

TUES: Positioning Engineers for Urban Sustainability Transition Strategy Development

Vertical Integration Course Evaluation Post-Survey for CEE 486/494/507/SOS 547/PUP 553 (Urban Infrastructure Anatomy and Sustainable Development)

1. Based on credit hours, you are currently a:
 - a. PhD student
 - b. MA student
 - c. MS student
 - d. MSE student
 - e. Undergraduate – Senior
 - f. Undergraduate – Junior
 - g. Undergraduate – Sophomore
 - h. Undergraduate – Freshman

2. In which course are you enrolled?
 - a. CEE 486
 - b. CEE 494
 - c. CEE 507
 - d. SOS 547
 - e. PUP 553

3. What is your current major, if you have declared one? Please select all that apply.
 - a. Computer science
 - b. Construction management
 - c. Engineering - Aerospace
 - d. Engineering - Biomedical
 - e. Engineering - Civil
 - f. Engineering - Civil and environmental
 - g. Engineering - Chemical
 - h. Engineering - Computer systems
 - i. Engineering - Construction
 - j. Engineering - Environmental
 - k. Engineering - Electrical
 - l. Engineering - Geotechnical
 - m. Engineering - Industrial
 - n. Engineering - Material science
 - o. Engineering - Mechanical
 - p. Engineering - Structural
 - q. Engineering - Transportation
 - r. Geography
 - s. Planning

- t. Sustainability
 - u. Other (please specify): _____
4. What is your current minor, if you have declared one?
 5. If you have an undeclared minor or focus, what is it?
 6. The instructor has made an effort to improve vertical integration between curriculum in lower division courses and upper division courses to benefit student learning. Were you aware of the vertical integration component of this course?
 - a. Yes
 - b. No
 7. Reflecting on your experience within the course, did you feel the vertical integration?
 - a. Yes
 - b. No
 8. [If yes] How do you think vertical integration impacted your learning in the course?
 9. Please rate your current skill level for each of the following skill areas. (Expert, Advanced, Proficient, Beginner, No knowledge)
 - a. Technical communication (i.e., talking with someone from within your field of expertise)
 - b. Interdisciplinary communication (i.e., talking about technical details with someone from outside of your field of expertise)
 - c. Identifying the contributions of fields outside your expertise to solving a problem
 - d. Understanding the perspectives of different fields on a problem
 - e. Working with community stakeholders
 - f. Integrating information from team members
 - g. Assessing the energy and environmental impacts of an infrastructure system
 - h. Explaining the basic physical structuring of core civil infrastructure systems
 - i. Describing the management structure of core civil infrastructure systems
 - j. Explaining the basic operating principles of core civil infrastructure systems
 - k. Assessing the economic costs of operation, maintenance, and use for core civil infrastructure systems
 - l. Assessing the social equity and environmental justice impacts of an infrastructure system
 - m. Assessing the climate change risks to core civil infrastructure systems
 10. To what extent have your skills in each of the following areas improved as a result of participating in Urban Infrastructure Anatomy and Sustainable Development? (Very much, Quite a bit, Some, Very little, Not at all)
 - a. Technical communication (i.e., talking with someone from within your field of expertise)

- b. Interdisciplinary communication (i.e., talking about technical details with someone from outside of your field of expertise)
 - c. Identifying the contributions of fields outside your expertise to solving a problem
 - d. Understanding the perspectives of different fields on a problem
 - e. Working with community stakeholders
 - f. Integrating information from team members
 - g. Assessing the energy and environmental impacts of an infrastructure system
 - h. Explaining the basic physical structuring of core civil infrastructure systems
 - i. Describing the management structure of core civil infrastructure systems
 - j. Explaining the basic operating principles of core civil infrastructure systems
 - k. Assessing the economic costs of operation, maintenance, and use for core civil infrastructure systems
 - l. Assessing the social equity and environmental justice impacts of an infrastructure system
 - m. Assessing the climate change risks to core civil infrastructure systems
11. How confident are you that you could...? (Very confident, Pretty confident, Somewhat confident, Not at all confident)
- a. Work as part of an interdisciplinary team
 - b. Work independently
 - c. Provide feedback to team members
 - d. Receive criticism from team members
 - e. Communicate technical information to people within your field of expertise
 - f. Communicate technical information to people outside of your field of expertise
12. To what extent has your confidence in each of the following areas improved as a result of participating in Urban Infrastructure Anatomy and Sustainable Development? (Very much, Quite a bit, Some, Very little, Not at all)
- a. Work as part of an interdisciplinary team
 - b. Work independently
 - c. Provide feedback to team members
 - d. Receive criticism from team members
 - e. Communicate technical information to people within your field of expertise
 - f. Communicate technical information to people outside of your field of expertise
13. To what extent have your skills in each of the following areas improved as a result of participating in Urban Infrastructure Anatomy and Sustainable Development? (Very much, Quite a bit, Some, Very little, Not at all)
- a. Advising students within your course on collecting high quality scientific information
 - b. Advising students in other courses on collecting high quality scientific information
 - c. Working collaboratively as part of a research team
 - d. Creating tasks for other students to help you complete your work

- e. Synthesizing information from multiple sources, such as peers and published research
14. To what extent has your confidence in each of the following areas improved as a result of participating in Urban Infrastructure Anatomy and Sustainable Development? (Very much, Quite a bit, Some, Very little, Not at all)
- a. Advising students within your course on collecting high quality scientific information
 - b. Advising students in other courses on collecting high quality scientific information
 - c. Working collaboratively as part of a research team
 - d. Creating tasks for other students to help you complete your work
 - e. Synthesizing information from multiple sources, such as peers and published research
15. What interactions and/or activities did you complete as part of the vertical integration with Dr. Parrish's CON 252 course?
- a. Emailed students within your course
 - b. Emailed students from Dr. Chester's course
 - c. Met with students within your course
 - d. Met with students from Dr. Chester's course
16. Do you intend to pursue additional degrees after you complete your current degree program?
- a. Yes
 - b. No
17. [If yes] What degree?
- a. Bachelor's
 - b. Master's
 - c. Doctorate (e.g., PhD, EdD)
 - d. Medical Doctorate (e.g., MD, DVM, DNP)
 - e. Professional Degree (e.g., MBA, JD, PE)
 - f. Other (please describe): _____
18. In what sector do you anticipate working following graduation or the conclusion of any planned further education? Please select all that apply.
- a. Academic
 - b. Government
 - c. Private for-profit
 - d. Private non-profit
 - e. Other (please describe): _____
19. To what extent do you think your experience participating in Urban Infrastructure Anatomy and Sustainable Development influenced your career goals?
- a. Very much
 - b. Quite a bit
 - c. Some

- d. Very little
- e. Not at all

20. Please explain why you think your experience influenced your career goals.
21. Are there any aspects of Urban Infrastructure Anatomy and Sustainable Development that you think should be improved based upon your experience in the course to date?
22. What advice would you give a student who enrolls in Urban Infrastructure Anatomy and Sustainable Development for next semester/year?
23. Please use this space to share any other comments you have about Urban Infrastructure Anatomy and Sustainable Development.
24. Please create a username by writing your favorite color and favorite food (e.g. blue tuna or red cookies). We will use this question only to make sure we don't have duplicates. We will not record your information.

Thank you for completing this survey.