Mathematics & Statistics Department
Guidelines for Evaluation of Faculty

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CONSIDERATIONS FOR TEACHING

The following are our departmental considerations for all faculty teaching at every stage of a departmental career. Strong teachers employ effective pedagogical practices that include:

1. Communicating in a clear and organized manner;
2. Engaging students in learning;
3. Challenging students intellectually;
4. Thoughtfully choosing and using appropriate pedagogy;
5. Being helpful to students within class;
6. Being helpful to students outside of class;
7. Working to make class materials, class dynamics, and office hour dynamics inclusive.

To assess the extent to which an individual employs effective pedagogical practices, we will look for evidence of the following practices in *Personal Statements, Syllabi and Assignments, Peer Review, Student Letters, Grades and Teaching Evaluations*. However, the absence of evidence from a particular source will not necessarily be construed as an absence of the practice.

Communicating in a clear and organized manner

Syllabi and Assignments: Is the organization of the course clear? Are guidelines, expectations, and deadlines clear? *Student Letters and Teaching Evaluations:* Do students understand the expectations set for them? Do they report that the instructor communicated clearly and in an organized manner? *Peer Review:* Did the review of teaching materials and classroom observation conclude that the course and individual class session was well organized? *Personal Statement:* Does the individual align course goals and structure?

Engaging students in learning

Peer Review: What did peers observe about student engagement during class? *Student Letters and Teaching Evaluations*: Do students report being interested in the material/thinking about course material? *Personal Statement:* Does the individual communicate an awareness of and effort to creatively engage students?

Challenging students intellectually

Syllabi and Assignments: Are the assignments at an appropriate level for the course? *Student Letters and Teaching Evaluations:* Do students report being challenged? *Personal Statement:* Does the instructor discuss ways in which they attempt to provide an appropriate level of challenge, with attention to inclusivity and equity in assessment? *Grades*: Are the grade distributions for the instructor's courses in line with departmental standards?

Thoughtfully choosing and using appropriate pedagogy

Syllabi and Assignments: Does the instructor use assignments and pedagogy that are appropriate to the subject and its goals? *Personal Statement:* Is the instructor reflective of choices about assignments and pedagogy? *Peer Review:* What did peers observe about the pedagogical techniques that the individual employed inside the classroom?

Being helpful to students within class

Peer Review: Did peer visits indicate that the instructor was able to respond to student questions and manage the mix of lecture, activities, and/or discussions skillfully? Were the instructor's interactions with students positive and constructive? *Student Letters and Teaching Evaluations:* Do students report that the instructor was able to answer questions in class? What do students say about the classroom environment?

Being helpful to students outside of class

Personal Statement: Does the instructor address the importance of office hours as a supplement to in-class learning? *Student Letters and Teaching Evaluations:* Were graded materials returned in a timely fashion? Do students report that course expectations and policies and grading standards were clearly defined and equitable? Do they understand the criteria being used to evaluate their work? Is the instructor effective in working with students one-on-one or in office hours? *Syllabi and Assignments*: Does the instructor indicate adequate resources for outside-of-class help, such as availability to meet with students during office hours and, when appropriate, arrangements for access to additional resources for students such as TA office hours, QSR, Oral Communications, or Writing Center support?

Working to make class materials, class dynamics, and office hour dynamics inclusive.

Personal Statement: Does the instructor indicate an awareness of class and office hours dynamics and discuss efforts to ensure that these are inclusive? Does the instructor discuss any attempts to utilize practices that make their courses more accessible to nontraditional math students? *Syllabi and Assignments*: Are students able to demonstrate their learning and development in multiple modes such as untimed homework, timed in-class or take-home exams, or possibly papers or presentations? *Peer Review:* Is there broad engagement and interaction with all students? *Student Letters and Teaching Evaluations:* Is there evidence from student feedback that the faculty member fosters an inclusive learning environment in class and in office hours?

PROCESS FOR PEER REVIEW OF TEACHING

The Department recognizes that implicit bias can be present in many different types of evidence. Department faculty will review all evidence with that caution in mind. All conclusions will be backed up by corroborating evidence.

Peer observation of teaching will include:

1. A pre-observation meeting in which subjects such as session goals, course goals, pedagogical approaches, and assignments are discussed.
2. Review of available course materials to contextualize the session
3. A classroom observation of a single class session
4. A post-observation meeting
5. Written documentation of the review that addresses the pre-observation conversation, review of teaching materials, and observations about various aspects of the class session such as content, clarity, and organization; student engagement; teacher-student interactions; and attention to diversity, equity, inclusion, and access. The written report will review evidence regarding the instructor's use of effective pedagogical practices identified in department guidelines for evaluating teaching. The written report will be shared with the person reviewed before it is submitted to the department chair and no later than the end of the semester in which the review occurred.

FREQUENCY OF PEER REVIEW

All voting members of the department will have firsthand knowledge of teaching through the peer review process before voting on reappointment, tenure, and promotion. The department chair will advise both reviewer and reviewee at the beginning of each semester on which tenured member will perform a peer review for that semester. The reviewee and reviewer will agree on a mutually convenient date for the visit. The member will advise the chair when the visit has been scheduled.

The Department will submit the written documentation of such reviews with reappointment, tenure, and promotion letters.

Faculty in their first semester of teaching will be reviewed for formative purposes only; no written documentation of the first semester review will be generated unless requested by the reviewee.

Continuing lecturers will be observed at least once in their first semester, and at least once per two years thereafter.

