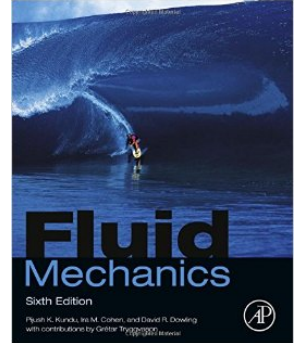


M E 522 Textbook

Prepared by Professor J. M. Cimbala, Penn State University. Latest revision: 21 December 2017

Recommended Textbook

- There is no *required* textbook for this course, since nearly everything you need will be given in class.
- However, a highly recommended textbook for this course is: ***Fluid Mechanics, 6th edition, Pijush K. Kundu, Ira M. Cohen, and David R. Dowling, Elsevier (Academic Press), 2016.***
- If you have an older edition of this book (4th or 5th edition), it should suffice, but equation numbers, figure numbers, and even some of the notation and symbols differ from the newest edition.
- Here are the most important (and potentially confusing!) nomenclature changes between the 5th and 6th editions:
 - Strain rate tensor: e_{ij} in 5th edition = S_{ij} in 6th edition
 - Stress tensor: τ_{ij} in 5th edition = T_{ij} in 6th edition
 - Deviatoric stress tensor: $\bar{\sigma}_{ij}$ in 5th edition = τ_{ij} in 6th edition
- *Note:* I plan to use the notation consistent with the 6th edition. I apologize in advance if I inadvertently use the older notation which is more ingrained in my head.



Additional Resources

- Many other reference books are on reserve in the Engineering Library, as listed in the References folder.
- Class notes and videos of the lectures are also posted on the CANVAS website at <http://canvas.psu.edu>.
- Other notes, pdf files, and articles will be provided as the semester progresses.