

Foundations in Engineering Education

EGN 6050 Section 16173

Class Periods: W | Period 7 – 9 (1:55 PM - 4:55 PM)

Location: Classroom location

Academic Term: Fall 2025

Instructor:

Name: Edwin Marte-Zorrilla

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Office Phone Number: 352-392-0638

Office Hours: Mondays and Fridays by appointment, 1:00 PM – 2:00 PM, NSC 329

Teaching Assistant/Peer Mentor/Supervised Teaching Student:

None

Course Description

An introduction to fundamental issues, questions, and approaches to engineering education; 3 credit hours.

Course Objectives

Objectives

- Develop a capacity for critical reflection.
- Inquire into the history and philosophy of engineering education.
- Problematize different perspectives as well as synthesize perspectives to form arguments for both oneself and others about the nature of engineering, education, and engineering education.

Course Goals

- Cultivate Scholarly Engagement: Encourage students to become active participants in the ongoing conversations that shape the field of engineering education.
- Build Foundational Knowledge: Provide students with a grounding in the central issues, questions, and approaches that define engineering education as a scholarly and professional domain.
- Develop Critical Thinkers: Foster the ability to question assumptions, challenge taken-for-granted ideas, and reflect on the social, cultural, and philosophical dimensions of engineering education.
- Integrate Diverse Perspectives: Enable students to examine, compare, and synthesize different theoretical and practical viewpoints on engineering and education.
- Strengthen Academic Identity: Support students in articulating their own emerging stance within the field, positioning themselves as reflective scholars and practitioners of engineering education.

Required Textbooks and Software and Materials

There is no required text, as relevant topics are spread across multiple sources. Readings (book chapter, journal articles, etc.) will be assigned and posted on the course Canvas site.

Attendance Policy, Class Expectations, and Make-Up Policy

This class is primarily discussion-based and therefore attendance is expected. Absences will be excused consistent with university policies in the Graduate Catalog

(<http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#attendance>) and require appropriate documentation. Assignments will be accepted late only in accordance with university policies.

Course Schedule

WK	Topic	Assignment
1	27-Aug Introduction to Class, Syllabus and History of Engineering Education	Each Week, students have to turn in blog entries and weekly reflections
2	3-Sep What is engineering? Student perspective	
3	10-Sep What is engineering? Perspectives of engineers	
4	17-Sep What is engineering? Perspectives of non-engineers	
5	24-Sep Engineering in the workplace	
6	1-Oct Engineering as sociotechnical	
7	8-Oct Purpose of education	
8	15-Oct Accreditation	
9	22-Oct Pedagogy	
10	29-Oct Current topics in engineering education practice	
11	31-Oct Engineering education research	
12	5-Nov Current topics in engineering education research	
13	12-Nov Peer review	
14	19-Nov Research-to-practice	
15	26-Nov Holiday - No Class	
16	3-Dec Synthesis and next steps	

Evaluation of Grades

Daily blog entry (15%)

We will use the course readings as the central basis for our discussion. The purpose of this assignment is for you to reflect on the articles prior to discussion in class. In addition, this is an opportunity for you to shape some of the course discussions on the articles. Each blog entry has a question for you to answer.

Weekly reflection (15%)

Reflection is an integral part of being a scholar. It is important to reflect on experiences to understand the meaning those experiences have for you. At the end of each week you will complete a blog entry reflecting on that week's topic. Each blog entry has a question for you to answer.

Topical presentations (20%)

Each student will give a 15 minute presentation in class on a topic related to engineering education practice or research that interests them. Topics will be identified and approved by the instructor ahead of time.

Synthesis paper (30%)

For this paper you will synthesize two or more of the topics from this semester based on the readings and discussions and develop a personal statement of your own philosophy of engineering, education, and engineering education. As such, it is an opportunity to: (1) synthesize and relate key issues and their importance, and (2) develop a personal philosophy. There are three components to the paper assignment:

- Draft paper: 5 points; Full credit for turning in a draft
- Peer review: 10 points; Each student will provide a peer review of two other draft papers.
- Final paper: 15 points

Course self-assessment (20%)

You will provide a grade for yourself for the course, along with a justification for that grade

Assignment	Total Points	Percentage of Final Grade
Daily Blog Entries	100 each	15%
Weekly Reflections	100 each	15%
Synthesis paper	100	30%
Presentation	100	20%
Self-assessment	100	20%
		100%

Grading Policy

The following is given as an example only.

Percent	Grade	Grade Points
93.4 - 100	A	4.00
90.0 - 93.3	A-	3.67
86.7 - 89.9	B+	3.33
83.4 - 86.6	B	3.00
80.0 - 83.3	B-	2.67
76.7 - 79.9	C+	2.33
73.4 - 76.6	C	2.00
70.0 - 73.3	C-	1.67
66.7 - 69.9	D+	1.33
63.4 - 66.6	D	1.00
60.0 - 63.3	D-	0.67
0 - 59.9	E	0.00

Academic Policies & Resources

To support consistent and accessible communication of university-wide student resources, instructors must include this link to academic policies and campus resources: <https://go.ufl.edu/syllabuspolices>. Instructor-specific guidelines for courses must accommodate these policies.

Commitment to a Positive Learning Environment

The Herbert Wertheim College of Engineering values varied perspectives and lived experiences within our community and is committed to supporting the University's core values.

If you feel like your performance in class is being impacted, please contact your instructor or any of the following:

- Your academic advisor or Undergraduate Coordinator
- HWCoe Human Resources, 352-392-0904, student-support-hr@eng.ufl.edu
- Pam Dickrell, Associate Dean of Student Affairs, 352-392-2177, pld@ufl.edu

Academic Dishonesty

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (<https://sccr.dso.ufl.edu/process/student-conduct-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Students Requiring Accommodations

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is

important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

University Honesty Policy

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Commitment to a Safe and Inclusive Learning Environment

The Herbert Wertheim College of Engineering values varied perspectives and lived experiences within our community and is committed to supporting the University’s core values, including the elimination of discrimination. It is expected that every person in this class will treat one another with dignity and respect regardless of race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information, and veteran status.

Software Use

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: <https://registrar.ufl.edu/ferpa.html>

Campus Resources:

Health and Wellness

U Matter, We Care:

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Counseling and Wellness Center: <https://counseling.ufl.edu>, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Discrimination, Harassment, Assault, or Violence

If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the **Office of Title IX Compliance**, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, title-ix@ufl.edu

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or <http://www.police.ufl.edu/>.

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu.
<https://lss.at.ufl.edu/help.shtml>.

Career Connections Center, Reitz Union, 392-1601. Career assistance and counseling; <https://career.ufl.edu>.

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring.
<https://teachingcenter.ufl.edu/>.

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers.
<https://writing.ufl.edu/writing-studio/>.

Student Complaints Campus: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>; <https://care.dso.ufl.edu>.

On-Line Students Complaints: <https://distance.ufl.edu/getting-help/>; <https://distance.ufl.edu/state-authorization-status/#student-complaint>.