

## ENGINEERING

### Ethics in Engineering Education: Is ABET Enough?

**Student researcher:** Alyssa DeLouise, Junior

ABET is an organization that accredits college or university programs in STEM and provides quality assurance that a program meets the standards of the field or profession. According to current scholarship, there is concern that ABET accreditation has a negative impact on the transparency of syllabi and student engagement in engineering ethics. This study was designed to understand more about the relationship between ABET accreditation, syllabi design, and engineering ethics by assessing 22 syllabi from an R1 institution's electrical and computer engineering department. These syllabi were analyzed to understand where they fall in the students' degree path, learning outcomes, assessment processes, and whether or not they explicitly mentioned ABET. Most notably from this study, 41% of syllabi mentioned ethics, while 23% of syllabi mentioned ABET requirements. Of those that mentioned ABET, two courses were core courses and three were upper-level electives, with only one of

the five syllabi mentioning ethics. These findings suggest that when ethics is prioritized in the course, ABET is not made apparent as a goal. When ABET is explicitly mentioned, it is unlikely to see ethics prioritized as well in the course. This is consistent with current scholarship that ethics is treated problematically as an add-on to courses. Future course design should focus on not just technical aspects, but also ethics and transparency around designed course outcomes and assessment. This study's limitations include a small sample size, and possible selection bias, given that faculty voluntarily chose to participate in this study. Future research involving a larger sample and mixed methods is needed to better understand the relationship between course objectives, ABET, and ethics across engineering.

*Research advisor Lindsay Weinberg writes: "Alyssa DeLouise's research has made an important contribution to understanding how ABET accreditation impacts electrical and computer engineering syllabi design, with particular attention to engineering ethics education. Her research helps us imagine possible reforms to ABET to bring about more consistent and robust engagement with ethics education."*