techniques****2 Credits / 4.0 Periods for Lecture & Lab**

Learning culture of engineering, engineering use of computer tools, and computer modeling as applied to engineering analysis and design. Prerequisites: A grade of C or better in MAT15+ or higher-level mathematics course, or permission of Instructor or Division or Department Chair.

**Division:** Physical Sciences and Engineering

**ECE103 / Engineering Problem Solving and Design****2 Credits / 4.0 Periods for Lecture & Lab**

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: A grade of C or better in ECE102 or permission of Instructor or Division or Department Chair. Course Notes: Student may receive credit for only one of the following: ECE103 or ECE103EP.

 SUN# EGR 1102

**Division:** Physical Sciences and Engineering

**ECE105 / MATLAB Programming****1 Credit / 2.0 Periods for Lecture & Lab**

Use MATLAB to solve engineering problems. An overview of programming, including matrices, structures, strings, functions, control flow, file management, data analysis, graphing capabilities, and mathematical calculations. Prerequisites: A grade of C or better in [(MAT150 or MAT151 or MAT152 or MAT155 or MAT156) and MAT182] or MAT187 or higher level mathematics course or permission of Instructor or Division or Department Chair.

**Division:** Physical Sciences and Engineering

**ECE150 / Exploring Engineering and its Impact on Society****3 Credits / 3.0 Periods for Lecture**

Introduction to the profession of engineering and its impact on culture and society. Prerequisites: None.

**Division:** Physical Sciences and Engineering



**ECE211 / Engineering Mechanics-Statics****3 Credits / 2.0 Periods for Laboratory, 3.0 Periods for Lecture**

Modeling of static equilibrium in particles and rigid bodies through analysis of forces and mechanical properties. Prerequisites: A grade of C or better in PHY115 or PHY121 or permission of Instructor or Division or Department Chair. Corequisites: MAT230 or MAT231 or permission of Instructor or Division or Department Chair.

**Division:** Physical Sciences and Engineering**ECE212 / Engineering Mechanics-Dynamics****3 Credits / 2.0 Periods for Laboratory, 3.0 Periods for Lecture**

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. A grade of C or better required in all Prerequisites. Prerequisites: [ECE211 and (PHY115 or PHY121)] or permission of Instructor or Division or Department Chair. Prerequisites or Corequisites: MAT240 or MAT241 or permission of Instructor or Division or Department Chair.

**Division:** Physical Sciences and Engineering**ECE215 / Mechanics of Materials****3 Credits / 5.0 Periods for Lecture & Lab**

Designed to provide students with a strong fundamental foundation in the mechanics of solids. Includes the concepts of stress and strain applied to the analysis and design of members subjected to axial and torsional loads and members subjected to shear and bending, applications and transformation of plane stress and plane strain, deformation of beams, and elastic buckling of columns. Prerequisites: A grade of C or better in ECE211 or ECE214 or permission of Instructor or Division or Department Chair.

**Division:** Physical Sciences and Engineering**ECE216 / Computer-Aided Engineering****2 Credits / 2.0 Periods for Lecture**

Introduction to engineering graphics, including tolerancing and fasteners, as well as creation and use of engineering drawings. Prerequisites: A grade of C or better in ECE103, or ECE103EP, or permission of Instructor or Division or Department Chair. Corequisites: ECE216LL.

**Division:** Physical Sciences and Engineering**ECE216LL / Computer-Aided Engineering Laboratory****1 Credit / 2.0 Periods for Laboratory**

Laboratory experience in support of ECE216. Prerequisites: A grade of C or better in ECE103, or ECE103EP, or permission of Instructor. Corequisites: ECE216.

**Division:** Physical Sciences and Engineering**ECE280 / Foundational Statistics for Engineers****3 Credits / 5.0 Periods for Lecture & Lab**

Fundamentals of probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, regression analysis, analysis of variance, and design of experiments. Prerequisites: A grade of C or better in MAT220, or MAT221, or equivalent.

**Crosslisted:** MAT280**Division:** Physical Sciences and Engineering**Electrical Engineering (EEE)****EEE120 / Digital Design Fundamentals****4 Credits / 6.0 Periods for Lecture & Lab**

Number systems, conversion methods, binary and complement arithmetic, Boolean switching algebra and circuit minimization techniques. Analysis and design of combinational logic, flip-flops, simple counters, registers, ROMs, PLDs, synchronous and asynchronous sequential circuits, and state reduction techniques. Building physical circuits. Prerequisites: None. Corequisites: CSC100 or CSC110 or permission of Instructor or Division or Department Chair.

**Crosslisted:** CSC120**Fulfills:** Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo**Division:** Physical Sciences and Engineering**EEE202 / Circuits and Devices****5 Credits / 3.0 Periods for Laboratory, 4.0 Periods for Lecture**

Introduction to circuits and devices. Component models, transient analysis, steady state analysis, Laplace transform, and active and passive filter networks. Prerequisites: A grade of C or better in PHY116 or PHY131 or permission of Instructor or Division or Department Chair. Corequisites: MAT276 or permission of Instructor or Division or Department Chair.

**Division:** Physical Sciences and Engineering**EEE230 / Computer Organization and Assembly Language****4 Credits / 5.0 Periods for Lecture & Lab**

Assembly language programming including input/output (I/O) programming and exception/interrupt handling. Register-level computer organization, I/O interfaces, assemblers, and linkers. Processor organization and design, data path, control, pipelining, and input/output. Memory organization with cache and virtual memory. Prerequisites: A grade of C or better in [(CSC100 or CSC110) and CSC/EEE120], or permission of Instructor or Division or Department Chair.

**Crosslisted:** CSC230**Division:** Physical Sciences and Engineering**Geology (GLG)****GLG101 / Introduction to Geology I - Physical Lecture****3 Credits / 3.0 Periods for Lecture**

Introduction to Earth's materials, surface and internal geologic processes, plate tectonics and geologic time. Prerequisites: None. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: GLG103. Arizona Shared Unique Number SUN#: GLG 1101. Students may receive credit for only one of the following: GLG101 or GLG101IN.

 SUN# GLG 1101**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo**Division:** Physical Sciences and Engineering**GLG102 / Introduction to Geology II - Historical Lecture****3 Credits / 3.0 Periods for Lecture**

The origin and history of the Earth, its dynamic geographic and climatic changes. Evolution and sequence of life recorded in the fossil record; tectonic evolution of major continents through time. Prerequisites: None. Course Notes: General Education Designation: Historical Awareness - [H]. General Education Designation: Natural Sciences (General) - [SG] in combination with: GLG104. Students may receive credit for only one of the following: GLG102 or GLG102IN.

**Fulfills:** Historical Awareness [H]; Historical Awareness [H]-in combo; Natural Sciences General [SG]; Natural Sciences General [SG]-in combo**Division:** Physical Sciences and Engineering

**GLG103 / Introduction to Geology I - Physical Lab****1 Credit / 3.0 Periods for Laboratory**

Includes practical experience in rock and mineral identification, topographic maps, and applied problems in geology. Prerequisites: None. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: GLG101. Arizona Shared Unique Number SUN#: GLG 1101. May accompany GLG101. Students may receive credit for only one of the following: GLG103 or GLG101IN.

 SUN# GLG 1101

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering

**GLG104 / Introduction to Geology II - Historical Lab****1 Credit / 3.0 Periods for Laboratory**

The study of minerals, rocks, fossils, geologic maps and structures. Prerequisites: None. Course Notes: General Education Designation: Natural Sciences (General) - [SG] in combination with: GLG102. May accompany GLG102. Students may receive credit for only one of the following: GLG104 or GLG102IN.

