

Undergraduate Program Review
Math
2007-2008

I. Strengths

1. The department supports many other programs in spite of its current challenges. While solid mathematics teaching implies better outcomes for many departments, the problems at the mathematics department also affect other departments.
2. The department can capitalize on technological advances and creation of interdisciplinary majors such as Bioinformatics to strengthen its program.
3. The math faculty is aware of the hardship to teach the abstract nature of teaching mathematics. Variety of approaches to enhance student learning besides traditional teaching methods: Group discussions, cooperative learning, TTVN and web-based instruction, recitation sessions and research project.

II. Weaknesses

1. The department has a high turnover rate in department leadership and faculty. This was acknowledged to create major challenges for the department to address the weaknesses of the program and create programmatic improvements. The high turnover rate may also cause program teaching efficiency problems such as the interruption of student learning outcome implementation due to the change in the administration.
2. Graduation rates remain low but appear to be in step with national trends.
3. Low enrollment numbers (Typical for this department) and quality of students. No departmental admission policy. Poor student advising.
4. No broad recruitment participation by the mathematics faculty.
5. No formal, established measurable outcome assessment measures. The Student Learning Outcomes on page 18 are not stated in measurable terms. Many of the assessment measures (student portfolios, publication, presentations) were similar to measures used previously and were never actually required of the students. Also, they *only have the recommendations (for approval)* for the measurable

outcome assessments on page 19. However, at least, one of the syllabi provided measurable outcome assessment criteria.

6. No outside support to the department faculty and students.
7. Insufficient travel and professional development funds for the faculty.
8. Catalog course descriptions are older than 20 years and have not been revised for a long time.

III. Recommendations

1. Establish an advisory committee to oversee, assess, monitor and assist implementation of recommendations and address the weaknesses and challenges.
2. Establish measurable, formal, effective methods to assess outcomes.
3. Modify the course offerings both to meet the departmental requirements and to support many other departments simultaneously. Better planning and communication among departments are essential.
4. Conditional Continuation.