

ART 190 Occupational Work Experience/Commercial Art**Units:** 1-4 **Hours:** 20 Laboratory**Required:** Enrollment in a minimum of seven (7) units, including Cooperative Work Experience, during regular semesters; enrollment in at least one other class in summer session.**Transferable:** GAV-GE: C1

The application of learned theory, knowledge, and skills to a practical job setting related to the student's educational/occupational goal. Employment must be directly related to the student's college educational/occupational goal. Periodic interviews of the students and employers or their representatives will be required. Each student shall be assisted in the development of individualized performance objectives, toward which the learning experience shall be directed.

ASTRONOMY**ASTR 1 Introduction to General Astronomy****Units:** 3 **Hours:** 3 Lecture**Advisory:** Mathematics 205 and eligible for English 250 and English 260.**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.

Athletics: see Physical Education (PE)

AVIATION FLIGHT TECHNOLOGY**AFT 121 Aviation Fundamentals****Units:** 3 **Hours:** 3 Lecture**Advisory:** Eligible for English 250, English 260 and Mathematics 205.**Transferable:** CSU

Principles of aerodynamics and flight, radio communications, aircraft engines and systems and aircraft performance characteristics including federal aviation regulations and air navigation. Students who satisfactorily complete the course will be eligible to take the Federal Aviation Administration Private Pilot Airplane written test.

AFT 122 Instrument Flight Technology**Units:** 3 **Hours:** 3 Lecture**Advisory:** AFT 121 or 131, or have passed the FAA Private Pilot written exam**Transferable:** CSU

Flight instrument usage, regulations, meteorology, chart reading and flight planning to prepare the student to begin flight training in flight solely by reference to flight instruments.

AFT 133 Commercial Flight Operations**Units:** 3 **Hours:** 3 Lecture**Advisory:** Hold private pilot certificate or AFT 121 with a grade of "C" or better. Eligible for English 250 and 260.**Transferable:** CSU

Air traffic control procedures, meteorology, regulations, aircraft performance, and aerodynamics for students preparing for their Federal Aviation Administration (FAA) commercial pilot's license.

AFT 134 Aviation Flight Technology**Units:** 3 **Hours:** 3 Lecture**Advisory:** Completion of English 250 and English 260.**Transferable:** No

This course includes all aerodynamics, navigation, regulations, airport and airspace requirements, meteorology, and emergency procedures necessary to qualify for a private pilot certificate.

AVIATION MAINTENANCE TECHNOLOGY**AMT 100 General Aircraft Technology****Units:** 7.5 **Hours:** 5 Lecture, 7.5 Laboratory**Advisory:** Mathematics 205**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.

AMT 101 General Aircraft Technology**Units:** 7.5 **Hours:** 5 Lecture, 7.5 Laboratory**Advisory:** Mathematics 205**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.

AMT 110 Airframe Maintenance Technology**Units:** 13.5 **Hours:** 9 Lecture, 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.

AMT 111 Airframe Structures**Units:** 13.5 **Hours:** 9 Lecture, 13.5 Laboratory**Transferable:** CSU

Aircraft wood, fiberglass construction, fabric covering, testing 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.

AMT 120 Aviation Powerplant Technology**Units:** 14 **Hours:** 9 Lecture, 15 Laboratory**Advisory:** Successful completion of AMT 101 and AMT 111.**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.

AMT 121 Aviation Powerplant Systems Technology**Units:** 14 **Hours:** 9 Lecture, 15 Laboratory**Advisory:** Successful completion of AMT 120.**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.

AMT 190 Occupational Work Experience/Aviation**Units:** 1-4 **Hours:** 20 Laboratory**Required:** Declared vocational major. Concurrent in seven or more units (including CWE units, except for summer school. For summer school, enrollment in one other class is required). Minimum 2.00 G.P.A.**Transferable:** CSU

College credit for learning experience obtained on the job in accordance with a training plan developed cooperatively between the employer, college and student. 75 hours per semester per unit or 60 hours per semester for unpaid experience. This is a pass/no pass course. May be taken for a maximum of 16 units of work experience units.

Beauty School: see Cosmetology

BIOLOGICAL SCIENCE**BIO 1 General Biology****Units:** 4 **Hours:** 3 Lecture, 3 Laboratory**Prerequisite:** Biological Science 10 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.**Transferable:** CSU; UC; CSU-GE: B2, B3; IGETC: 5B; GAV-GE: B2, B3; CAN: BIOL 2, BIOL SEQ. A
A general biology course with an emphasis on the structure and function of cells, cell respiration, photosynthesis, cell cycle, Mendelian and non-classical genetics, evolution and diversity of life. The course is required for students majoring in biology and/or its subcategories (e.g., plant or animal sciences).**BIO 4 General Zoology****Units:** 4 **Hours:** 3 Lecture, 3 Laboratory**Prerequisite:** Mathematics 233 with a grade of 'C' or better.**Advisory:** Eligible for English 250 and English 260.**Transferable:** CSU; UC; CSU-GE: B2, B3; IGETC: 5B; GAV-GE: B2, B3; CAN: BIOL 4, BIOL SEQ. A

The classification, ecology, evolution and systems analysis of biological functions in major taxonomic groups of animals from Protists through to Chordata.

