ATH 45 Intercollegiate Softball

Units: 2.5 TO 3.0 **Hours:** 7.5 TO 10.0 Laboratory
Transferable: CSU, UC; CSU-GE:E, GAV-GE:E1

This course provides practice and competition in intercollegiate softball for women. Before participating, students must have completed a physical exam and their athletic eligibility paperwork. May be repeated three times for credit. This course has the option of a letter grade or pass/no pass.

ATH 46 Intercollegiate Volleyball

Units: 2.5 TO 3.0 **Hours:** 7.5 TO 10.0 Laboratory
Transferable: CSU, UC; CSU-GE:E, GAV-GE:E1

This course provides practice and competition in intercollegiate volleyball for women. Before participating, students must have completed a physical exam and their athletic eligibility paperwork. May be repeated three times for credit. This course has the option of a letter grade or pass/no pass.

ATH 47 Intercollegiate Soccer

Units: 2.5 TO 3.0 **Hours:** 7.5 TO 10.0 Laboratory
Transferable: CSU, UC; CSU-GE:E, GAV-GE:E1

This course provides practice and competition in intercollegiate soccer. Before participating, students must have completed a physical exam and their athletic eligibility paperwork. May be repeated three times for credit. This course has the option of a letter grade or pass/no pass.

ATH 48 Agility and Strength Development

Units: .5 OR 1.0 **Hours:** 1.5 OR 3.0 Laboratory
Transferable: CSU, UC; CSU-GE:E, GAV-GE:E1

This conditioning class is designed to improve and increase agility and strength development of the student-athlete through various exercises and exercise programs. May be repeated three times for credit. This course has the option of a letter grade or pass/no pass. Previously listed as PE 46 and KIN 46.

ATH 65 Baseball

Units: .5 OR 1.0 **Hours:** 1.5 OR 3.0 Laboratory
Transferable: CSU, UC; CSU-GE:E, GAV-GE:E1

This is a sport specific course designed for our student-athletes. Fundamentals, mechanics, strategy and rules of the game of baseball are included. May be repeated three times for credit. This course has the option of a letter grade or pass/no pass.

ATH 75 Sports Conditioning

Units: .5 OR 1.0 **Hours:** 1.5 OR 3.0 Laboratory
Transferable: CSU, UC; CSU-GE:E, GAV-GE:E1

This activity class is designed to improve the physical condition of our male and female student-athletes. It includes strength training, cardiovascular endurance, plyometric training, and sport specific techniques through an open lab format. May be repeated three times for credit. This course has the option of a letter grade or pass/no pass. Previously listed as PE 75 and KIN 75.

ATH 77 Football

Units: .5 OR 1.0 **Hours:** 1.5 OR 3.0 Laboratory
Transferable: CSU, UC; CSU-GE:E, GAV-GE:E1

This is a sport specific course designed for our student-athletes. Instruction is in the fundamentals of football. Includes skills, rules and strategy with emphasis on the application of skills and strategies in game play. May be repeated three times for credit. This course has the option of a letter grade or pass/no pass.

ATH 90 Intercollegiate Sand Volleyball

Units: 2.5 TO 3.0 **Hours:** 7.5 TO 9.8 Laboratory
Transferable: CSU; GAV-GE:E1

This course provides practice and competition in intercollegiate sand volleyball for women. Before participating, students must have competed a physical exam and their athletic eligibility paperwork. May be repeated three times for credit. This course has the option of a letter grade or pass/no pass.

AVIATION MAINTENANCE TECH

AMT 100 General Aircraft Technology

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

This course is an FAA Part 147 course designed to prepare the student for their FAA Airframe and Powerplant (A and P) certificate. The course will provide the student with a thorough understanding of the use of basic hand tools and measuring devices; basic physics and math; aircraft materials, processes and hardware, procedures for clean and corrosion control; weight and balance techniques; and human factors. Both theory and practical application to aircraft systems are taught. COREQUISITE: AMT 110, Airframe Maintenance Technology. ADVISORY: Mathematics 430.

AMT 101 General Aircraft Technology

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

This course is an FAA Part 147 course designed to prepare the student for their FAA Airframe and Powerplant (A and P) certificate. This course will provide the student with a thorough understanding of the use of maintenance publications, maintenance forms and records with emphasis on A and 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. Both theory and practical application to aircraft are taught. COREQUISITE: AMT 111, Airframe Structures. ADVISORY: Mathematics 430.

AMT 110 Airframe Maintenance Technology

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

This course is an FAA Part 147 course designed to prepare the student for their FAA Airframe certificate. The course will provide the student with a thorough understanding of airframe structures; metal structural repair; aircraft welding; aircraft instruments; communications and navigation systems; fuel systems; and cabin environmental systems. Both theory and practical application to aircraft systems is taught. COREQUISITE: AMT 100, General Aircraft Technology. ADVISORY: Mathematics 430

AMT 111 Airframe Structures

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

This course is an FAA Part 147 course designed to prepare the student for their FAA Airframe certificate. The course will provide the student with a thorough understanding of nonmetallic aircraft structures including wood, fabric, composite structures. Also the study of hydraulic and pneumatic power systems; landing gear systems; electrical systems; and assembly and rigging. Both theory and practical application to aircraft systems is taught. COREQUISITE: AMT 101, General Aircraft Technology. ADVISORY: Mathematics 430.