**Fulfills:** Natural Sciences General [SG]; Natural Sciences General [SG]-in combo

**Division:** Physical Sciences and Engineering

**GLG110 / Geological Disasters and the Environment****3 Credits / 3.0 Periods for Lecture**

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 earthquakes, volcanoes, floods and landslides. Examines environmental impact and use of mineral and energy resources. Prerequisites: None. Course Notes: General Education Designation: Global Awareness - [G]. General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with GLG111. Students may receive credit for only one of the following: GLG110 or GLG110IN.

**Fulfills:** Global Awareness [G]; Global Awareness [G]-in combo; Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering

**GLG111 / Geological Disasters and the Environment Lab****1 Credit / 3.0 Periods for Laboratory**

Introduction to geological processes and concepts. Application of basic geologic knowledge to evaluate, interpret and propose solutions for a variety of current and past geology-related environmental disasters and hazards. Prerequisites: None. Course Notes: General Education Designation: Global Awareness - [G] in combination with GLG110. General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with GLG110. May accompany GLG110. Students may receive credit for only one of the following: GLG111 or GLG110IN.

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo; Global Awareness [G]; Global Awareness [G]-in combo

**Division:** Physical Sciences and Engineering

**GLG230AA / Field Geology of the Southwest****1 Credit / 5.0 Periods for Laboratory**

Field trips to selected areas in the Southwest, such as Arizona, Utah, California, and Sonora to observe and interpret various geological features and phenomena. Prerequisites: None. GLG103 suggested but not required. Course Notes: GLG230AA may be repeated for a total of four (4) credit hours.

**Division:** Physical Sciences and Engineering

**Geography (GPH)****GPH113 / Introduction to Physical Geography****4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

Earth's physical processes and impacts on human environments via the atmosphere, biosphere, lithosphere and hydrosphere. Topics and practical experiences include severe weather, climate change, biomes and ecosystems, landform processes; mountain building and erosion by rivers, glaciers, waves and wind, topographic maps. Prerequisites: None.

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering

**GPH212 / Introduction to Meteorology I****3 Credits / 3.0 Periods for Lecture**

Atmospheric processes and elements. General and local circulation, heat exchange and atmospheric moisture. Prerequisites: None. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: GPH214

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering

**GPH214 / Introduction to Meteorology Laboratory I****1 Credit / 3.0 Periods for Laboratory**

Basic meteorological and climatological measurements. Prerequisites: None. Corequisites: GPH212. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: GPH212

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering

**Physics (PHY)****PHY101 / Introduction to Physics****4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**


A survey of physics emphasizing applications of physics to modern life. Prerequisites: A grade of C or better in MAT090, or higher level mathematics course, or eligibility for MAT120 or higher as indicated by appropriate placement. Course Notes: Students may receive credit for only one of the following: PHY101 or PHY101AA.

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering

**PHY111 / General Physics I****4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

Includes motion, energy, and properties of matter. Prerequisites: A grade of C or better in MAT182 or MAT187 or MAT220 or MAT221 or eligibility for MAT220 as indicated by appropriate placement or one year high school Trigonometry with a grade of C or better or permission of Department or Division. Course Notes: PHY111 is recommended for preprofessional and suggested for certain other majors. Students may receive credit for only one of the following: PHY111 or PHY111AA.

 SUN# PHY 1111

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering

**PHY112 / General Physics II****4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

Includes electricity, electromagnetism, and modern physics.

Prerequisites: A grade of C or better in PHY111.

 SUN# PHY 1112**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo**Division:** Physical Sciences and Engineering**PHY121 / University Physics I: Mechanics****4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

Kinematics, Newton's laws, work, energy, momentum, conservation laws, dynamics of particles, solids, fluids, mechanical waves, and sound.

Prerequisites: A grade of C or better in MAT220 or MAT221 or permission of Department or Division. One year of High School physics or PHY111 and PHY112 suggested but not required.

 SUN# PHY 1121**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo**Division:** Physical Sciences and Engineering**PHY131 / University Physics II: Electricity and Magnetism****4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Prerequisites: A grade of C or better in MAT230 or MAT231 or permission of Department or Division and PHY121.

Corequisites: MAT241 or permission of Department or Division.

 SUN# PHY 1131**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo**Division:** Physical Sciences and Engineering**PHY241 / University Physics III: Thermodynamics, Optics, and Wave Phenomena****4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

Heat, entropy, and laws of thermodynamics; wave propagation; geometrical and physical optics; introduction to special relativity.

Prerequisites: A grade of C or better in PHY116 or PHY131 or permission of Instructor.

**Division:** Physical Sciences and Engineering

# Artificial Intelligence and Machine Learning, Associate in Applied Science

**STEM****Associate in Applied Science : AAS 3891****61-76 Credits****Program Contact**Habib Matar | [habib.matar@cgc.edu](mailto:habib.matar@cgc.edu)

## Program Description

The Associate in Applied Science (AAS) in Artificial Intelligence and Machine Learning focuses on building machine learning models that can be used for predicting, making decisions and enhancing

human capabilities. The program prepares students for entry level positions in a variety of fields using artificial intelligence, including the information technology, automotive, healthcare, aerospace, industrial, and manufacturing industries. Program content includes an introduction to artificial intelligence and machine learning, natural language processing, computer vision, and artificial intelligence for business solutions and other applications. The curriculum also includes coursework in computer programming, math, engineering, and statistics.

## Program Notes

Students must earn a grade of C or better for all courses required within the program. Overall program minimum GPA = 3.00.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
AIM100	Introduction to Artificial Intelligence	3	_____
AIM110	Introduction to Machine Learning	3	_____
AIM210	Natural Language Processing	3	_____
AIM220	Artificial Intelligence for Computer Vision	3	_____
AIM230	Artificial Intelligence for Business Solutions	3	_____
AIM240	Artificial Intelligence Capstone Project	3	_____
Select one of the following:		0-3	_____
CIS105	Survey of Computer Information Systems		_____
May be waived by permission of the Program Director			_____
Select one of the following:		3	_____
CIS119DO	Introduction to Oracle: SQL		_____
CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
CIS156	Python Programming: Level I	3	_____
ECE102	Engineering Analysis Tools and Techniques	2	_____

ECE103	Engineering Problem Solving and Design	2	_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
MAT206	Elements of Statistics	3	_____
MAT225	Elementary Linear Algebra	3	_____
<b>Restricted Electives</b>			
Select a programming language from below that best aligns with academic and professional goals (to complete the minimum total program credits required for this degree) in one of the following areas:		0-3	_____
CIS150	Programming Fundamentals		_____
CIS150AB	Object-Oriented Programming Fundamentals		_____
CIS159	Visual Basic Programming I		_____
CIS162++	Any C Programming: Level I course		_____
CIS163AA	Java Programming: Level I		_____
CIS165++	Any Mobile Application Development course		_____
CSC100++	Introduction to Computer Science (C++)		_____
CSC110++	Introduction to Computer Science (Java)		_____
<b>General Education</b>			
<b>Core</b>			
<i>First-Year Composition</i>			
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
<i>Oral Communication</i>			
Select one of the following:		3	_____

COM100	Introduction to Human Communication		_____
COM110	Interpersonal Communication		_____
COM225	Public Speaking		_____
COM230	Small Group Communication		_____
Any approved General Education course from the Oral Communication area			_____
<i>Critical Reading</i>			
Complete one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Or equivalent as indicated by assessment			_____
<i>Mathematics</i>			
Any approved general education course in the Mathematical Applications (MA) area (that serves as a prerequisite for) MAT22+ 0-9		4-14	_____
MAT220	Calculus with Analytic Geometry I		_____
or MAT221 Calculus with Analytic Geometry I			_____
<b>Distribution</b>			
<i>Humanities, Arts and Design</i>			
Any approved general education course(s) from the Humanities, Arts and Design area		3	_____
<i>Social and Behavioral Sciences</i>			
Any approved general education course(s) in the Social and Behavioral Sciences area <sup>1</sup>		3	_____
<i>Natural Sciences</i>			
Any approved general education course(s) in the Natural Sciences area		4	_____
Total Credits		61-76	_____

<sup>1</sup> Recommend PSY101 Introduction to Psychology or SOC101 Introduction to Sociology

## Artificial Intelligence and Machine Learning, Certificate of Completion



**STEM**

**Certificate of Completion: 5897N**  
**21-36 Credits**  
**Program Contact**

Habib Matar | habib.matar@cg.edu

## Program Description

The Certificate of Completion (CCL) in Artificial Intelligence and Machine Learning focuses on building machine learning models that can be used for predicting, making decisions and enhancing human capabilities.

