ELEG 491, Spring 2019
Ethics and Impacts of Engineering

Professor Tom Powers, tpowers@udel.edu, ext. 3229

Office Hours (ISEB 471): T-Thu 2:30-3:30pm
and by appointment

Description: This course will analyze a range of social, ethical, and legal issues that arise because of the power and pervasiveness of computers and information technology, including privacy, security, free speech, intellectual property, Big Data, cyberwar, emerging technologies, and professional ethical codes. These issues will be discussed from the standpoint of those designing and implementing the technologies—for the most part, engineers. By focusing on the societal and global impact of engineering solutions, the course will also provide guidance for life-long learning. (Syllabus subject to change by instructor)

Readings: *All on Canvas*

Grading:

Midterm exam on the assigned readings and in-class discussion:	25%
Final exam on the assigned readings and in-class discussion:	35%
10 Group Journal Entries on Canvas	20%
In-class Group Presentations by each student	20%

Journal entries must consist of two or more paragraphs and must be posted for each week (except weeks 1 and exam weeks) before class on the Wednesday (5pm) before the chapter is to be discussed. The entry must be relevant to the chapter. Journal entries will be presented each Thursday by a member of the group. Each journal entry must include an example from popular or scientific publications, a website, or another publicly-available resource, and an analysis of the ethical relevance. Responsibility for the journal entries and presentations must rotate amongst members of each group.

Schedule:

Week1:	Introduction to the class - Ethical Concepts, Codes, and Theories
Week 2:	Privacy
Week 3:	Security, Safety, and Hacking
Week 4:	Intellectual Property
Week 5:	Student Presentations
Week 6:	Engineering Failures
Week 7:	Review & First Exam
Week 8 :	Autonomous Weapons & Cyberwar
Week 9:	e-Commerce and Free Speech
Week 10:	Technology and Democracy
Week 11:	Online Communities and Social Media
Week 12:	Pervasive Surveillance Technologies
Week 13:	Technology and Moral Responsibility
	Final Exam during exam period