BIO 5 General Botany**Units:** 4 **Hours:** 3 Lecture, 3 Laboratory**Prerequisite:** Mathematics 233 with a grade of 'C' or better.**Advisory:** Biological Science 10, eligible for English 250 and English 260.**Transferable:** CSU; UC; CSU-GE: B2, B3; IGETC: 5B; GAV-GE: B2, B3; CAN: BIOL 6, BIOL SEQ. A

This course is designed for students majoring in botany and/or its related disciplines. The course includes the study of the ecology, evolution, anatomy, physiology and systematics of plants as well as the use of plants in biotechnology and agriculture.

BIO 7 Human Anatomy**Units:** 4 **Hours:** 2 Lecture, 6 Laboratory**Prerequisite:** Biological Science 10 or 15 with a grade of credit or C or better.**Advisory:** Eligible for English 250, English 260 and Mathematics 205.**Transferable:** CSU; UC; CSU-GE: B2, B3; IGETC: 5B; GAV-GE: B2, B3; CAN: BIOL 10, BIOL SEQ. B

A functional approach to the gross and microscopic structure of the major systems of the human body. Includes dissection in lab. A cadaver is observed in this course.

BIO 8 General Microbiology**Units:** 5 **Hours:** 4 Lecture, 3 Laboratory**Prerequisite:** Biological Science 10 or 15 with a grade of credit or C or better.**Advisory:** Chemistry 30A; eligible for English 250, English 260 and Mathematics 205.**Transferable:** CSU; UC; CSU-GE: B2, B3; IGETC: 5B; GAV-GE: B2, B3; CAN: BIOL 14

An introduction to microbiology with an emphasis on bacteriology. Includes the study of morphology, physiology and classification of microorganisms, a survey of infectious disease, immunology and techniques for culture and control of microorganisms. This course is also listed as Allied Health 8.

BIO 9 Human Physiology**Units:** 5 **Hours:** 4 Lecture, 3 Laboratory**Prerequisite:** Biological Science 7 or 15 with a grade of credit or C or better.**Advisory:** Chemistry 30A; eligible for English 250, English 260 and Mathematics 205.**Transferable:** CSU; UC; CSU-GE: B2, B3; IGETC: 5B; GAV-GE: B2, B3; CAN: BIOL 12, BIOL SEQ. B

A study of the functions of the major organs and organ systems of the human body, emphasizing control at the cellular level, integration of systems and homeostasis of the human body. This course is also listed as Allied Health 9.

BIO 10 Principles of Biology**Units:** 4 **Hours:** 3 Lecture, 2 Laboratory**Advisory:** Eligible for English 250, English 260 and Mathematics 205.**Transferable:** CSU; UC; CSU-GE: B2, B3; IGETC: 5B; GAV-GE: B2, B3

An introductory biology course covering functions at the cellular and organismal levels. Includes study of the basic principles of metabolism, heredity, evolution and ecology. Primarily for non-biological science majors.

BIO 11 Nutrition**Units:** 3 **Hours:** 3 Lecture**Prerequisite:** Eligible for English 250 and English 260**Advisory:** Chemistry 30A and Mathematics 205**Transferable:** CSU; UC; CSU-GE: E2; GAV-GE: E2; CAN: FCS 2

This course is designed to meet the needs of the Allied Health student and the general education student alike. The major aim of this course is to help the student acquire relevant information about nutrition which they can use professionally and/or personally. The course will cover the practical aspects of normal nutrition, ways to promote sound eating habits throughout the life cycle, and physiological contribution nutrients make to body structure and function. This course is also listed as Allied Health 11.

BIO 13 Marine Biology**Units:** 4 **Hours:** 3 Lecture, 3 Laboratory**Transferable:** CSU; UC; CSU-GE: B2, B3; IGETC: 5B; GAV-GE: B2, B3

An overview of the ocean as an ecosystem. This course will include segments on the ocean as a physical environment; marine ecology; marine habitats, plant and animal taxonomy. There will be an emphasis of evolutionary adaptations which organisms have for their habitat.

BIO 15 Survey of Human Anatomy and Physiology**Units:** 5 **Hours:** 4 Lecture, 3 Laboratory**Advisory:** Biological Science 10, Eligible for English 250, English 260 and Mathematics 205.**Transferable:** CSU; UC; CSU-GE: B2, B3; IGETC: 5B; GAV-GE: B2, B3

An introductory study of the structure and function of the human body. Includes study at the cellular and organ system levels, emphasizing integration of systems. Note that a cadaver will be observed in this course. This course is also listed as Allied Health 15.

BIO 20 Field Biology**Units:** 4 **Hours:** 3 Lecture, 3 Laboratory**Advisory:** Eligible for English 250 and English 260.**Transferable:** CSU; UC; CSU-GE: B2, B3; GAV-GE: B2, B3

An introductory course based on biological principles but emphasizing the ecology, evolution, behavior (where appropriate), structure and function of major groups of organisms including, but not restricted to, invertebrates and vertebrates, fungi and plants. Field trips are required.