

Abilene Approval Chart for Curriculum Changes

A = Approve I = Information Item R = Respond in Writing

Course Number ENGR 306 or Degree Plan(s) _____

State the requested change and reason. A memo may be attached if more space is necessary.

We would like to add ENGR 306, Engineering Ethics, to the menu for the Arts and Humanities in the University Requirements. Explanation and justification is provided in the attached application.

Indicate the requested change.

	Change to a Course	Dept ./Sc hool 1	Coll ege	Dea n	TE C	UG EC	AU AC/ Gra d	Prov ost	Pres iden t
1.	Title (description unchanged)	A	A	A	I	—	I	I	I
2.	Description (not affecting content)	A	A	A	I	—	I	I	I
3.	Course term(s)	A	I	A	I	—	I	I	I
4.	Content (change of course outcomes)	A	A	A	I	—	I	A	I
5.	Number of hours (lecture, lab, contact)	A	A	A	A	—	A	A	I
6.	Course number within the hundred	A	A	I	I	—	I	I	I
7.	Course number beyond the hundred	A	A	A	A	—	A	A	I
8.	Prerequisites	A	A	A	I	—	I	I	I
9.	Course fee(s)	A	—	A	—	—	—	A	I
10.	From U to G or G to U	A	A	A	A	—	A	A	I
11.	Cross-list course	A	A	A	A	—	A	A	I
12.	Department of record	A	A	A	A	—	A	A	I
13.	Close a course	A	A	A	A	—	A	A	I
14.	New course (includes combining or splitting courses)	A	A	A	A	—	A	A	I

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	Change to the University Requirements (All Campuses)	D e p t . / S c h o o l	C o l l e g e	D e a n	T E C	U G E C	A U A C / G r a d	P r o v o s t	F a c u l t y	P r e s i d e n t	T r u s t e e s
1.	University Requirements — Change course outcomes of an included course ²	A	A	A	—	A	—	A	—	A	—
2.	University Requirements — Add or drop a required course from the University Requirements ²	A	A	A	—	A	—	A	A	A	—
3.	University Requirements — Add or drop a course from a menu within the University Requirements ²	A	—	—	—	A	—	A	—	A	—
4.	University Requirements — Change hours within a menu in the University Requirements ²	A	A	A	—	A	—	A	A	A	—
	Change to Catalog Information (for Campus)										
1.	General Requirements for Bachelor's Degrees and Associate's Degrees	—	—	—	—	—	A	A	A	A	—
2.	Policies governing academic probation and suspension	—	—	—	—	—	A	A	A	A	—
3.	Requirements for graduating with honors	—	—	—	—	—	A	A	A	A	—
	Change to a Degree Plan Proposed by Faculty or College										
5.	Educational Program — Revise ³	A	A	A	A	—	A	A	—	A	—
6.	Educational Program — Adopt/change admission requirements	A	A	A	A	—	A	A	—	A	—
7.	Educational Program — Add ³	A	A	A	A	—	A	A	A	A	I
8.	Educational Program — Discontinue	A	A	A	A	—	A	A	A	A	I
9.	GPA — Revise program-required GPAs	A	A	A	A	—	A	A	—	A	—
10.	Minor — Revise	A	A	A	I	—	I	I	—	I	—
11.	Minor — Add	A	A	A	A	—	A	A	—	A	—
12.	Minor — Discontinue	A	A	A	A	—	A	A	—	A	—
13.	Degree — Add	A	A	A	A	—	A	A	A	A	I
14.	Degree — Discontinue	A	A	A	A	—	A	A	A	A	I
	Change to a Degree Plan Proposed By Provost										
15.	Educational Program — Discontinue	R	—	R	A	—	A	A	A	A	I
16.	Minor — Discontinue	R	—	R	A	—	A	A	—	A	—
17.	Degree — Discontinue	R	—	R	A	—	A	A	A	A	I

¹ When an academic unit does not have a council, the UGEC and/or UUAC will serve as its academic council, depending on the nature of the issue.

