

College of Science and Health 2016-2017 Annual Report

Summary

In academic year 2016-2017 the College of Science and Health continued to provide new and unique learning opportunities to more than 5300 undergraduate and graduate majors within the College through the development of programs such as data science, neuroscience, and mathematical ecology, and dual-degree programs in clinical laboratory science and microbiology. Study abroad courses in Tanzania and faculty-lead research projects in Belize and Panama offered international exposure to students. Many departments revised curriculum, underwent reviews of academic programs with a focus on quality improvement, and received or renewed accreditations from external agencies. Public lectures by Nobel laureates, the establishment of a Tourism Research Institute, and service-learning activities by faculty, staff and students, such as the annual *Health for Generations Camp* for Native American students, engaged the surrounding community and provided experiential learning opportunities beyond the boundaries of campus. College-sponsored programs, which include the McNair Scholars and First Year Research Exposure (FYRE), reduced gaps in equity for first-generation students. Programs, including a lecture by a visiting scholar of color and a workshop on inclusive excellence in the classroom, were offered to faculty. Twelve new faculty and six new instructional academic staff were hired for academic year 2017-2018 to replace personnel who have retired or resigned. However, changing enrollment demographics and static state funding resulted in a loss of 2.5 positions and a budgetary reduction in supplies and expenses for the next fiscal year. College goals for the 2017-2018 academic year include the development of a peer-mentoring program for new faculty and instructional academic staff, enhancing programming opportunities for students by developing new majors, interdisciplinary minors or certificate programs, creating additional undergraduate research fellowships, and promoting inclusive excellence by submitting grant proposals to fund scholarships for students of color and hosting equity events for faculty and staff.

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Section 1: Success Stories

One of the unique aspects of colleges and universities are lectures and presentations by internationally recognized scientists and academicians. In addition to providing unique learning experiences for students, these lectures also provide excellent opportunities for outreach and development with the La Crosse community. This year CSH hosted several distinguished speakers, including:

- Distinguished Lecture Series in Computer Science – Dr. Shafi Goldwasser, Professor of Electrical Engineering and Computer Science at MIT. Among numerous awards, Dr. Goldwasser received the 2012 ACM Turing Award (equivalent to a Nobel Prize).
- Distinguished Lecture Series in Life Sciences – Dr. Mario Capecchi, Professor of Biology at the University of Utah and co-winner of the 2007 Nobel Prize in Physiology or Medicine.
- Distinguished Lecture Series in Physics – Dr. Shuji Nakamura of the University of California Santa Barbara and co-winner of the 2014 Nobel Prize in Physics.
- Warner Memorial Lecture – Dr. Marlene Zuk, Professor of Ecology, Evolution and Behavior at the University of Minnesota.

The collaborative, online M.S. degree program in Data Science (Jeff Baggett, Academic Director) is in its second year and growing rapidly. The program began in Fall 2015 with 38 students (7 enrolled through UWL) and as of Spring 2017 had 219 students (44 enrolled at UWL).

Faculty from Biology and Mathematics & Statistics initiated in summer 2016 the Research Experience for Undergraduates (REU) in Mathematical Ecology, funded by NSF with participation of undergraduate students from across the country.

The Tourism Research Institute was established with funding from CSH for a director (Dan Plunkett) for two years. The mission of the Institute is to conduct and facilitate tourism- and recreation-related research activities, which will provide additional opportunities for our undergraduate and graduate students.

Section 2: Programming

- Update on New Programs/ Initiatives
 - Microbiology – In June 2016 the UW System Board of Regents approved the creation of a UWL Department of Microbiology Master of Science program. Also the department developed a Dual Degree program in Clinical Lab Science (BS) and Clinical Microbiology (MS)
 - Biology – Introduced a new concentration in Plant and Fungal Biology in the fall of 2016.
 - Biology (with Psychology and Philosophy) – The interdisciplinary minor in Neuroscience will be submitted to UCC in fall 2017.
- Changes to Existing Programs/Initiatives
 - Physics – Developed Dual Degree program in Physics and Engineering with the University of Minnesota-Duluth Engineering College
 - Health Education and Health Promotion -- The M.S.-SHE program has been suspended due to low enrollment.
 - Geography and Earth Science -- Major revision of the Geography: Environmental Science Concentration Major and the Earth Science Minor.
 - Chemistry – The Biochemistry major received accreditation from the American Society for Biochemistry and Molecular Biology (ASBMB). It is the first and only Biochemistry program in the UW-System to be accredited by ASBMB
 - Recreation Management and Therapeutic Recreation – The Department of RMTR successfully renewed their accreditation through the National Recreation and Park Association Council on Accreditation of Parks, Recreation, Tourism, and Related Professions during 2016-2017 academic year
 - Health Professions – Pursuing expansion of the PA program to include an additional 12 students at Marshfield Clinic; investigating creating new undergraduate major in radiography.
 - Faculty Senate accepted the following CSH Departments/Programs APR Reports during 2016-2017:
 - Undergraduate:** Community Health Education, Exercise Science, Geography/Earth Science, Math, Microbiology & Clinical Laboratory Science, Nuclear Medicine Technology, Recreation Management, Therapeutic Recreation
 - Graduate:** Public Health, Clinical Exercise Physiology, Recreation Management

Section 3: Staffing, Resources and Facilities

- Overview of Staffing and Consequent Changes

Since July 2016, six faculty members, one IAS member, and three NIAS and university staff members have retired. Five faculty and four IAS have resigned. Notably, three of the five faculty resignations have occurred in the Department of Exercise and Sports Science and each of these individuals left for higher paying positions at universities in other states. One additional faculty member in Health Professions received a job offer from another university, but accepted a counter offer from CSH and is remaining at UWL.

