

# Teaching Expectations for Faculty in the Mathematical Sciences

One of the primary missions of the Department of Mathematical Sciences at Appalachian State University is to educate students in pure and applied mathematics, statistics, mathematics education, and actuarial science. Faculty are expected to be committed to teaching excellence and to contribute to the department's teaching mission by creating quality courses, challenging and encouraging students, and interacting with the larger educational community. When assessing teaching quality, reviewing bodies will use student evaluations of teaching, peer and chair evaluations of teaching, and faculty provided evidence-based narratives to judge faculty success in contributing to this important mission.

The Department of Mathematical Sciences expects that all teaching faculty will meet the goals from Section 1 and no explicit justification from faculty members should be needed. However, if student, peer or chair evaluations indicate concerns with meeting these goals, the evaluating body would benefit from specific documentation to address those concerns. Section 2 describes goals ascribed to good teachers which help guide faculty as they document their effectiveness in the classroom. As these goals are more general and vary widely in their implementation, faculty will need to provide evidence to show how the goals were accomplished. Section 3 provides a discussion on possible evidences faculty can provide as well as the effort required to meet expectations and exceed expectations in regard to accomplishing the goals laid out in Section 2.

When undergoing a formal review (triennial review of non-tenure track faculty, tenure, promotion, post-tenure review), faculty should demonstrate that over the course of the evaluation period their teaching has met the three teaching goals described in Section 2 of this document. Since some formal reviews require limited documentation, it is recommended that faculty use the annual review to provide documentation of their teaching effectiveness. Within their annual teaching self-evaluation, faculty can discuss what they have learned from their student and peer evaluations with regards to their effectiveness in accomplishing all goals of section 2, and then possibly choose at least one goal to expand upon, giving details of their activities related to a subset of the goals' outcomes. In this way all goals can be addressed in detail for their formal review.

The suggestions given in Section 3 concerning the effort required to meet expectations and exceed expectations may help faculty as they evaluate their teaching. However, faculty should keep in mind that the final determination regarding meets or exceeds teaching expectations classification lies with the evaluating body which uses a faculty member's narrative together with student, peer, and chair evaluations to make this determination.

## 1 Basic Criteria

All teachers in the Mathematical Sciences Department will:

- Meet face-to-face classes as scheduled and provide a substitute or a sufficiently challenging academic experience on the (hopefully rare) occasions when meeting class is not possible; actively interact with online classes regularly; hold the appropriate number of office hours each week and encourage students to utilize appropriate out-of-class resources.

- Address course learning outcomes as specified in the departmental syllabus and provide regular feedback to students regarding their progress.
- Complete student evaluations and peer evaluations as required.

## **2 Goals for Effective Teaching**

Effective teachers create quality courses, challenge and encourage students, and interact with the larger educational community. This section clarifies these important goals regarding planning, implementation, and community membership, giving outcomes related to each.

### **Goal 1: Effective teachers create quality courses.**

#### **Outcomes:**

- (a) Provide clearly articulated expectations and plan experiences to challenge students in meeting those expectations.
- (b) Use formative and/or summative assessment, in conjunction with formal and/or informal evaluations, to ensure high quality courses.

### **Goal 2: Effective teachers challenge and encourage students both inside and outside the classroom.**

#### **Outcomes:**

- (a) Utilize instructional strategies and/or technologies that encourage student interaction with course content and classmates.
- (b) Provide preprofessional mentoring (e.g. research advising and mentoring teaching experiences) or effective academic advising to students as appropriate.
- (c) Foster a positive and respectful learning environment through effective classroom management.

### **Goal 3: Effective teachers interact with and support their peers for the continued development of quality academic instruction.**

#### **Outcomes:**

- (a) Intentionally consult professional resources in order to improve courses.
- (b) Be involved in faculty development in the department, university, or broader educational community.
- (c) Contribute to the creation of new course-wide classroom content and/or methodologies.
- (d) Actively participate in program assessment.

