Syllabus: COEN 1500

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Instructor and About the Course | Assignments and Grading | Course Policies and University Policies

Contact Information

Name: Kurt Maute

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Office Location: ECAD 105 (Dean's office)

Office Hours: TBD

Instructor Bio

Dr. Maute is a professor of the Department of Aerospace Engineering Sciences and the Palmer Endowed Chair at the University of Colorado Boulder. He is currently serving as the Associate Dean for Undergraduate Education. Dr. Maute received his Ph.D. degree in Civil Engineering in 1998 and his B.Sc./M.Sc. in Aerospace Engineering in 1992, both from the University of Stuttgart, Germany. After working as a postdoctoral research associate at CAS, he started his faculty position at CUB in 2000. His research is concerned with computational mechanics and design optimization methods. He focuses on fundamental problems in solid and fluid mechanics and heat transfer with applications to aerospace, civil, and mechanical engineering problems. For the past 20 years, Dr. Maute has worked on topology and shape optimization methods for a broad range of problems, in particular, coupled multi-physics and multi-scale problems, such as fluid-structure interaction and chemo-mechanically coupling. Dr. Maute has published his work in over 250 journal articles, book chapters, and conference proceedings. He is a senior adviser of *Structural and Multidisciplinary Optimization* and a member of the editorial boards for several journals.

Communication Policies

To contact Prof. Maute outside of lecture and office hours, students should exclusively use email (**maute@colorado.edu (mailto:maute@colorado.edu)**). The instructor reserves the right to reply to emails only during business hours, i.e., Monday through Friday, 8:00 am – 5:00 pm. Students can expect a reply to emails within one business day. Emails should be exclusively about administrative and personal matters and not about technical questions; technical questions should be asked in class or during office hours.

Students should email the instructor to schedule personal meetings. These meetings are exclusively to discuss personal matters, such as if a student experiences a medical/family emergency, or the student struggles in the course and needs to discuss success strategies.

Announcements and emails are sent exclusively through Canvas. Students are strongly encouraged to adjust their settings in Canvas to receive automatic notifications for course announcements.

Course Description

Guiding students through their first six weeks of college, from their first day of classes through their first round of midterms, the First Year Seminar provides Engineering students with a foundation to thrive as university scholars. The discussion-based seminar examines how students can approach their university education in order for it to be a healthy, challenging, and rewarding transformative experience. It is required of all first year engineering students living in the Engineering Connections residential community.

Course Objectives

Learning Goals

1. Students will understand that they belong to a diverse community of peers, develop an appreciation for the values and contributions of those different from themselves, cultivate a genuine curious, and charitable attitude toward others
2. Students will learn how to build trust and find a voice, how to listen to and learn from peers, how to ask for help and offer help without shame or judgment, how to develop resilience, how to give oneself permission to be a beginner, and have a learner's mindset.

3. Students will wrestle with the process of developing personal ethics (both what they value and how to live these values), without which there can be no true professional ethics.
4. Students will build a social network, as evidenced by finding a study group, being known by name (by peers and by faculty), making new friends, and engaging in co- and non-curricular events.
5. Students will find a voice in the academic give-and-take of civil discourse and inquiry
6. Students will understand why being a successful engineer requires skills in communication, leadership, ethical fluency, cooperation, and self-knowledge
7. Students will engage in conversations with their peers on topics related to their own views of education and success, and their role in the university as a young scholar.
8. Students will develop a common vocabulary regarding the fundamental values and concerns of being a successful undergraduate engineering student.
9. Students will share common readings and assignments as a foundation for discussions and engagement with peers not in their specific class (their roommates, floormates, classmates in other courses).
10. Students will be exposed to the unique, layered, and complex embodiment of particular values, interests, passions, and approaches of a caring and accomplished faculty member.
11. In addition to the common curriculum, students will have a second foundation for discussions and engagement with peers (each having a unique experience to discuss).
12. Students will be informed of and encouraged to make use of the multiple resources made available by the College, Engineering Connections, Residential Life, and Student Affairs, designed to facilitate their overall success (academic, wellness, social, civic, career, etc.)

Measurable Outcomes

1. Students will identify and explain various ethical challenges, problems and questions they encounter in the course readings and activities
2. Students will explain and compare how various thinkers/actors approach and respond to ethical questions and problems
3. Students will apply what they learn from various thinkers about ethical questions and problems to their own concerns and lives
4. Students will generate a provisional personal approach to ethical concerns and a provisional plan for academic and personal development
5. Students will identify the skills and resources necessary for undergraduate success

6. Students will identify the skills necessary to participate in a seminar discussion
7. Students will apply the skills necessary to participate in seminar discussions
8. Students will identify key elements in approaches engineers use to design engineering artifacts and systems
9. Students will apply mathematical models to design engineering artifacts

Prerequisites

First year engineering student living in the Engineering Connections residential community.

