

**DM 114 Digital Media Production****Units:** 2.0 **Hours:** 2.0 Lecture

A team oriented practicum that focuses on the application of learned skills to the production of digital media and digital print projects, such as web sites, CD ROM, and DVDs. Project development will be accomplished according to team derived master schedules. Lectures will be on project management, work coordination and production techniques, client-team interface, asset management and integration, budget estimates, testing, and copyright infringement. Please note that this is very much a team oriented class. This course has the option of a letter grade or pass/no pass. This course is also listed as CSIS 114. **ADVISORY:** At least one of the following: ART 75, CGE 2, JOUR 18A, MUS 21, CSIS 7, CSIS 71, OR CSIS 77. or possess equivalent skills from any one of the following areas: digital media, computer graphics, digital print, film, TV/video, journalism (publishing), drawing or illustration, web design/ development, business/marketing, or programming.

**DM 117 Visual Effects-Motion Graphics****Units:** 3.0 **Hours:** 2.0 Lecture and 3.0 Laboratory

Study of the design of motion graphics and special effects used in digital video and film, web, multimedia, and interactive games. Includes video/graphics compositing techniques, 2D animation, basic 3D animation, and special effects commonly generated in digital post-production. Software such as Adobe After Effects or Apple's Motion will be used. This course has the option of a letter grade or pass/no pass. This course is also listed as CSIS 117. **ADVISORY:** DM/ART/CSIS 113 or DM/ART/CSIS 140 or DM/ART/CSIS 77 or THEA 17A or basic knowledge of digital video/film editing.

**DM 140 Basic Digital Film, Video Production****Units:** 1.0 **Hours:** 1.0 Lecture**Transferable:** GAV-GE:C1

An on-line self-paced course covering the basics of film/video production and post production (editing) using "easy to use" computer software such as Apple's iMovie. Beneficial for students who are producing a video/film project as a requirement for another college course, extra skills development, or for self interest. Completion of the associated class or personal project in DVD format using either personal video equipment or the equipment in the Digital Media Studio is required. This course has the option of a letter grade or pass/no pass. This course is also listed as CSIS 140.

**DM 160 Game Design****Units:** 3.0 **Hours:** 3.0 Lecture

Intended for students who want to explore game design and computational media. Compelling successful games are created by developers who have absorbed the fundamental principles of good game design. Students will analyze existing games for their educational and entertainment value, and create their own games using freely available software and game development environments. Key concepts such as game math, textures and materials, geometry and topology, lighting, sound and special effects will be explored. No previous programming experience is necessary. This course has the option of a letter grade or pass/no pass. This course is also listed as CSIS 160.

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

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. (C-ID: ECON 202) **PREREQUISITE:** MATH 430 or MATH 205

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

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. (C-ID: ECON 201) **PREREQUISITE:** MATH 430 or MATH 205

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

The use of probability techniques, hypothesis testing, and predictive techniques to facilitate decision-making. Topics include descriptive statistics; probability and sampling distributions; statistical inference; correlation and linear regression; analysis of variance, chi-square and t-tests; statistical analysis including the interpretation of the relevance of the statistical findings. Applications using data from disciplines including business, social science, psychology, life science, health science, and education. Additional and more extensive case studies from business and economics, emphasizing statistical results that provide guidance for business decisions or suggest solutions to contemporary business and economic problems; use of larger data sets analyzed with computer software programs. (C-ID: MATH 110) **PREREQUISITE:** Math 233, or Math 233A and Math 233B, or Math 235, or Math 240, or Math 242 with a grade of "C" or better.

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

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

**ECOLOGY****ECOL 1 Conservation of Natural Resources****Units:** 4.0 **Hours:** 3.0 Lecture and 3.0 Laboratory**Transferable:** CSU-GE:B2, CSU-GE:B3, IGETC:5B, IGETC:5C, GAV-GE:B2, GAV-GE: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.

