ENGINEERING LEADERSHIP - CERTIFICATE

The Engineering Leadership Program (ENLP) confronts leadership challenges in applied science using liberal arts pedagogy. The program aims to cultivate engineering leaders of curiosity and character who combine technical expertise with moral principles and political literacy to address society's most pressing scientific and technological problems.

ENLP offers a wide variety of courses on the thought and practice of leadership, many of which utilize primary source texts in history, the philosophy of science, moral philosophy, political science and anthropology. The program's courses count for humanities and social sciences credit in the College of Engineering and Applied Science and most courses are discussion-based seminars. Students with a deep interest in ENLP's curriculum are encouraged to pursue the Engineering Leadership Certificate and develop long-term relationships with faculty. Such students may also wish to take courses in the Herbst Program for Engineering, Ethics & Society, many of which count for credit toward the certificate.

In addition to introducing students to the intellectual complexities of leadership, the program also addresses contemporary concerns in engineering practice. CU Boulder's engineering alumni and established leaders from engineering industry, business and politics frequently visit ENLP classes to give guest lectures, hold interview sessions and converse with students over informal lunches. The Engineering Leadership Program has also partnered with the Engineering Management Program to offer coursework for ENLP students interested in engineering project management, engineering entrepreneurship and engineering economics.

Requirements

Courses offered by the Engineering Leadership Program are open to all students in the College of Engineering and Applied Science. *All ENLP courses count for humanities and social sciences credit.* Students interested in ENLP are advised (but not required) to begin their course of study with ENLP 2000, the program's introductory course.

The certificate requires 12 credit hours of coursework to be completed prior to graduation. All 12 credit hours must be earned with CU Boulder coursework only. Graduating students who have completed their certificate requirements must fill out the Certificate Completion Form on the ENLP website (https://www.colorado.edu/engineeringleadershipprogram/course-offerings-and-certificate-requirements/) to receive certificate status on their transcripts.

Students may take any ENLP course to sample the program's offerings, or they may choose to take multiple courses and pursue the Engineering Leadership Certificate. The certificate is designed for students who are deeply curious about leadership and its manifold relationship with science, technology, humanity, and political society.

Most ENLP courses are discussion-based seminars focused on primary source readings spanning a wide variety of scientific, humanistic, and social scientific disciplines. ENLP courses also offer opportunities to attend guest lectures, travel abroad, network with CU alumni, and meet leaders from the public and private sectors.

Required Courses and Credits

Students are required to take any four courses from the list of core requirements *or* any three courses from the list of core requirements and one approved elective.

A list of approved electives is also available on the ENLP website (https://www.colorado.edu/engineeringleadershipprogram/). Students may petition the Engineering Leadership Program Director to consider other electives, including transfer credits from other universities, not listed below.

Code	Title	Credit Hours
Core Requirements		
ENLP 2000	Leadership, Fame and Failure	3
ENLP 3000	Intelligent Leadership	3
ENLP 3100	Complex Leadership Challenges	3-4
ENLP 4000	The Empire of Modern Science	3
Approved Electives		
ASEN 3046	Introduction to Humans in Aviation	3
ASIA 4500	Urban Asia: Tradition, Modernity, Challenges	3
ASTR 4800	Space Science: Practice and Policy	3
ATLS 2000	The Meaning of Information Technology	3
EHON 1151	Critical Encounters	3
EMEN 4030	Project Management Systems	3
EMEN 4100	Engineering Economics	3
EMEN 4050	Leadership and Professional Skills	3
ENES 1850	Engineering in History: The Social Impact of Technology	3
ENES 2100	History of Science and Technology to Newton	3
ENES 2120	History of Modern Science from Newton to Einstein	3
ENES 2130	History of Modern Technology from 1750 to the Atomic Bomb	3
ENES 2210	Modern Science and Technological Society	3
ENES 2020	The Meaning of Information Technology	3
ENES 3100	Ethical Awareness for Engineers	3
ENES 3350	Gods, Heroes and Engineers: The Western Quest for Excellence	3
ENES 3843	Special Topics	1-3
ENVS 3140	Environmental Ethics	3
ENVS 3621	Energy Policy and Society	3
MILR 4072	Leadership 1: Adaptive Leadership	3
MILR 4082	Leadership 2: Leadership in a Complex World	3
NAVR 4020	Leadership and Ethics	3
PHIL 1400	Philosophy and the Sciences	3
PHIL 3160	Bioethics	3
PHIL 3200	Social and Political Philosophy	3
PHYS 3000	Science and Public Policy	3
PRLC 1810	Leadership Foundations and Applications I	3

PRLC 3800	Global Inquiry for 21st Century Leadership	4
PSCI 1101	Introduction to American Politics	3
PSCI 2004	Survey of Western Political Thought	3
PSCI 2106	Introduction to Public Policy Analysis	3
PSCI 2116	Introduction to Environmental Policy and Policy Analysis	3
PSCI 3011	The American Presidency and the Executive Branch	3
PSCI 3054	American Political Thought	3