### 3 Evidence and Evaluation

It is expected that all faculty teaching in the department will meet the goals from Section 1 and no explicit justification from a faculty member should be needed. However, if student, peer or chair evaluations indicate concerns with meeting these goals, the evaluating body may wish specific documentation to address those concerns.

The goals and outcomes in Section 2 are more open and less specific than those in Section 1. Experiences that address Section 2 outcomes can vary widely in the time required to develop and implement and vary widely in their scope. Faculty should provide documentation that describes the experience and how it accomplishes the outcome, as well as gives an indication of the effort required to create the experience so that a proper evaluation can be performed. In many cases, this can be a personal reflection that describes the experience and the effect on the faculty member's future teaching. Potential experiences and related evidences include but are not limited to those listed in Table 1.

Within each multiyear review faculty members should address available classroom evidences in support of their narrative when appropriate. While it is not expected that each of the nine specific outcomes will have been satisfied, each faculty member should be able to provide evidence that they have created quality courses, challenged and encouraged students, and interacted with their peers in order to have **met expectations**. Faculty who **exceed** our department's teaching expectations should also show evidence that they have become leaders in improving teaching quality in our department or the broader educational community or that they have received external recognition for their accomplishments.

This document's introduction recommends that faculty use their annual teaching self-evaluations to give details regarding their activities, focusing on at least one goal per year and cycling through all goals within a three year period. If faculty include appropriate experiences and evidences within their annual narratives, these self-evaluations should form a strong basis for their teaching documentations when undergoing formal multiyear reviews.

	<b>Experiences and Evidences</b>
Classroom Evidence	<ul style="list-style-type: none"> <li>• student evaluation numbers with faculty reflection of the evaluations and changes made to courses as a result of student feedback</li> <li>• peer evaluations with faculty reflection of the evaluations and changes made to courses as a result of peer feedback</li> <li>• detailed syllabus or day-by-day course guide</li> <li>• course web pages</li> <li>• individual assignments, semester projects or portfolios</li> </ul>
Scholarship of Teaching and Learning	<ul style="list-style-type: none"> <li>• abstracts of talks given outside the department on the content of the courses taught or the methodology of their delivery (Hubbard center, MELT, professional development initiatives, regional conferences, national conferences, etc.)</li> <li>• abstracts of talks, workshops, or other pedagogical professional development opportunities experienced by faculty member</li> <li>• abstracts of externally validated publications concerning the content of courses taught or the methodology of their delivery</li> <li>• results concerning extensive evaluations (beyond traditional student and peer evaluations) concerning course content or delivery methods</li> </ul>
Educational Service	<ul style="list-style-type: none"> <li>• descriptions of mentoring activities requiring a nontrivial amount of time (mentoring student teachers, undergraduate research, directed research projects, graduate student apprenticeships, graduate student teaching, academic student organizations, math lab tutors, etc.)</li> <li>• examples of professional resources created in order to improve courses</li> <li>• descriptions of leadership roles taken in the creation of new course-wide classroom content or assessment activities</li> <li>• documentation of participation in a committee that develops national standards or guidelines for particular courses</li> </ul>
External Validation of Teaching	<ul style="list-style-type: none"> <li>• college, university, regional, or national teaching awards</li> <li>• invited addresses related to pedagogical content</li> </ul>

Table 1: Experiences and Evidences

## References

- [1] Bressoud David, Mesa Vilma, Rasmussen Chris, eds. *Insights and Recommendations from the MAA National Study of College Calculus*. MAA Press, 2015.
- [2] National Council of Teachers of Mathematics: Standards and Positions. “Teacher Evaluation: A Brief Statement”, NCTM, 2011. Web. Retrieved 29 Mar. 2016. <http://www.nctm.org/Standards-and-Positions/Position-Statements/Evaluation-of-Teachers-of-Mathematics/>
- [3] Neptune, C. *Opportunities for Excellence: Professionalism and the Two-Year College Mathematics Faculty*, AMATYC, 2001.