

**Profile of the  
Department of Mathematics, Statistics and Computer Science  
University of Wisconsin-Stout  
2008 Regents Teaching Excellence Award Recipient**

**Department Facts, Activities, and Resources**

- *Personnel:*
  - The MSCS department strongly promotes the philosophy of “hands-On, Minds-On” learning and the effective use of technology to enhance teaching and learning.
  - The department expanded collaboration among faculty and staff in the Scholarship of Teaching and Learning (SOTL), including Lesson Study research, sponsored by OPID.
  - In 2003, faculty from MSCS instituted a weekly Research and Teaching Seminar where faculty and instructional staff meet.
  - Faculty effectively improved student learning in lower level mathematics courses and thus aided retention of first-year students. In 2004 the department piloted a Math Teaching and Learning Center format for teaching Mat 010 and Math 110. Failure and withdrawal rates have dropped by an average of 55% in Beginning Algebra.
  - The department received a \$ 450,000 FIPSE grant from the U.S. Department of Education to study impact on student retention and to expand the format to other courses and other schools throughout the state.
  - Three MSCS faculty have been selected as UW-System Teaching Fellows
  - Four faculty have been chosen to participate in the national Project NExT program.
  - Since the fall of 2005, MSCS faculty have collaborated with industry to provide “live” projects for our students that provide actual software engineering experienced. Companies include Lockheed-Martin and Thomson-West. Student projects follow industry guidelines.
  - For student research participation, two National Science foundation grants have provided opportunities.
  - Two women members of the department are serving as invested scholars in the UW-Stout Teaching and Learning Center and on the Advisory Board.
  - The Applied Math and Computer Science Club and the Women’s Club, supported by faculty, provide numerous fun learning activities.
  
- *Students:*
  - The department houses and provides courses for the Applied Mathematics and Computer Science program but also offers general education and other technical courses for all of the majors on campus, i.e. approximately 2150 students each year.
  - Students receive jobs in leading national companies.
  - Many students participate in clubs and in industry real life projects and student-faculty research.

**Fostering Excellence in Teaching**

- Through each department member’s dedication to instilling technical excellence in students and by thus preparing them to excel in their future careers.
- Through hiring junior faculty members who are key contributors to the department and the university community and who are recognized by their peers
- By making student learning their primary mission in this undergraduate-only department.
- By developing a curriculum that is rigorous, invigorating, and requires mastery of a complex set of analytical and scientific skills.
- By enhancing student accountability in a capstone course, in which students work in teams on real-life projects.
- By devoting themselves to incoming freshmen and underrepresented students and providing a diverse teaching faculty from international countries.

### **Teaching as a Public, Collaborative Activity**

- The Department has endorsed and implemented effective new pedagogical strategies, participating in the Scholarship of teaching and Learning and as keynote speakers at conferences.
- The faculty's research and consulting activities rank among the most productive at UW-Stout
- The Department has an outstanding record of attracting external and internal grant funding to launch innovative programs to improve education.

### **Curricula that Challenge and Prepare Students for the Future**

- The Department's curriculum is broadly structured to include a wide range of Math, Statistics and Science education.
- The Department has increasingly emphasized the importance of engaging students in research and emphasizes students' real life skills.
- Faculty use student-friendly teaching techniques such as mentoring and discovery learning, which provides students with tools with which to master their discipline.
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### **In the Words of the Department's Students**

- "This department is so great at teaching that internships just fall into our laps. I have had many offers for actuarial scholarships and for IT positions as well. The Math department has such great connections with its previous students who are out in the workforce and others who have not had the chance to attend Stout, because the faculty teaches the students so well. We have our choice of jobs."

Stephanie Boyd, current student in MCCS at UW-Stout

- "AI had the pleasure of having instructors who were not only up-to-date on the material, via their interest in the field and attendance at professional learning events, but who also wanted to be better teachers. ... There are several research opportunities available to students. I participated in a project to further the body of mathematics known as Lie Algebras. This gave me the ability to apply the material first hand as well as further my knowledge of the fields taught to me."

Alloys J. Samz, Software Engineer, Thomson West, Alumnus of the MSCS program.