Term Information

Effective Term   Spring 2020

General Information

Course Bulletin Listing/Subject Area	Philosophy
Fiscal Unit/Academic Org	Philosophy - D0575
College/Academic Group	Arts and Sciences
Level/Career	Graduate
Course Number/Catalog	7080
Course Title	Engineering Ethics
Transcript Abbreviation	Engineering Ethics
Course Description	Equip engineering grad students with skills for resolving moral issues that may arise in professional contexts. Includes an introduction to ethics, followed by contemporary issues in engineering ethics, such as the nature and moral status of technology; responsibility; privacy; honesty and integrity, safety and risk; environmental ethics; and the ethics of artificial intelligence.
Semester Credit Hours/Units	Fixed: 1

Offering Information

Length Of Course	14 Week, 12 Week, 8 Week, 7 Week, 6 Week, 4 Week
Flexibly Scheduled Course	Never
Does any section of this course have a distance education component?	No
Grading Basis	Satisfactory/Unsatisfactory
Repeatable	No
Course Components	Lecture
Grade Roster Component	Lecture
Credit Available by Exam	No
Admission Condition Course	No
Off Campus	Never
Campus of Offering	Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites	Grad standing in ECE
Exclusions	
Electronically Enforced	Yes

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code	14.1001
Subsidy Level	Doctoral Course
Intended Rank	Masters, Doctoral

Requirement/Elective Designation

Required for this unit's degrees, majors, and/or minors

Course Details

Course goals or learning objectives/outcomes	• To introduce engineering grad students to ethics and to equip them with skills for resolving moral issues that may arise in professional contexts.
Content Topic List	• Ethical Dilemmas, Moral choices, and Codes of Ethics
	• Moral Theories: Utilitarianism
	• Moral Theories: Deontology
	• Engineering as Social Experimentation
	• Safety and Risk
	• Workplace Responsibilities and Rights
	• Honesty
	• Environmental Ethics
	• Global Issues
	• Big Data and Privacy
	• Autonomous Vehicles
	• Artificial Intelligence: Short-Term Issues
	• Artificial Intelligence: Long-Term Issues
Sought Concurrence	No

Attachments

• E-Mail RE ECE Course Request.docx

 (Other Supporting Documentation. Owner: O'Keeffe,Susan B)

• Program Change Proposal Grad Course.docx

 (Other Supporting Documentation. Owner: O'Keeffe,Susan B)

• 7080 Syllabus (for Course Proposal - rev. 1).docx: Revised Syllabus

 (Syllabus. Owner: O'Keeffe,Susan B)

Comments

• See 3-4-19 feedback email. *(by Vankeerbergen,Bernadette Chantal on 03/04/2019 01:16 PM)*

• A copy of the request from ECE and or a quick email from CoE would be helpful as this move forward. Could you upload that in the event that someone asks for evidence? *(by Heysel,Garett Robert on 02/13/2019 11:59 AM)*

• The Department of Philosophy has been asked by Electrical and Computing Engineering to teach this course to replace their ECE 7080 Ethics and Professionalism course. *(by O'Keeffe,Susan B on 02/05/2019 05:07 PM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	O'Keeffe,Susan B	02/13/2019 09:02 AM	Submitted for Approval
Approved	Jorati,Julia	02/13/2019 11:15 AM	Unit Approval
Revision Requested	Heysel,Garett Robert	02/13/2019 11:59 AM	College Approval
Submitted	O'Keeffe,Susan B	02/13/2019 03:19 PM	Submitted for Approval
Approved	Jorati,Julia	02/13/2019 03:32 PM	Unit Approval
Approved	Heysel,Garett Robert	02/16/2019 09:46 PM	College Approval
Revision Requested	Vankeerbergen,Bernadette Chantal	03/04/2019 01:16 PM	ASCCAO Approval
Submitted	O'Keeffe,Susan B	03/07/2019 10:34 AM	Submitted for Approval
Approved	Jorati,Julia	03/07/2019 10:54 AM	Unit Approval
Approved	Heysel,Garett Robert	03/07/2019 11:46 PM	College Approval
Pending Approval	Nolen,Dawn Vankeerbergen,Bernadette Chantal Oldroyd,Shelby Quinn Hanlin,Deborah Kay Jenkins,Mary Ellen Bigler	03/07/2019 11:46 PM	ASCCAO Approval

Engineering Ethics

The purpose of this course is to equip graduate students in engineering with the skills necessary for resolving moral issues that are likely to arise in professional contexts. We will begin the course with a brief introduction to ethics and will then turn to contemporary issues in engineering ethics. We will discuss the nature and moral status of technology; responsibility; computers, software, and privacy; honesty and integrity; safety and risk; employment issues; environmental ethics; and the ethics of artificial intelligence.

Course Number: PHILOS 7080

Format of Instruction: Lecture (1 contact hour per week).

Required Course Materials:
- Mike W. Martin and Roland Schinzinger, *Ethics in Engineering* (4th ed.)
- All other course materials will be available online or on Carmen.

