



This addendum to the 2018-19 American River College Catalog contains important changes and additions. This addendum was updated after the 2018-2019 American River College Catalog went to press in March.

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American River College

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Los Rios Community College District

CSU-GE Breadth and IGETC 2017-2018 additions to the Catalog 2017-2018

For a complete listing of the California State University (CSU) General Education Pattern, see Catalog 2018-2019, page 69

For a complete listing of the UC and CSU Intersegmental General Education Transfer Curriculum (IGETC), see Catalog 2018-2019, page 71

CSU-GE Breadth 2017-2018 Additions

The following additions to the CSU-GE Breadth were received after the last addendum was posted.

| Course | CSU-GE Area |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| BIOL 375 – Marine Ecology HEED 308 – Environmental Health Science | B2 – (Life Science) Scientific Inquiry and Quantitative Reasoning |
| ARTH 318 – History of American Art | C1 – Arts |
| ENGLT 335 – Latino, Mexican-American and Chicano Literature GERM 401 – Elementary German I GERM 402 – Elementary German II RUSS 413 – Russian for Heritage Speakers I SPAN 427 – Introduction to Spanish American Literature TAFILM 320 – Cinema Genres | C2 – Humanities |

IGETC 2017-2018 Additions

The following additions to IGETC were received after the last addendum was posted.

| Course | IGETC Area |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| TAFILM 320 – Cinema Genres | 3A - Arts |
| ENGLT 335 – Latino, Mexican-American and Chicano Literature GERM 401 – Elementary German I GERM 402 – Elementary German II RUSS 413 – Russian for Heritage Speakers I SPAN 427 – Introduction to Spanish American Literature | 3B - Humanities |
| ANTH 335 – Research Methods in Anthropology | 4 – Social and Behavioral Sciences |
| BIOL 375 – Marine Ecology HEED 308 – Environmental Health Science | 5B – Biological Science |
| RUSS 413 – Russian for Heritage Speakers | 6A – Language Other Than English (LOTE) |

CSU-GE Breadth 2018-2019 Additions

The following additions to the CSU-GE Breadth were received after the 2018-2019 Catalog was printed.

| Course | CSU-GE Area |
|---------------------------------------------------------------------------------|------------------------------------|
| MATH 372 – College Algebra for Calculus MATH 373 – Trigonometry for Calculus | B4 – Quantitative Reasoning |
| HUM 324 – Global Islam: Culture and Civilization | C2 – Humanities |
| IS 301 – Introduction to Global Studies IS 302 – Issues in Global Studies | D – Social and Behavioral Sciences |
| HCD 382 – Learning Strategies for College and Life | E |

IGETC 2018-2019 Additions

The following additions to IGETC were received after the 2018-2019 Catalog was printed.

| Course | IGETC Area |
|-----------------------------------------|-------------------------------------------------------|
| MATH 372 – College Algebra for Calculus | 2A – Mathematical Concepts and Quantitative Reasoning |

The department certificate programs listed here are additions to the Catalog 2018-2019

For a complete listing of programs and courses in Automotive Technology, please see Catalog 2018-2019, page 149

| | |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Area: Technical Education Dean: Dr. Trish Caldwell Phone: (916) 484-8354 Counseling: (916) 484-8572</p> | <p>Degree: A.S. - Automotive Analysis A.S. - Automotive Component Service Technician A.S. - Automotive Technology</p> <p>Certificates: Air Conditioning Service Alternative Fuels and Green Vehicle Technology Automotive Analysis Automotive Component Service Technician Automotive Emissions Inspection and Repair Technician Automotive Service Technician Automotive Technology Extreme Tuner Parts and Service Transmission Service Undercar Service</p> <p>Department Certificates: Automotive Brakes Automotive Suspension and Steering Small Engines Snap-On™ Certification</p> |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

DEPARTMENT CERTIFICATES

Small Engines Certificate

Major Code: 011034C01

This certificate prepares students for employment in the automotive industry, specializing in small engines.

Student Learning Outcomes

Upon completion of this program, the student will be able to:

- demonstrate accepted safety and work procedures, including Occupational Safety and Health Administration (OSHA) and proper hazardous materials disposal.
- service and repair the starter systems of 2-cycle and 4-cycle small engines.
- identify the external and internal parts of 2-cycle and 4-cycle small engines.
- determine the proper lubrication and fuel requirements for 2-cycle and 4-cycle small engines using factory maintenance data.
- service and repair the cooling and oil systems of 2-cycle and 4-cycle small engines.
- remove, rebuild, install, adjust, and tune 2-cycle and 4-cycle small engine fuel delivery and ignition system components.

