

Fall 2020 CEE 733/833: Public Infrastructure and Asset Management

<https://courses.unh.edu/class/202010/16448>

Description: The course provides a thorough examination of the growing engineering field of Public Infrastructure Assess Management (IAM). The course enables the student to design an IAM system. It touches upon all types of public infrastructure with a particular focus on water infrastructure for the semester design project. Students build upon their engineering economics and project engineering skills and use simple IAM software along with GIS applications. Practice leaders from the industry provide guest lectures throughout the semester. A focus on triple bottom line or the Societal, Environmental and Economic aspects of IAM are included. The format is a modified team base design learning experience providing practice in processing of technical lecture material, personal performance evaluation (frequent quizzes) and team based performance evaluation. Student groups will present their design to the class and provide a written engineering report.

Schedule: MWF 210 PM -300 PM

Room: On-line

Instructor: James P. Malley, Ph.D. jim.malley@unh.edu

Text book, title author, and year: No required textbook. All materials will be available via CANVAS

Content Delivery:

CEE 733/833 will be delivered in a ZOOM synchronous manner, (meaning it will be a live broadcast of what is happening during the course lecture). The synchronous broadcast will be recorded for later viewing and placed on CANVAS. There will not be any face-to-face meetings for this course. The course has a TA assigned and she will be available to assist students throughout the term with formal office hours and with help on study sessions and administering specific student accommodations.

Students will have the opportunity to ask questions during class via ZOOM chats and/or raising their hand electronically and then using the Zoom audio.

Additional asynchronous videos and other asynchronous material will be made available in the CEE 733/833 CANVAS pages. The course will also have a series of guest speakers who will deliver presentations both synchronously and recorded for later viewing and placed on CANVAS.

CEE 733/833 will have a design project where groups will design a public infrastructure asset management system for an actual community provided by a leading consulting firm. The project will require both an oral and a written engineering design report and during the term the ZOOM breakout rooms will be used to work on the project.

Students will be expected to “attend” each Zoom class and be prepared to ask questions and answer questions. The class is run in an interactive format.

Assessment:

All assignments will be posted in Canvas as well as links to the recordings of the synchronous broadcasts.

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| A) Seven (7) quizzes given and the top 6 will be counted – these will be given during the e-class meetings for about 60 minutes. | 60% |
| B) Term PIAM System Design Project (Oral and Written Reports) | 25% |
| C) Group turn-in assignments (Team Based Learning) will be conducted during the e-class meetings using group lecture and the Zoom break out rooms | 15% |

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.