

Fall 2020 CEE 650: Fluid Mechanics
<https://courses.unh.edu/class/202010/14149>

Description: Properties of fluids, fluid statics, continuity, momentum and energy equations, resistance to flow, boundary layer theory, flow in open channels and piping systems, dimensional analysis, similitude, drag, and lift. Laboratory exercises on measurement of fluid properties, energy principles, flow resistance, discharge measurements, momentum, hydropower, groundwater flow, and settling of spheres.

Schedule: MWF 1110 AM-1200 PM

Room: CHASE 105

Instructor: Tom Ballesterio Ph.D., P.E., tom.ballesterio@unh.edu

Text book, title author, and year:

Content Delivery:

CEE 650 will be delivered in a ZOOM synchronous manner, (meaning it will be a live broadcast of what is happening in the classroom). There will be limited space for student lecture attendance. The synchronous broadcast will be recorded for later viewing.

Students will have the opportunity to ask questions during class via ZOOM chats.

Additional asynchronous videos and other asynchronous material will be made available in the CEE 650 Canvas pages.

Students will be expected to “attend” class, either in the classroom or via ZOOM, and be prepared to ask questions and answer questions. The class is run in an interactive format.

Laboratories:

There will be three laboratory components for CEE 650 in Fall 2020.

(1) Group labs that will be taught online. Students will asynchronously watch laboratory videos and work in groups to analyze data and prepare lab reports. A total of six laboratory sessions are planned.

(2) Individually each student in class will be required to come to two (2) in-person three (3) hours long laboratory session. At start of semester students will be asked to sign up for dates for these two sessions. Timing of these two in-person sessions will be same as the laboratory section that student has selected during registration.

(3) Mini home experiments for students will be assigned. These will be conducted by students in individual format with a short memo and video submissions to Canvas.

Assessment:

- All assignments will be posted in Canvas as well as links to the recordings of the synchronous broadcasts.
- 8-10 homework assignments that will be submitted electronically via Canvas
- 6 laboratory report and 3 memo and video submissions will be required to be submitted electronically via Canvas
- Periodic on-line quizzes will be administered electronically, a minimum of 6
- 2 mid-term examinations and 1 final examination

All three exams will be administered online. Students will be required to use Lock-down browser and will have to keep their webcams on for the duration of exam.

Note: Accommodations for remote administration of any examination will be made on an individual basis following University policies and after timely consultation with course instructor.