

ME542  
Advanced Fluid Mechanics  
M-W 2:30PM-4:15PM  
STH 113

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Textbook:

I will closely follow: Fluid Mechanics 6th Edition, by Pijush K. Kundu, Ira M. Cohen, David R. Dowling.

**SYLLABUS for FALL 2023\***

WEEK	TOPIC	BOOK SECTIONS
1	Introduction	
2	Cartesian Tensors	2.1-2.13
3	Kinematics	3.1-3.3
4	Kinematics	3.4-3.6
5	Conservation Laws	4.1-4.4
6	Conservation Laws	4.5-4.6
7	Conservation Laws	4.8, 4.10, 4.11
8	Vorticity	Chapter 5
9	Ideal Flow	Chapter 7
10-12	Laminar Flow	Chapter 9
13-14	Boundary Layers	Chapter 10

*\*Subject to change. Will be updated.*

**Policies:**

- 1-HW will be given, but not graded. It is just intended to prepare you for the quizzes.
- 2-In-class quizzes will be given.
- 3-No midterm or final.
- 4-A computational project will be assigned.