

Strategic Plan Submission: Research Support Agenda at UW-Stout

Goal Statement: Expand early and ongoing experiential learning opportunities including undergraduate applied research and entrepreneurship.

The research enterprise at UW-Stout continues to grow with increasing applied research and experiential learning opportunities. Although many positive, foundational activities are already occurring, fragmentation exists and is problematic. Creating a solid infrastructure and a more systematic approach will insure a coordinated campus wide effort to strengthen and expand early and ongoing opportunities and create an environment of teaching, learning and discovery. Identification as a Focus 2015 goal would provide the structure and support needed to strategically design general and specific actions to accomplish the following secondary goals:

- Facilitate the involvement in professional organizations early in major
- Institutionalize undergraduate research, creative activities, and entrepreneurship across all disciplines
- Require progressive applied experiences throughout their academic careers at UW-Stout culminating in a capstone experience
- Encourage global experiential learning

Current campus activities and indicators of an expanding research agenda include:

1. Growth in undergraduate research activities, specifically:

The Journal of Student Research

- 8 editions of The Journal published to date
- Since its inception in 2002, published over 100 articles involving 154 student authors
- Stout is unique – only several other campuses within the UW System produce a similar product

UW-Stout Research Week, a celebration of research, scholarly and creative activities with

Research Day

- 2009 event involved 180 students, faculty and staff and 98 posters highlighting individual and group research
- 25% increase in the number of posters over previous year

Research Gala

- Recognizes the valuable contributions made by students
- 85 students were honored and received certificates
- Attendance doubled from 70 in 2008 to 140 in 2009.

UW System Symposium for Undergraduate Research and Creative Activity

- Sponsored by UW System, hosted in 2 year blocks at comprehensive campuses
- Hosted by UW-Stout in 2006 and 2007 with 30% overall increase in system-wide participation in 2006 and an additional 20% in 2007.
- Remarkable increase in Stout student interest and participation from 3 (2005 at Oshkosh) to 80 (2006) and to 96 (2007). Thirty-eight (38) Stout students and advisors for 2008 Symposium at UW-River Falls

The 2009 National Conference on Undergraduate Research (NCUR)

- 2009 is the first year a group of Stout students has participated
- 30 UW-Stout abstracts accepted and 54 students represented Stout at this national conference

Posters in the Rotunda

- Undergraduate students travel to the State Capitol each year to present posters and visit with legislators.

2. Faculty led Creative Original Research Experiences (CORE) group for grass level involvement and collaboration in research.

- Originated with CUR workshop dialogue and subsequent Stout workshop (November 2007) to discuss undergraduate research

- Beginning of a grassroots effort to change the campus culture concerning undergraduate research
- Recently recognized as official campus committee
- Membership continues to grow (current members total 40)

The Chancellor and Provost Julie Furst-Bowe are very supportive of the CORE group. In *How to Develop and Administer Institutional Undergraduate Research Programs*, author Toufic M. Hakim, states:

"Grassroots efforts will indeed bear fruit, but without the support of an institutional officer who has line authority and collegial access to top leadership, it is a long and tough road ahead."

"A successful undergraduate program must begin in the faculty but it cannot flourish without administrative support – both philosophical and financial. One committed faculty member can initiate an undergraduate research project and several working together can spark a revolution."

3. Expanded Council on Undergraduate Research (CUR) involvement

- CUR is a national organization of individual and institutional members representing over 900 colleges and universities with a shared focus on providing undergraduate research opportunities for faculty and students at predominantly undergraduate institutions.
- Stout is a member of CUR through a UW System Institutional Membership. UW-Stout officials were instrumental in securing this membership, one of the first such memberships among university systems in the nation.
- Stout provides leadership to CUR with 3 faculty members serving as Councilors on the governing Council. Councilors are elected by the members of each of seven disciplinary divisions and one at-large division.
- Campus members continue to participate in valuable CUR-sponsored activities. A description of these activities can be found [here](#).

4. Expanded Student Research Grant program

The Student Research Fund

- Allows students to submit proposals and request funding to either conduct research or disseminate research results
- Supported solely by Access to Learning dollars and available to all students

- Annual number of proposals submitted continues to increase. Despite increases in recent years doubling the funds available, all funds are quickly allocated and there are a few months when no awards can be made due to lack of funding.

5. Growth in collaborative proposals and expansion of research vision of faculty

The new faculty that are being hired have active research agendas that they are bringing with them to Stout. This is influencing the climate of research expectations and involvement of undergraduate student in research projects. This also calls for examination of research related infrastructure---assistance in preparation of proposals, enhanced submission details, policies/procedures and attention to bio-safety, and equipment and start-up needs as new faculty and new programs enter the Stout environment. Along with constantly assessing growth, we need to consider the infrastructure needs now and in the future. Research on a comprehensive campus such as UW-Stout is about more than doing *more*; it is about creating and supporting a research environment that serves needs effectively, efficiently and with the balance of “right-sizing”.

