LIBERAL ARTS AND ENGINEERING STUDIES (LAES)

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LAES Courses

LAES 200. Special Problems for Undergraduates. 1-4 units
Term Typically Offered: TBD
Prerequisite: Consent of department head.

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

LAES 270. Selected Topics. 1-4 units
Term Typically Offered: TBD
Prerequisite: Open to undergraduate students and consent of instructor.

Directed group study of selected topics. The Class Schedule will list topic selected. Total credit limited to 8 units. 1 to 4 lectures.

LAES 301. Project-Based Learning in Liberal Arts and Engineering Studies. 4 units
Term Typically Offered: F, SP
Prerequisite: MATH 241; PHYS 132 or PHYS 142; PHYS 133 or PHYS 143; and GE Area A with grades of C- or better.

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. Researching, writing, revising and presenting a technical proposal suitable for submission to a national design competition seeking innovative solutions to complex technological/social problems. 2 seminars, 2 activities.

LAES 302. Advanced Project-Based Learning in Liberal Arts and Engineering Studies. 4 units
Term Typically Offered: F, SP
Prerequisite: LAES 301.

Teamwork and leadership in project-based learning. Students lead, build, and maintain project teams; guide the creative process; and use and evaluate the principles of project management in theory and practice. Development of a technical proposal suitable for submission to a national design competition seeking innovative solutions to complex technological/social problems. 2 seminars, 2 activities.

LAES 400. Special Problems for Advanced Undergraduates. 1-4 units
Term Typically Offered: F, W, SP
Prerequisite: Consent of department head.

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

LAES 411. Technology and Community Engagement. 4 units
Term Typically Offered: W, SP
Prerequisite: Completion of GE Area A with grades of C- or better; and sophomore standing.

Onsite work with community and design team to develop and evaluate the use of innovative technologies as tools for community development and empowerment. Through guided discussion with instructor, guests, and community members, work through intercultural collaboration and design issues, conduct qualitative and quantitative research, and present works-in-progress. Field trip may be required. Total credit limited to 8 units. 4 lectures. Crosslisted as ISLA/LAES 411.

LAES 430. Internship. 2-12 units
Term Typically Offered: F, W, SP
CR/NC
Prerequisite: Approval of area chair, junior standing, and a CPSLO cumulative GPA of at least 2.5 without being on academic probation.

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.

LAES 461. Senior Project in Liberal Arts and Engineering Studies. 4 units
Term Typically Offered: F, W, SP
Prerequisite: LAES 302; senior standing; and permission of instructor.

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.

LAES 462. Capstone Senior Seminar in Liberal Arts and Engineering Studies. 4 units
Term Typically Offered: F, W, SP
Prerequisite: LAES 461.

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.

LAES 470. Selected Advanced Topics. 1-4 units
Term Typically Offered: TBD
Prerequisite: Consent of instructor.

Directed group study of selected topics for advanced students. Open to undergraduate and graduate students. The Class Schedule will list topic selected. Total credit limited to 8 units. 1 to 4 lectures.

LAES 471. Selected Advanced Laboratory. 1-4 units
Term Typically Offered: TBD
Prerequisite: Consent of instructor.

Directed group laboratory study of selected topics for advanced students. Open to undergraduate and graduate students. The Class Schedule will list topic selected. Total credit limited to 8 units. 1 to 4 laboratories.

LAES 485. Cooperative Education Experience. 6 units
Term Typically Offered: F, W, SP
CR/NC
Prerequisite: Sophomore standing and consent of instructor.

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.

LAES 495. Cooperative Education Experience. 12 units
Term Typically Offered: F, W, SP
CR/NC
Prerequisite: Sophomore standing and consent of instructor.

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.