Committee on Research Experiences (CORE)
Position Paper

Background:
In 2006, UW-Stout became a UW-System member of the Council on Undergraduate Research. In the summer of 2007 CUR hosted a workshop entitled “Mentorship, Collaboration and Undergraduate Research in the Social Sciences and Humanities” which was attended by Steve Deckelman, Desiree Budd, and Richard Tafalla. The purpose of the meeting was to set goals related to the undergraduate research enterprise at UW-Stout. Three goals were proposed in that workshop including:

1) establish a universal undergraduate research (UR) experience for all freshmen,
2) establish a universal capstone experience in UR
3) Have 5-15% of students engage in independent research outside of the first-year UR experience and capstone experience.

In order further explore these objectives and determine the feasibility of instituting them, a small workshop focusing on undergraduate research at UW-Stout was hosted in the fall of 2007. The goals of the workshop were threefold: 1) to establish a core group of researcher/teachers who are already dedicated to scholarly activity that engages undergraduates, 2) determine how to increase the number of researcher/teachers on campus dedicated to this goal and 3) strategize on how to implement the three goals established at the CUR workshop. The result of this workshop was the establishment of the grassroots Committee On Research Experiences (CORE). After breaking up into three discussion groups focused on each of the three objectives, several themes surfaced. However, the first key problem identified was how to broadly define research. The purpose of this position paper on the undergraduate research enterprise is to define research in a fashion commensurate with a Polytechnic and to operationalize research in a manner that can guide UW-Stout’s institutional objectives. Furthermore, the rationale for an undergraduate research enterprise will be outlined and specific targeted objectives for meeting the goals will be forwarded.

Defining Research:

Research is defined in many ways. In order to avoid confusion, research at UW-Stout: Wisconsin’s Polytechnic University must be a term used to refer to scholarly, creative or investigative activities. Research must be defined broadly to encompass many different disciplines in the physical sciences, human sciences and humanities. The following are definitions from several resources focused on UR.

Undergraduate research is a student-faculty collaboration to examine, create and share new knowledge or works in ways commensurate with practices in the discipline. (Hakim, 2000, pg. 1)

Research is a diligent and systematic inquiry or investigation into a subject in order to discover facts or principles, and increase the sum of knowledge, enhance design or enrich artistic ability.
Although undergraduate research and creative activity will be necessarily discipline specific, some characteristics common to all fields will include appropriateness for publication or presentation in undergraduate research venues.

Justification for Undergraduate Research Enterprise:

Studies have shown that student’s academic experience, engagement and retention is enhanced by hands-on research (Bauer & Bennett, 2003; Chaplin, Manske & Cruise, 1998; Kardash, 2000; Nagda, Gregerman, Jonides, von Hippel & Lerner, 1998; Hakim, 1998). Minority students in particular overcome boundaries to STEM access (Campbell & Skoog, 2004; Lopatto, 2004; Nnadozie, Ishimaya & Chon, 2001; Ishiyama, 2001; Foertsch, Alexander & Penberthy, 2000; Nagda, Gregerman, Jonides, von Hippel & Lerner, 1998; Hakim, 1998; Chandra, Stoecklin & Harmon, 1998) in college and interest in STEM fields when they conduct research.

Undergraduate research is increasingly being seen as a measure of institutional quality. US News and World Report now includes it in its rankings of undergraduate schools. Polytechnic institutions such as Cal Poly have a long history of undergraduate research that remains very strong today. In the UW System, Stout is somewhat behind peer institutions. UW Eau Claire and UW La Crosse have thriving undergraduate research programs in place and La Crosse has been a host site for both CUR and NCUR national undergraduate research conferences. Undergraduate research raises the profile of the institution and contributes toward an image of high academic engagement that can attract higher caliber students. Undergraduate research is a synergistic process that keeps faculty members vibrant and vital while enhancing student learning outcomes. (Webster, To Appear)

Mission of CORE: Promote undergraduate student research, scholarship, and creative activity as a significant active learning pedagogy.

This broadly-defined undergraduate student research, scholarship, and creative activity will have an applied focus that enhances society. The campus will provide support and resources for faculty to integrate collaborative research, scholarship, and creative activity into the curriculum in order to facilitate student development as innovative, resourceful, independent thinkers throughout their polytechnic college experience.

