ART 98 Special Topics

Units: .5 TO 3.0 **Hours:** .5 TO 3.0 Lecture
Transferable: CSU; GAV-GE:C1

Special topics courses examine current problems or issues of interest to students within a specific discipline area. For topic content information, consult with the appropriate department chairperson. For transfer status, check with a counselor. This course may have the option of a letter grade or pass/no pass.

ART 190 Occupational Work Experience / Commercial Art

Units: 1.0 TO 4.0 **Hours:** 5.0 TO 20.0 Laboratory
Transferable: CSU; GAV-GE:C1

Occupational work experience for students who have a job related to their major. A training plan is developed cooperatively between the employer, college and student. (P/NP grading) 75 hours per semester paid work = 1 unit. 60 hours non-paid (volunteer) work per semester = 1 unit. May be taken for a maximum total of 16 units. Minimum 2.00 GPA. REQUIRED: Declared vocational major.

Athletics: see Kinesiology

ASTRONOMY

ASTR 1 Introduction to General Astronomy

Units: 3.0 **Hours:** 3.0 Lecture
Transferable: CSU, UC; CSU-GE:B1, IGETC:5A; GAV-GE:B1

An introduction to the realm of astronomy and space science. Topics to be covered include the historical development of astronomy, the physics of gravitation and radiation, the solar system, stellar astronomy, galactic and extragalactic astronomy, and cosmology. ADVISORY: Mathematics 205 and eligible for English 250 and English 260.

AVIATION FLIGHT TECHNOLOGY

AFT 134 Aviation Flight Technology

Units: 3.0 **Hours:** 3.0 Lecture
Transferable: CSU

This course includes all aerodynamics, navigation, regulations, airport and airspace requirements, meteorology, and emergency procedures necessary to qualify for a private pilot certificate. ADVISORY: Completion of English 250 and English 260.

AVIATION MAINTENANCE TECHNOLOGY

AMT 100 General Aircraft Technology

Units: 7.5 **Hours:** 5.0 Lecture and 7.5 Laboratory
Transferable: CSU

This course will provide the student with a thorough understanding of the use of basic hand tools and measuring devices, aircraft hardware, materials, and processes, mathematics and physical science for aircraft, aircraft weight and balance, aircraft drawing and blueprint reading. Both theory and practical application to aircraft systems is taught. ADVISORY: Mathematics 205

AMT 101 General Aircraft Technology

Units: 7.5 **Hours:** 5.0 Lecture and 7.5 Laboratory
Transferable: CSU

This course will provide the student with a thorough understanding of the use of maintenance publications, maintenance forms and records with emphasis on A & P Mechanic Privileges and Limitations. Basic electricity for aircraft from Ohm's Law through transistor theory will be taught as well as ground operation and servicing of aircraft. ADVISORY: Mathematics 205 Basic hand tools required. Details at the first class meeting.

AMT 110 Airframe Maintenance Technology

Units: 13.5 **Hours:** 9.0 Lecture and 13.5 Laboratory
Transferable: CSU

Study of aircraft aerodynamics, rigging and assembly, aircraft sheet metal structures and welding technology. Also the study of cabin atmosphere systems, fuel systems, and line maintenance, level information on aircraft instruments. Each of these areas will be accompanied with appropriate laboratory time. Basic hand tools required. Details at the first class meeting.

AMT 111 Airframe Structures

Units: 13.5 **Hours:** 9.0 Lecture and 13.5 Laboratory
Transferable: CSU

This course will cover aircraft wood, fabric covering, test and repair, aircraft inspection, painting techniques and procedures. Also the study of basic hydraulic systems of anti-skid systems, pneumatic, fixed landing and retractable landing gear systems. Basic aircraft systems familiarization along with advanced laboratory projects from topics covered in AMT 110 are a part of this course. Basic hand tools required. Details at the first meeting.

AMT 120 Aviation Powerplant Technology

Units: 14.0 **Hours:** 9.0 Lecture and 15.0 Laboratory
Transferable: CSU

This course is part of the curriculum required by the Federal Aviation Administration to obtain certification as an aircraft powerplant maintenance technician. This certificate allows the rated technician to perform maintenance, preventive maintenance repairs and alterations to USA FAA certificated aircraft powerplants. This Section covers the theory and practical application of operation, overhaul practices, inspection, installation, testing and troubleshooting techniques covering the subject areas of reciprocating and turbine engines, ignition, induction, supercharging, cooling and exhaust systems. ADVISORY: Successful completion of AMT 101 and AMT 111. Basic hand tools required. Details at the first class meeting.

AMT 121 Aviation Powerplant Systems Technology

Units: 14.0 **Hours:** 9.0 Lecture and 15.0 Laboratory
Transferable: CSU

The theory of operation, maintenance, repair, and trouble-shooting procedures of powerplant systems and their relationship to the total powerplant package. To include lubrication, electrical, instrument, fuel metering, fire protection, starting, control systems, and the aerodynamics, theory and maintenance of propellers and their control systems. ADVISORY: Successful completion of AMT 120. Basic hand tools required. Details at the first class meeting.

AMT 190 Occupational Work Experience / Aviation

Units: 1.0 TO 4.0 **Hours:** 5.0 TO 20.0 Laboratory
Transferable: CSU

Occupational work experience for students who have a job related to their major. A training plan is developed cooperatively between the employer, college and student. (P/NP grading) 75 hours per semester paid work = 1 unit. 60 hours non-paid (volunteer) work per semester = 1 unit. May be taken for a maximum total of 16 units. Minimum 2.00 GPA. REQUIRED: Declared vocational major.

Beauty School: see Cosmetology

BIOLOGICAL SCIENCE

BIO 1 Cell and Molecular Biology

Units: 4.0 **Hours:** 3.0 Lecture and 3.0 Laboratory
Transferable: CSU, UC; CSU-GE:B2, B3, IGETC:5B, 5C; GAV-GE:B2, B3; CAN:BIOL2, BIOL SEQ A

A general biology course with an emphasis on the structure and function of cells, biological molecules, homeostasis, cell respiration, photosynthesis, cell life cycle and its controls, cellular communication, Mendelian and non- classical genetics, evolution and diversity of life. The philosophy of science, methods of scientific inquiry and experimental design are foundational to the course. The course is required for students majoring in biology and/or its subcategories (e.g., plant or animal sciences). PREREQUISITE: Biological 10 or Biology 12 or Environmental Science 1 with a grade of 'C' or better and Mathematics 233 with a grade of 'C' or better. ADVISORY: Chemistry 30A; eligible for English 250 and English 260.