

Daniels Fund Faculty Fellowships 2020-2021 Report

Charlie Zhang

Department of Civil and Architectural Engineering

Activities performed:

Fall 2020:

1. Revise CM2000 Introduction to Construction Management and CM3210 Cost Estimating curriculum to include ethic lectures cover DFEI principles in Fall 2020.
2. Introduce DFEI principles to CM2000 students.
3. Host round table discussions in CM2000 (Virtually breakout room through ZOOM) to promote students' discussion on DFEI principles.
4. Invite guest speaker in CM3210 to discuss how DFEI principles can be applied to construction industry, especially in the construction cost estimating.

Spring 2021:

1. Introduce DFEI principles to CM3210 Construction Scheduling Class. Students gain the knowledge necessary to apply engineering principles to the analysis of economic approaches to construction planning, scheduling, monitoring, and control.
2. Students in CM2600 and CM3210 are encouraged to participate in the American Institute of Contractors (AIC) Ethics Competition.
3. Students are encouraged to participate in the American Society of Civil Engineers (ASCE) DANIEL W. MEAD Prize competitions.

Activities planned but not be able performed:

I plan to have students conduct a Role-play scenario and make a series of videos to discuss the unethical practices in the construction industry. However, due to the COVID-19, I was not able to complete this.

Evaluate the impact of the learning instrument:

Student Learning Outcome (SLO): Construction management accreditation body requires our program to assess the one SLO related to the ethics: Analyze professional decisions based on ethical principles.

- The student were required to the completed ethics quiz, which is a set of 20 multiple-choice questions, including DFEI principles.
- Case study "Academic Integrity—Obligation of Engineering Faculty Who Becomes Aware of Cheating", Case 12-1, from National Society of Professional Engineers were given to students to discuss the DFEI principles of **INTEGRITY, TRUST, AND ACCOUNTABILITY**. This topic was covered on September 9th, 2020 in CM2000 class.

- Case study “Conflict of Interest—Participating in Multiple DOT Proposals for Different Contractors”, Case 17-8, from National Society of Professional Engineers were given to students to discuss the DFEI principles of **TRANSPARENCY AND FAIRNESS**. This is an assignment for students to write an Ethic paper. Students gave their opinion or make decision based on the **DFEI priciples**.