Career Opportunities

The automotive small engines industry is growing and in need of technicians. This certificate prepares students for employment in many different areas, including horticulture, off road vehicles, marine applications, and many others.

| Requirements for Certificate | 12 Units |
|---------------------------------------------------------------|-----------------|
| AT 100 Technical Basics for the Automotive Professional | 3 |
| AT 180 Automotive Data Acquisition | 3 |
| AT 181 Snap-On Multimeter Basics | 1 |
| AT 301 Small Gas Engines, Outdoor Power Equipment (4) | 4 |
| or HORT 330 Small Gas Engines, Outdoor Power Equipment (4) | |
| A minimum of 1 unit from the following: | 1 |
| AT 140 Advanced Automotive Skill and Speed Development (3) | |
| AT 298 Work Experience in Automotive Technology (1 - 4) | |

Snap-On™ Certification Certificate

Major Code: 011481C01

This certificate prepares students for entry-level positions in the automotive industry. It provides the knowledge and skills needed for certification using current Snap-On™ diagnostic tools.

Student Learning Outcomes

Upon completion of this program, the student will be able to:

- demonstrate safe, accurate use of tools and equipment.
- apply accurate measurement techniques.
- explain screen orientation and how to navigate through different functions of the VERUS scanner.
- perform the proper procedure to do an oil change on a vehicle.
- locate and analyze technical manuals from online computerized databases.
- apply retrieved data to specific vehicle conditions.

Career Opportunities

The automotive industry is growing and in need of technicians. Snap-On™ certifications are in high demand.

| Requirements for Certificate | | 13 Units |
|------------------------------------------------------|---------------------------------------------------------------|----------|
| AT 100 | Technical Basics for the Automotive Professional | 3 |
| AT 107 | Employability Skills for Technical Careers | 2 |
| AT 180 | Automotive Data Acquisition | 3 |
| AT 181 | Snap-On Multimeter Basics | 1 |
| AT 188 | Snap-On SOLUS— Automotive Diagnostic Use and Operation | 1 |
| AT 189 | Snap-On VERUS – Automotive Diagnostic Use and Operation | 2 |
| A minimum of 1 unit from the following: | | 1 |
| AT 140 | Advanced Automotive Skill and Speed Development (3) | |
| AT 298 | Work Experience in Automotive Technology (1 - 4) | |

Automotive Brakes Certificate

Major Code: 011029C01

This certificate prepares students for employment in the automotive industry, specializing in brakes.

Student Learning Outcomes

Upon completion of this program, the student will be able to:

- describe shop orientation and safety issues.
- discuss the basics of vehicle service including oil, lubrication, inspection, and replacement of fluids.
- demonstrate proper handling, use, and disposal of hazardous materials in the automotive shop environment, combined with safety test.
- practice safety precautions and procedures when inspecting and repairing braking systems.
- analyze the various brake components used on automobiles and describe the functions of each.
- evaluate and diagnose brake components/system malfunctions.
- reassemble and adjust all components of the brake system following service manual procedures.
- arrange, clean, inspect, and measure all components of brake systems following established service manual procedures.

Career Opportunities

The automotive brakes industry is growing and in need of technicians.

| Requirements for Certificate | | 11 Units |
|------------------------------------------------------|--------------------------------------------------------|----------|
| AT 100 | Technical Basics for the Automotive Professional | 3 |
| AT 110 | Automotive Brakes | 3 |
| AT 180 | Automotive Data Acquisition | 3 |
| AT 181 | Snap-On Multimeter Basics | 1 |
| A minimum of 1 unit from the following: | | 1 |
| AT 140 | Advanced Automotive Skill and Speed Development (3) | |
| AT 298 | Work Experience in Automotive Technology (1 - 4) | |

Automotive Suspension and Steering Certificate

Major Code: 011033C01

This certificate prepares students for employment in the automotive industry, specializing in suspension and steering.

Student Learning Outcomes

Upon completion of this program, the student will be able to:

- analyze, describe, and avoid unsafe working conditions and unsafe acts, as well as observe safety regulations in an auto repair facility.
- identify the various components used on automotive steering and suspension systems and describe the function of each.
- perform geometric centerline and thrustline alignments.
- disassemble, inspect, clean, and reassemble all components of the steering and suspension systems in accordance to service manual procedures.
- determine the need for and perform four-wheel alignments.
- diagnose any malfunction of the steering suspension components used on automobiles.

Career Opportunities

The automotive suspension and steering industry is growing and in need of technicians.

| Requirements for Certificate | | 11 Units |
|------------------------------------------------------|--------------------------------------------------------|----------|
| AT 100 | Technical Basics for the Automotive Professional | 3 |
| AT 180 | Automotive Data Acquisition | 3 |
| AT 181 | Snap-On Multimeter Basics | 1 |
| AT 311 | Suspension and Steering Systems | 3 |
| A minimum of 1 unit from the following: | | 1 |
| AT 140 | Advanced Automotive Skill and Speed Development (3) | |
| AT 298 | Work Experience in Automotive Technology (1 - 4) | |

The department certificate programs listed here are additions to the Catalog 2018-2019

For a complete listing of programs and courses in Music,
see Catalog 2018-2019, page 403

| | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Area: Fine & Applied Arts Dean: Angela Milano (Interim) Phone: (916) 484-8433 Counseling: (916) 484-8572</p> | <p>Degrees: A.A. - Music A.A. for Transfer - Music A.A. - Jazz Studies A.A. - Commercial Music: Business A.A. - Commercial Music: Recording</p> <p>Certificates: Commercial Music: Business Commercial Music: Recording Digital Audio Production Music Management and Promotion</p> <p>Department Certificates: Music Instructional Assistant Studio Jazz/Pop Voice Instructor Studio Music Instructor Studio Voice Instructor</p> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

DEPARTMENT CERTIFICATES

Music Instructional Assistant Certificate

Major Code: 011520C01

The certificate is an introductory program for students planning careers in music education for grades K-12.