The program provides the industry professional with the knowledge and skills used in a variety of fields using artificial intelligence, including the information technology, automotive, healthcare, aerospace, industrial, and manufacturing industries. Program content includes an introduction to artificial intelligence and machine learning, natural language processing, computer vision, and artificial intelligence for business solutions and other applications. The curriculum also includes coursework in computer programming, math, and statistics.

## Program Notes

This program is not eligible for Title IV Federal Financial Aid.

This Certificate of Completion (CCL) is a closed program that is available to industry professionals with the requisite industry experience or those with an associate or bachelor's degree in a related field. Speak to a Program Director for additional information.

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

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites:** None

Code	Title	Credits	Semester
<b>Required Courses</b>			
AIM100	Introduction to Artificial Intelligence	3	
AIM110	Introduction to Machine Learning	3	
AIM210	Natural Language Processing	3	
AIM220	Artificial Intelligence for Computer Vision	3	
AIM230	Artificial Intelligence for Business Solutions	3	
AIM240	Artificial Intelligence Capstone Project	3	
Select one of the following:		0-3	
CIS105	Survey of Computer Information Systems		
May be waived by permission of the Program Director			
Select one of the following:		0-3	

CIS119DO	Introduction to Oracle: SQL	
CIS276DA	MySQL Database	
CIS276DB	SQL Server Database (May be waived by permission of the Program Director)	
Select one of the following:		0-3
CIS156	Python Programming: Level I	
May be waived by permission of the Program Director		
Select one of the following:		0-6
MAT14+	Any College Mathematics course	
MAT15+	Any College Algebra/ Functions course	
MAT187	Precalculus	
Appropriate District placement		
Permission of Department/ Division Chair		
MAT206	Elements of Statistics	3
<b>Total Credits</b>		<b>21-36</b>

## Social & Behavioral Sciences

Linda Zehr, Division Chair  
480-857-5530 | linda.zehr@cg.edu

### Courses

Prefix	Course
ASB	Anthropology
ASM	Anthropology
CFS	Child/Family Studies
ECH	Early Childhood Education
ECN	Economics
EDU	Education
EED	Early Education
ETL	Excellence/Teaching/Learning
HON	Honors
POS	Political Science
PSY	Psychology
SOC	Sociology

### Career Programs

Early Childhood Education  
Foundations of Early Childhood Education

## Associate in Applied Science (AAS)

- Early Childhood Education, Associate in Applied Science (p. 270)

## Certificate Of Completion (CCL)

- Early Childhood Education, Certificate of Completion (p. 272)
- Foundations of Early Childhood Education, Certificate of Completion (p. 274)

## Anthropology

**Edmonds, Hailie**

- B.A., University of Arizona
- M.A., University of Arizona
- P.H.D., University of Arizona

## Economics

**Villalobos, Karen**

- B.A., Universidad Autonoma De Ciudad Juarez, Mexico
- M.S., University of Texas

**Zehr, Linda**

Division Chair

- B.A., M.A., St. Mary's University

## Education

**Burris, Joni**

- B.S., M.Ed., Ph.D., University of North Dakota

**Peterson, Jennifer**

- B.S., Minnesota State University Moorhead
- M.Ed., Northern Arizona University

**Reider, Christopher**

- B.A., Arizona State University
- M.A.Ed., Ottawa University

## Psychology

**Beyer, Alisa**

- B.A., University of Arizona
- M.A., Ph.D., University of Kansas

**Dinehart, Jared**

- Ph.D., Arizona State University

**McDonald, Kristy**

- B.S., M.A., Ph.D., Arizona State University

**Ramos, Belinda T.**

- B.A., M.A., Ph.D., Northwestern University

**Romero, Fernando**

- Ph.D., Arizona State University

**Silberman, Scott W.**

- B.A., University of Arizona
- M.A., University of Georgia
- Ph.D., Arizona State University

**Tovar-Blank, Zoila**

- B.A., Stanford University
- M.Ed., Ph.D., Arizona State University

## Sociology

**Huntsinger, Marie**

- M.A., Arizona State University

## Anthropology (ASB)

**ASB102 / Introduction to Cultural Anthropology**

**3 Credits / 3.0 Periods for Lecture**

Principles of cultural anthropology, with illustrative materials from a variety of cultures. The nature of culture; social, political, and economic systems; religion, aesthetics and language. Prerequisites: None.

**Fulfills:** Global Awareness [G]; Global Awareness [G]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

**ASB211 / Women in Other Cultures**

**3 Credits / 3.0 Periods for Lecture**

Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies. Prerequisites: None.

**Fulfills:** Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

**ASB214 / Magic, Witchcraft and Healing: An Introduction to Comparative Religion**

**3 Credits / 3.0 Periods for Lecture**

Origins, elements, and forms of religion; a comparative survey of religious beliefs, myths, rituals and symbolism including magic, witchcraft and healing as practiced in selected regions of the world; the place of religion in the total culture. Prerequisites: None.

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Global Awareness [G]; Global Awareness [G]-in combo

**Division:** Social & Behavioral Sciences

**ASB222 / Buried Cities and Lost Tribes: Old World**

**3 Credits / 3.0 Periods for Lecture**

Introduction to archaeology through discoveries and the researchers who made them. Emphasis on methods of archaeological fieldwork and what these discoveries reveal about humanity, including the nature of archaeological inquiry, the development of human social groups, the changing role of religion in evolving societies, the origins of agriculture, the origins of settled life ways, the rise of cities and complex societies, political strife across different cultures and the forces which tend to fragment societies. Examples drawn from Africa, Asia, Europe, the Pacific Islands, and Australia. Prerequisites: None.

**Fulfills:** Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo; Global Awareness [G]; Global Awareness [G]-in combo

**Division:** Social & Behavioral Sciences

**ASB223 / Buried Cities and Lost Tribes: New World****3 Credits / 3.0 Periods for Lecture**

Introduction to archaeology through discoveries and the researchers who made them. Emphasis on methods of archaeological fieldwork and what these discoveries reveal about humanity, including the nature of archaeological inquiry, the development of human social groups, the changing role of religion in evolving societies, the origins of agriculture, the origins of settled life ways, the rise of cities and complex societies, political strife across different cultures and the forces which fragment societies. Examples drawn from North America, Central America, and South America. Prerequisites: None.

**Fulfills:** Global Awareness [G]; Global Awareness [G]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

**ASB253 / Death and Dying Across Cultures****3 Credits / 3.0 Periods for Lecture**

Responses to death and dying in cultures around the world. Explanations for particular cultural responses to death and dying. Examples drawn from ancient and contemporary cultures. Prerequisites: None.

