

## 2007-2009 Cal Poly Catalog

### Updated Course Descriptions.

See catalog pages as printed for [original descriptions](#).

### Honors Program

#### HNRS--HONORS

##### HNRS 100 Orientation to the University Honors Program (2) (CR/NC)

Introduction to the Honors Program and overview of the University. Topics include the role of higher education, development of leadership skills, career advising, and guest speakers from the Cal Poly community. For University Honors Program students only. Credit/No Credit grading only. 1 lecture, 1 activity.

##### HNRS 101 Public Speaking (4) (Also listed as COMS 101) GE A2

Introduction to the principles of public speaking. Practical experience in the development, presentation, and critical analysis of speeches to inform, to persuade, and to actuate. Not open to students with credit in COMS 102. 4 lectures.

##### HNRS 112 Race, Culture and Politics in the United States (4) (Also listed as ES 112) GE D1 USCP

Introductory and interdisciplinary study of the ways that race and ethnicity are created by both historical processes and American institutional formation – specifically social, political, economic, legal and cultural institutions. Special attention paid to the interlocking systems of race, class, gender and sexuality. 4 lectures. →

##### HNRS 131 General Physics I (4) GE B3 & B4 (Also listed as PHYS 131)

Fundamental principles of mechanics. Vectors, particle kinematics. Equilibrium of a rigid body. Work and energy, linear momentum, rotational kinematics and dynamics. Primarily for engineering students, and for students majoring in the physical sciences. Not open to students with credit in PHYS 141. 3 lectures, 1 laboratory. Prerequisite: MATH 141 with grade C- or better and MATH 142 or MATH 182 (or concurrent enrollment). Recommended: high school physics. For ME and AERO students only.

##### HNRS 132 General Physics II (4) GE B3 & B4 (Also listed as PHYS 132)

Oscillations, waves in elastic media, sound waves. Temperature, heat and the first law of thermodynamics. Kinetic theory of matter, second law of thermodynamics. Geometrical and physical optics. 3 lectures, 1 laboratory. Prerequisite: PHYS 131, PHYS 141 or HNRS 131.

##### HNRS 134 General Physics IA (4) (Also listed as PHYS 141) GE B3

Fundamental principles of mechanics. Vectors, particle kinematics. Equilibrium of a rigid body. Work and energy, linear momentum, rotational kinematics and dynamics. Primarily for engineering and science students. Not open to students with credit in HNRS/PHYS 131. 4 lectures. Prerequisite: MATH 141 with grade C- or better and MATH 142 or MATH 182 (or concurrent enrollment). Recommended: High school physics.

##### HNRS 141, 142, 143 Calculus I, II, III (4) (4) GE B1 (Also listed as MATH 141, 142, 143)

Limits, continuity, differentiation, integration. Techniques of integration, applications to physics, transcendental functions. Infinite sequences and series, vector algebra, curves. 141 prerequisite: ELM requirement and passing score on Mathematics Placement Examination, or MATH 118 and MATH 119 or equivalent; and consent of Honors Program. 142 prerequisite: HNRS/MATH 141 with a grade of C- or better or consent of instructor. →

##### HNRS 145 Reasoning, Argumentation, and Writing (4) (Also listed as ENGL/COMS 145) GE A3

The principles of reasoning in argumentation. Examination of rhetorical principles and responsible rhetorical behavior. Application of these principles to written and oral communications. Effective use of research

methods and sources. 4 lectures. Prerequisite: Completion of GE Areas A1 and A2.

##### HNRS 148 Reasoning, Argumentation and Professional Writing (4) (Also listed as ENGL 148) GE A3

The principles of reasoning in technical writing. Discussion and application of rhetorical principles, both oral and written, in technical environments. Study of methods, resources and common formats used in corporate or research writing. 4 lectures. Prerequisite: Completion of GE Areas A1 and A2.

##### HNRS 149 Technical Writing for Engineers (4) (Also listed as ENGL 149) GE A3

The principles of technical writing. Discussion and application of rhetorical principles in technical environments. Study of methods, resources and common formats used in corporate or research writing. 4 lectures. Prerequisite: Completion of GE Areas A1 and A2. For Engineering students only.

##### HNRS 200 Special Problems for Undergraduates (1–2) (CR/NC)

Individual investigation, research, projects, or surveys of selected problems. Total credit limited to 4 units, with a maximum of 2 units per quarter. Credit/No Credit grading only. Prerequisite: Consent of instructor and Honors Program.

##### HNRS 201 Survey of Economics (4) GE D2 (Also listed as ECON 201)

Basic principles of microeconomics and macroeconomics. Emphasis on applications to current national and global economic issues. For majors requiring one quarter of economics. Not open to students having previous credit in ECON 222 or equivalent. 4 lectures.

