

School of Engineering and Computer Science
ECE 405: Professional Issues and Ethics in Electrical Engineering
Master Syllabus

Catalog Data:	ECE 405: Professional Issues and Ethics in Electrical Engineering; 3 credits Social, legal, ethical and professional issues that arise in the context of electrical engineering. Typically offered in Spring.
Class Schedule:	Three lecture hours per week, for one semester.
Laboratory Schedule:	None
Prerequisites by Course:	ENGL 402; Certified in ECE
Prerequisites by Topic:	<ol style="list-style-type: none"> 1. General understanding of electrical engineering concepts. 2. Well-developed critical thinking skills. 3. Ability to compose and author undergraduate research papers.
Typical Text:	Fleddermann, C., <i>Engineering Ethics, 4th Ed.</i> , Pearson 2012
Course Coordinator:	Dr. John Lynch
Course Objectives:	<p>Students will:</p> <ol style="list-style-type: none"> 1. Identify ethical issues such as professional responsibility, loyalty, conflict of interest, safety, and confidentiality in cases. 2. Identify organizational, social, cultural, and legal constraints on possible solutions to ethical problems. 3. Propose solutions to ethical problems that honor relevant moral considerations. 4. Evaluate possible consequences of proposed actions according to both consequentialist and deontological tests.
Topics Covered:	<ol style="list-style-type: none"> 1. The Profession of Engineering 2. Moral Reasoning and Ethical Theories 3. Engineering as Social Experimentation 4. Commitment to Safety 5. Workplace Responsibilities and Rights 6. Intellectual Property 7. Global Issues
Lab Experiments and Activities:	None

Course Outcomes:	Students will be able to:		
	Assessed for Student Outcomes	3-b. Deliver well-organized, logical oral presentations accommodating audience interests and background, including good explanations when questioned. 4-a Evaluate engineering solutions considering the global, economic, environmental and societal impacts. 4-b. Make ethical judgements in situations involving safety, intellectual property, reporting data, etc. using the IEEE code of ethics. 7-b. Employ appropriate learning strategies such as communicating with an expert, using credible sources, etc.	
	Other	3-a. Produce documents using appropriate formats, grammar and citations. 7-a. Use resources effectively to learn new material not taught in class.	
Relationship of Course to Program:	Meets: Educational Objectives <u>2, 3, 4</u> Student Outcomes <u>3, 4, 7</u>		
Prepared by:	Dr. John Lynch	Date:	December 30, 2009; Revised Feb. 26, 2014, revised 03/2018 (mb)