**Fulfills:** Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Global Awareness [G]; Global Awareness [G]-in combo

**Division:** Social & Behavioral Sciences

**Anthropology (ASM)****ASM104 / Bones, Stones, and Human Evolution****4 Credits / 5.0 Periods for Lecture & Lab**

Study of human evolution and variation; including fossil hominids and their tools, primate anatomy and behavior, human genetics, and the environment and human biology. Prerequisites: None.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo; Natural Sciences General [SG]; Natural Sciences General [SG]-in combo

**Division:** Social & Behavioral Sciences

**ASM275 / Forensic Anthropology****4 Credits / 5.0 Periods for Lecture & Lab**

Survey of the role of forensic anthropologists, from the crime scene to the courtroom. Course focuses on how skeletal analysis can aid in medicolegal investigations, especially by identifying aspects of the life history of unknown individuals and by reconstructing events that took place at crime scenes. Covers both the legal aspects of forensic practice and the underlying biological basis for evidence obtained from skeletal remains. Examines applications of forensic anthropology in mass disasters, human rights investigations, and the deciphering of historic cases. Lab activities designed to illustrate techniques and principles central to the discipline. Prerequisites: None.

**Crosslisted:** FOR275

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo; Natural Sciences General [SG]; Natural Sciences General [SG]-in combo

**Division:** Social & Behavioral Sciences

**Child/Family Studies (CFS)****CFS123 / Health and Nutrition in Early Childhood Settings****1 Credit / 1.0 Periods for Lecture**

Creating and maintaining healthy environments and practices in programs serving young children. Emphasis on assessing the child's health status, nutrition and food service, communicable disease recognition, transmission, and prevention, infection control, regulations and regulatory agencies, current topics, resources, and innovative practices. Prerequisites: None.

**Division:** Social & Behavioral Sciences

**CFS125 / Safety In Early Childhood Settings****1 Credit / 1.0 Periods for Lecture**

Fundamental concepts of promoting a safe, but challenging learning environments. Establishing and maintaining safety procedures in the early childhood setting. Emphasis on indoor and outdoor equipment and activities, risk analysis, accident, evacuation, and emergency plans, regulations, regulatory agencies and resources, current topics, and innovative practices. Prerequisites: None.

**Division:** Social & Behavioral Sciences

**CFS282 / Mainstreaming The Young Child With a Disability****1 Credit / 1.0 Periods for Lecture**

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.

**Division:** Social & Behavioral Sciences

**Early Childhood Education (ECH)****ECH128 / Early Learning: Play and the Arts****3 Credits / 3.0 Periods for Lecture**

Examines theory, research and practices relating to play and the creative arts in early childhood. Considers practical constraints and alternative perspectives. Prerequisites: None.

**Division:** Social & Behavioral Sciences

**ECH176 / Child Development****3 Credits / 3.0 Periods for Lecture**

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.

**Crosslisted:** CFS176

**Division:** Social & Behavioral Sciences

**ECH253 / National Credential Portfolio Development****3 Credits / 3.0 Periods for Lecture**

Portfolio or resource file development, completion, and presentation. Self-assessment and credentialing planning, professional development, writing, and critical learning included. Prerequisites: Permission of Program Director.

**Division:** Social & Behavioral Sciences

**ECH271 / Arranging the Environment****1 Credit / 1.0 Periods for Lecture**

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.

**Crosslisted:** CFS271

**Division:** Social & Behavioral Sciences



**ECH280 / Food Experiences with Young Children****1 Credit / 1.0 Periods for Lecture**

A discussion of the nutritional needs of young children and the cultural and social meanings of foods, feeding and eating. Includes planning and managing food experiences in home and group settings. Prerequisites: None.

**Division:** Social & Behavioral Sciences

**Economics (ECN)****ECN211 / Macroeconomic Principles****3 Credits / 3.0 Periods for Lecture**

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.

 SUN# ECN 2201

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

**ECN212 / Microeconomic Principles****3 Credits / 3.0 Periods for Lecture**

Microeconomic analysis including the theory of consumer choice, price determination, resource allocation and income distribution. Includes non-competitive market structures such as monopoly and oligopoly; and the effects of government regulation. Prerequisites: None.

 SUN# ECN 2202

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

**Education (EDU)****EDU115 / Digital Literacy for Teaching and Learning in Education****3 Credits / 3.0 Periods for Lecture**

Overview of digital literacy for identifying the skills needed to become informed users of technology to communicate, instruct, create and think critically with digital tools. Explores how emerging technologies are used to teach and learn across varied educational environments (face-to-face, hybrid, online, etc). Includes skills focused on basic computer operations, productivity software, digital citizenship, instructional practices, information literacy and family and professional partnerships. Discusses current trends and related issues about the use of technology and its impacts in P20 education. Prerequisites: None.

**Crosslisted:** EED115

**Fulfills:** Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo

**Division:** Social & Behavioral Sciences

**EDU220 / Introduction to Serving English Language Learners (ELL)****3 Credits / 3.0 Periods for Lecture**

Historical overview of current educational and legal issues for serving English Learners (EL). Comparison and evaluation of various types of language educational models including Structured English Immersion (SEI), Sheltered English Instruction, and bilingual/Dual Language Immersion (DLI). Includes SEI, Sheltered English Instruction, and bilingual/DLI strategies. Prerequisites: None. Course Notes: Approved school-based practicum is required. EDU220 incorporates the 45-clock hour curricular framework for SEI endorsement through the Arizona Department of Education.

**Fulfills:** Literacy & Critical Inquiry [L]; Literacy & Critical Inquiry [L]-in combo

**Division:** Social & Behavioral Sciences

**EDU221 / Introduction to Education****3 Credits / 3.0 Periods for Lecture**

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 Notes: EDU221 requires a minimum of 30 hours of field experience in elementary or secondary classroom environment.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

**EDU222 / Introduction to the Exceptional Learner****3 Credits / 3.0 Periods for Lecture**

Overview of the exceptional learner with emphasis on factors relating to current practices, identification, characteristics, and educational adaptations. Issues related to mild disabilities, severe disabilities, emotional and behavioral disorders, intellectual disabilities, and students who are gifted. Prerequisites: None. Course Notes: EDU222 requires an approved field experience.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

**EDU230 / Cultural Diversity In Education****3 Credits / 3.0 Periods for Lecture**

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.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo

**Division:** Social & Behavioral Sciences

**EDU236 / Classroom Relationships****3 Credits / 3.0 Periods for Lecture**

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.

**Division:** Social & Behavioral Sciences

**EDU250 / Teaching and Learning in the Community College****3 Credits / 3.0 Periods for Lecture**

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.

**Division:** Social & Behavioral Sciences

**EDU291 / Children's Literature****3 Credits / 3.0 Periods for Lecture**

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.

**Crosslisted:** ENH291

**Division:** Social & Behavioral Sciences

**EDU292 / The Art of Storytelling****3 Credits / 3.0 Periods for Lecture**

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.

**Crosslisted:** HUM292, STO292

**Division:** Social & Behavioral Sciences

**Early Education (EED)****EED115 / Digital Literacy for Teaching and Learning in Education****3 Credits / 3.0 Periods for Lecture**

Overview of digital literacy for identifying the skills needed to become informed users of technology to communicate, instruct, create and think critically with digital tools. Explores how emerging technologies are used to teach and learn across varied educational environments (face-to-face, hybrid, online, etc). Includes skills focused on basic computer operations, productivity software, digital citizenship, instructional practices, information literacy and family and professional partnerships. Discusses current trends and related issues about the use of technology and its impacts in P20 education. Prerequisites: None.

