

## **Continuum Mechanics – Spring 2026**

EGM 6611 Section CAMP

**Class Periods:** MWF, Period 7, 1:55 PM – 2:45 PM (E.T.)

**Location:** NEB 0G0102

**Academic Term:** Spring 2026

### ***Instructor:***

Xin Tang

Email Address: [xin.tang@ufl.edu](mailto:xin.tang@ufl.edu)

Office Phone Number: (352) 294-1194

Office Hours: MWF, 2:45 PM – 3:15 PM (E.T.), NEB 0G0102

**Teaching Assistant/Peer Mentor/Supervised Teaching Student:** NA

### ***Course Description***

Class Number 11700; 3 Credits

Tensors of stress and deformation. Balance and conservation laws, thermodynamic considerations. Examples of linear constitutive relations. Field equations and boundary conditions of fluid flow.

**Course Pre-Requisites / Co-Requisites:** EGM3520

### ***Course Objectives***

This course provides broad introduction to the fundamentals of continuum mechanics, elasticity, thermodynamics, and active matter physics. It covers the concepts and principles of the mechanics of continuous media including solids and fluid mechanics. Topics include kinematics, stresses, strains, conservation equations, and constitutive theories. We aim to foster the next generation of leading engineers and scientists to approach scientific inquiry in a way that crosses conventional academic disciplines.

**Materials and Supply Fees:** NA

### ***Required Textbooks and Software***

Note: Students are not required to purchase any textbooks in our class. We will teach the relevant book sections in our class and the UF library have all books available to borrow.

- Continuum Mechanics for Engineers, G. T. Mase, and G. E. Mase, CRC Press, 1999, ISBN number: 10-0849318556
- A First Course in Continuum Mechanics, Yuan-Cheng Fung, Pearson, 1994, ISBN number: 13- 978-0130615244

### ***Recommended Materials***

Note: Students are not required to purchase any textbooks in our class. We will teach the relevant book sections in our class and the UF library have all books available to borrow.

- Theory of Elasticity, L. D. Landau and E. M. Lifshitz, Pergamon Press, 2012, ISBN: 13-978-0750626330

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### ***Required Computer***

Recommended Computer Specifications: <https://it.ufl.edu/get-help/student-computer-recommendations/>

HWCOE Computer Requirements: <https://www.eng.ufl.edu/students/advising/fall-semester-checklist/computer-requirements/>

## Course Schedule

Note: The following tentative schedule is subject to change because we will adapt our class progress to all our student with different educational backgrounds. We will provide an updated and detailed course schedule throughout the semester.

Week 1:	Introduction to the course; Mathematics Review
Week 2:	Vectors and Tensors I
Week 3:	Vectors and Tensors II
Week 4:	Kinematics of Deformation I
Week 5:	Kinematics of Deformation II
Week 6:	Stress I
Week 7:	Stress II
Week 8:	Stress III
Week 9:	Spring Break
Week 10:	General Principle I
Week 11:	General Principle II
Week 12:	General Principle III
Week 13:	Constitutive Theories I
Week 14:	Constitutive Theories II
Week 15:	Constitutive Theories III
Week 16:	Current Frontier of Continuum Mechanics
Week 18:	Final Exams

## Important Dates

<1/12/2026>	<b>Class Starts (We will meet in our classroom NEB 0G0102)</b>
<1/19/2026>	<b>MLK Day (No Class)</b>
<1/28/2026>	<b>Mid-Exam 1 (Class Time (1:55 PM – 2:45 PM (E.T.)); via Zoom link in Canvas)</b>
<2/27/2026>	<b>Mid-Exam 2 (Class Time (1:55 PM – 2:45 PM (E.T.)); via Zoom link in Canvas)</b>
<3/16-3/20>	<b>Spring Break (No Class)</b>
<2/27/2026>	<b>Mid-Exam 2 (Class Time (1:55 PM – 2:45 PM (E.T.)); via Zoom link in Canvas)</b>
<4/1/2026>	<b>Mid-Exam 3 (Class Time (1:55 PM – 2:45 PM (E.T.)); via Zoom link in Canvas)</b>
<4/22/2026>	<b>Last class (We will meet in our classroom NEB 0G0102)</b>
<4/24/2026>	<b>Reading Day (No Class)</b>
<4/27/2026>	<b>Final Exam (Class Time (1:55 PM – 2:45 PM (E.T.)); via Zoom link in Canvas)</b>

## Evaluation of Grades

Assignment	Total Points	Percentage of Final Grade
Homework Sets (6)	100 each	15%
Quizzes (4)	100 each	15%
Midterm Exam (3)	100	30%
Final Exam	100	30%
Attendance	100	10%
		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 by discrimination or harassment of any kind, please contact your instructor or any of the following:

- Your academic advisor or Graduate Coordinator
- HWCOE Human Resources, 352-392-0904, [student-support-hr@eng.ufl.edu](mailto:student-support-hr@eng.ufl.edu)
- Pam Dickrell, Associate Dean of Student Affairs, 352-392-2177, [pld@ufl.edu](mailto:pld@ufl.edu)