

# Setting up early expectations in students: a case study in an engineering design course

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## Abstract

The Faculty of Engineering at McMaster University has recently launched the PIVOT, a re-thinking of the undergraduate engineering program with a re-designed curriculum that aims to foster new and relevant competencies in engineering students via large-scale experiential and integrated learning curricular experiences.

The aim of this presentation is two-fold. First, to present students' evaluation of different course aspects, highlighting the importance of setting up early expectations in students and how those expectations can affect the way in which students perceive the course. Second, to discuss how course instructors are iterating using evidence collected from students to improve future course implementations.

The case study is ENGINEER 2PX3. Winter 2022 was the first delivery of this second year engineering design and communications course. Using a mixed-method approach, we analyzed student responses to a Likert-like survey, and also interviewed students and teaching assistants. The survey data showed that the majority of students achieved the course learning outcomes, and mastered the related skills. However, the same data showed a range of opinions on the success of the course delivery. The student interviews suggested that the reason for this difference in opinion was the term-long design project that students worked on. For some projects, the course content and project deliverables were greatly in alignment. For other projects, students felt a great difference between their expectations and the actual work they did.

The knowledge gained will be used to improve the 2023 delivery of 2PX3. Pedagogical research will be carried out to explore whether the proposed changes make a difference in students' perceptions of the course.