Student Learning Outcomes

Upon completion of this program, the student will be able to:

- interpret a music score and play a melody with accompanying block chords (I, IV, V7)
- evaluate the playing of others
- recommend and demonstrate good practice habits
- formulate practice routines specific to an instrument
- create basic lesson plans for beginning instrumental or choral ensembles
- evaluate and critique performance ensembles
- select appropriate teaching materials for beginning band or choral ensembles
- compose for various instrumental and vocal combinations
- apply effective leadership styles at work, with consideration to group dynamics, team and individual decision making, and workforce diversity

Career Opportunities

This certificate prepares a student for careers in music education, grades K-12, in paraprofessional roles such as a docent, tutor, or instructional assistant.

Enrollment Eligibility

To be eligible for enrollment in the program, the student must meet the following criteria:

- three years of experience in any band or choir

Core Requirements for Certificate 8.5 Units

| | | |
|------------------------------------------------|-----------------------------------------------------------|----------|
| MUFHL 400 | Music Theory and Musicianship I | 4 |
| MUIVI 200 | Introduction to Music Education | 0.5 |
| MUIVI 340 | Beginning Piano | 2 |
| MUIVI 420 | Applied Music | 1 |
| A minimum of 1 unit from the following: | | 1 |
| MUIVI 298 | Work Experience in Instrumental/Voice Instruction (1 - 4) | |
| MUIVI 498 | Work Experience in Instrumental/Voice Instruction (1 - 4) | |

Guitarists/Pianists/Composers 10.5 Units

| | | |
|-----------------------------------------------------|-------------------------|----------|
| Core Requirements | | 8.5 |
| And a minimum of 2 units from the following: | | 2 |
| MUP 310 | Orchestra (2) | |
| MUP 320 | Jazz Band (2) | |
| MUP 323 | Latin Jazz Ensemble (2) | |
| MUP 330 | Concert Band (2) | |
| MUP 340 | Symphonic Band (2) | |
| MUP 350 | Concert Choir I (2) | |
| MUP 360 | Chamber Singers (2) | |
| MUP 400 | Vocal Jazz Ensemble (2) | |

Instrumentalists 10.5 Units

| | | |
|-----------------------------------------------------|-------------------------|----------|
| Core Requirements | | 8.5 |
| And a minimum of 2 units from the following: | | 2 |
| MUP 310 | Orchestra (2) | |
| MUP 320 | Jazz Band (2) | |
| MUP 323 | Latin Jazz Ensemble (2) | |
| MUP 330 | Concert Band (2) | |
| MUP 340 | Symphonic Band (2) | |

Vocalists 10.5 Units

| | | |
|-----------------------------------------------------|-------------------------|----------|
| Core Requirements | | 8.5 |
| And a minimum of 2 units from the following: | | 2 |
| MUP 350 | Concert Choir I (2) | |
| MUP 360 | Chamber Singers (2) | |
| MUP 400 | Vocal Jazz Ensemble (2) | |

Studio Music Instructor Certificate

Major Code: 011196C01

This certificate focuses on studio music teaching and prepares students for employment as an owner or employee of a private or public music studio. It includes tutoring and coaching students/clients in basic instrumental/vocal technique with an emphasis on performance pedagogy.

Student Learning Outcomes

Upon completion of this program, the student will be able to:

- apply effective leadership styles at work, with consideration to group dynamics, team and individual decision making, and workforce diversity
- design and implement an effective practice routine
- interpret a music score and play a melody with accompanying block chords (I, IV, V7)
- compare and contrast music from different musical eras written for instrument/voice
- analyze music performance skills
- demonstrate the skills needed to play simultaneously with other pianists/musicians
- demonstrate individual musical skills commensurate with the Level I & II National Association of Schools of Music (NASM) guidelines
- analyze basic music form and structure
- construct scales, chords, harmonic progressions and rhythms

Career Opportunities

This certificate offers an overview of the skills essential to enter the music teaching profession as either a member of a retail studio or as an independent music instructor, coach, consultant, or tutor.

