Mathematics departments exist in many shapes and sizes, offering undergraduate curricula that are a complex blend of theoretical, applied, and engineering mathematics, statistics, data and actuarial science, and mathematics education. Additionally, faculty respond to the skills and experience of the students they serve, who may come to college from rigorous pre-college programs, from high schools providing minimal college preparation, or some combination of the two. We prepare students for careers in education, business, industry, government, and other disciplines both in and out of STEM, as well as for life in a data-driven world. Despite this range of context and focus, mathematics programs share a common responsibility for providing relevant service courses in mathematics for students across the institution, collaborating with colleagues in engineering, science, and social science on calculus and statistics sequences, and, of course, attending to the needs of our own majors.

Because each mathematics program has a unique set of challenges, each department’s goals balance a complex set of priorities ranging from modernizing curricula, to attracting and including diverse students and faculty, to incorporating technology and meeting the changing needs of disciplines and industries that depend on quantitative and computational skills and reasoning. The mathematics community has long been a collaborative enterprise in which professional societies, universities, and departments work in concert, using a robust set of practices for self-study and external review to evaluate and improve mathematics programs. This work is done in the context of the institution’s mission and considering program recommendations and guidelines that have been issued over the years by the mathematical societies that belong to the Joint Policy Board for Mathematics: MAA, AMS, ASA, and SIAM. These long-standing practices have allowed mathematics education to be agile, responding to the changing expectations of society, industry, and the academy.
The quality improvement approaches of the JPBM societies and those of ABET have many similarities. Both processes aim to promote equity and best practice in education-based disciplinary standards, and both involve intensive self-assessment by programs, culminating in a site visit by an external review team. There are important differences, however, as well. For example, while ABET-accredited programs meet common quality standards, the societies’ program review processes customize assessment to the specific curricular goals, populations, and service requirements of individual programs. Before engaging with ABET accreditation, programs in the mathematical sciences and the professional societies that guide them may want to consider:

Which approach is most consistent with the goals of continuous program improvement and equity that are fundamental to modern post-secondary mathematics education?

Which approach has the flexibility and agility to support educational quality across the diverse mathematics education ecosystem?

The AMS Department of Education and the AMS Committee on Education respect and share ABET’s goal of ensuring that students have the best educational experiences possible. We welcome discussion within the mathematical sciences communities about the most effective way to ensure high-quality, equitable access and outcomes for all students in post-secondary mathematics education.