**ENGINEERING****ENGR 1 Graphical Communication and Design****Units:** 3.0 **Hours:** 2.0 Lecture and 3.0 Laboratory

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

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

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

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

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.

**ENGR 10A Introduction to Engineering I****Units:** 2.0 **Hours:** 1.5 Lecture and 1.5 Laboratory

Engineering 10A introduces students to the engineering profession. Topics will include an introduction to the various engineering disciplines; the role of engineers and engineering in society; the curriculum requirements for the various engineering disciplines at different four-year institutions; academic success strategies; personal and professional development techniques; an introduction to the engineering design process; an introduction to engineering problem-solving methodologies; engineering ethics; communication skills; and working as a member of a team. **ADVISORY:** English 250.

**ENGLISH****ENGL 1A Composition and Reading****Units:** 4.0 **Hours:** 4.0 Lecture**Transferable:** CSU-GE:A2, IGETC:1A, GAV-GE:A2

English 1A is a composition course which focuses on the development and application of the academic writing process. Students read and assess models of expository, analytical, and argumentative prose to learn techniques of effective writing. Students practice strategies for planning, drafting, sharing, and revising essays in a variety of rhetorical modes. Students apply critical reading skills to the evaluation of source material in the development of a thesis-driven, research-supported essay. To create the research essay, students apply techniques in organizing, developing, and crafting prose which supports their arguments and balances outside sources with their own voice as writers. To achieve this end, students write no fewer than six essays (a minimum of 6,000 words) and read at least five works, two of which are book length. (C-ID: ENGL 100). Completion of English 1A meets transfer level and baccalaureate/university level equivalent. **PREREQUISITE:** English 250 and English 260 or equivalent with grade of 'C' or better or satisfactory score on the English Placement examination.

**ENGL 1B Composition and Literature****Units:** 3.0 **Hours:** 3.0 Lecture**Transferable:** CSU-GE:C2, IGETC:3B, GAV-GE:C2, GAV-GE:F

English 1B continues the work begun in 1A, but now the emphasis shifts to writing expository prose in conjunction with reading and analyzing imaginative literature. Students are to write as fledgling critics and use the text as a basis for other forms of reflection. The reading requirement includes short stories, poetry, drama, and at least two novels. Course work will also include fundamentals of research writing. Minimum 6,000 words of formal writing. (C-ID: ENGL 120) **PREREQUISITE:** English 1A with a grade of "C" or better.

**ENGL 1C Critical Reasoning and Writing****Units:** 3.0 **Hours:** 3.0 Lecture**Transferable:** CSU-GE:A3, IGETC:1B, GAV-GE:C2

This course is designed to develop critical thinking, reading, and writing skills beyond the level achieved in English 1A. The emphasis is on critical analysis of arguments and the development of the ability to integrate the principles of critical thinking into essay writing. Students will write a minimum of 6,000 words. (C-ID: ENGL 105) **PREREQUISITE:** English 1A with a grade of "C" or better.

**ENGL 2B American Ethnic Literature****Units:** 3.0 **Hours:** 3.0 Lecture**Transferable:** CSU-GE:C2, IGETC:3B, GAV-GE:C2, GAV-GE:F

Students will examine the concept of ethnicity in the context of contemporary American multi-ethnic literature: Native American, Hispanic American, Black American, Asian American. Students will critique this literature using the accepted elements of literary criticism. They will read and analyze selections from each literature and explain their results in journals, oral presentations, a research project and examinations. **PREREQUISITE:** Eligible for English 1A.

**ENGL 2C Introduction to Film and Fiction****Units:** 3.0 **Hours:** 3.0 Lecture**Transferable:** CSU-GE:C2, IGETC:3B, GAV-GE:C2

This is a literature course in analysis of the novel and film as art forms. The student will read several novels, view the films based on the novels, and discuss the difference in techniques, both orally and in writing. **PREREQUISITE:** Eligible for English 1A.