Enrollment Eligibility

To be eligible for enrollment in the program, the student must meet the following criteria:

- three years of experience in any band or choir

Core Requirements for Certificate 8.5 Units

| | | |
|-----------|---------------------------------------|-----|
| MUFHL 321 | Basic Musicianship | 3 |
| MUIVI 200 | Introduction to Music Education | 0.5 |
| MUIVI 340 | Beginning Piano | 2 |
| MUIVI 420 | Applied Music..... | 1 |
| MUIVI 421 | Applied Music II..... | 1 |

A minimum of 1 unit from the following:

| | |
|-----------|-----------------------------------------------------------|
| MUIVI 298 | Work Experience in Instrumental/Voice Instruction (1 - 4) |
| MUIVI 498 | Work Experience in Instrumental/Voice Instruction (1 - 4) |

Guitarists/Pianists/Composers 10.5 Units

Core Requirements 8.5

And a minimum of 2 units from the following:

| | |
|---------|------------------------------------|
| MUP 311 | Advanced Orchestra (1-2) |
| MUP 321 | Advanced Jazz Band (1-2) |
| MUP 324 | Advanced Latin Jazz Ensemble (1-2) |
| MUP 331 | Advanced Concert Band (1-2) |
| MUP 341 | Advanced Symphonic Band (1-2) |
| MUP 352 | Advanced Concert Choir I (2) |
| MUP 361 | Advanced Chamber Singers (2) |
| MUP 401 | Advanced Vocal Jazz Ensemble (1-2) |

Instrumentalists 10.5 Units

Core Requirements 8.5

And a minimum of 2 units from the following:

| | |
|---------|------------------------------------|
| MUP 311 | Advanced Orchestra (1-2) |
| MUP 321 | Advanced Jazz Band (1-2) |
| MUP 324 | Advanced Latin Jazz Ensemble (1-2) |
| MUP 331 | Advanced Concert Band (1-2) |
| MUP 341 | Advanced Symphonic Band (1-2) |

Vocalists 10.5 Units

Core Requirements 8.5

And a minimum of 2 units from the following:

| | |
|---------|------------------------------------|
| MUP 352 | Advanced Concert Choir I (2) |
| MUP 361 | Advanced Chamber Singers (2) |
| MUP 401 | Advanced Vocal Jazz Ensemble (1-2) |

The courses listed in this section are new and have been added to the Catalog 2018-2019

ANTHROPOLOGY

ANTH 391 Life and Culture Study Abroad 3.0 Units

Enrollment Limitation: The student must complete the pre-enrollment process into the Los Rios Community College District Study Abroad program as required by the American Institute for Foreign Studies (AIFS).

Course Transferable to CSU

Hours: 54 hours LEC

This course allows students to acquire a level of global competence while enrolled in the Los Rios Study Abroad program. Global competence is a continuing process of acquiring specific economic, historical, and geopolitical knowledge, which supports the intercultural communication skills and authentic lived experiences that allow a person to function in another culture, and result in attitudes of cultural appreciation and interdependence. While participating in a specific Study Abroad program the student will have opportunities to study and generally survey the host country's historical, cultural, and geopolitical influences, as well as the societal structures, to develop an understanding and appreciation of the host culture as different from U. S. American culture. Students may find information about the pre-enrollment meetings at the Study Abroad website, located at: http://www.arc.losrios.edu/Study_Abroad.htm.

Computer Information Science - Apps

CISA 348 Exploring Presentation Graphics 1.0 Unit

Course Transferable to CSU

Hours: 18 hours LEC

This course provides students with sufficient knowledge and skills to prepare presentations in a variety of courses. Topics include planning, designing, and preparing presentations; enhancing presentations with media; creating posters, tables, and statistical charts; interactivity, advanced animation, and hyperlinks; customizing a slide show; and collaborating, securing, and sharing a presentation.

English as a Second Language

ESL 325 Advanced-Low Integrated Reading and Writing 6.0 Units

Prerequisite: ESLR 310 and ESLW 310 with grades of "C" or better.

Course Transferable to CSU

Hours: 108 hours LEC

This advanced-low level integrated-skills course for non-native speakers of English is an accelerated pathway to complete 320-level coursework in reading and writing. This course integrates two existing courses, ESLR 320 and ESLW 320, and focuses on refining academic reading and writing skills, as well as practice in synthesizing and integrating research into argumentative writing. Reading instruction emphasizes speed, vocabulary development, and analytical comprehension. Language instruction includes the construction of well-organized and focused academic essays on a variety of topics with a focus on the development of ideas in body paragraphs, sentence variety, and the mechanics of English. Written final drafts of essays totaling at least 6,000 words are required. Completion of this course is equivalent to completion of both ESLR 320 and ESLW 320 and serves as a prerequisite for ESLR 340 and ESLW 340. This course is not open to students who have completed both ESLR 320 and ESLW 320.

Fire and Forestry Services

FFS 1500 All Hazards Operations Section Chief (S-430/E-958) 1.5 Units

Prerequisite: FFS 1510, FFS 1511, and FFS 1514 with grades of "C" or better.

Enrollment Limitation: To enroll in this course (FFS 1500) the student must be an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior's Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a local or state fire agency.
Hours: 24.5 hours LEC; 7.7 hours LAB

The purpose of this course is to provide local and state-level emergency responders with an overview of key duties and responsibilities of an Operations Section Chief Type-III in a Type III All-Hazards Incident Management Team (AHIMT). Topics include roles and responsibilities, management cycle, strategy and planning, contingency planning, supervision and communications, managing and adjusting the operations section, risk assessment and safety management, and personnel interaction. Pass/No Pass only.

