

**DRLT 270 Advanced Construction Techniques****Units:** 1.5 **Hours:** 21.0 Lecture and 18.0 Laboratory**Transferable:** No

This course covers safety, materials, principles and theory of advanced construction techniques. Topics include following written and verbal directions, construction directly from blueprints, and research techniques. This course has the option of a letter grade or pass/no pass.

**DRLT 290 Occupational Work Experience / Drywall-Lathing****Units:** 1.0 TO 4.0 **Hours:** 5.0 TO 20.0 Laboratory**Transferable:** No

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.

**Early Childhood Education: see Child Development**  
**Earth Science: see Geology, Geography**

**ECOLOGY****ECOL 1 Conservation of Natural Resources****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

This course examines the fundamentals of ecology (the study of the relationships between organisms and their environment) with special emphasis on human effects on the environment. Topics of discussion will include ecosystem dynamics, resources, pollution, population growth, and the clash between economic and political policy and the environment. **ADVISORY:** Eligible for English 250 and English 260.

**ECONOMICS****ECON 1 Principles of Macroeconomics****Units:** 3.0 **Hours:** 3.0 Lecture**Transferable:** CSU, UC; CSU-GE:D2, IGETC:4B; GAV-GE:D2; CAN:ECON2

Introduction to the principles of macroeconomic analysis, economic institutions, and economic policy; supply and demand, determinants and distribution of output, income, and welfare through the market system; international trade and globalization. Measurement, determinants of, and policies relating to long-run economic growth, business cycle fluctuations, unemployment, and inflation. This course has the option of a letter grade or pass/no pass. **PREREQUISITE:** MATH 430 or MATH 205

**ECON 2 Principles of Microeconomics****Units:** 3.0 **Hours:** 3.0 Lecture**Transferable:** CSU, UC; CSU-GE:D2, IGETC:4B; GAV-GE:D2; CAN:ECON4

Introduction to microeconomic principles, theory, and analysis. Topics include scarcity and resource allocation, specialization and exchange, and the determinants and distribution of output, income, and welfare through the market system, as well as elasticity, production and cost theory, and market failure caused by externalities and asymmetric information. Includes consumer choice and utility maximization, as well as profit maximization in various competitive settings. This course has the option of a letter grade or pass/no pass. **PREREQUISITE:** MATH 430 or MATH 205

**ECON 11 Statistics for Business and Economics****Units:** 4.0 **Hours:** 4.0 Lecture**Transferable:** CSU, UC; CSU-GE:B4, IGETC:2A; GAV-GE:B4

Statistical methods for business/economics analysis; descriptive statistics, inference, correlation and regression, probability, time series analysis. This course has the option of a letter grade or pass/no pass. This course is also listed as BUS 11. **PREREQUISITE:** Mathematics 233.

**ECON 14 Personal Finance****Units:** 3.0 **Hours:** 3.0 Lecture**Transferable:** CSU

This course is designed to assist individuals to analyze their financial affairs for lifelong decision making. Elements and concepts of financial planning and decision making in the areas of budgeting, taxes, borrowing, money management, insurance, investments, retirement, and estate planning will be examined. This course is also listed as BUS 14. This course has the option of a letter grade or pass/no pass. **ADVISORY:** Math 400.

**Education: see Child Development, Liberal Arts with  
Elementary Education Emphasis**

**ENGINEERING****ENGR 1 Graphical Communication and Design****Units:** 3.0 **Hours:** 2.0 Lecture and 3.0 Laboratory**Transferable:** CSU, UC; CAN:ENGR2

An introduction to the graphical and visual communication of the engineering design process. Topics will include the design process, visualization, free-hand sketching, instrument drawing, scales, orthographic projection, section views, auxiliary views, and dimensioning and tolerancing. Computer based drafting will be used in conjunction with traditional methods to highlight the strengths of multiple communication methodologies. **ADVISORY:** MATH 1A; may be concurrent.

**ENGR 2 Statics****Units:** 3.0 **Hours:** 3.0 Lecture**Transferable:** CSU, UC; CAN:ENGR8

Vector treatment of two- and three-dimensional force systems acting on particles and engineering structures in equilibrium. Topics include forces, moments, couples, resultants, equilibrium conditions, trusses, centroids, moment of inertia, beams, shear and moment diagrams, cables, fluids and friction. **PREREQUISITE:** Mathematics 1A and Mathematics 1B and Physics 4A with a grade of 'C' or better.

**ENGR 3 Electric Circuit Analysis****Units:** 4.0 **Hours:** 3.0 Lecture and 3.0 Laboratory**Transferable:** CSU, UC; CAN:ENGR12

An introduction to the theory of electric circuits. Topics include resistive circuits, voltage and current sources, network theorems, op-amp circuits, energy storage elements, RC, RL, and RLC circuits. **PREREQUISITE:** Mathematics 2C (may be taken concurrently) and Physics 4B with a grade of 'C' or better.

**ENGR 4 Properties Of Materials****Units:** 3.0 **Hours:** 3.0 Lecture**Transferable:** CSU, UC; CAN:ENGR4

Basic principles of physics and chemistry are used to determine the quantitative relationships that describe the behavior of solids. Particular emphasis is placed upon the relationship between the structure and properties of crystalline solids. Applications consider control of properties as an engineering design variable. A term paper based upon review of the periodical technical literature is required. **PREREQUISITE:** Chemistry 1A and Physics 4A.

**ENGR 5 Engineering Programming and Problem Solving****Units:** 3.0 **Hours:** 2.0 Lecture and 3.0 Laboratory**Transferable:** CSU, UC; CAN:CSCI4

An introduction to engineering problem solving using computer programming, numerical computing, and spreadsheets. Topics will include basic control structures, data types, input/output, an introduction to the design, implementation, testing and documentation of software, and the syntax and semantics of a modern programming language. Additional topics include matrix manipulation, curve plotting, finding solutions of ODEs, statistical analysis and presentation of data using available software. **PREREQUISITE:** Mathematics 1A with a grade of 'C' or better. May be taken concurrently.