

ANNUAL FACULTY REVIEW, 2011

Faculty Member's Statement

Doug Bullock

Department of Mathematics

TEACHING

Course Load

Spring 11: Math 170, Calculus I 4 credits 39 enrolled

Fall 11: Math 170, Calculus I 4 credits 37 enrolled

Issues from 2010 Evaluations and Proposed Responses

Of the various concerns expressed by students in 2010 there were two items identified for action in 2011:

1. Too many typos in homework that I write myself.
2. Rushed and perhaps under-prepared lectures.

Planned responses for 2011 were:

1. Reuse much of what I created for the new text and to do less in the way of original homework creation.
2. Try to locate time to write more scripted lectures or lesson plans.

Actions Taken in 2011 and Observed Results

1. Much homework was reused, with typos corrected as they were caught in previous semesters. Since some new material still had to be developed, typos were not eliminated but were reduced. Comments on this dropped from eight in 2010 to three in spring 2011 and to zero in fall 2011.
2. Failed. Did not find any additional time to prep. However, comments on this dropped to nearly none in 2011 evaluations. 2011 numerical scores for preparedness and clarity are not much different than in 2010.

Review of 2011 Written Evaluations

I have written comments from both courses. There are several isolated suggestions and one concern that was expressed by multiple students (perhaps half a dozen). The biggest concern was my demeanor. For the first time I can remember, students (2) have commented that they felt afraid to ask questions in class. A few others stated or implied that I was unapproachable or unhelpful. There are also isolated comments that, although only appearing once or twice this year, fit with a pattern of past comments:

- Still a few comments about typos in homework.
- Still a few comments about availability.
- A few comments asking for better clarification of vocabulary and notation. This has not come up since my 2007 evaluation cycle, but it was interesting to see it again this year.

Although negative comments about demeanor were not widespread this is a very serious concern for me as an instructor. It is unquestionably true that this year I allowed personal stress to color interactions with students to a greater degree than I had in the past. I believe that the only proper responses are to (1) monitor behavior with greater effort and consciousness, and (2) seek to reduce overall stress levels.

There is an interesting new set of questions newly available from the on-line system. Students were asked to identify their own behaviors that either aided or impeded their learning. I was pleased to see a strong and

persistent theme in both sets of answers. The most common answer to “What...enhanced...learning?” was a variation of “did all the homework daily”. The most common answer to “What...inhibited...learning?” was some variation on “put off daily homework”.

I found this pleasantly gratifying, since I attempt to structure a course precisely to reward daily engagement with my homework sets. I am considering preparing a handout or webpage that uses these student responses to communicate to future classes the fact that past groups of students saw this as central to their success (or lack of) in my class.

Review of 2011 Numerical Evaluations

The spring semester used the old paper and bubble sheet form and the same questions as in previous terms.

Spring 11, Calculus I		
Question	Respondents	Average
1. Organized and prepared	33	1.24
2. Clarity of expression	33	1.36
3. Encourages critical thinking	33	1.48
4. Respect for questions	33	1.45
5. Available out of class	32	1.50
6. Clear objectives	33	1.52
7. Value of homework	31	1.45

These are on a 5 point Likert scale with 1 being the best score possible. The numbers are distinctly lower than my historical averages. Disappointing, but unsurprising after the written comments. Scores on respect and availability dipped rather this year than did others. There is no new information here, rather it supports what I found in the written comments.

The fall semester used the new online system and a different set of questions, so it is unclear what the scores mean in a historical context. Scores are sometimes on a 5 point Likert and sometimes on a 4 point scale. Always, 1 is the worst possible score.

