Nexus in Engineering

The Nexus in Engineering is administered by a faculty advisory group: Professors Gomez (physics), Associate Professors Aidala (physics, track chair), Hoopes (environmental studies), St. John (computer science); Assistant Professor Shepardson (mathematics and statistics).

Overview

The Engineering Nexus provides a path from the traditional disciplines of the liberal arts to a career in engineering. Engineers are trained to solve a diverse set of problems, and a student may major in the field of science or mathematics most closely allied to the engineering subfield in which she is interested. Combining a science or mathematics major with some additional course work and summer internships in engineering is excellent preparation for future graduate work in engineering or employment in engineering-related fields.

While the Engineering Nexus explicitly is not an engineering degree or accreditation, it is intended as a route into the field of engineering. The experiential portion of the Nexus involves completing a summer internship in the field of engineering. This may be participating in a formal Research Experiences for Undergraduates (REU) program in an academic laboratory, a summer internship with an engineering firm, working abroad for the summer in an engineering laboratory, or other options.

Contact Info

Eleanor Townsley, Nexus director
Katherine Aidala, track chair

Requirements for the Nexus

Courses

- Two 200-level, 4-credit courses, chosen from the faculty-approved list for the Nexus
  - Given the diversity of the engineering field, a wide range of courses can count toward the Nexus, but students must consult with a Nexus advisor to determine a program that will match their interests and goals.
- College 210 (the 2-credit “pre-experience” course) or a suitable substitute, chosen in consultation with the track chair
- College 211 (the 2-credit “post-experience” course), culminating in a public presentation at the annual LEAP (Learning from Application) Symposium
- One 300-level, 4-credit course in a relevant topic, chosen from the faculty-approved list for the Nexus

Other

- An approved internship, research project, or summer job, completed as the “experience” between College 210 and 211
- The sequence of a Nexus is part of what makes it unique. It is essential that College 210 (or an appropriate substitute) be taken before the internship or research project and that College 211 be taken after the internship or research project

Courses Counting toward the Nexus

Chemistry

208   Introduction to Materials
399   Comprehensive Seminar

Economics

212   Microeconomic Theory
307   Seminar in Industrial Organization

Mathematics

333   Differential Equations
342   Probability

Physics

290   Advanced Laboratory Practicum
308   Electronics
390   Advanced Laboratory Practicum

See Also

- Dual-Degree in Engineering (Other Programs and Certificates)