FFS 1510 Intermediate Incident Command System (I-300) 0.75 Unit

Enrollment Limitation: To enroll in this course (FFS 1510) the student must be 1) an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior's Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a local or state fire agency, and 2) successful completion of Incident Command System (I-200), which is an online course offered by Federal Emergency Management Agency (FEMA).
Hours: 12.5 hours LEC; 5.5 hours LAB

This course provides expanded description and detail of the organization and operation of the Incident Command System (ICS). Topics include management of expanding incidents, incident/event management process, and development of an Incident Action Plan (IAP). This course was formerly listed as FIRE 1622 prior to November 2017. This course is not open to students who have completed FIRE 1622.

FFS 1511 Advanced Incident Command System (I-400) 0.75 Unit

Prerequisite: FFS 1510

Enrollment Limitation: To enroll in this course (FFS 1511) the student must be 1) an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior's Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a local or state fire agency.
Hours: 16 hours LEC

This course provides in-depth training in the Incident Command System (ICS) and its components. This course provides the necessary training needed to manage and command large scale complex incidents, as well as the knowledge to develop organizational structures. Topics include fundamentals review for command and general staff, major and/or complex incident/event management, area command, and multi-agency coordination. This course was formerly listed as FIRE 1623 prior to November 2017.

**FFS 1512 National Incident Management System (NIMS)
ICS All-Hazards Safety Officer (E954) 1.5 Units**

Prerequisite: FFS 1510, FFS 1511, and FFS 1514 with grades of “C” or better.

Enrollment Limitation: To enroll in this course (FFS 1512) the student must be an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior’s Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a local or state fire agency.
Hours: 27 hours LEC; 5 hours LAB

This course provides local and state-level emergency responders with an overview of key duties and responsibilities of a safety officer type III in a type-III All-Hazards Incident Management Team (AHIMT). Topics include incident safety officer’s role, obtaining information, identifying hazards and risks, prioritizing and managing hazards and risks, site safety and control planning, and incident safety planning. Pass/No Pass only.

FFS 1523 Aerial Supervision (S-378) 1.75 Units

Enrollment Limitation: To enroll in this course (FFS 1523) the student must be an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior’s Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a state fire agency.
Hours: 32 hours LEC; 8 hours LAB

This course is designed to meet the training needs of an Air Tactical Group Supervisor (ATGS), Helicopter Coordinator (HLCO), lead plane pilot, Air Tanker Coordinator (ATCO), and Aerial Supervision Module (ASM) crewmember as outlined in the Interagency Aerial Supervision Guide (IASG). Topics include aerial supervision program introduction, aerial supervision roles and responsibilities, administration, training, certification, currency, policies, incident aircraft, suppressants and retardants, aerial supervision mission procedures, aerial firefighting strategy and tactics, incident aircraft operations, all-hazard incidents, and safety. Pass/No Pass only.

FFS 1524 Helicopter Management Refresher (RT-372) 1.0 Unit

Prerequisite: FFS 1521 with a grade of “C” or better
Enrollment Limitation: To enroll in this course (FFS 1524) the student must be an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior’s Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a local or state fire agency.
Hours: 20 hours LEC

This course is a refresher course for the job of helicopter manager. Topics include policy review, dispatching and ordering, contract administration and pay documents update, risk management, and operational review. Pass/No Pass only.

**FFS 1525 Air Tactical Group Supervisor (ATGS)
Workshop (RT-378) 1.0 Unit**

Prerequisite: FFS 1522 and FFS 1523 with grades of “C” or better.
Enrollment Limitation: To enroll in this course (FFS 1525) the student must be an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior’s Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a local or state fire agency.
Hours: 20 hours LEC

This is a workshop course for the job of Air Tactical Group Supervisor (ATGS). Topics include aviation safety/risk management, airspace coordination, dispatch coordination, fixed-wing and rotor-wing operations, contract administration, and operational review. Pass/No Pass only.

FFS 1531 Initial Attack Dispatcher (D-311) 1.25 Units

Prerequisite: FFS 1540 with a grade of “C” or better.
Enrollment Limitation: To enroll in this course (FFS 1531) the student must 1) be an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior’s Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a local or state fire agency, 2) successful completion of Basic Firefighter (S-130), and 3) qualified as dispatch recorder (EDRC).
Hours: 22 hours LEC; 10 hours LAB

This course provides a consistent knowledge and skill base for the initial attack dispatcher (IADP). It includes concepts that will help an IADP perform at an acceptable level on a national basis without regard to geographic boundaries. Topics include initial attack dispatching, extended attack support, maps and aviation charts, and radio use. Pass/No Pass only.

FFS 1532 Aircraft Dispatcher (D-312) 1.75 Units

Enrollment Limitation: To enroll in this course (FFS 1532) the student must 1) be an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior’s Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a local or state fire agency, and 2) qualified as dispatch recorder (EDRC).
Hours: 32 hours LEC; 8 hours LAB

This course provides a consistent knowledge and skill base for the aircraft dispatcher (ACDP). It includes concepts that will help an ACDP perform at an acceptable level on a national basis without regard to geographic boundaries. It also provides an overview of aircraft dispatching, maps and aviation charts, decision making, situational awareness, airspace coordination, safety, and aircraft. Pass/No Pass only.