² Courses that satisfy ACU's University Requirements will normally have lower-level numbering, be free of prerequisites and co-requisites, appeal to more than one or two majors, and "not narrowly focus on those skills, techniques, and procedures specific to a particular occupation or profession" (SACS 2.7.3). Departments may request exceptions to the first three criteria.

³ For undergraduate majors, a minimum of 30 hours is required. These programs must have a minimum of 6 elective hours, unless the requirements of external accrediting bodies make it impossible.

Revised 8-29-22

Department/School Chair(s)	
 _____ <i>Signature</i>	_____ 9/19/22 <i>Approval date</i>
_____ <i>Signature</i>	_____ <i>Approval date</i>

College Academic Council(s)	
_____ <i>Signature</i>	_____ <i>Approval date</i>
_____ <i>Signature</i>	_____ <i>Approval date</i>

Dean(s)	
_____ <i>Signature</i>	_____ <i>Approval date</i>
_____ <i>Signature</i>	_____ <i>Approval date</i>

Teacher Education Council	
_____ <i>Chair's signature</i>	_____ <i>Approval date</i>

University General Education Council	
_____ <i>Chair's signature</i>	_____ <i>Approval date</i>

Abilene Undergraduate Academic Council	
_____ <i>Chair's signature</i>	_____ <i>Approval date</i>

Graduate Council	
_____ <i>Chair's signature</i>	_____ <i>Approval date</i>

Provost	
_____ <i>Signature</i>	_____ <i>Approval date</i>

Faculty	
_____ <i>Chair of Faculty Senate</i>	_____ <i>Approval date</i>

President	
_____ <i>Signature</i>	_____ <i>Approval date</i>

Application for Arts and Humanities Menu

Guidelines For All General Education Courses

1. All general education courses must be 100-level or above.
2. General education courses should present a breadth of knowledge, not focusing on skills, techniques, and procedures specific to a particular occupation or profession.
3. Individual courses will fulfill only a single general education requirement.
4. Courses free of prerequisites are preferred. Applications to add courses with prerequisites must provide additional evidence that the course contributes to a student's breadth of knowledge and is not specific to a particular occupation or profession.
5. Each course may appear on a maximum of two menus that accept applications (arts and humanities, cultural literacy, life and physical sciences, and social and behavioral sciences).

Arts and Humanities Description

Courses within this domain will expose students to other cultures, time periods, and points of view through a wide variety of media. Emphasis will be placed on understanding the human condition, relevance and aesthetics of rhetorical claims, interrogating one's own personal worldviews, and drawing conclusions from analysis of artifacts.

Instructions

Complete this form and submit it with a course syllabus and approval chart to the University General Education Council. Faculty submitting an application should be prepared to perform an annual assessment for their course. The assessment will be conducted with the rubric included in this course application. See the last page of this document for explanation of disciplines that will be considered for the menu.

Subject code, course number, and title of course:	ENGR 306: Engineering Ethics
Terms offered:	Fall
Catalog description:	The purpose of this course is to provide engineering students with the fundamentals of professional ethics. This course will provide students with a set of tools and concepts that are directly applicable to the personal and professional decisions that may be encountered as practicing engineers.
Course prerequisites:	ENGL 112
Cross-listed courses: *Note: Many gen ed courses are cross-listed between the Abilene and Dallas campuses.	NONE
Other general education menus on which the course appears or you are applying for:	None

Description of Menu Fit

Please describe how your class fits into the Arts and Humanities Menu (200 words or less).

This course provides students the opportunity to examine the role of professionals (including engineers) in complex, contemporary social issues, including identifying all stakeholders and the role that each party plays in developing solutions. It also requires students to develop and write down their own code of ethics as a result of their own personal experiences and upbringing and then share and read other students' code of ethics to better understand the human condition. Lastly, it fits as it requires them to examine how ethics have changed over time for engineers and look forward to what might still need to change.