##### HNRS 207 Freedom and Equality in American History (4) (Also listed as HIST 207) GE D1 USCP

The multiple and conflicting ways in which various Americans (defined in terms of race, class and gender) have struggled to formulate and promote their own understandings of freedom and equality, from the pre-conquest era to the present. 4 lectures. *New crosslisted course, effective Fall 2008.*

##### HNRS 212 Global Origins of United States Cultures (4) (Also listed as ES 212) GE D3 USCP

How the global dispersal of Europeans, Asians, and Africans, the hemispheric dispersal of Latin Americans, and the forced internal migration of Native Americans have contributed to American cultural heritage and the struggles for ethnic, class and gender equality, and justice. 4 lectures.

##### HNRS 215 World History II (4) (Also listed as HIST 215) GE D3

Comparative history of Western and non-Western societies in global perspective. The history of cross-cultural exchange, interaction, and conflict in the making of the modern world, concentrating on the economic, political, and cultural transformations that facilitated and emerged from imperialism. 4 lectures.

##### HNRS 230 Philosophical Classics: Metaphysics and Epistemology (4) (Also listed as PHIL 230) GE C2

Study of several classic works from the history of philosophy on issues in metaphysics and epistemology. At least one will be from the Ancient period, and at least one from the Modern era. No more than one from the twentieth century. 4 lectures. Prerequisite: Completion of GE Area A.

##### HNRS 231 Philosophical Classics: Social and Political Philosophy (4) (Also listed as PHIL 231) GE C2

Readings from primary philosophical texts, from the ancient and modern periods, with focus on the identification and evaluation of the central ethical and political themes and arguments presented in them. 4 lectures. Prerequisite: Completion of GE Area A.

##### HNRS 232 Masterworks of British Literature from the Late 18<sup>th</sup> Century to the Present (4) (Also listed as ENGL 231) GE C1

Broadly surveys Romantic, Victorian, Modern, and Contemporary British literature in an historical-cultural context. Investigates works from several genres and a variety of national and cultural voices. May include such writers as Wordsworth, Wollstonecraft, Dickens, G. Eliot, Wilde, Woolf, Yeats, and Gordimer. 4 lectures. Prerequisite: Completion of GE Area A. *New course effective Spring 2009.*

**HNRS 241 Calculus IV (4) (Also listed as MATH 241)**

Partial derivatives, multiple integrals, introduction to vector analysis. 4 lectures. Prerequisite: MATH 143.

**HNRS 244 Linear Analysis I (4) (Also listed as MATH 244)**

Separable and linear ordinary differential equations with selected applications; numerical and analytical solutions. Linear algebra: vectors in n-space, matrices, linear transformations, eigenvalues, eigenvectors, diagonalization; applications to the study of systems of linear differential equations. 4 lectures. Prerequisite: MATH/HNRS 143 or consent of instructor.

**HNRS 251 Great Books I: The Ancient and Classical World—From Myth to Reason (4) (Also listed as ENGL 251) GE C1**

Examination of the ancient epics and classical literature of Mesopotamia, Greece, and Rome. Representative readings include "The Epic of Gilgamesh," "The Iliad," "The Odyssey," "Genesis," "Exodus," "Antigone," "The Symposium," "The Aeneid," and Marcus Aurelius's "Meditations." 4 lectures. Prerequisite: Completion of GE Area A.

**HNRS 299 Honors Group Seminar (1) (CR/NC)**

Students in the Honors Program are required to take at least eight courses for honors credit before graduation. Taking an Honors course may not be possible due to scheduling conflicts or unavailability of courses. This course allows students to engage in honors-level work in a standard, non-honors course on a group basis. Credit/No Credit grading only. Total credit limited to 4 units; repeatable in same term. Must achieve a B or better in the related standard course. 1 seminar.

**HNRS 303 Economics of Poverty, Discrimination and Immigration (4) (Also listed as ECON 303) GE D5 USCP**

Economic analysis of the cause, extent and impact of poverty, discrimination and immigration and of the policies designed to address these socioeconomic issues. Emphasis on the experience of African-Americans, Latinos, and women in the United States. 4 lectures. Prerequisite: Completion of GE Areas A, D1, and either ECON 221 and ECON 222, or ECON 201. Economics majors will not receive GE Area D5 credit.

**HNRS 304 Values and Technology (4) GE C4 (Also listed as HUM 303)**

Humanistic investigation into the theoretical and practical applications of technology with specific reference to the social effects of technological change. For all majors. Non-technical. 4 lectures. Prerequisite: Completion of GE Area A and one course from Area C.

**HNRS 310 Air and Space (4) GE Area F (Also listed as AERO 310)**

Technological innovations that have led to modern aircraft and spacecraft as viewed from an historical perspective. Development of aerodynamics, propulsion systems, light-weight structures, and control systems. How aviation has affected, and been affected by, history. Impact of aviation on society, including civil and military aircraft/spacecraft. Federal regulation of aviation, including air traffic control and airlines. Future developments in air and space technology. 4 lectures. Prerequisite: Completion of GE Area B, junior standing.