FFS 1534 USDA Law Enforcement Dispatch (LEDSP) 1.5 Units

Prerequisite: FFS 1531 with a grade of “C” or better
Enrollment Limitation: To enroll in this course (FFS 1534) the student must 1) be an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior’s Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a local or state fire agency.
Hours: 28 hours LEC; 4 hours LAB

This is an interagency course for wildland dispatchers, designed to help the students understand the roles and functions of law enforcement dispatching in the emergency dispatch centers. Topics include law enforcement incidents, agencies, organizational structures, the importance of the dispatcher as first point of contact, appropriate response to an incident, procedures for making inquiry into law enforcement information systems, and cross referencing the information obtained within these systems. Pass/No Pass only.

FFS 1540 Introduction to Wildland Fire Behavior (S-190) 0.25 Unit

Enrollment Limitation: To enroll in this course (FFS 1540) the student must be an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior’s Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a local or state fire agency.
Hours: 8 hours LEC

This is the first course in a series that collectively serves to develop fire behavior prediction knowledge and skills. Topics include the fire triangle, topography, fuels, weather, and fire behavior. Pass/No Pass only.

FFS 1541 Intermediate Wildland Fire Behavior (S-290) 1.75 Units

Prerequisite: FFS 1540 with a grade of "C" or better.
Enrollment Limitation: To enroll in this course (FFS 1541) the student must 1) be an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior's Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a local or state fire agency.
 Hours: 32 hours LEC

This is the second course in a series that collectively serves to develop fire behavior prediction knowledge and skills. Topics include the fire environment, topographic influences, fuels, weather, wind, fuel moisture, and extreme fire behavior. Pass/No Pass only.

FFS 1542 Introduction to Wildland Fire Behavior Calculations (S-390) 1.5 Units

Prerequisite: FFS 1541 with a grade of "C" or better.
Enrollment Limitation: To enroll in this course (FFS 1542) the student must 1) be an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior's Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a local or state fire agency.
 Hours: 29 hours LEC; 3 hours LAB

This course provides an introduction into fire behavior calculations by manual methods, using nomograms, and the Fireline Handbook Appendix B: Fire Behavior. Topics include studying inputs (weather, slope, fuels, and fuel moisture), interpreting fire behavior outputs, documentation processes, and fire behavior briefing components. Pass/No Pass only.

FFS 1543 Advanced Fire Behavior Calculations (S-490) 2.0 Units

Prerequisite: FFS 1542 with a grade of "C" or better.
Enrollment Limitation: To enroll in this course (FFS 1543) the student must 1) be an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior's Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a local or state fire agency, and 2) satisfactory completion of Introduction to Wildland Fire Behavior Calculations (S-390).
 Hours: 34 hours LEC; 6 hours LAB

This course prepares students desiring to become qualified as a prescribed fire burn boss type 1 (RXB1). Topics include atmospheric stability, critical fire weather patterns, crown fire behavior, wildland fire behavior on slopes, predicting large fire growth, and adapting large scale winds to local terrain. Pass/No Pass only.

FFS 1544 Intermediate National Fire Danger Rating System (S-491) 1.5 Units

Prerequisite: FFS 1541 and FFS 1556 with grades of "C" or better.
Enrollment Limitation: To enroll in this course (FFS 1544) the student must 1) be an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior's Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a local or state fire agency, 2) satisfactory completion of Intermediate Wildland Fire Behavior (S-290), 3) demonstrate at least intermediate skills with the current Windows™ operating system, 4) possess a valid Weather Information Management System (WIMS) and Wildland Fire Management Information (WFMI) system logon identification, and 5) current and comprehensive working knowledge of WIMS (the WIMS course is strongly recommended to attain this prerequisite knowledge).
 Hours: 24 hours LEC; 12 hours LAB

This course provides the knowledge and skills necessary to operate, apply, and manage the National Fire Danger Rating System (NFDRS). Topics include NFDRS input, calculations and inputs, data retrieval and analysis, decisions, and application. Pass/No Pass only.

FFS 1545 Prescribed Fire Implementation (RX301) 1.0 Unit

Prerequisite: FFS 1542 with a grade of "C" or better.
Advisory: Students desiring to take both RX-341 and RX-301 will benefit from taking RX-341 first.

Enrollment Limitation: To enroll in this course (FFS 1545) the student must 1) be an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior's Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a local or state fire agency, 2) qualified as a firing boss (FIRB) and incident commander type 4 (ICT4), and 3) proficient in the use of BehavePlus.
 Hours: 15.75 hours LEC; 8.25 hours LAB

This course introduces students to the tools and techniques used to perform in the role of a prescribed fire burn boss. Topics include operational leadership, liability, prescribed fire plan evaluation, pre-burn preparation, pre-burn operations, contingency operations, post-burn activities, and documentation. Pass/No Pass only.