Prerequisites

If the course has prerequisites, provide evidence that the course contributes to a student's breadth of knowledge. Also provide evidence that the course content is not specific to a particular occupation or profession (200 words or less).

The course has been given prerequisites that are a part of the Gen Ed and meant to ensure students are prepared to analyze and then communicate their thoughts in a written form, while also not limiting anyone from taking the course. The course is for a variety of students as it examines ethics for a majority of the course and how students should interact. The assignments ask students to look at situations through the lens of the students profession and not specifically a certain occupation. Specifically it will benefit students in technology, physics, engineering, and business areas.

Relevant Outcomes

- A2: Listen to, understand, and critically evaluate rhetorical claims.
- B1: Demonstrate competent discourse in global, historical, and cultural experiences of diverse populations.
- B2: Understand the interconnectedness of the human experience with a posture of humility while celebrating difference.
- B3: Interrogate one's internal and external views and values for greater self-awareness.
- C2: Analyze quantitative data, published writing, or observable phenomena to draw informed conclusions.

Describe how the course meets the A2 outcome (100 words or less).

As part of a final paper on a contemporary issue each student will examine the role of engineering in complex, contemporary social issues, including identifying all stakeholders and the role that each party plays in developing solutions. They will be required to present all sides of the issue and evaluate the claims made by published sources.

Describe how the course meets the C2 outcome (100 words or less).

Students will analyze published writing through multiple readings through out the semester where we analyze ethical dilemmas. Specifically, as part of a final paper on a contemporary issue each student will examine the role of engineering in complex, contemporary social issues, including identifying all stakeholders and the role that each party plays in developing solutions. They will be required to present all sides of the issue and evaluate the claims made by published sources. They are required to have 8 sources.

Describe how the course meets at least one or more of the following outcomes: B1, B2, B3 (200 words or less).

The course will require students to meet B3 as they must develop and write their own code of ethics after reading those of other societies, understanding how they came to be and what they mean as a citizen in society. Additionally, B1 will be met as they analyze modern ethical issues (such as whistleblowing and their role in social justice). They will be required to interrogate their own view of these as well as those in the class and outsiders to develop a greater self awareness of how they will contribute to society.

Outcomes assessment should occur within one or two exams/assignments. Please indicate which exams or assignments will be used for each outcome. Provide assignment prompts if available.

Area to Be Assessed	Assessment Artifact
Outcome A2	Final paper on a modern ethical issue paper that includes 8 referenced sources presenting both sides of the issue.
Outcome C2	Final paper on a modern ethical issue paper that includes 8 referenced sources presenting both sides of the issue.
Outcome B1, B2, or B3 *note which of the 3 outcomes will be assessed	B1 will be assessed through the final paper described above, while B3 will be assessed on their own personal code of ethics assignment.

Prompt for personal ethics:

1. Explain your foundation of personal ethics, with examples.
2. Describe your professional aspirations and relate them to your personal ethics.
3. Explain some of the main values behind your chosen professions code of ethics (look this up and reference) and relate them to your personal ethics.

