

A hand is shown holding several interlocking puzzle pieces. The pieces are in shades of blue, green, and brown. The background is a bright blue sky with soft white clouds. The text is overlaid on this image.

E-LEAP FALL SEMESTER COURSE

LEAP 1501

Social and Ethical Implications of Engineering

LEAP 1501 provides you with an understanding of the role of ethics in the engineering profession. This course prepares you critically to understand and appreciate the social and ethical implications of engineering technologies. You will take a critical look at how engineering can impact humans; through policy changes, innovation, or the impact it may have on the surrounding community. Through the help of articles and case studies you will learn to identify these impacts within the broader context of local and global communities.

As a class we will identify responsibility based on professional codes of ethics published by discipline specific organizations. We will discuss engineering failures, e.g., Fukushima nuclear disaster, Challenger explosion, and the Union Carbide gas leak in Bhopal, India, in order to integrate concepts of risk analysis into the discussion of ethics and professional responsibility, especially as these failures relate to public health, safety, and whistle blowing.

You will examine the notion of **sustainable development** and more specifically how this perspective influences our use and development of renewals from the practicing engineer's perspective.

You will also critically inquire ethical implications of issues such as globalization and rapid growth of information technology. You will explore your discipline specific discourse on sustainability while learning to research and work in teams. You will be instructed by librarians embedded in the course. You will learn to present your findings as a culmination of your semester-long learning at our Spring LEAP Symposium.

If you want to engage in a dialog, have riveting conversations, sometimes lively debates, this is the class for you. My classrooms are safe spaces where you can engage and flex your thoughts, learn from each other. There are few categorical 'right' or 'wrong' answers, but broad parameters of professional ethical codes to guide us. There are no stupid questions, for every question is a gateway to more learning. So, if you are considering engineering, if you want to know more about the intersections of social sciences and engineering, mining, and technology, you want to take this class. I love teaching, I love engaging with students. I look forward to seeing you in my class!