**Crosslisted:** EDU115

**Fulfills:** Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo

**Division:** Social & Behavioral Sciences

**EED205 / The Developing Child: Prenatal to Age Eight****3 Credits / 3.0 Periods for Lecture**

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.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

**EED212 / Guidance, Management and the Environment****3 Credits / 3.0 Periods for Lecture**

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.

**Division:** Social & Behavioral Sciences

**EED215 / Early Learning: Health, Safety, Nutrition and Fitness****3 Credits / 3.0 Periods for Lecture**

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.

**Division:** Social & Behavioral Sciences

**EED261 / Early Childhood Preschool Internship****1 Credit / 1.0 Periods for Laboratory**

Work experience with preschoolers in early care and education settings. Eighty (80) hours of designated work per credit. Prerequisites: Permission of Department or Division. Course Notes: May be repeated for a total of six (6) credit hours.

**Division:** Social & Behavioral Sciences

**Excellence/Teaching/Learning (ETL)****ETL220 / Online Teaching and Learning I****3 Credits / 3.0 Periods for Lecture**

Application of and experience using an online teaching and learning environment from a student's perspective to inform the design and support of an online course environment. Application and evaluation of online learning principles and tools for teaching and learning. Identification and development of online facilitation knowledge and skills. Introduction to the best practices in content building, course design and delivery. Prerequisites: Permission of Instructor.

**Division:** Social & Behavioral Sciences

**ETL221 / Online Teaching and Learning II****3 Credits / 3.0 Periods for Lecture**

Experience with creating an online or hybrid duplicative course module structure in an online teaching and learning environment using evidence-based practices in course design. Develop learning objectives and module map based on curricular principles. Using instructional design techniques develop and align materials, activities, assignments and assessments to learning objectives. Discuss and develop active learning strategies for presenting content, facilitating discussions, creating assignments and administering assessments in the online environment. Prerequisites: A grade of C or better in ETL220 or permission or Instructor.

**Division:** Social & Behavioral Sciences

**Honors (HON)****HON201 / Leadership Development: Historical and Contemporary Perspectives****3 Credits / 3.0 Periods for Lecture**

Interdisciplinary study of leadership focusing on development of leadership skills. Prerequisites: Admission to the college honors program or permission of Instructor.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

**Political Science (POS)****POS100 / Introduction to Political Science****3 Credits / 3.0 Periods for Lecture**

Introduction to the discipline of political science and its relation to other disciplines with emphasis on the major philosophies and institutions of government. Prerequisites: None.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

**POS101 / Current Issues****1 Credit / 1.0 Periods for Lecture**

Introduction to current issues in politics, economics, social relations, foreign affairs. Presentations by local, state and national civic and cultural leaders. Prerequisites: None. Course Notes: POS101 may be repeated for a total of two (2) credit hours.

**Division:** Social & Behavioral Sciences

**POS110 / American National Government****3 Credits / 3.0 Periods for Lecture**

Study of the historical backgrounds, governing principles, and institutions of the national government of the United States. Prerequisites: None.

**Division:** Social & Behavioral Sciences

**POS120 / World Politics****3 Credits / 3.0 Periods for Lecture**

Introduction to the principles and issues relating to the study of international relations. Evaluation of the political, economic, national, and transnational rationale for international interactions. Prerequisites: None.


 SUN# POS 1120

**Fulfills:** Global Awareness [G]; Global Awareness [G]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

**POS140 / Comparative Government****3 Credits / 3.0 Periods for Lecture**

Overview and evaluation of the sub-field of comparative politics. Covers various national governments from around the world: their structure, system, method of governance. Examines methods of assessing these governments. Prerequisites: None.

 SUN# POS 2204

**Fulfills:** Global Awareness [G]; Global Awareness [G]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

**POS180 / United Nations Studies****3 Credits / 3.0 Periods for Lecture & Lab**

Historical origins, structural makeup, political and operational characteristics, and legal activities of the United Nations. Analysis of the overall institution's ongoing utility, productivity and creativity. Prerequisites: None.

**Fulfills:** Global Awareness [G]; Global Awareness [G]-in combo

**Division:** Social & Behavioral Sciences

**POS210 / Political Ideologies****3 Credits / 3.0 Periods for Lecture**

Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures. Prerequisites: None.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

**POS220 / U.S. and Arizona Constitution****3 Credits / 3.0 Periods for Lecture**

Examination of the United States Constitution and the constitution and government of the State of Arizona. Prerequisites: None.

**Division:** Social & Behavioral Sciences

**POS221 / Arizona Constitution****1 Credit / 1.0 Periods for Lecture**

Examination of the Constitution of the State of Arizona. Equivalent to the second part of POS220. May not enroll in POS220 and POS221 concurrently. Prerequisites: None.

**Division:** Social & Behavioral Sciences

**POS222 / U.S. Constitution****2 Credits / 2.0 Periods for Lecture**

Examination of the United States Constitution. Equivalent to the first part of POS220. May not enroll in POS220 and POS222 concurrently. Prerequisites: None. Course Notes: Students may not enroll in POS220 and POS222 concurrently.

**Division:** Social & Behavioral Sciences

**POS223 / Civil Rights and Liberties****3 Credits / 3.0 Periods for Lecture**

The historic background and current status of major civil rights and civil liberties issues in the United States. Prerequisites: None.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

**POS285 / Political Issues and Public Policy****3 Credits / 3.0 Periods for Lecture & Lab**


Introduction to public policy, how policy is made, and how public policy decisions are affected. Prerequisites: None.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

**Psychology (PSY)****PSY101 / Introduction to Psychology****3 Credits / 3.0 Periods for Lecture**

Overview of the study and methods of psychological science. Includes an introduction to subfields such as biopsychology, learning, memory, development, social, and psychological disorders. Prerequisites: None.

 SUN# PSY 1101

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

**PSY123 / Psychology of Parenting****3 Credits / 3.0 Periods for Lecture**

The demonstration and application of psychological principles to parenting and the development and guidance of children and adolescents. Prerequisites: None.

**Division:** Social & Behavioral Sciences

**PSY132 / Psychology and Culture****3 Credits / 3.0 Periods for Lecture**

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.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Global Awareness [G]; Global Awareness [G]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

**PSY156 / Understanding Death and Dying****3 Credits / 3.0 Periods for Lecture**

Designed to give the student an understanding of the research and theories of death, dying, bereavement process, and aspects of end-of-life care and decision-making. Prerequisites: None.

**Division:** Social & Behavioral Sciences

**PSY215 / Sports Psychology****3 Credits / 3.0 Periods for Lecture**

Application of the physiological, behavioral, social, cognitive, and humanistic perspectives in psychology to sport. Includes topics such as optimal performance, correlation, motivation, co-action effect, self-actualization, psycho-behavioral techniques, self-efficacy, and the general health benefits of sport participation. Prerequisites: None.

**Division:** Social & Behavioral Sciences

**PSY230 / Introduction to Statistics****3 Credits / 3.0 Periods for Lecture**

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: A grade of C or better in (PSY101 and eligibility for MAT14+ or higher as indicated by appropriate district mathematics placement) or permission of Instructor.

**Division:** Social & Behavioral Sciences

**PSY231 / Laboratory for Statistics****1 Credit / 2.0 Periods for Laboratory**

Applications of inferential and descriptive statistics to statistical software in the field of psychology. Prerequisites: None. Corequisites: PSY230.