Prompt for modern ethical issue

1. Research and identify a current (within the last 10 years) product, design, or concept within your profession that has, is, or will soon have an impact on society. The design, product or concept must be documented, patented or copyrighted.
 - You must get the topic approved before you can begin the rest of the assignment. You should submit a short paragraph description of the topic as well as 8 sources in ASME format.
2. After identifying a current issue and having it approved you should:
 - Find several in-depth and credible sources of information on the design, product, or concept. The Internet is a good place to start, but you should also research journal articles (use scholar.google.com on campus, <http://guides.acu.edu/c.php?g=157898&p=2586974> for help) to justify that peer reviewed writing exists on the topic.
3. You should address the following in your paper at a minimum:
 - Provide background on the engineering design, product, or concept. Who is responsible for creating/producing/building it and what need is it intended to fill for society?
 - What positive consequences of the new design/ product are anticipated for:
 - The company responsible?
 - The users ?
 - Bystanders who do not use it, but are affected by it?
 - You?
 - What are the negative consequences of the design/product? Any downsides? Any negative impacts on society?
 - Can negative impacts be minimized? How?
 - Should the company continue with the design/product or discontinue it? Explain your answer.
 - Using what you know from this class, what are some guiding ethical principles that apply here? Again, Justify your answer.
 - oCharacterize at least two competing viewpoints toward the dilemma case. Present these viewpoints as charitable as you are able and give the strongest reasons for adopting each viewpoint.
 - oClose by developing support for what you believe is the best course of action in the dilemma case.

Please use the following rubric to perform assessment each year.

Student Learning Outcome A2

Students will be able to:	Shortcomings	Meets Expectations	Points of Excellence
Evaluate rhetorical claims	Fails to demonstrate understanding or recognition of rhetorical claims.	Demonstrates effective understanding of and ability to critique rhetorical claims.	Demonstrates keen analytical abilities and attention to detail in understanding and evaluating rhetorical claims.

Student Learning Outcome C2

Students will be able to:	Shortcomings	Meets Expectations	Points of Excellence
Analyze data to draw conclusions	Lacks sufficient analysis of data or published writing.	Analyzes data and/or published writing in an effective manner.	Analyzes data and/or published writing in an exemplary manner.

Student Learning Outcome B (evaluate the one or more selected above)

Students will be able to:	Shortcomings	Meets Expectations	Points of Excellence
Demonstrate competent discourse in global, historical, and cultural experiences of diverse populations (B1)	Little to no engagement in discourse in global, historical, and cultural experiences of diverse populations.	Effectively presents the capacity to engage in discourse in global, historical, and cultural experiences of diverse populations.	Excellently presents the capacity to engage in discourse in global, historical, and cultural experiences of diverse populations.
Understand the interconnectedness of the human experience with a posture of humility while celebrating difference (B2)	Little to no demonstration of understanding or humility in relation to the human experience and diversity.	Effective demonstration of understanding or humility in relation to the human experience and diversity.	Exemplary demonstration of understanding or humility in relation to the human experience and diversity.
Interrogate one's internal and external views and values for greater self-awareness (B3)	Little to no interrogation of personal views and little to no movement toward self-awareness.	Effective interrogation of personal views with some attention to self-awareness.	Exemplary interrogation of personal views with an eye toward self-awareness.

Disciplines to Consider

Proposed courses should fit commonly accepted practices across disciplines. As an external indicator of what constitutes Humanities disciplines, we have consulted the American Academy

of Arts and Sciences definition, which lists the following disciplines as humanities:

- Art and music history, musicology, and the academic study of drama and cinema
- American Studies and Area Studies (e.g., Latin American Studies, Africana Studies, etc.)
- Archeology
- Communication, including media studies, but not professionalization-oriented coursework
- Cultural, Ethnic, & Gender Studies: Programs studying from an interdisciplinary perspective race, ethnic, gender, or cultural groups, such as Black studies, Hispanic studies, women's studies, gender studies.
- English Language and Literature: English, American, and Anglophone literature; general literature programs; creative writing; speech and rhetoric (does not include technical and business writing programs).
- History
- Languages & Literatures Other than English: Modern languages and literature; linguistics; classics and ancient languages; comparative literature.
- Jurisprudence: Includes philosophy of law.
- Philosophy
- Religion: Programs in the comparative, nonsectarian study of religion; studies of particular religions; history of religion; does not include programs in theology or ministry.
- Selected Interdisciplinary Studies: General humanities programs; programs in the study of a particular historical period (e.g., medieval and Renaissance studies, classical and ancient studies, holocaust studies, etc.).

