

Weber State University
2017-2018 Mathematics Program Review Team Report
March 10, 2018

Members of the Mathematics Program Review spent two days on campus. We met with faculty, staff, students and the Dean of the College of Science.

STANDARD A - MISSION STATEMENT

The expected outcomes of the Mathematics program are clearly defined. The details of the process by which these accomplishments are determined and periodically assessed is articulated clearly in the assessment plan. The department has a clearly defined educational program, including a curriculum that enables graduates to achieve the mission. The program mission statement is appropriate to, aligns very well with, and supports the mission of both the College of Science and Weber State University. Overall, we find the Math Department's mission statement to be a program strength.

STANDARD B – CURRICULUM

The WSU math department has done a good job of demonstrating that the curriculum for each degree and for any general education/service course is the result of thoughtful curriculum planning and review process. For example, the changes in curriculum for QL and Math for Elementary/Secondary Education seem very good although there is not enough information provided to determine the specific reasons for the changes.

The curriculum is consistent with each programs' learning outcomes and is a strength of the program.

There is insufficient allocation of resources for the Math Department to fulfill its mission in the university. In particular, the addition of Concurrent Enrollment and the increased use of adjuncts, has placed an increased service workload on the full-time faculty. This demand is not sustainable. In our discussions with individual faculty members, each indicated that time constraints affect their ability to work on research and/or participate in campus professional development activities. Additionally, the math department chair spends an inordinate amount of time on administrative duties. Perhaps some of these duties/responsibilities could be handled by staff or through delegation. However, given that there is only one full-time staff member and few student helpers, and given the already high service workload carried by the full-time faculty members, neither seems like a good option. More full-time faculty are needed in order to carry out the duties of the department in the university. Travel allowance is also small and should be increased, if possible. Allocation of program resources is a program concern and perhaps a weakness. Certainly, more work needs to be done in this area.

Courses to support the major/minor/general education/service programs are carefully scheduled, are offered on a regular basis and ensure that students are able to complete graduation requirements in a timely manner. Students indicate that the system is working fine and express satisfaction at the course offerings and scheduling. This is a program strength.

STANDARD C - STUDENT LEARNING OUTCOMES AND ASSESSMENT

The Learning Outcomes clearly describe the expected knowledge, skills, and behaviors that students will have achieved at the time of graduation; support the goals of the program and constituencies; and are directly linked to the program's curriculum. An explicit curriculum grid illustrating the alignment and the depth to which each course addresses each outcome is publicly available and is a program strength.

The program has developed a well-crafted set of measures for assessment and has done a great job in applying the measures. Each learning outcome is assessed with at least one direct measure of learning. Thresholds for acceptable performance are defined and published. Evidence of learning is gathered each year across the program. The department has done a wonderful job in aggregating and reporting their results. Summaries of the past 5 years were provided to us and we feel this is a great program strength.

The assessment results are discussed in departmental meetings and are reviewed against department-established thresholds. Minutes from departmental meetings were provided which confirm that the department reviews and discusses the assessment results together and that changes in pedagogy and curriculum are brought about as a result of these discussions. This is a program strength.

STANDARD D - ACADEMIC ADVISING

The Math department has adopted a faculty mentor system for advising their minor/major, or BIS students. Students know who their faculty mentor is. Students indicate that they may or may not seek out advice from the assigned mentor, because once they develop a relationship with a particular faculty member, this faculty member takes on the role of mentor, including planning their individual program of study and helping with career and employment decisions. In short, students receive appropriate guidance and advising under this system. Taking care of the majors/minors/BIS students under this system is a departmental strength.

STANDARD E – FACULTY

Faculty size is a weakness. Filling positions with adjuncts/instructors has resulted in an increased service demand on full-time faculty which is not sustainable.

We feel that there are insufficient faculty to maintain the programs offered. With a present 29.53 student to faculty ratio (up from 22.54 in 2012-2013), the time demands on individual faculty members is high, which interferes with their ability to work towards improving the

degree programs offered. Some of the demand is currently taken up through using highly qualified adjunct teachers, but reliance on adjuncts is not reliable and is not advised. This is a program weakness.