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.

All courses listed here are part of Gavilan College's approved curriculum. All courses are not offered every semester. Check the Class Schedule for current offerings.

AMT 121 Aviation Powerplant Systems 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 certified aircraft powerplants. This section covers theory of operation, maintenance, repair, and troubleshooting procedures of powerplant systems and their relationship to the total powerplant installation package. To include lubrication, electrical systems, instrument systems, fuel metering, fire protection, starting systems, powerplant control systems, and the aerodynamics, theory and maintenance of propellers and their control systems. ADVISORY: Successful completion of AMT 100 and 101. Basic hand tools required. Details at the first class meeting.

AMT 123 Independent Study

Units: 1.0 TO 2.0 **Hours:**
Transferable: CSU

Designed to afford selected students specialized opportunities for exploring areas at the independent study level. The courses may involve extensive library work, research in the community, or special projects. May be repeated until six units of credit are accrued. This course has the option of a letter grade or pass/no pass. REQUIRED: The study outline prepared by the student and the instructor must be filed with the department and the dean.

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

BIOLOGY

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

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). (C-ID: BIO 190) PREREQUISITE: Biological 10 or Biology 12 or Environmental Science 1 with a grade of 'C' or better, and Chemistry 1A and Mathematics 240 with a grade of 'C' or better. ADVISORY: Eligible for English 250 and English 260.

BIO 4 General Zoology

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

General Zoology is designed for students exploring a career and majoring in Biology. This course uses the animal model to introduce the principles of evolutionary biology. Zoology explores animal diversity and considers the selection pressures of nature that direct animal form and function. Topics include mechanisms of evolution, animal life cycles, embryological development, comparative morphology and physiology, taxonomy and systematics, molecular and morphological phylogeny, ecological principles, organismal behavior and its place in the natural world. PREREQUISITE: Mathematics 240 with a grade of 'C' or better. ADVISORY: Chemistry 1A, Biology 1 and eligible for English 250 and English 260.

BIO 5 General Botany

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

General Botany is designed for students majoring in biology and/or its related disciplines. This course introduces the evolution and diversity of botanical organisms and begins with a brief review of plant like organisms (protista and fungi) and continues with an emphasis in the plant kingdom for the remainder of the course. The course will include topics such as life cycles, embroyonic development, morphology, physiology, taxonomy and plant systematics. Principles of population ecology, community ecology, ecosystems interactions, biotechnology and agriculture are highlighted in this course. (C-ID: BIOL 155) PREREQUISITE: Mathematics 235 or Mathematics 240 with a grade of 'C' or better. ADVISORY: Chemistry 1A, Biological Science 1, and eligible for English 250 and English 260.

BIO 7 Human Anatomy

Units: 4.0 **Hours:** 2.0 Lecture and 6.0 Laboratory
Transferable: CSU, UC; CSU-GE:B2, B3, IGETC:5B, 5C, GAV-GE:B2, B3

Structural organization of the human body: gross and microscopic structure of the integumentary, skeletal, muscular, nervous, sensory, endocrine, cardiovascular, lymphatic, respiratory, digestive, excretory, and reproductive systems, from cellular to organ system levels of organization. Includes dissection in lab. A cadaver is observed in this course. PREREQUISITE: Biological Science 10 or Biology 15 or Biology 12 with a grade of credit or C or better. (C-ID: BIOL 110B) ADVISORY: Eligible for English 250, English 260 and Mathematics 430.

BIO 8 General Microbiology

Units: 5.0 **Hours:** 4.0 Lecture and 3.0 Laboratory
Transferable: CSU, UC; CSU-GE:B2, B3, IGETC:5B, 5C, GAV-GE:B2, B3

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. PREREQUISITE: Biological Science 10 or 15 with a grade of credit or C or better. ADVISORY: Chemistry 30A and Chemistry 30B; Eligible for English 250, English 260 and Mathematics 205.

BIO 9 Human Physiology

Units: 5.0 **Hours:** 4.0 Lecture and 3.0 Laboratory
Transferable: CSU, UC; CSU-GE:B2, B3, IGETC:5B, 5C, GAV-GE:B2, B3

Study of the physiological principles, function, integration and homeostasis of the human body at the cellular, tissue, organ, organ system and organism level: integumentary system, bone, skeletal, smooth and cardiac muscles, nervous system, sensory organs, cardiovascular system, lymphatic and immune systems, respiratory system, urinary system, endocrine system, and reproduction system. This course is also listed as Allied Health 9. (C-ID: BIOL 120B) PREREQUISITE: Chemistry 30A, Biological Science 7 or 15 with a grade of credit or C or Better. ADVISORY: Chemistry 30B; eligible for English 250, English 260 and Mathematics 205.

BIO 10 Principles of Biology

Units: 4.0 **Hours:** 3.0 Lecture and 2.0 Laboratory
Transferable: CSU, UC; CSU-GE:B2, B3, IGETC:5B, 5C, 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. ADVISORY: Eligible for English 250, English 260 and Mathematics 205.

BIO 11 Nutrition

Units: 3.0 **Hours:** 3.0 Lecture
Transferable: CSU, UC; CSU-GE:E, GAV-GE:E2, F

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 AH 11. PREREQUISITE: Eligible for English 1A. ADVISORY: Chemistry 30A and Mathematics 205