**Division:** Social & Behavioral Sciences

**PSY235 / Psychology of Gender****3 Credits / 3.0 Periods for Lecture**

To assess historical and psychological perspectives on women and men and to evaluate contemporary viewpoints regarding the psychology of women and men. Prerequisites: A grade of C or better in PSY101, or permission of Instructor.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

**PSY240 / Developmental Psychology****3 Credits / 3.0 Periods for Lecture**

Human development from conception through death. Includes biological, physical, cognitive, emotional, and sociocultural development across various ages. Prerequisites: A grade of C or better in PSY101, or permission of Instructor. Course Notes: Recommended for students majoring in nursing, education, behavioral, pre-med, and psychology.

**Division:** Social & Behavioral Sciences

**PSY250 / Social Psychology****3 Credits / 3.0 Periods for Lecture**

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: A grade of C or better in PSY101, or permission of Instructor.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

**PSY241 / Understanding and Changing Behavior****3 Credits / 3.0 Periods for Lecture**

Theory and methods for observing, analyzing, and modifying behavior. Prerequisites: A grade of C or better in PSY101 or permission of Instructor.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

**PSY262 / Positive Psychology: The Science of Well-Being****3 Credits / 3.0 Periods for Lecture**

Overview and application of psychological principles based on strengths and resilience of human beings as opposed to dysfunction and symptoms of mental disorders. Topics include happiness, relationships, resilience, optimism, well-being, and brain research explaining positive emotions. Prerequisites: None.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

**PSY266 / Psychological Disorders****3 Credits / 3.0 Periods for Lecture**

Distinguishes between healthy psychological functioning and psychological disorders. Includes topics in psychopathology such as problems with anxiety and depression, eating disorders, substance-use, schizophrenia, sexuality, and personality. Also covers causes and treatments of psychological disorders. Prerequisites: A grade of C or better in PSY101, or permission of Instructor.

**Division:** Social & Behavioral Sciences

**PSY267 / Introduction to Forensic Psychology****3 Credits / 3.0 Periods for Lecture**

Overview of the practice of psychology in the law, by the law, and of the law. Focuses on the complementary functions and distinctions between psychology and the legal justice system. Topics include, but are not limited to, criminal investigations, risk and level of danger, competency, interrogations, confessions, assessment, eyewitness testimony, child custody, and domestic violence. Prerequisites: A grade of C or better in PSY101 or permission of Instructor.

**Division:** Social & Behavioral Sciences

**PSY290AB / Research Methods****4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

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. A grade of C or better required in all Prerequisites. Prerequisites: ENG101 or ENG107. Prerequisites or Corequisites: PSY230 or PSY230WL or permission of Instructor.

**Division:** Social & Behavioral Sciences

**PSY290AC / Research Methods Laboratory****1 Credit / 2.0 Periods for Laboratory**

Laboratory experience in support of PSY290AC lecture course. A grade of C or better required in all Prerequisites. Prerequisites: ENG101 or ENG107. Prerequisites or Corequisites: PSY230 or PSY230WL or permission of Instructor. Corequisites: PSY290AC lecture course.

**Division:** Social & Behavioral Sciences

## Sociology (SOC)

### SOC101 / Introduction to Sociology

#### 3 Credits / 3.0 Periods for Lecture

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.

 SUN# SOC 1101

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

### SOC130 / Human Sexuality

#### 3 Credits / 3.0 Periods for Lecture

Sociological study of human sexuality. Course examines the social forces that shape a culture's sexual practices, attitudes, and inequalities. Topics include the social construction of sexuality, social change, sexual identities, sexual inequalities, institutional influence and regulation of sexuality, as well as current trends and issues surrounding human sexuality. Prerequisites: None. Course Notes: SOC130 contains mature adult content and some of the topics discussed may be considered "controversial" or "taboo" in some societies and cultures. Students are expected to be able to engage with the content in a respectful and open-minded way.

**Division:** Social & Behavioral Sciences

### SOC157 / Sociology of Families and Relationships

#### 3 Credits / 3.0 Periods for Lecture

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.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

### SOC180 / Social Implications of Technology

#### 3 Credits / 3.0 Periods for Lecture

Effects of development and implementation of technology on society. Historical and multi-cultural comparisons of this process, current concerns addressed, and prospects for the future analyzed. Prerequisites: None.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

### SOC212 / Gender and Society

#### 3 Credits / 3.0 Periods for Lecture

A sociological analysis of the way culture shapes and defines the positions and roles of both men and women in society. Major emphasis on social conditions which may lead to a broadening of gender roles and a reduction of gender role stereotypes and the implications of these changes. Prerequisites: None.

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

### SOC220 / Sport and Society

#### 3 Credits / 3.0 Periods for Lecture

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 fans, athletes, and athletic administrators, as well as how professional, collegiate, and amateur sports have at times played a transformative role in society. Prerequisites: None.


**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

### SOC241 / Race and Ethnic Relations

#### 3 Credits / 3.0 Periods for Lecture

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.

 SUN# SOC 2215

**Fulfills:** Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

### SOC251 / Social Problems

#### 3 Credits / 3.0 Periods for Lecture

A systematic and in-depth survey of selected social problems and inequalities from a sociological perspective, including what is known about the problem, recent trends, their causes and consequences, individual and societal responses to them, and possible remedies or policies that could address these issues. Issues to be examined may include 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.

 SUN# SOC 2250

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

### SOC266 / Sociology Through Film

#### 3 Credits / 3.0 Periods for Lecture

Examines movie-going and the experience of spectatorship. Studies how motion pictures reflect, influence, and are influenced by American culture and societal institutions. Explores the role of the movie industry as a vehicle for social commentary, analysis, and criticism. Prerequisites: None.

**Fulfills:** Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

**Division:** Social & Behavioral Sciences

## Early Childhood Education, Associate in Applied Science



Associate in Applied Science: AAS 3186

60-74 Credits

Program Contact

Joni Burris | 480-857-5526 | j  
(jennifer.peterson@cgcc.edu)joni.burris@cgcc.edu (joni.burris@cgcc.edu)

## Program Description

The Associate in Applied Science (AAS) in Early Childhood Education (ECE) program is designed to prepare individuals for employment as early childhood professionals in a variety of educational settings. The AAS program includes courses based on current ECE theory and practice as well as general education classes to broaden a student's base of knowledge. Certificates of Completion are also available.

## Program Notes

Students must earn a grade of "C" or better in all courses in the program. Overall program minimum GPA = 2.00.

For some employment and field experiences (including internship courses), students will be required to have a current Identity Verified Print (IVP) Fingerprint Clearance Card and a current TB test.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites:** None

Code	Title	Credits	Semester
<b>Required Courses</b>			
CFS101AH & ECH281	Art Activities for the Young Child and Movement/ Music for the Young Child	2-3	
or ECH128	Early Learning: Play and the Arts		
or EED210	Creative and Cognitive Play		
CFS123 & CFS125 & ECH280	Health and Nutrition in Early Childhood Settings and Safety In Early Childhood Settings and Food Experiences with Young Children	3	
or EED215	Early Learning: Health, Safety, Nutrition and Fitness		
CFS/ECHOR176	Child Development	3	
or CFS235	Developing Child: Theory into Practice, Prenatal to Age Eight		
or EED205	The Developing Child: Prenatal to Age Eight		
Select one of the following options:		2-3	
<b>Option 1</b>			
CFS/ECHOR269	Child Care Seminar		
CFS/ECHOR287	Professional Development in Early Childhood Education		

