

# Executive Summary

The Mathematical and Physical Sciences major met for its annual review of students' progress toward majors in Computer Science, Mathematics, and Physics. (These had been concentrations under a single MPS major but have now been made into separate majors.) Advisors will meet with individual students. The group also considered having second readers for senior theses and requiring each student to work with a faculty member. These already occur in most cases but should be formalized. We discussed making changes in major requirements in light of the three new majors and planned to revisit how this affects assessment after any such changes are proposed.

## Summary of Assessment Review and Planning Meeting

Professors Adams, Loosemore, Moore, Sievers, and Stiadle met on January 28. The group first reviewed the progress and roster of current and prospective majors in CS, Math, and Physics. We considered how remaining requirements interacted with our anticipated ability to offer courses, reviewed the thesis activity of current seniors, and discussed concerns about the maturity of theses by students graduating in less than four years.

Since our 2010–2011 assessment, senior theses have been read both by the faculty member who teaches the course and by a second faculty member serving as topic advisor. So far, an informal system for choosing topic advisors has not inequitably distributed workload. However, with increasing projected enrollment and the potential for clustered student interests, we remain aware of the potential need to discuss mechanisms so as to equitably distribute faculty workload. We are concerned that seniors have on the whole been displaying little initiative to take advantage of topic advisors.

In considering past and expected present performance in senior theses, we are concerned that the work of students graduating early (e.g. three years) has lacked in academic maturity. Though this is not a problem exclusive to early graduates, recent memory did not supply examples of early graduates who did display maturity in their thesis work.

## Follow-up from past action

Two years ago, the department opted to move from an MPS major-with-concentrations to three distinct majors in Mathematics, Physics, and Computer Science. This was fed in part by the 2010 campus-wide curricular review. The move generated immediate interest from current students heading toward or in an MPS major, with one student explicitly re-declaring their major to have "Computer Science" listed as their major.

Since then, changes in our context have included the upcoming retirement of our resident statistician, the pending release of the updated ACM/IEEE Computer Science Curricula, and a few years of recruitment with the distinct majors. We have made a few changes to the Physics major requirements, reorganized some course content within Physics and Computer Science, and are discussing updates to the Mathematics and Computer Science major requirements.

## Plan for Upcoming Year

- Revisit curricular review and distinct major decision in light of staffing changes and, for CS, updated [ACM/IEEE CS Curricula 2013](#)
- Request feedback from Admissions concerning the effect of distinct majors on recruitment.
- Discuss ideas for fostering four-year level maturity in three-year students.

## Assessment Plan Updates

- Augment current plan by tracking thesis maturity and graduation time (regular, early/3-year, transfer+2, etc).