

2011-13 Cal Poly Catalog

Liberal Arts and Engineering Studies

LAES—LIBERAL ARTS and ENGINEERING STUDIES

LAES 200 Special Problems for Undergraduates (1–4)

Individual investigation, research, studies, or surveys of selected problems. Total credit limited to 8 units, with a maximum of 4 units per quarter. Prerequisite: Consent of department head.

LAES 270 Selected Topics (1–4)

Directed group study of selected topics. The Schedule of Classes will list title selected. Total credit limited to 8 units. 1 to 4 lectures. Prerequisite: Open to undergraduate students and consent of instructor.

LAES 301 Project-Based Learning in Liberal Arts and Engineering Studies (4)

Researching, writing, revising and presenting a technical proposal suitable for submission to a national design competition seeking innovative solutions to complex technological/social problems. Examination of how to define LAES as a new field of study; analysis of the creative process and team building in theory and in application. For LAES majors only. 4 lectures. Prerequisite: MATH 241; PHYS 133, PHYS 132; GE Area A; completion of 4 engineering fundamentals courses.

LAES 400 Special Problems for Advanced Undergraduates (1–4)

Individual investigation, research, studies, or surveys of selected problems. Total credit limited to 8 units, with a maximum of 4 units per quarter. Prerequisite: Consent of department head.

LAES 411 Global Synthesis in Liberal Arts and Engineering Studies (4)

Onsite work with a global technical development and/or design team to develop a project to be completed/expanded upon in LAES 461. Through guided online discussion with the instructor and fellow LAES students, work through intercultural collaboration and design issues, and present works-in-progress. 4 lectures. Prerequisite: LAES 301, junior standing.

LAES 430 Internship (2–12) (CR/NC)

Work experience in business, industry, government and other areas of student career interest. Periodic written progress reports, final report, and evaluation by work supervisor required. Credit/No Credit grading. Total credit limited to 12 units. Prerequisite: Approval of area chair, junior standing, and a CPSLO cumulative GPA of at least 2.5 without being on academic probation.

LAES 461 Senior Project in Liberal Arts and Engineering Studies (4)

Under faculty supervision, the selection and completion of a senior project, demonstrating an interdisciplinary focus in LAES. With one-on-one format with the instructor, individual or small group work through many iterations of the senior project, with occasional showing of works in small student groups. Prerequisite: LAES 411, senior standing.

LAES 462 Capstone Senior Seminar in Liberal Arts and Engineering Studies (4)

The final refinement and completion of LAES senior projects and other projects. In a development workshop format, presentation of final versions of works-in-progress to combined faculty and professional review committees throughout the quarter. Prerequisite: LAES 461.

LAES 470 Selected Advanced Topics (1–4)

Directed group study of selected topics for advanced students. Open to undergraduate and graduate students. The Schedule of Classes will list title selected. Total credit limited to 8 units. 1 to 4 lectures. Prerequisite: Consent of instructor.

LAES 471 Selected Advanced Laboratory (1–4)

Directed group laboratory study of selected topics for advanced students. Open to undergraduate and graduate students. The Schedule of Classes will

list title selected. Total credit limited to 8 units. 1 to 4 laboratories. Prerequisite: Consent of instructor.

LAES 485 Cooperative Education Experience (6) (CR/NC)

Part-time work experience in business, industry, government, and other areas of student career interest. Positions are paid and usually require relocation and registration in course for two consecutive quarters. Formal report and evaluation by work supervisor required. Major credit limited to 6 units; total credit limited to 18 units. Credit/No Credit grading only. Prerequisite: Sophomore standing and consent of instructor.

LAES 495 Cooperative Education Experience (12) (CR/NC)

Full-time work experience in business, industry, government, and other areas of student career interest. Positions are paid and usually require relocation and registration in course for two consecutive quarters. A more fully developed formal report and evaluation by work supervisor required. Credit/No Credit grading only. Major credit limited to 6 units; total credit limited to 24 units. Prerequisite: Sophomore standing and consent of instructor.