Fall 11, Calculus I

Question	Respondents	Average	Max
Prepared	22	4.50	5
Fostered learning	22	4.55	5
Clear assessment plan	22	4.55	5
Clear Objectives	22	4.55	5
Class organization	22	3.77	4
Effective use of time	22	3.82	4
Clear presentation	22	3.73	4
Student questions	22	3.82	4
Critical thinking	22	3.82	4
Grading system	22	3.73	4
Feedback	22	3.73	4
Homework returned	22	3.41	4
Fairness	22	3.50	4
Classroom environment	22	3.59	4
Assignments	22	3.77	4

These scores are no more illuminating than student comments, so I have nothing to say in response to them. However, the new system allows for comparisons to benchmarks for all of Math 170, all Math courses, and (for some questions) all courses in the College of Arts and Sciences. The comparisons between my scores and available benchmarks (table next page) are pleasantly good, but not otherwise informative.

Proposed Actions in 2012

1. Maintain a higher level of awareness of my personal conduct and demeanor when interacting with students.
2. Reduce external stress levels by (1) moving out of the chairmanship of the department, and (2) doing more advance prep work for the fall 2012 semester during the summer of 2012.

Fall 11, Calculus I – Benchmark Comparisons

Question	My score	All 170	All Math	All College
Prepared	4.50	4.4	4.3	4.5
Fostered learning	4.55	4.3	4.2	4.4
Clear assessment plan	4.55	4.1	4.1	4.3
Clear Objectives	4.55	4.3	4.2	4.4
Class organization	3.77	3.4	3.4	
Effective use of time	3.82	3.5	3.4	
Clear presentation	3.73	3.2	3.2	
Student questions	3.82	3.5	3.4	
Critical thinking	3.82	3.6	3.4	
Grading system	3.73	3.4	3.4	
Feedback	3.73	3.1	3.0	
Homework returned	3.41	3.4	3.4	
Fairness	3.50	3.5	3.5	
Classroom environment	3.59	3.4	3.3	
Assignments	3.77	3.4	3.3	

RESEARCH/CREATIVE ACTIVITY

I continue to do a small amount of research, currently supported by a small amount of NSF funding, on strategies to improve retention of STEM majors. One paper listed as submitted last year has been accepted into a peer reviewed proceedings. New output in 2011 consists of one poster presentation, one workshop, and two articles in preparation.

Grants

NOTE: This was awarded in 2011. I forgot to include it in my statement that year.

- *Idaho Scholarships for Transfer Students*, J. Callahan, **D. Bullock**, A. Jain, A. Moll, C. Schrader. Funded by NSF. Total award \$600,000.

Publications

- J. Callahan, S. Shadle, J Garzolini, G. Hunt, J. Guarino, **D. Bullock**, *The Idaho Science Talent Expansion Program: Improving Freshman Retention for STEM Majors*, Proceedings ASEE Annual Conference & Expo (2011).

Articles in Preparation

- J. Callahan, **Doug Bullock**, *Both Sides of the Equation: Learner and Teacher*.

Abstract submitted, reviewed and accepted for ASEE Annual Conference & Expo in 2011. Paper submitted in 2012.

- A. Feldman, J. Callahan, **D. Bullock**, *Using Online Assessment and Practice to Achieve Better Retention and Placement in Precalculus and Calculus*.

Abstract submitted, reviewed and accepted for ASEE Annual Conference & Expo in 2011. Paper submitted in 2012.

Posters

- J. Callahan, J. Garzolini, **D. Bullock**, J. Guarino, G. Hunt, S. Shadle, *The Idaho Science Talent Expansion Program*, NSF Annual STEP PI Grantee Meeting March 16-28, 2011.

Conference Presentations

- *Faculty Development for STEM Student Success: Generating a Campus Culture of Best Practice*, workshop co-presented with S. Shadle and (lead) and J. Callahan, NSF Annual STEP PI Grantee Meeting March 2011.

PROFESSIONALLY-RELATED SERVICE

- President's Leadership Academy.
- Alternative Academic Calendar Committee.
- Science Competition Day (scoring only, no committee work).
- College of Engineering Dean Search Committee.
- Chair, Math Department.