The criteria team anticipates some overlap with other menus, particularly cultural literacy.

In ACU's specific institutional context, the council recognizes religion as a humanities discipline but will not consider Bible courses for the Arts and Humanities menu because of the number of hours reserved in the Bible and Theology menu for these courses in the general education requirements.

Resources:

- [American Academy of Arts & Sciences — Scope of the Humanities](#)
- [4Humanities — Five Definitions of the Humanities](#)
- [Cambridge University Press — What Are the Humanities For?](#)

ENGINEERING ETHICS
ENGR 306, SECTION 01
FALL 2022

PREREQUISITES:

ENGL 111

CREDIT HOURS:

1

CLASS MEETING TIMES AND LOCATION

This class meets Monday from 12:00 p.m. to 12:50 p.m. in Onstead Science Center Room 342.

REQUIRED TEXT

The required text for this course is *Engineering Ethics: Contemporary and Enduring Debates*, by Deborah G. Johnson, 2020, ISBN 978-0300209242.

INTENDED AUDIENCE

This is a required course for Engineering majors and intended to be completed during their Junior or Senior year. Non-majors interested in engineering ethics and professional practice may also enroll in the course.

CATALOG DESCRIPTION

The purpose of this course is to provide engineering students with the fundamentals of professional ethics. This course will provide students with a set of tools and concepts that are directly applicable to the personal and professional decisions that may be encountered as practicing engineers.

CONTACT INFORMATION

Name: Dr. Timothy Kennedy, Assistant Professor of Engineering

Office: Onstead Science Center 137D

Phone: 325-674-2165

Email: timothy.kennedy@acu.edu

Office hours: Virtual Office or in person office hours will be available and can be scheduled during normal business hours (8am-5pm) at timkennedy.youcanbook.me. if you need to meet outside that time please contact me by email.

COMPETENCIES AND MEASUREMENTS

	COMPETENCY	MEASUREMENT
1	Understand codes of ethics and how to apply codes to problems to find potential solutions.	homework, weekly quizzes, exam, project
2	Discuss the role of ethics in the engineering profession, and for self as an engineer, Christian, and citizens	paper, weekly quizzes, exam

	Develop an understanding of duties and responsibilities as professionals through gaining knowledge of the philosophies of ethics, professional practice, and world culture.	
3	Examine the role of engineering in complex, contemporary social issues, including identifying all stakeholders and the role that each party plays in developing solutions.	homework, weekly quizzes, exam
4	Discuss the role of the engineering profession in macro-ethical issues	homework, weekly quizzes, exam, project

GRADING POLICY

Course Assignments	Due Date*	Weight
<u>Assignments</u> A few shorter writing assignments will be due throughout the semester. <u>Late homework will not be graded</u> (if you only have part of it done, turn in what you have done on time), however, you do have a silver bullets that you may use on to for quiz retakes, or late submittals (of assignments).	See Canvas	25%
<u>Quizzes</u> Quizzes will be given via Canvas as part of the preparation to enter class (reading and/or video watching) or at the beginning of class. Thus, it is important that you be in class and on time to complete the quiz. No makeup quizzes will be given except in the rare circumstances of pre-approved absences. However, you do have a silver bullet that you may use on to for retakes, or late submittals. Quiz material will cover previous lecture material, recent homework assignments and/or the text reading assignment for that day. All assignments, quizzes, and exams are considered to be comprehensive. That is, it will be likely that you will need to sufficiently know and understand previously covered material to adequately solve currently covered problems on quizzes or exams. No unauthorized help may be given or received on the quizzes (see academic integrity policy).	Weekly	25%
<u>Participation</u> Students are expected to come to class prepared to contribute to the discussion. Each student should contribute or lead daily discussion and will be graded daily on how engaged they are.	Weekly	25%
<u>Final Paper</u> Students will research and write a final paper on a contemporary engineering ethics topic. Details to follow later	Final Exam	25%

Silver Bullets I do not "drop" any grades, but do allow 1 silver bullet that can be used to submit a homework or quiz late. Note all late work must be submitted via email indicating you are using one of your silver bullets. The last day I will accept a silver bullet assignment is the last day of class.		

