

**ENG ME 452 Advanced Fluid Mechanics****Fall 2021**

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Text: P. K. Kundu et al., *Fluid Mechanics*, 6th ed., Academic, 2016.

<u>Week Beginning</u>	<u>Topics</u>	<u>Reading</u>
8/30	Fluid properties, index notation	Chs. 1, 2
9/6	Fluid kinematics	Secs. 3.1 – 3.6
9/13	"	"
9/20	Conservation laws	Secs. 4.1 – 4.11
9/27	"	"
10/4	Vorticity dynamics	Secs. 5.1 – 5.7
10/11	"	"
10/18	Potential flow	Secs. 7.1 – 7.9
10/25	"	"
11/1	Gravity waves	Secs. 8.1 – 8.8
11/8	"	"
11/15	Viscous flow	Secs. 9.1 – 9.7
11/22	"	"
11/29	Linear stability theory	Secs. 11.1 – 11.6
12/6	"	"

Grading: Two tests, each worth 33% of final grade.  
Homework assignments, together worth 34% of final grade.

## **Course Blackboard Site**

There is a combined Blackboard site for Sections A1 and A2 of ENG ME 303. with a content folder for each section. The lab and simulation exercises will be the same for each section, and lecture videos for both sections are available to everyone.

## **COVID-19 and BU Community Health Expectations**

Masks are required and must be worn over the mouth and nose at all times when in public spaces on campus, including classrooms. Students should be prepared to show proof that they are compliant with health attestations and testing in order to attend class. All students are expected to follow all university guidelines with respect to daily symptom checks, testing, social distancing, and use of masks when they leave their dorm or home. For a detailed description of official BU policies regarding COVID, please visit <http://www.bu.edu/dos/policies/lifebook/covid-19-policies-for-students>