<b>Option 2</b>			
EED255	Portfolio Development and Writing for the Profession		
Select one of the following options:		3	
<b>Option 1</b>			
CFS/ECHOR271	Arranging the Environment		
CFS282	Mainstreaming The Young Child With a Disability		
ECH282	Discipline/ Guidance of Child Groups		
<b>Option 2</b>			
EED212	Guidance, Management and the Environment		
Select one of the following options:		2-3	
<b>Option 1</b>			
CFS/ECHOR284AB	Early Childhood Teaching Internship		
<b>Option 2</b>			
EED260 & EED261	Early Childhood Infant/Toddler Internship and Early Childhood Preschool Internship		
or CFS284A/		Early Childhood Teaching Internship	
ECH140 & ECH270	Learning Made Visible Through Documentation and Observing Young Children	2-3	
or EED280	Standards, Observation and Assessment of Typical/Atypical Behaviors of Young Children Birth to Age 8		
Select one of the following options:		3-4	
<b>Option 1</b>			
CFS/ECHOR273	Math for the Young Child		
CFS/ECHOR275	Literacy Development and the Young Child		
ECH272	Science for the Young Child		
ECH279	Early Childhood Curriculum Development		
<b>Option 2</b>			

EED278	Early Learning Curriculum and Instruction - Birth to Age Eight		
EED200	Foundations of Early Childhood Education	3	
EED222	Introduction to the Exceptional Young Child: Birth to Age Eight	3	
EED225	Language and Literacy in the Context of Culture and Relationships	3	
FYE101	Introduction to College, Career and Personal Success	1-3	
or FYE103	Exploration of College, Career and Personal Success		
<b>Restricted Electives</b>			
Students must select nine (9) to twelve (12) credits from the following to complete the minimum total program credits required for this degree. Students are encouraged to consult with a faculty advisor or student services analyst to identify the requirements for their desired academic and professional goals:		9-12	
CFS+++	Any CFS Child/Family Studies course(s)		
ECH+++	Any ECH Early Childhood Education course(s)		
EDU+++	Any EDU Education course(s)		
EED+++	Any EED Early Education course(s)		
FCS+++	Any FCS Family and Consumer Science course(s)		
ITD+++	Any ITD Infant/Toddler Development course(s)		
<b>General Education</b>			
<b>Core</b>			
<i>First-Year Composition</i>			

ENG101	First-Year Composition	3	
or ENG107	First-Year Composition for ESL		
ENG102	First-Year Composition	3	
or ENG108	First-Year Composition for ESL		
<i>Oral Communication</i>			
Any approved General Education course from the Oral Communication area <sup>1</sup>		3	
<i>Critical Reading</i>			
Select one of the following:		0-3	
CRE101	College Critical Reading and Critical Thinking		
or equivalent by assessment			
<i>Mathematics</i> <sup>2</sup>			
Select one of the following:		3-6	
MAT112	Mathematical Concepts and Applications		
OR satisfactory completion of a higher-level mathematics course			
<b>Distribution</b>			
<i>Humanities, Arts and Design</i>			
Any approved general education course(s) from the Humanities, Arts and Design area <sup>3</sup>		3	
<i>Social and Behavioral Sciences</i>			
Fulfilled by Required Courses <sup>4</sup>		0	
<i>Natural Sciences</i>			
Any approved general education course(s) in the Natural Sciences area		4	
<b>Total Credits</b>		<b>60-74</b>	

<sup>1</sup> Note: COM225 Public Speaking is recommended for students who wish to transfer to the BAE at ASU.

<sup>2</sup> Note: MAT14+ College Mathematics or any approved general education course in the Mathematical Application [MA] area may be required for students intending to transfer to a bachelor's degree program.

<sup>3</sup> Recommend: EDU291 Children's Literature/ENH291 Children's Literature or EDU292 The Art of Storytelling/HUM292 The Art of Storytelling/STO292 The Art of Storytelling.

<sup>4</sup> Fulfilled by EDU222 Introduction to the Exceptional Learner or EED222 Introduction to the Exceptional Young Child: Birth to Age Eight in Required Courses area.

## Early Childhood Education, Certificate of Completion



**EDUCATION**



**Certificate of Completion: CCL 5056****36 Credits****Program Contact**

Joni Burris | 480-857-5526 | joni.burris@cgc.edu (joni.burris@cgc.edu)

## Program Description

The Certificate of Completion (CCL) in Early Childhood Education program is designed to prepare students for employment as early childhood teachers in a variety of educational programs. Students learn effective teaching skills as they apply developmentally appropriate early childhood educational theory in the classroom setting. Courses have been selected with a focus on developing an educational career ladder. An Associate in Applied Science (AAS) in Early Childhood Education is also available and includes additional early childhood electives and general education classes to broaden the student's base of knowledge.

## Program Notes

Students must earn a grade of "C" or better in all courses in the program. Overall program minimum GPA = 2.00.

For some employment and field experiences (including internship courses), students will be required to have a current Identity Verified Print (IVP) Fingerprint Clearance Card and a current TB test.

++ indicates any suffixed course may be selected.

## Program Requirements

**Program Prerequisites: None**

Code	Title	Credits	Semester
<b>Required Courses</b>			
CFS101AH & ECH281	Art Activities for the Young Child and Movement/Music for the Young Child	2-3	
or ECH128	Early Learning: Play and the Arts		
or EED210	Creative and Cognitive Play		
CFS123 & CFS125 & ECH280	Health and Nutrition in Early Childhood Settings and Safety In Early Childhood Settings and Food Experiences with Young Children	3	
or EED215	Early Learning: Health, Safety, Nutrition and Fitness		
CFS/ECHOR176	Child Development	3	
or CFS235	Developing Child: Theory into Practice, Prenatal to Age Eight		
or EED205	The Developing Child: Prenatal to Age Eight		
Select one of the following options:		2-3	
Option 1			

CFS/ECHOR269	Child Care Seminar		
CFS/ECHOR287	Professional Development in Early Childhood Education		
Option 2			
EED255	Portfolio Development and Writing for the Profession		
Select one of the following options:		3	
Option 1			
CFS/ECHOR271	Arranging the Environment		
CFS282	Mainstreaming The Young Child With a Disability		
ECH282	Discipline/Guidance of Child Groups		
Option 2			
EED212	Guidance, Management and the Environment		
Select one of the following options:		2-3	
Option 1			
CFS/ECHOR284AB	Early Childhood Teaching Internship		
Option 2			
EED260 & EED261	Early Childhood Infant/Toddler Internship and Early Childhood Preschool Internship		
or CFS284A/		Early Childhood Teaching Internship	
ECH140 & ECH270	Learning Made Visible Through Documentation and Observing Young Children	2-3	
or EED280	Standards, Observation and Assessment of Typical/Atypical Behaviors of Young Children Birth to Age 8		
Select one of the following options:		3-4	
Option 1			
CFS/ECHOR273	Math for the Young Child		
CFS/ECHOR275	Literacy Development and the Young Child		
ECH272	Science for the Young Child		

ECH279	Early Childhood Curriculum Development		
<b>Option 2</b>			
EED278	Early Learning Curriculum and Instruction - Birth to Age Eight		
EED200	Foundations of Early Childhood Education	3	
EED222	Introduction to the Exceptional Young Child: Birth to Age Eight	3	
EED225	Language and Literacy in the Context of Culture and Relationships	3	
FYE101	Introduction to College, Career and Personal Success	1-3	
or FYE103	Exploration of College, Career and Personal Success		
<b>Restricted Electives</b>			
Students must select nine (9) to twelve (12) credits from the following to complete the minimum total program credits required for this degree. Students are encouraged to consult with a faculty advisor or student services analyst to identify the requirements for their desired academic and professional goals:		9-12	
CFS+++	Any CFS Child/Family Studies course(s)		
ECH+++	Any ECH Early Childhood Education course(s)		
EDU+++	Any EDU Education course(s)		
EED+++	Any EED Early Education course(s)		
FCS+++	Any FCS Family and Consumer Science course(s)		

