

1145-VK-2371      **Youssef Qranfal\***, Wentworth Institute of Technology, 550 Huntington Ave, Boston, MA 02115,  
and **Steve Morrow**. *The Making of a Senior Design Course in Applied  
Mathematics*. Preliminary report.

Undergraduate research in our engineering university involves a student exploring, and perhaps obtaining on their own, results with faculty support. Ideally, this research is a common project with one or more of the engineering department capstone courses. Typical projects involve understanding or developing a mathematical model and applying it using tools such as from programming languages, statistics, and data science. Students are encouraged to come up with their project ideas, although they could choose from proposed ones by faculty. Their choices might be projects from their past or present coop or from courses of their own interest. Implementing this senior design course in our institute has evolved over time and is close to maturity, although there is always room for improvement. In this talk we will discuss the making of an applied mathematics capstone course within an engineering university and ways to improve it, grading schemes used, lessons we've learned, and students reactions. Examples of successful projects will be provided. (Received September 25, 2018)