

Teaching Faculty

For normal merit advancement at the assistant teaching professor, associate teaching professor, full teaching professor, and above scale teaching professor levels, the department expects uniformly excellent teaching and sustained professional or scholarly activity. The department expects a light record of departmental service at the assistant teaching professor level, and an increasingly strong record of such service at the associate, full, and above scale teaching professor levels.

Teaching: The department expects dedication and commitment to teaching from its teaching faculty regardless of rank and step. Teaching effectiveness is measured partly using responses on Student Evaluation of Teaching (SET) forms. The interpretation of these responses is based on various factors, including class level, class size, and evidence of teaching effectiveness in previous reviews. While student ratings on the SET forms are an important consideration, the department takes a holistic approach to the evaluation of teaching. The department also considers the teaching portfolio and expects to see evidence that faculty are thinking carefully about their pedagogical choices, and that students are engaged and working hard.

Professional or Scholarly Activity: Professional or scholarly activity for teaching faculty includes publishing papers about mathematics or about mathematics education, but it also includes developing and disseminating curricular materials, leading workshops for K-12 teachers, creating items for diagnostic mathematics tests, presenting seminars or lectures at other institutions or conferences, collaborating on grants for mathematics or mathematics education, etc. The impact of these activities is best judged individually rather than merely counted. Nevertheless, the department expects something on the order of one or two substantial activities over a two-year review period for assistant and associate teaching professors, two or three substantial activities over a three-year review period for full teaching professors, and three or four such activities over a four-year review period for above scale teaching professors.

Publications in mathematics and mathematics education are typically authored by single researchers or by small teams of collaborators (typically 2-4), with names appearing on the publication in alphabetical order, representing approximately equal contributions of all co-authors. However, some publications may use a different convention. In such cases, our department letter will explain the convention used for that specific article.

Service: The department tries to avoid burdening its assistant teaching professors with a heavy service load. Expected department service for assistant teaching professors would involve membership in one of the less time-consuming department committees related to undergraduate education. For associate teaching professors, expected department service would involve membership in one or two of the less time-consuming department committees related to undergraduate education, while full and above scale teaching professors would be expected to serve on one or two of the moderately time-consuming department committees related to undergraduate education.

The department also encourages teaching faculty to engage in service outside the department at the school, college, or campus level, and to participate in the wider mathematics and mathematics education communities. However, such external service is not considered to be a requirement for normal merit advancement.

Examples of scholarly activities in the mathematical sciences following APM 210-3 (2):

This section gives some examples of scholarly activities. The list is not meant to be exhaustive, nor to imply that faculty need to engage in all of these activities:

1. Designing, developing, and implementing innovative workshops for local in-service K-12 school teachers.
2. Mathematics Diagnostic Testing Project (MDTP): creating and revising questions for mathematics proficiency diagnostic exams for California schools grades 7-12.
3. Developing innovative curricular materials designed to improve learning outcomes. This might include, for example, videos, online courses, substantial lecture notes, innovative problem sets, etc.
4. Publishing peer-reviewed papers or books in any areas of mathematics, statistics, mathematics education, and related fields. This includes publications in disciplinary research journals, or in mathematics education journals.
5. Presenting seminars or lectures at other institutions or conferences in mathematics, statistics, mathematics education, and related fields.
6. Collaborating on a grant or award related to mathematics, statistics, mathematics education, or related fields.

Expectations with regard to scholarly achievement increase as one progresses to higher ranks. For example, advancement to Step VI involves a career review, and national or international recognition is expected for advancement to Above Scale. Independent letters from external referees, as well as professional activities such as refereeing or editorial service for reputable publications, can help to document professional standing.

Two types of scholarly activity in mathematics education that can be disseminated through publications or conference presentations are known as DBER (Discipline-Based Education Research) and SoTL (the Scholarship of Teaching and Learning). Although they overlap to some extent, DBER tends to be rigorous social science research on teaching and learning, while SoTL leans more toward sharing one's own design of mathematics courses and experiences teaching them. DBER journals in mathematics include the *Journal of Mathematical Behavior* and *Educational Studies in Mathematics*. SoTL is published in the *Journal of the Scholarship of Teaching and Learning*, *The Mathematics Teacher*, and *PRIMUS* (Problems and Resources In Mathematics Undergraduate Studies) among others. Conferences of the MAA and AMS both include sessions devoted to DBER and SoTL. There is an MAA publication, free for members, called *Doing the Scholarship of Teaching and Learning in Mathematics*, by J. Dewar and C. Bennett.