FFS 1546 Introduction to Fire Effects (RX-310) 1.25 Units

Enrollment Limitation: To enroll in this course (FFS 1546) the student must 1) be an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior's Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a local or state fire agency, 2) a working knowledge of fire behavior; and 3) a understanding of basic ecological principles.
 Hours: 21.5 hours LEC; 10.5 hours LAB

This course prepares the student with the knowledge and skills necessary to recognize and communicate the relationships between basic fire regimes and first-order fire effects. Topics include fire effects on biological systems, fire in ecosystems, fire effects on the physical environment, fire effects on the cultural resources, and management considerations. Pass/No Pass only.

FFS 1547 Prescribed Fire Plan Preparation (RX341) 1.5 Units

Prerequisite: FFS 1542 with a grade of "C" or better.
Advisory: Students desiring to take both RX-341 and RX-301 will benefit from taking RX-341 first.
Enrollment Limitation: To enroll in this course (FFS 1547) the student must 1) be an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior's Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a local or state fire agency, 2) proficient in the use of BehavePlus, and 3) fire personnel must be qualified as Incident Commander Type 4 (ICT4).
 Hours: 26 hours LEC; 6 hours LAB

This course prepares students with the skills/knowledge to prepare a prescribed fire plan for technical review and approval in accordance with the Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide. Topics include policies and guidelines, goals and objectives, risk assessment, prescription development and scheduling, smoke management and air quality, implementation of the planning process, monitoring, funding, post-burn activities, and final complexity rating. Pass/No Pass only.

FFS 1548 Smoke Management Techniques (RX-410) 1.5 Units

Enrollment Limitation: To enroll in this course (FFS 1548) the student must 1) be an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior's Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a local or state fire agency, and 2) students should have a background in prescribed fire planning, implementing, monitoring, permitting or smoke/air regulating.
 Hours: 28 hours LEC; 4 hours LAB

This course leads students through the ecological and historical role of fire, characteristics of smoke and the health, safety and visibility impacts of smoke. Other topics include public relations, legal requirements, meteorology, fuel consumption, smoke production dispersion modeling, and operational smoke management strategies. The pre-course work assignment is designed to familiarize students with the Smoke Management Guide and air quality regulations that impact prescribed fire programs. Pass/No Pass only.

FFS 1550 All Hazards Planning Section Chief (S-440/E-962) 1.25 Units

Prerequisite: FFS 1510, FFS 1511 and FFS 1514 with grades of “C” or better.

Enrollment Limitation: To enroll in this course (FFS 1550) the student must be an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior’s Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a local or state fire agency, and 2) Resources Unit Leader (RESL), Situation Unit Leader (SITL), Planning Section Chief type 3 (PSC3), Operations Section Chief type 2 (OSC2), Safety Officer type 2 (SOF2), or Logistics Section Chief type 2 (LSC2).

Hours: 24 hours LEC

This course provides local and state-level emergency responders with an overview of key duties and responsibilities of a Planning Section Chief type-III in a Type III All-Hazards Incident Management Team (AHIMT). Topics include the role of the Planning Section Chief, Resources Unit and Situation Unit, initial response, the planning cycle, interactions, and an overview of the documentation and demobilization units. Pass/No Pass only.

FFS 1552 National Incident Management System (NIMS) ICS All-Hazards Resources Unit Leader (E965/S349) 1.0 Unit

Prerequisite: FFS 1510, FFS 1511 and FFS 1514 with grades of “C” or better.

Enrollment Limitation: To enroll in the course, you must be an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior’s, Bureau of Land Management, National Park Service, United States Fish and Wildlife Service and the Bureau of Indian Affairs, or a member of a Local, or State Fire Agency.

Hours: 15.5 hours LEC; 8.5 hours LAB

This course provides local and State-level emergency responders with an overview of key duties and responsibilities of a Resources Unit Leader (RESL) type III in a type-III All-Hazards Incident Management Team (AHIMT). Topics include overview of the planning section and process, overview of the resources unit, tracking resource status, operational planning, unit products/outputs, and demobilization. Pass/No Pass only.

FFS 1553 Incident Training Specialist (S-445) 1.0 Unit

Enrollment Limitation: To enroll in this course (FFS 1553) the student must be an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior’s Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a local or state fire agency.

Hours: 18 hours LEC

The course is designed to meet the training needs of the incident training specialist (TNSP) on an incident as outlined in the Wildland Fire Qualification System Guide PMS 310-1, and the position task book. Topics include roles and responsibilities, initiating the incident training program, individual training plans, and incident training activities. Pass/No Pass only.

FFS 1556 Weather Information Management System (WIMS) 1.0 Unit

Prerequisite: FFS 1541 with a grade of “C” or better

Enrollment Limitation: To enroll in this course (FFS 1556) the student must be an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior’s Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a local or state fire agency.

Hours: 16 hours LEC; 8 hours LAB

This course meets the training needs of individuals charged with the collection and maintenance of fire weather data collected from remote automated weather systems used to support the National Fire Danger Rating System (NFDRS). Topics include WIMS navigation and functionality, weather station siting and maintenance, observations, weather forecaster interactions, managing the model, viewing outputs, and troubleshooting. Pass/No Pass only.

