ENGINEERING, ETHICS AND SOCIETY - CERTIFICATE

The certificate in engineering, ethics and society (EES) leads students to courses that will engage them with contemporary issues regarding the promotion, use and possible risks of engineering and applied science. For example, what are the likely benefits and risks of genetic engineering? How can engineering help offset worldwide environmental degradation? What role should engineers play in formulating policies that will govern the relationship between science and contemporary American society?

The EES certificate includes a cornerstone course that explores these philosophical questions (and others related to them). The certificate also steers students toward other courses that address these difficult questions and will help them find a path toward workable answers. The list of possible courses includes:

- courses that view engineering in social, economic and legal contexts;
- courses that study science and technology in the past, thereby illuminating their influence in the present; and
- courses that explore the environmental consequences of STEM innovation.

Requirements

Eligibility

To begin the certificate, students must be in good academic standing (https://www.colorado.edu/registrar/students/your-information-records/academic-standing/) at CU Boulder and must complete a certificate of enrollment with Dr. Sarah Stanford-McIntyre of the Herbst Program for Engineering, Ethics & Society.

To complete the certificate, students must submit a certificate completion form to Dr. Stanford-McIntyre.

Program Requirements

Students must complete 12 credits, including four courses (at least one upper-division) with a minimum grade in each course of C+.

Code	Title	Credit Hours
Required Courses		
Great Books Seminar		
Choose one:		3
ENES 1010	Humanity in a Technological Age	
ENES 3100	Ethical Awareness for Engineers	
EHON 1151	Critical Encounters	
STEM & H&SS Intersection		
Choose one:		3
ENES 1850	Engineering in History: The Social Impact of Technology	
ENES 2020	The Meaning of Information Technology	
ENES 2120	History of Modern Science from Newton to Einstein	
ENES 2130	History of Modern Technology from 1750 to the Atomic Bomb	
ENES 2210	Modern Science and Technological Society	
ENES 2360	Gaining a Global State of Mind for Effective Engineering Practice	
ENES 3360	Gaining a Global State of Mind for Effective Engineering Practice	
ENES 3430	Ethics of Genetic Engineering: A Multidisciplinary Approach	
ENLP 2000	Leadership, Fame and Failure	
ENLP 4000	The Empire of Modern Science	
INFO 3101	History of Computing and Information	
Additional coursework		
Additional Herbst or EHON (Engineering Honors) course [1]		3
Course in Humanities or Social Science from the College of Arts & Sciences linked to EES (Engineering, Ethics & Society) themes [2]		3
Total Credit Hours		**12**

[1] This could be an additional course from the list above, or it could include Herbst or EHON Special Topics courses, Herbst Global Seminars or Global Intensives, or other Herbst courses.

[2] Students must confer with the EES Certificate Director to determine the suitability of a particular course.