CALCULATION OF FINAL COURSE GRADE*

The grading scale will be as follows:

90% and above A

80% - 89% B

70% - 79% C

60% - 69% D

59% and below F

*Instructor reserves the right to decrease the lower bound of the grade cut-offs.

COURSE POLICIES

COMMUNICATION

ACU email and Canvas are the two official forms of class communication. General announcements and supplementary course materials will be posted on Canvas, and Canvas will also be used to report grades. Announcements that are time sensitive will be sent via ACU email.

PROFESSIONAL BEHAVIOR

As an engineering professional, it is extremely important that you treat people with respect and consideration. It is expected, therefore, that you will maintain good professional conduct throughout this course, in all your interactions with your peers and the instructor. You will earn points for having good professional conduct, and you may lose points for exhibiting poor behavior.

REMOVAL FROM COURSE

The instructor reserves the right to remove from the course any student whose behavior is disruptive to the learning environment for students or faculty.

DEPARTMENTAL POLICIES

CALCULATORS

If the course instructor determines that calculators may be used during the exams or other in-class graded activities, only NCEES approved calculators will be permitted. This is to help you begin preparing for the FE exam. Also per NCEES policy, software that simulates approved calculators will not be permitted. The NCEES policy may be reviewed at <http://ncees.org/exams/calculator-policy>. If you are unsure about your calculator, it is your responsibility to check with the instructor for approval. If you are caught using a non-approved calculator, you will not be allowed to complete the activity, and you will receive a zero for that activity (including tests).

The approved calculators include the following:

- Hewlett Packard – HP 33s, HP 35s, and no other
- Casio – All FX-115 models. Any Casio calculator must contain FX-115 in its model name.
- Texas Instruments – All TI-30X and TI 36X models. Any TI calculator must contain either TI-30X or TI-36X in its model name.

LATE WORK

In order to assist students in developing the discipline of meeting deadlines, assignments must be turned in on time in order to receive credit. Students who are absent, for any reason and including absences for University approved activities, on the day an assignment is due should contact the instructor before the assignment is due for directions.

ACADEMIC INTEGRITY

Academic integrity is defined as academic work completed as assigned for each class by the individual or group responsible for the work. Violations of academic integrity and other forms of cheating involve the intention to deceive, mislead, or misrepresent and therefore, are a form of lying. Such actions are contrary to behavioral norms that flow from the nature of God. Academic misconduct includes, but is not limited to, the following:

- 1) Failing to give credit to sources used in a work in an attempt to present the work as one's own,
- 2) Submitting papers or projects obtained from another source (e.g., research service or club paper file) as one's own,
- 3) Falsifying information orally or in writing, and
- 4) Receiving, giving, or using unauthorized aid on an examination or quiz.

An example of academic misconduct specific to this course might be copying an instructor's solution while their back is turned and then sharing the solution with classmates. All parties involved would be guilty of misconduct. Academic misconduct may result in, but is not limited to, a zero on the assignment and/or an F in the course. Additionally, the department chair, Dean of the College of Arts and Sciences, and the Dean of Student Life will be notified. See the full university policy, including how to appeal a decision, by following this link: <http://www.acu.edu/academics/provost/policies/index.html>.

There are many websites claiming to offer study aids to students, but in using such websites, students could find themselves in violation of academic conduct guidelines. These websites include (but are not limited to) Quizlet, Course Hero, Chegg Study, and Clutch Prep. ACU does not endorse the use of these products in an unethical manner, which could lead to a violation of our University's Rules of Conduct. They encourage students to upload course materials, such as test questions, individual assignments, and examples of graded material. Such materials are the intellectual property of instructors, the university, or publishers and may not be distributed without prior authorization. Students who engage in such activity could be found in violation of academic conduct standards and could face course and/or University penalties. Please let me know if you are uncertain about the use of a website so I can determine its legitimacy.