Required Texts

All required texts are included within this canvas course.

Course Outline

See **Schedule Page (https://canvas.colorado.edu/courses/123323/pages/schedule)** .

Method of Instruction

This course will be taught in person; there will be no virtual or recorded option. Students are expected to attend class in person.

Student Responsibilities and Class Expectations

As a discussion-based seminar, Students in COEN 1500 are expected to attend class and actively participate in meaningful discussions with their peers. Students are expected to prepare for class by reading the short texts *before* coming to class. A significant portion of your grade, 30%, will be based on the quality of your in-class engagement, and unexcused absences will negatively impact your final grade.

Assignments

This class has two sets of assignments: Common Curriculum Assignments and Unique Content Assignments. Common Curriculum Assignments are shared across all sections of COEN 1500, every member of the Engineering Connections community will complete these. The Unique Content Assignments will be different depending on each specific instructor's expertise. See the Assignments page for more information.

Common Curriculum Assignments:

- **Assignment #1: Sign Up For Your Major Dinner (https://canvas.colorado.edu/courses/123323/assignments/2386247)**
- **Thought Project #1: Your Personal Philosophy of Higher Education (https://canvas.colorado.edu/courses/123323/assignments/2386277)**
- **Thought Project #2: Your Relationship to Engineering Studies (https://canvas.colorado.edu/courses/123323/assignments/2386283)**

Unique Curriculum Assignments:

- Design Concept Presentation (Assignment details will be posted later)
- Final Design Presentation (Assignment details will be posted later)

Submission Policies

Each assignment details how you should submit it. Read each assignment carefully and submit it accordingly.

Grading Criteria and Points Breakdown

Your grade is determined by three parts: Assignments (70%), Classroom Engagement & Participation (30%), and Attendance (see Attendance Policy, link below).

Assignments: 70%

Classroom Engagement & Participation: 30%

Attendance: Your attendance in class is a major factor in your final grade! Learn more about the attendance policy here: **FYS Attendance Policy & Grade Impact.pdf (https://canvas.colorado.edu/courses/123323/files/79752571?wrap=1)** ⬇ **(https://canvas.colorado.edu/courses/123323/files/79752571/download?download_frd=1)**

Grading Scale

Grades will be assigned as follows

Table - Grading Scale

Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
Percentage Grade	94-100	90-93	87-89	83-86	80-82	77-79	73-76	70-72	67-69	63-66	60-62	<60

Attendance Policy

Please hit the following link to see the Attendance Policy and its impact upon your final grade: **FYS Attendance Policy & Grade Impact.pdf (https://canvas.colorado.edu/courses/123323/files/79752571?wrap=1)** ⬇ **(https://canvas.colorado.edu/courses/123323/files/79752571/download?download_frd=1)**

Inclusivity

In COEN 1500, we are committed to creating an inclusive learning environment where all students feel respected, valued, and supported. Diversity in backgrounds, perspectives, and experiences enriches our discussions and enhances our learning outcomes. We recognize and celebrate the unique contributions that each student brings to our classroom community.

It is our collective responsibility to promote a culture of inclusivity, where differences are embraced and everyone has equal opportunities to participate and succeed. Discrimination, harassment, or any form of disrespectful behavior will not be tolerated.

We encourage open dialogue, empathy, and mutual respect among all members of our learning community.

Please approach me or the Engineering Connections team if you have any concerns or suggestions regarding inclusivity in our course. Together, we can ensure that COEN 1500 is a welcoming and supportive environment for everyone.

Course Plagiarism Policy

Academic integrity is of utmost importance in COEN 1500. Plagiarism, which includes using AI or any other automated tools to generate reflections or assignments, is strictly prohibited. All work submitted must be your own, representing your individual thoughts, analyses, and conclusions. Any instances of plagiarism or misuse of AI will be addressed according to university policies on academic dishonesty. It is essential to uphold ethical standards and ensure that all academic work reflects your own effort and understanding.. **Review the campus options and requirements for reporting plagiarism. (http://www.colorado.edu/policies/academic-integrity-policy)**

University Policies

You can find a copy of the University Policies on the **CU Resources (https://canvas.colorado.edu/courses/123323/pages/cu-resources)** page.