Grading Information: You will be given a satisfactory (S) or unsatisfactory (U) final grade on the basis of your performance in three domains: attendance, 5 homeworks (each of which will require you to write approximately 500-750 words in response to 2-5 questions), and an in-person final examination (consisting of 5 questions, each of which will require an answer of 1-2 pages in a blue book). You will get an S for the course if (1) you don't miss more than 1 class without a legitimate, documented excuse (e.g., an illness for which you have a doctor's note) and (2) you score an average of 70% or more on the homeworks and final exam, where the homeworks are worth 50% and the final exam is worth 50%. You will get a U if you don't meet both of those requirements.

Attendance Policy: Absences for which you have a legitimate, documented excuse (e.g., an illness for which you have a doctor's note) will not affect your grade. But if you miss more than 1 class without a legitimate, documented excuse, then you will receive a U for the course.

Academic Misconduct: It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct: http://studentlife.osu.edu/csc/.

Disability Accommodations: Students with disabilities (including mental health, chronic, or temporary medical conditions) that have been certified by the Office of Student Life Disability Services will be appropriately accommodated and should inform the instructor as soon as possible of their needs. The Office of Student Life Disability Services is located in 098 Baker Hall, 113 W. 12th Avenue; telephone (614) 292-3307, slds@osu.edu; http://slds.osu.edu.

Weekly Topical Outline

Week 1   **Introduction**

                   Martin and Schinzinger, ch. 1

Week 2   **Ethical Dilemmas, Moral Choices, and Codes of Ethics**

                   Martin and Schinzinger, ch. 2

Week 3   **Moral Theories: Utilitarianism**

                   Martin and Schinzinger, pp. 54-60
                   Fred Feldman, "Problems for Act Utilitarianism"

                   Homework #1 due

Week 4   **Moral Theories: Deontology**

                   Martin and Schinzinger, pp. 60-66
                   W. D. Ross, "What Makes Right Acts Right?"

Week 5   **Engineering as Social Experimentation**

                   Martin and Schinzinger, ch. 4

                   Homework #2 due

Week 6   **Safety and Risk**

                   Martin and Schinzinger, ch. 5

Week 7   **Workplace Responsibilities and Rights**

                   Martin and Schinzinger, ch. 6

Week 8   **Honesty**

                   Martin and Schinzinger, ch. 7

Week 9   **Environmental Ethics**

                   Martin and Schinzinger, ch. 8

                   Homework #3 due

Week 10   **Global Issues**

Martin and Schinzinger, ch. 9

Week 11   **Big Data and Privacy**

Cathy O'Neil, *Weapons of Math Destruction*, introduction and ch. 1
Anita Allen, "Coercing Privacy," pp. 723-741

Homework #4 due

Week 12   **Autonomous Vehicles**

Patrick Lin, "Why Ethics Matters for Autonomous Cars"

Week 13   **Artificial Intelligence: Short-Term Issues**

Brian Resnick, "Yes, Artificial Intelligence Can Be Racist"
Julia Angwin, Jeff Larson, Surya Mattu, and Lauren Kirchner, "Machine Bias"

Week 14   **Artificial Intelligence: Long-Term Issues**

Kelsey Piper, "The Case for Taking AI Seriously as a Threat to Humanity"
Nick Bostrom, *Superintelligence* (selections)

Homework #5 due

From: Heysel, Garett <heysel.1@osu.edu>
Sent: Wednesday, February 13, 2019 2:56 PM
To: O'Keeffe, Sue <okeeffe.10@osu.edu>
Subject: Re: Question RE: Documentation

Hi sue go ahead and upload this and your email and I'll approve. I'm just trying to make extra sure this happens without any delay. Thanks

Sent from my iPhone

On Feb 13, 2019, at 14:28, O'Keeffe, Sue <okeeffe.10@osu.edu> wrote:

Hi Garett,

I saw your request for a revision on our Philosophy 7080 course request. I asked Professor Downing if she had any documentation on ECE's original request and she sent the attached. Would this be sufficient, or should I write to Professor Anderson in ECE as well?

Let me know.

Thanks,
Sue O'Keeffe

Sue O'Keeffe
Fiscal/Human Resources Officer
Department of Philosophy
Ohio State University
350 University Hall
230 North Oval Mall
Columbus, OH 43210
Phone: 614/292-1701

<Program Change Proposal Grad Course.docx>

Program change proposal: Master of Science and Doctor of Philosophy Programs in Electrical and Computer Engineering

August 21, 2018

Executive Summary

We propose to eliminate our current requirement for ECE 7080 Ethics and Professionalism (1 credit hour), and instead require all ECE graduate students to take PHILOS XXXX (1 credit hour) The change is proposed for both the Master of Science and the Doctor of Philosophy programs.

Contact:

Betty Lise Anderson, Associate Chair, Electrical and Computer Engineering
Anderson.67@osu.edu

Motivation/Rationale

The Department of Electrical and Computer Engineers strongly believes that all students should study ethics and professionalism. For many years we have offered and required ECE 7080, a one-credit course, on these subjects. We have difficulty staffing this course, so the Department of Philosophy will take it over. The new course number is PHILOS XXXX.

Effective Date

This change will be effective for students entering our graduate program Autumn 2019.

Transition Plan

Graduate students may count either ECE 7080 or PHILOS XXXX toward the ethics requirement of their degrees.

Attachments

Attachment 1: Current MSECE program requirements summary
Attachment 2: Proposed MSECE program requirements summary
Attachment 3: Current PhD- ECE program requirements summary
Attachment 4: Proposed PhD-ECE program requirements summary