More traditional measures of “research activity” include the number of grants submitted, the number of grants awarded as well as the level of contract activity. The following charted information provides a profile of the traditional measures by college at UW-Stout over the last three years. (See Appendix A) While this traditional method of assessment of research activity is one measure, we drill down further to find information that describes in a more qualitative manner, the research enterprise at UW-Stout.

On a comprehensive campus, **students, primarily undergraduate students, are at the center of the research enterprise.** Faculty integrate research within the learning agenda, concomitantly using active research within the framework of teaching and learning to develop hands on minds on application, critical thinking skills development and action learning to give meaning to theory within the discipline. This is occurring across the UW-Stout program array. Of course, there is variation in how this is done and to what extent. It is naturally based somewhat on the discipline and somewhat on the

individual faculty member's research orientation. The new faculty that have been hired over the past five or so years are being hired partially based on their research involvement, particularly on the work that they have done as students and what they have done in prior faculty positions. The climate has changed from one where "research is OK" to "research is critical and expected".

In 2003 Chancellor Sorensen strengthened the institutional commitment to research by announcing at fall opening day that "we do research, it is valuable to students, faculty and the University". At the same time a team was working on the indirect cost disbursement model. For the first time, a portion of the indirect funds would go back directly to the principle investigator, the department and the college. This was designed to reward those that do; a prior campus priority for research activity increase. The climate, expectations and activity continues to grow.

In 2005, the Chancellor, through the Faculty Senate, directed each department to develop their own definition of research which would be appropriate to their discipline and program of study. This definition was to be in alignment with the University definition of research. The departmental definitions of research is used to link appropriate funding sources to faculty, departments and programs and to provide a focus on the scope and content. This precipitated discussion on promotion and tenure expectations so as to provide clear expectations for faculty and review committees. Where we have moved is from a very general expectation of research to a more defined expectation. Where a few years ago we had faculty being granted both promotion and tenure without any or much research activity, today, that is not the case. There has clearly been a "sea-shift" in expectation of research involvement on our campus.

Marketing, and public acknowledgement of research engagement is paramount. Just like teaching excellence awards give credence and attention to faculty and reward outstanding teaching, so do forms of recognition for research involvement. Two years ago, the *StoutQuest* publication was initiated specifically for this purpose. The publication tells the story of research activity at UW-Stout.

Designed for use with program advisory committees, faculty recruitment, student recruitment, and other public relations venues, the publication tells the story. Jointly produced with the office of University Communications, within the Office of University Advancement, the staff work throughout the year to capture campus research activities. With the second issue recently published, *StoutQuest*'s annual publication provides a broadening of knowledge, awareness and acknowledgment of the variety of extraordinary projects being conducted by the Stout community.

A related, but critical growth area within the research enterprise is the process, infrastructure and implementation of the federal rules on the protection of human subjects, through the Institutional Review Board (IRB). Federal regulations call for policies and procedures to be in place at each institution that receive federal funding. One measure of the activity in the IRB area is through the number of protocols that are reviewed by the IRB each year.

This year we are at 357 IRB protocols as of May 1, with 2 months yet to go. The IRB Executive Committee and the IRB Committee each meet monthly. The IRB is made up of 11 committee members representing the colleges.

Animal research has been present in some form at UW-Stout over the last eight years. First the mice lab was introduced and then upon change in faculty, the lab was transformed into a zebrafish lab. The campus IACUC Committee oversees the activity according to federal regulations.

The safety and risk management issues on many fronts are growing as the amount and type of research conducted changes. Additional attention needs to be paid to this area.

UW-Stout is being identified more and more as an applied research institution. In recognition of Stout's polytechnic designation, the **First Annual Wisconsin Science and Technology Symposium** was held here in July 2008. Stout co-sponsored this very successful, ground-breaking event. The goal was to bring together the most innovative researchers and students from the UW comprehensive campuses

and other research organizations in Wisconsin and provide an opportunity for critical networking and for partnerships to help grow Wisconsin.

The research enterprise at UW-Stout has grown significantly as shown through both qualitative and quantitative measures. This growth has been accomplished by many related efforts.

The plans to open the Discovery Center for Applied Research emphasizes the recognized need to build a solid infrastructure and establish more systematic, coordinated approach to create opportunities and promote an environment of teaching, learning and discovery.