ITD+++	Any ITD Infant/Toddler Development course(s)	
<b>Total Credits</b>		36

## Foundations of Early Childhood Education, Certificate of Completion



**EDUCATION**

**Certificate of Completion: CCL 5054**

**18-19 Credits**

**Program Contact**

Joni Burris | 480-857-5526 | joni.burris@cgc.edu (joni.burris@cgc.edu)

### Program Description

The Certificate of Completion (CCL) in Foundations of Early Childhood Education is designed to prepare students with foundational knowledge regarding the growth and development of the young child. Topics include cognitive and physical development of the young child, language acquisition, curriculum development, health and safety guidelines, business procedures, and family/community relationship building. This CCL is embedded (can be used to fulfill part of the requirements) in a second available CCL, Early Childhood Education. Both CCLs are embedded (can be used to fulfill requirements) in the Associate in Applied Science (AAS) in Early Childhood Education.

### Program Notes

Students must earn a grade of "C" or better in all courses in the program. Overall program minimum GPA = 2.00.

For some employment and field experiences (including internship courses), students will be required to have a current Identity Verified Print (IVP) Fingerprint Clearance Card and a current TB test.

++ indicates any suffixed course may be selected.

### Program Requirements

Code	Title	Credits	Semester
<b>Required Courses</b>			
CFS101AH & ECH281	Art Activities for the Young Child and Movement/Music for the Young Child	2-3	
or ECH128	Early Learning: Play and the Arts		
or EED210	Creative and Cognitive Play		

CFS123 & CFS125 & ECH280	Health and Nutrition in Early Childhood Settings and Safety In Early Childhood Settings and Food Experiences with Young Children	3	_____
or EED215	Early Learning: Health, Safety, Nutrition and Fitness		_____
CFS/ECHOR176	Child Development	3	_____
or CFS235	Developing Child: Theory into Practice, Prenatal to Age Eight		_____
or EED205	The Developing Child: Prenatal to Age Eight		_____
CFS271 & CFS282 & ECH282	Arranging the Environment and Mainstreaming The Young Child With a Disability and Discipline/ Guidance of Child Groups	3	_____
or EED212	Guidance, Management and the Environment		_____
CFS/ ECHOR284AA	Early Childhood Teaching Internship	1	_____
or EED260	Early Childhood Infant/Toddler Internship		_____
or EED261	Early Childhood Preschool Internship		_____
EED200	Foundations of Early Childhood Education	3	_____
EED222	Introduction to the Exceptional Young Child: Birth to Age Eight	3	_____
<b>Total Credits</b>		<b>18-19</b>	_____

## Special Programs

### Continuing Education and Workforce Development

Chandler-Gilbert Community College offers life-long learning opportunities through non-credit courses. The Continuing Education Department offers courses designed to enhance personal and professional development through classroom instruction as well as online learning.

Workforce development at CGCC brings together employers, employees and education. Instruction is either at the company, at the college, or

online. Students can enroll in CTE programs or take courses to learn skills needed by current or future employers.

To continue learning with flexible courses year-round, call 480#857-5500.

## Fitness, Wellness and Recreation

CGCC offers a variety of fitness, wellness, and recreation opportunities on the Pecos and Williams Campus.

### Fitness Center

The Pecos Fitness Center features state-of-the-art cardiovascular training equipment, Life Fitness and Cybex weight training machines, and a complete free-weight area with Olympic style platforms and bumper plates. The Fitness Center is equipped with TRX trainers, plyometric boxes, medicine balls, stability balls, bands and hurdles for complete performance training. Whether you are an elite athlete or a week-end warrior we have all of the equipment that you need.

All members of the Pecos Fitness Center are offered personalized instruction, a complete fitness assessment, and body composition analysis from our degreed and certified instructors. Fitness Center members also have access to amenities such as locker rooms and shower facilities.

To use the Fitness Center, all students must be enrolled in a credit (PED115) or non-credit (Fitness 600-100) Lifetime Fitness course. PED115 students also have access to Group Fitness Courses. Additional information is available by calling the Pecos Campus Fitness Center at 480#732#7200.

### Group Fitness Classes

Chandler-Gilbert also has a wide variety of group fitness classes open to students. All Group Fitness classes are 1-credit classes and have the PED101 prefix. Students may choose from Boot Camp Fitness, Zumba, Pilates, Yoga, Restorative Yoga, Stretch and Relaxation, Tai Chi, Karate and other classes.

To see a complete list of group fitness classes being offered this semester, please see the current schedule of classes.

Students, faculty, staff, and community members interested in using the Fitness Center or taking a group fitness class can contact the Pecos Campus Fitness Center at 480#732#7200 for more information.

## Honors Program

The CGCC Honors Program provides the opportunity for academically advanced students to participate in challenging and rewarding educational experiences. The purpose of the Honors Program is to foster greater depth of thought in reading, writing, and discussion with faculty and guest lecturers, which will better prepare Honors students to complete baccalaureate degrees or to begin their careers. A variety of academic scholarships are available to eligible Honors Program students.

Honors students enjoy:

- Scholarships
- Special recognition on transcripts and diplomas
- Cultural and social activities, such as the Honors
- Forum Lecture Series and other experiential learning activities
- Enhanced intellectual growth through Honors courses and projects

Students with a cumulative grade point average of 3.25 or higher and have earned at least 12 credit hours of Maricopa Community College coursework are invited to apply as an Honors Achievement Scholar. Recent high school graduates with an unweighted GPA of at least 3.25 from attending an accredited Maricopa County high school are invited to apply to the Honors Program as a Presidents' Scholar. Other requirements may apply at the time of application.

For full details and specific requirements about the Honors Program or Honors scholarships, visit [www.cgc.edu/honors](http://www.cgc.edu/honors) (<http://www.cgc.edu/honors/>) or contact the Honors Office at 480#732#7252 or [honors@cgc.edu](mailto:honors@cgc.edu).

## Performing Arts

The Performing Arts Program at CGCC offers an integrated approach to dance, theatre, and music. The classes, while separate, are coordinated within the area to provide students a broader base and more versatility in their performing arts education.

Students can explore all aspects of the performing arts at CGCC. The department offers a transfer program to four-year institutions in music performance, music education, music theory, dance education, dance performance, theater education, theater performance, technical theater and musical theater. Two-year degrees are offered in dance and theatre and music business as well as a certificate of completion in music business. Preparing for life after CGCC is the focus of the program and student success is the goal of the dedicated faculty. There are many opportunities for students to develop skills leading to work in the performing arts, and related areas.

The Arnette Scott Ward Performing Arts Center (the PAC) is home to the CGCC's music, theatre, and dance faculty and staff. It houses a costume shop, scene shop, and its heart, a 299-seat performance venue. In addition, the program has ample teaching facilities including two dance studios, a revitalized black box theater, an instrumental music room, choir room, music library, rehearsal rooms and studio recording space.

For more information on performing arts at CGCC, visit [www.cgc.edu/arts](http://www.cgc.edu/arts) (<https://catalog.cgc.eduhttp://www.cgc.edu/arts/>) or call:

Contact	Phone Number
Dance and Musical Theatre	480-732-7136
Instrumental Music	480-732-7290
Music Business	480-857-5182
Theatre	480-732-7040
Vocal Music and Musical Theatre	480-732-7144