**HNRS 311 Computers for Poets (4) GE Area F (Also listed as CSC 310)**

How computers and computer devices work. Introduction to software systems and applications. How computers connect with various media including images, speech and data. How information is encoded and transmitted across networks. Relationship between the computer and human information processing. 4 lectures. Prerequisite: Junior standing and completion of GE Area B. [New crosslisted course, effective Winter 2008.](#)

**HNRS 319 Natural Resource Ecology, Theories and Applications (4) (Also listed as FNR 319) GE B5**

Scope and nature of "ecology" in modern society, including resource terminology and classifications systems; dynamics of natural systems (energy exchange and cycles); man's role as a principle agent of change; environmental impacts; historical perspective including people (ethnicity); and the future environment. 3 lectures, 1 laboratory. Prerequisite: Completion of GE Area B2.

**HNRS 320 Values, Media, and Culture (4) GE C4 (Also listed as HUM 320)**

Contemporary popular culture and its relationship to the great art and literature of the past. Discussion of television, films, advertising, best sellers, popular magazines, children's stories, comics, and the great tradition of literature. 4 lectures. Prerequisite: Completion of GE Area A and one course from Area C.

**HNRS 321 Undergraduate Research Methods and Practice (4) (Also listed as UNIV 321)**

Research methods and tools for sciences and humanities, including formulating a research question, designing a study, using the scientific method to conduct and analyze surveys, and analyzing data. Emphasis on working in interdisciplinary research teams. Total credit limited to 8 units. 2 lectures, 2 activities. Prerequisite: Completion of GE Areas A and B1, and consent of instructor. [New course effective Winter 2009.](#)

**HNRS 375 Technology and the Environment: A Seminar on Contemporary Issues (4) (Also listed as CRP 375)**

Interdisciplinary exploration of significant environmental issues (local, regional, national, or global) where technology is a major cause and/or offers a possible solution. 4 seminars. Prerequisite: Completion of GE Area A and two courses from Areas D1, D2, D3. Honors Program membership or nomination by CRP department head.

**HNRS 380 Literary Themes (4) GE C4 GWR (Also listed as ENGL 380)**

Literature selected according to a particular theme. Emphasis on critical interpretation, aesthetic appreciation, and historical and cultural contexts. The Schedule of Classes will list topic selected. Total credit limited to 12 units. 4 lectures. Prerequisite: Completion of GE Areas A and C1. English majors will not receive GE C4 credit.

**HNRS 391 Appropriate Technology for Impoverished Communities: Development (4) (Also listed as UNIV 391) GE D5**

A broad overview of international development and appropriate design for sustainability. Besides traditional classroom work, students work in teams to address problems with technical solutions. Collaboration with mentors from the university, private sector, and nonprofits serves to provide diverse background and project mentorship. 4 lectures. Prerequisite: Completion of GE Area A, two courses from GE D1-D4 and consent of instructor. [New course, effective Fall 2008.](#)

**HNRS 400 Special Problems for Advanced Undergraduates (1-2)**

Individual investigation, research, studies, or surveys of selected problems. Total credit limited to 4 units, with a maximum of 2 units per quarter. Prerequisite: Consent of Honors Program Director.

**HNRS 411 New Media Arts I (4) (Also listed as ENGL 411)**

Advanced-level presentation of new media theory, design and practice. Topics covered include, but are not limited to, interactivity theory, user-centered system design, cognitive psychology, media analysis, and basic web design theory. Total credit limited to 8 units. 4 lectures. Prerequisite: Advanced skills in writing and/or graphics, and/or computer programming; upper-division standing, ENGL 148 or ENGL 149 and consent of instructor.

**HNRS 412 New Media Arts II (4) (Also listed as ENGL 412)**

Advanced level of work with the primary technologies and design/critique theories currently at use in the professional creation of new media works. Lectures and readings expand upon material presented in HNRS/ENGL 411. 4 lectures. Prerequisite: HNRS/ENGL 411 and consent of instructor.

**HNRS 475 Sustainable Forest and Environmental Practices (15) (Also listed as FNR 475)**

Typical modules related to sustainable resource management: ecosystem sampling and inventory methods, photo interpretation, hydrologic resources, road condition, project impact analysis, best management practices. Topics covered vary from term to term depending on the priority for learning modules. Residency at Swanton Pacific and extended field trips required. 10 lectures, 5 activities. Prerequisite: Completion of Area B and consent of instructor.

**HNRS 490 President's Seminar: Science, Society and the University (4) (Also listed as HUM 490)**

Development of higher education in the United States; the role of science and research in the University; and the response of higher education to changing economic, political and social demands. 4 seminars. Prerequisite: Senior standing, GPA of at least 3.0, or consent of instructor.

**HNRS 499 Honors Group Seminar (1) (CR/NC)**

Students in the Honors Program are required to take at least eight courses for honors credit before graduation. Taking an Honors course may not be possible due to scheduling conflicts or unavailability of courses. This course allows students to engage in honors-level work in a standard, non-honors course on a group basis. Credit/No Credit grading only. Total credit limited to 4 units, repeatable in same term. Must achieve a B or better in the related standard course. 1 seminar.