ACTION PLAN
Short-term: Getting undergraduate research recognized as important to Stout and integrated into the curriculum:
1. Establish a committee of Faculty Senate
2. Meet with CORE to get vision approved – decide on presentations.
3. Meet with SSA – articulate benefits to students
4. Meet with faculty senate / courtesy: academic staff
5. Professional development week presentation: CUR to whole faculty: The Teacher-Scholar
6. Hire Deans that will support research integration into the curriculum
7. Redefine professional development grants for curricular transformation (for 1-2 years)
8. Define assessment tools
Richard: discuss with Provost and get included as bullet in strategic plan.

Benchmarks: Evaluate # of posters, # of student research grants, approval of mission/vision statement

Mid-term: Increased resources (dollars) for faculty implementation
1. Dollars for re-inventing general education / introductory courses to include research component
2. Dollars for professional development workshops
3. Dollars for student stipends (competitive)

Benchmarks: $ amounts, # of prof. devo teacher-scholar workshops
# of courses surveyed that self-identify as including an authentic research component
Implementation of student stipend program

Long-term: Structural revisions
Every graduating senior have a true research experience in their curriculum.
Every freshman have a research experience (via RI designation).
Establish an Office of Undergraduate Research
Generate a more scholarly atmosphere on campus: paradigm shift.

Benchmarks:
Specific Objectives:
What items do we need? I have a lot of info from the CUR meeting on universities doing this and their specific objectives.

- Make tangible sources of support available to faculty and students for undergraduate research (release time, funding)
- Build undergraduate research into the rewards system (promotion and tenure)
- Take undergraduate research into consideration when hiring new faculty
- Integrate undergraduate research into the curriculum (e.g. senior capstone experiences and/or UG GE requirement)
- Recognize undergraduate research as a form of experiential learning.
- Celebrate undergraduate research (e.g. through an undergraduate research award)

Methods to Meet Goals:
Objectives to meet Goal 1: establish a universal undergraduate research (UR) experience for all freshmen.
(A MODEST PROPOSAL)
The CORE group has discussed a number of methods for achieving goal 1. For example develop a required research course or require research within the majors in introductory courses. In addition, CORE has discussed a number of barriers we must overcome to meet this goal such as how to deal with transfers who are not freshman. In order to make participating in research at
the freshman level an attractive goal for students and not just another hoop they must jump through, we must give students options for achieving this outcome. Furthermore, we must make this administratively feasible and a desirable goal for the university. I would like to outline one strategy for discussion.

Several steps can be employed for meeting the objective of every freshman engaged in research. To begin with, like the Global requirement and the Ethnic studies requirement students can select from several options in their freshmen year for achieving this goal. (I am purposing avoiding the terms “meeting the requirement” because this sounds like another hoop to jump.) As part of their normal schedule, students would have to include one of these options in their freshman year and it would be noted on their transcripts. These options are:

One, take a “Research Intensive” general education course. We can designate several general education course sections, not all sections, as “Research Intensive” and provide resources for faculty to enhance those general education courses to meet standards of research we all agree on. This shouldn’t be just assigning a research paper that students work on independently for example. (This will be developed later). For example nearly every student takes English 101 or General Psychology. We have a number of sections of those courses and several could be designated “Research Intensive.” We wouldn’t restrict this option for faculty and anyone teaching a freshman general education course could apply to re-design their course and offer it as “Research Intensive” after Faculty Senate review.

Two, take the required “Research Intensive” introductory course in the major. Some majors already have early research courses that students are required to take. For example, Psychology requires Research Methods in the freshman year. These courses would have to apply to have them designated “Research Intensive.”

Three, any student who takes any “Research Intensive” course would meet this goal.

Four, Participate in a “Research Intensive” learning community. We are already developing some excellent learning communities that have a strong research/discovery focus.

Five, develop a 1 or 2 credit introduction to research, multi/interdisciplinary, general education course that is team taught and is problem focused.

In order to support a culture of research and make achieving this goal possible, we would require administrative support for professional development of faculty teaching these courses in order to learn how to engage freshman. Summer stipends for curriculum development, workshops, training, etc. would be important. We must also celebrate student success. As Michael Pickart suggests, we should have awards and recognitions for freshman research and perhaps special focus at research day for freshman. In addition, the Faculty Senate should review all courses that are attempting to be “Research Intensive” so that they adhere to a set standard.

Webster, M. M. (To Appear). Transforming our Institutions into Research Rich Environments. CUR Quarterly.