

NEWSTREAMS

BRIDGEWATER STATE UNIVERSITY

SPRING 2012



STudent Retention Enhancement Across Mathematics and Science (STREAMS) is in its second year of a five year process to increase the number of graduates in science and math from Bridgewater State University. This issue of NewSTREAMS highlights new connections with local community colleges and the new science and math Residential Learning Community.

New Science and Math Learning Community takes root in Woodward Hall

The first Science and Mathematics Residential Learning Community opened in fall 2011 with over 40 students living together on a floor in Woodward Hall. The LC supports primarily first year science and math majors with guided study groups and special programming geared towards science and math majors. The learning community is led by Dr. Jeff Williams and is supported by a team of Residential Life staff and upper-class science and math majors.

Six upper-class science and math majors live in the LC, including two Resident Assistants, two upper-class Resident Mentors paid by STREAMS, and two additional students. The ability for upper-class science and math majors to live in the LC was a new development sought by STREAMS to promote a stronger academic culture through role models on the floor.

Resident Mentors (RMs) held study sessions 4 times per week in the basement of Woodward Hall and encouraged all BSU students to attend. "It's not about giving the students the right answers, we focus on guiding them in the right direction and making sure they are prepared," says RM Kyle Murphy. The RMs also answer questions during registration and talk to the residents about various topics in science and math.

Special science and math programming is organized by LC residents. Fall semester saw activities labeling bones; conducting fun, at-home style science experiments; creating re-usable arts and crafts to highlight sustainability; finding out about Undergraduate Research; and sharing a little music. Spring semester programs will include several faculty visits and a trip to the Boston science museum.

The LC will grow next academic year with an expanded upper-class student presence and more formal study sessions. Faculty interested in contributing to the programs at the LC should contact Dr. Jeff Williams in the physics department.

IN THE FLOW . . . More STREAMS Activities

- Full implementations of Structured Learning Assistance (SLA) in Biol 121, Chem 141 & 142, Comp. Sci 151, Math 161, and Phys 243 & 244 are in place. Stay tuned for more data on increases in student success.
- Two cohorts of Summer Bridge students are already on campus, and we will soon recruit faculty and student research mentors for Summer 2012.
- SPIDER Network connects about 24 new first year science and math majors with an upper-class mentor.



RMs Tyler Holloway and Kyle Murphy (standing, second and third from right) take a brief break from leading a study group for a photo.

Closer Connections with Community Colleges

STREAMS sub-contracts with Massasoit and Cape Cod Community Colleges (MCC & CCCC) are leading to closer ties between science and math faculty, better advising, and new and improved courses at MCC and CCCC designed to help science and math majors transfer more successfully. About 120 students transfer to Bridgewater to major in science or math each year, with approximately half of those students coming from Bristol, Massasoit, or Cape Cod. STREAMS aims to slightly increase the number of transfer students while improving their success rates once at BSU through better advising and student support.

MAJOR	FA09	SP10	FA10	SP11
BIOL	24	14	29	14
CHEM	7	7	5	3
COMP	17	6	16	7
EASC	8	4	9	1
MATH	19	7	17	9
PHYSICS	4	1	4	4
SEMESTER TOTAL	79	39	80	38
ANNUAL TOTAL	118		118	

Under the leadership of Dr. Jennifer Mendell in Biology, a transfer working group, made up of BSU science and math faculty from each department, was created to assist in the transfer process of students to Bridgewater State University. On February 10th, MCC will host members of the transfer working group on their campus to present STEM opportunities at Bridgewater and assist in advising of MCC students. This is a repeat of a successful visit to MCC last spring, and a visit of Dr. Mendell to CCCC last fall. Prospective transfer students will visit BSU later in the spring, tour the building and meet with the transfer working group, financial aid, and admissions.

Dr. Mendell has partnered with faculty from MCC and CCCC to prepare department level articulation agreements, starting in Biology this year. These articulation agreements will help the local community colleges better advise students and inform community college administrators of the required courses that need to be run at their institutions for successful transfer. With help from CONNECT further work will continue on this endeavor this spring and summer.

Faculty at CCCC and MCC have received Faculty Development Grants supported by STREAMS to improve their STEM courses. As a result, both campuses are introducing new Cell Biology courses to assist with the articulation in Biology. Cape Cod Community College has also reestablished a calculus-based physics class with modified labs that promote inquiry based learning. Faculty from all three local community colleges attended the December 15, 2011 professional development day, "Back to Basics," hosted at Bridgewater through the Office of Teaching and Learning.

The working transfer group also continues to develop a relationship with Bristol Community College. Dialogue has begun with the dean of BCC about creating transfer programs similar to those at Massasoit and Cape Cod Community College. Faculty interested in helping with transfer issues or departmental advising of transfer students should contact Dr. Mendell.

Announcing Science and Math Course Development Grants

Through STREAMS, up to six \$3500 grants for course development will be available to faculty in Summer 2012. STREAMS is looking to support innovative, engaged student learning pedagogy in courses for science or math majors at any level. Of particular interest will be proposals that would support courses routinely taught or required of majors with traditionally high, persistent student failure rates. Also of interest will be proposals that encourage civic engagement or service learning, undergraduate research, non-traditional use of class time, or substantial writing components.

Applications will be available soon. Please consider attending information sessions on the course development grants or speaking with Dr. Thomas Kling (tkling@bridgew.edu) as you prepare your application.