ADA COMPLIANCE STATEMENT

"Abilene Christian University is dedicated to removing barriers and opening access for students with disabilities in compliance with ADA and Section 504 of the Rehabilitation Act. The Alpha Scholars Program facilitates disability accommodations in cooperation with instructors. In order to receive accommodations, you must be registered with Alpha Scholars Program, and you must complete a specific request for each class in which you

need accommodations. If you have a documented disability and wish to discuss academic accommodations, please call our office directly at 325-674-2667."

TITLE IX POLICY

"As a Christian community, Abilene Christian University has committed itself, unequivocally, to ensuring a working and learning environment in which the dignity of every individual is respected. Harassment is defined as unwelcome behavior or conduct based on sex, religion, race, age, color, national origin, veteran's status, disability, or any other characteristic protected by law when (1) submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment, education, or participation in University programs or activities, (2) submission to, or rejection of, such conduct by an individual is used as the basis for a decision affecting an individual's employment, education, or participation in University programs or activities, or (3) such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creating an intimidating, hostile, or offensive environment for work, education, or participation in a University program or activity. See the full university policy by following this [link](#).

PARTICIPATION

Please evaluate your own health status regularly and refrain from attending class and other on-campus events if you are ill. ACU students who miss class due to illness will be given opportunities to access course materials online. You are encouraged to seek appropriate medical attention for treatment of illness. In the event of contagious illness, please do not come to class or to campus to turn in work. Instead, notify me by email about your absence as soon as practical, so that accommodations can be made. One of those behaviors is being present for class.

If I haven't heard from you or SOAR, you need to

- 1) be physically in class,
 - 2) be synchronously present on Zoom, OR
 - 3) complete whatever assignment/discussion/video watching/activity by x time.
-

COPYRIGHT INFORMATION

This course may contain copyright protected materials such as audio or video clips, images, text materials, etc. These items are being used with regard to the Fair Use doctrine in order to enhance the learning environment. Please do not copy, duplicate, download or distribute these items. The use of these materials is strictly reserved for this online classroom environment and your use only. All copyright materials are credited to the copyright holder.

THE MISSION OF ACU

To educate students for Christian service and leadership throughout the world.

THE MISSION OF THE COLLEGE OF ARTS AND SCIENCES

To educate students for worldwide Christian service and leadership through programs of study and other learning experiences that blend a liberal arts education with professional and career education.

THE MISSION OF THE ENGINEERING AND PHYSICS DEPARTMENT

The ACU engineering program strongly supports the university's mission of educating students for Christian service and leadership throughout the world. In support of this mission, ACU engineering graduates will attain:

- A deep and broad understanding of engineering principles and practices as evidenced by professional employment, continued professional development, and graduate study in engineering or other professional fields.
- An extensive knowledge of the innovative design processes unique to engineering professionals as demonstrated by using critical thinking skills to contribute to the scientific and technical literature, patents and intellectual property, professional societies, and creative designs.
- A thorough understanding of Christian service and leadership as shown in their commitments to professionalism, ethics, and service and leadership within the engineering profession, the church, and society.

COURSE SCHEDULE

See Canvas for schedule

Week	Topic
1	Introduction
2	Can Ethics be taught?
3	Engineering and Science Issues Test Assessment and discussion
4	Are codes of Ethics Needed?
5	How to think about Ethics
6	Should Engineers see themselves as Guns for Hire?
7	Are Whistleblowers heroes or Traitors
8	Who is to blame for technological Mishaps?
9	Will autonomous cars ever be safe enough?
10	Is social justice in the scope of your responsibilities?
12	Case Studies
13	Case Studies
14	Final Paper presentations
15	Final Paper presentations