FFS 1574 Incident Contract Project Inspector (S-262) 0.75 Unit

Enrollment Limitation: To enroll in this course (FFS 1574) the student must be an employee of a federal wildland fire fighting agency, which includes: United States Department of Agriculture, Forest Service, the United States Department of Interior’s Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, the Bureau of Indian Affairs, or a member of a local or state fire agency.

Hours: 16 hours LEC; 4 hours LAB

This course introduces students to tools and techniques used to perform the duties of the Incident Contract Project Inspector (ICPI). Topics include an overview of what to expect if dispatched to an incident, basic contract administration, types of equipment to be inspected, and inspection opportunities to inspect equipment. Pass/No Pass only.

Fitness

FITNS 416 Taekwondo II 1.0 Unit

Course Transferable to CSU

Hours: 54 hours LAB

This course provides instruction in intermediate level of Taekwondo. Aerobic, anaerobic, and plyometric training drills are employed to increase students strength, speed, and agility. More complex footwork, one-step sparring, paddle drills, and free sparring combinations are introduced. Intermediate level poomsae is practiced in addition to basic competition training in both sparring and poomsae. Field trips may be required.

The following is a correction to the footnote for the Business Administration

A.S. for Transfer Degree, see Catalog 2018-2019, page 165.

NOTE: MATH 342 and STAT 305 cannot be used.

Business Administration A.S. for Transfer Degree

Major Code, CSU GE: 010205A01

Major Code, IGETC: 010205A02

This Associate in Science in Business Administration provides students with a major that fulfills the general requirements for transfer to the California State University. Students with this degree will receive priority admission with junior status to the California State University system. The Associate in Science in Business for Transfer (A.S.-T.) may be obtained by the completion of 60 transferable, semester units with a minimum of a 2.0 GPA, including the major or area of emphasis described in the Required Program outlined below (earning a C or better in these courses), and the Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education-Breadth Requirements.

Students should work closely with their ARC counselor to ensure that they are taking the appropriate coursework to prepare for majoring in Business at the four year college they wish to transfer to.

Career Opportunities

Account executive, analyst, bank employee, buyer, manager, entrepreneur, financial planner, government service, insurance representative, investment counselor, public administration, purchasing agent, retail/industrial sales, stockbroker. Some options may require more than 2 years of study and additional licensing.

Student Learning Outcomes

Upon completion of this program, the student will be able to:

- identify and explain the major functional areas of the business organizations including management, marketing, finance, and accounting.
- apply commonly used computer application programs to create relevant business documents.
- apply accounting and mathematical concepts and principles in making decisions about business operations.
- assess the relationships and interdependencies of economic, social, legal, and global environments in which businesses operate.

| Requirements for Degree | | 25 Units |
|------------------------------------------------------|------------------------------------------------------------|----------------------|
| ACCT 301 | Financial Accounting | 4 |
| ACCT 311 | Managerial Accounting | 4 |
| BUS 340 | Business Law | 3 |
| ECON 302 | Principles of Macroeconomics..... | 3 |
| ECON 304 | Principles of Microeconomics..... | 3 |
| A minimum of 3 units from the following:..... | | 3 |
| MATH 340 | Calculus for Business and Economics (3) | |
| STAT 300 | Introduction to Probability and Statistics (4) | |
| A minimum of 5 units from the following:..... | | 5¹ |
| BUS 300 | Introduction to Business (3) | |
| CISA 305 | Beginning Word Processing (2) | |
| CISA 308 | Exploring Word Processing and Presentation Software (1) | |
| CISA 315 | Introduction to Electronic Spreadsheets (2) | |
| CISA 316 | Intermediate Electronic Spreadsheets (2) | |
| CISA 318 | Exploring Spreadsheet Software (1) | |
| CISA 340 | Presentation Graphics (2) | |
| CISC 305 | Introduction to the Internet (1) | |
| CISC 308 | Exploring Computer Environments and the Internet (1) | |
| CISC 310 | Introduction to Computer Information Science (3) | |
| CISC 320 | Operating Systems (1) | |

¹Students can also select one of the following courses if not already used:
MATH 340, STAT 300.

Associate in Science for Transfer Degree Requirements: The Business Administration Associate in Science for Transfer (A.S.T.) Degree may be obtained by completion of 60 transferable, semester units with a minimum 2.0 GPA, including (a) the major or area of emphasis described in the Required Program, and (b) either the Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education-Breadth Requirements.

The following is a correction to the Corequisites of AT 140,
see Catalog 2018-2019, page 154.

NOTE: AT 312 is not a corequisite.

AUTOMOTIVE TECHNOLOGY

AT 140 Advanced Automotive Skill and Speed Development 4.0 Units

Corequisite: AT 110, 130, 311 and 314

Hours: 54 hours LEC; 54 hours LAB

This course covers automotive component diagnosis and repair, including brakes, suspension, heating and air conditioning, engine, transmissions, and other areas in preparation for competing in the regional, state, and national Skills USA competition. This course may be taken up to four times with different competitions.