Visiting professors will be observed at least once in their first semester, and at least once per two years thereafter.

Assistant Professors will be observed at least once, and at most twice, per semester.

Tenured Associate Professors will be reviewed by each voting member before a vote on promotion to Professor. Ideally, these reviews will take place over the course of one or two years before the department member goes up for promotion. The promotion candidate will assume responsibility for ensuring that this occurs.

Tenured Professors need not be reviewed.

CONSIDERATIONS FOR SCHOLARSHIP

The following are our departmental considerations for scholarship at each stage of a tenure-line career.

As noted in a 2014 statement by the American Mathematical Society, publication of research in mathematics differs from that in natural sciences in several ways. Most scholarship appears in refereed journals, rather than conference proceedings or monographs. The time between submission and publication of an article tends to be longer. Rates of publication can vary across different subdisciplines, but a study of mathematicians who won significant prizes showed that most of them published no more than two papers per year in the five years preceding their awards.

A separate 2015 statement by the same organization noted that collaborative work has become the norm in mathematical research. The majority of publications in professional journals have multiple authors. Within pure mathematics (as opposed to applied mathematics and statistics) contributions by individual authors cannot easily be differentiated or ranked in terms of quantity or importance. It is therefore customary in these cases to list authors in alphabetical order. Thus within pure mathematics, the department values single-author and multiple-author papers equally.

Some publications in applied mathematics and in statistics are more similar to publications in the lab sciences - author names are listed in order of contribution. However, it is possible that the few authors at the top of the list equally share credit. We look to the candidate, their coauthors, and outside reviewers to make these distinctions.

In considering scholarship, the department will weigh most highly articles accepted for publication in well-regarded, peer-reviewed, research journals, or for books accepted for publication by well-regarded, peer-reviewed academic monograph publishers.

GUIDELINES FOR PROMOTION AT EACH LEVEL

REAPPOINTMENT

Teaching.

Using the standards for teaching and the peer review process described in this document, we expect that the candidate has shown growth in their teaching abilities during their pre-reappointment period, and seems on track to meet all such standards before tenure.

Scholarship.

The department expects that, by the time of the first reappointment, the candidate has begun to establish a research program that extends beyond work done prior to arrival at Hamilton. The primary evidence of this is publication of peer-reviewed work, but, at the time of reappointment, work in progress and manuscripts in preparation are examples of factors that might also signal a developing scholarly program. In addition, we would normally expect that the candidate has presented, or intends to present, work at conferences, seminars, or colloquia.

Service.

By the time of reappointment, we expect the candidate to participate fully in the life of the department and to begin to explore avenues for college-wide service. In particular, the candidate should have begun serving as an engaged academic advisor. Examples of departmental service include activities such as organizing the Putnam Exam, administering the Tompkins Prize Exam, working with colloquium organization and scheduling, coordinating student participation in undergraduate conferences, and helping to provide students with information on summer or pre- and post-graduate opportunities.

TENURE AND PROMOTION TO ASSOCIATE PROFESSOR

Teaching.

Effective teaching in mathematics and statistics has several dimensions, and we note that strong teachers will have demonstrated the ability to teach a variety of courses at different levels before they are considered for tenure.

By the time of the tenure decision, we expect that all evaluation measures, as described above, will point to an engaged, skilled, influential classroom teacher who is committed to supporting students and has demonstrated excellence in teaching both introductory and upper-level courses and seminars. Any areas that, at the first reappointment, were noted to require improvement, should have been addressed and resolved. By this time, all tenured members of the department should have first-hand knowledge of the candidate's teaching, as detailed in the teaching section under the first reappointment.

Scholarship.

The candidate should present evidence of a fully launched research program that shows promise of continuing into the post-tenure years. Published work is the best attestation of this. Normally, we expect that, at this stage, a candidate will have three articles representing affiliation with Hamilton College that have either appeared or been accepted for publication in peer-reviewed journals. In addition to the quantity of published work, we will also consider its quality and that of the journals in which it appears. We also expect the candidate to have established a record of public presentations of their scholarly work.

Service.

A candidate standing for tenure should have continued their active role in the department as well as assumed a role in wider campus governance. Professional involvement in regional and national organizations, refereeing or reviewing articles for journals, for example, would be evidence of service to the wider mathematics and statistics community.

PROMOTION TO PROFESSOR

Teaching.

The candidate's teaching record, as assessed using the standards described above, should indicate sustained excellence and continued growth since tenure. Other factors contributing to the teaching component of the file might include pedagogical work in the form of running workshops or writing textbooks, continued contributions to the departmental curriculum, and mentorship of junior colleagues.

Scholarship.

A sustained, active scholarly record is expected. Again, the best evidence of this is continued publication. We expect that the candidate will have published at a rate commensurate with that before tenure, with indications that such productivity will continue. A wide variety of research profiles could meet our standard. A short paper that solves a long-standing unsolved problem, for example, a monograph that helps unify an area of mathematics or statistics, or a new textbook in an emerging area, might contribute as much to the field, and to the quality of the candidate's portfolio, as several longer papers with a narrower focus. We expect publications to be complemented by presentations at conferences, seminars, and colloquia.

Service.

The level of service for promotion should be elevated beyond mere committee membership to leadership roles in College governance or in the wider mathematics and statistics community. This might include leadership positions in College committees or the department, serving as an external reviewer in another college's departmental review, or playing a leadership role in regional or national organizations.