There seems to be a mix of well qualified and trusted adjuncts and less qualified/vetted instructors. The well qualified and trusted instructors are given greater teaching responsibilities, and are even allowed to teach calculus courses. This is neither a strength nor a concern.

The math program has excellent diversity in its faculty members. We are unable to determine intentionality.

The department has an active procedure for orientation of new contract/adjunct faculty. The chair and assistant chair meet for training and review of teaching materials. The course final exams are collected and reviewed during the first year. We recommend both scheduled and unscheduled classroom visits for new hires.

Good processes are in place to determine appropriate teaching load. Service assignments seem to be self-selected. The mentoring of new faculty appears to be completely handled and well done by the chair. There is inadequate support for the Concurrent Education responsibility. Two faculty members have half time responsibility in this area yet there is still an inordinate amount of work being done by other faculty members on this project. There is insufficient support for activities such as concurrent enrollment and the state math contest, which implement and support the program's mission. We recommend the department seek grants, where applicable, which may provide opportunities for released time. We understand this is yet another task placed on already overworked faculty, so every opportunity should be taken to reduce the other responsibilities on the faculty members involved. If possible, seek assistance from a university grant specialist to help identify and write grants to provide the additional support needed.

A good annual process is in place where tenure-track faculty teaching is reviewed by the chair followed by members of the tenure committee and adjunct teaching is monitored by the chair. For both contract and adjunct faculty, there is evidence of:

- Effective creation and delivery of instruction.
- Ongoing evaluation and improvement of instruction.
- Innovation in instructional processes.

All faculty are reviewed every 5 years as part of the tenure or post-tenure review process and the results are available. This process is good.

STANDARD F - PROGRAM SUPPORT

Both the faculty and the students are exceptionally happy with the one support staff member. She is excellent and well respected in the department. Her current responsibilities include many tasks that are usually handled by faculty. While it is working, having a single staff member who manages such a high workload, is risky. We highly recommend at least one more staff member (even part-time) in order to fulfill some of the administrative responsibilities currently handled by the administrative assistant, chair and faculty. This will enable faculty to delegate administrative duties to the staff member so that they have more time to spend on their responsibilities and eliminate the need for the one staff member to take work home.

There is regular training for staff.

The newly constructed and beautiful building provides excellent office space in a central location and close classroom space. Classroom space is tight. Seating limited to 24 students in some classrooms, which results in persistent waitlists and limited available classrooms. More classroom space is needed. Also, workroom space is tight with limited counter and storage space.

STANDARD G - RELATIONSHIPS WITH EXTERNAL COMMUNITIES

There are clearly defined formal relationships between the program and the local public schools, concurrent enrollment and the state math competition. The department received a grant to partially support concurrent enrollment. This is good for the program.

Advisory bodies include Hill Air Force Base, the University of Utah and the Mathematics Association of America (MAA). These relationships have a clearly defined role and regular meeting occur. A curriculum revision to include programming followed as a direct result of discussions with the advisory board. This is good for the program.

STANDARD H - PROGRAM SUMMARY

From previous reviews: No new faculty have been hired. Grants have not been pursued. Excellent progress in advising has been implemented through the creation of the mentoring program. Moderate success has been achieved in pursuing alternative approaches in gateway courses. Excellent progress is shown in implementing common final exams and mentoring new faculty. Rewriting the mission statement and Strategic plan has been delayed.

2018 Recommendations:

1. Rewrite Mission Statement and Strategic Plan in order to find common goals and set priorities so that all faculty have a role in working together on re-evaluating and improving their mission.
2. Hiring full-time faculty rather than contract faculty/adjuncts will help in several areas.
3. Hiring an additional staff member, even part-time, will alleviate pressure on faculty and the one current staff member.

4. Classroom space should be improved by scheduling classes in larger rooms or by making available additional classroom space. Workroom space/facilities should be re-evaluated and improved.
5. We recommend assigning course coordinators for multi-section courses.