As a result of required budget reductions due to changing enrollment demographics, staffing levels for AY 17-18 were reduced by 2.5 FTE. These reductions were met by not replacing with “redbook” positions one retiring faculty member in computer science (1.0 FTE; 0.5 FTE of Dr. Senger’s position was transferred from Math—net reduction of 0.5 FTE in CS) and two IAS that resigned from Biology. One of the two positions in Biology was replaced temporarily with monies from CSH salary savings.

Departments within the college hired twelve tenure-track faculty, six IAS and one university staff member to replace faculty and staff. Two additional faculty positions in Health Professions (OT and PT) were posted, but remain unfilled. During AY 17-18, we anticipate conducting fewer searches than in AY 16-17; as of this date, we will be conducting searches for four faculty and one IAS. A continuing challenge will be hiring tenure-track faculty in the health professions. Few applicants, high salary demands, and restrictive accreditation requirements will require the college to develop alternative strategies for meeting staffing needs in this area in the near future.

- Status of Resources and Facilities: Changes, Challenges, Development

In addition to staffing reductions for AY 17-18 to meet budget reductions, CSH reduced the collective S&E funding to the departments by \$100,000. This will pose a challenge to the departments and the college, especially in funding repairs and replacement of aging equipment in teaching laboratories.

Renovations in Wittich and Wing will require the transfer of 22 faculty and IAS offices to Cartwright Center. Productive discussions with facilities management and affected staff will result in each individual having a private office space.

Section 4: Outreach & Inclusion Activities

- Summary of International Activities and Opportunities Offered

Faculty Research Projects: Gretchen Gerrish (BIO) and Colin Belby (GEO) conducted field work funded by the NSF in Belize with undergraduate students. Barret Klein (BIO) and students conducted field work funded by Smithsonian Tropical Research Institute. John Kelly (GEO) conducted research on conservation reserves in Mexico and serves on the M.S. thesis committee for a student at then Environmental Geography Research Center in Morelia, Mexico. Daniel Sambu (GEO) conducted research on the effects of wildlife conservation on Maasai communities in Kenya and Tanzania. Bob Jecklin (HEHP) was awarded a second Fullbright to teach in Azerbaijan in Spring 2018.

Study Abroad: Daniel Sambu (with Julie Weiskopf, History) lead a study tour to Tanzania for 12 students.

- Summary Community Engagement Activities Attempted and Outcomes

The Department of Health Professions prides itself on faculty/student service and outreach activities. Student placements occurred at over 230 clinical sites across the US in 2016-2017. Faculty-mentored OT and PT students have served over 100 clients through the OT adult and pediatric clinics and the PT's Exercise Program for People with Neurological Disorders (EXPAND). Inter-professional programs involving Viterbo University and the *Go Baby Go* program continue to bring students together for unique learning activities from different HP programs. Faculty/student service learning activities have influenced over 20 community-based organizations and nearly 500 participants.

The Department of Health Education and Health Promotion conducted their second annual *Health for Generations Camp* in July 2016. A goal of this camp is to promote health careers and to introduce Native American students interested in a health to a college campus. In partnership with La Crosse Health Science Academy and Gundersen Health System, ten students from Pine Ridge, South Dakota participated in the camp. The camp will be held again in summer 2017.

Physics students in teacher education host multiple Saturday workshops each semester at the La Crosse Children's museum.

CSH faculty and staff are active in the community serving on the board of directors and volunteering in a number of ways with local non-profit organizations. Some examples include: GROW La Crosse, Outdoor Recreation Alliance, Prairie Enthusiasts, First Free Church food pantry, Blue Stars Drum & Bugle Corps, Coulee Region Chinese School, La Crosse Eating Disorders Task Force, Boy Scouts USA, etc.

Section 5: Inclusive Excellence

Improving Access

- Submission of a National Science Foundation S-STEM grant Proposal: Eagle Achiever Scholars Program (PI – Anton Sanderfoot, Co PIs – Faye Ellis, Mark Sandheinrich & Roger Haro, \$967,816, pending). The goal of our S-STEM program is to increase the retention and graduation rates and to encourage the enrollment into STEM graduate programs for economically disadvantaged, first generation, and underrepresented minority students at the University of Wisconsin-La Crosse. Our plan is to offer 128 annual scholarships of \$5,000 over the five-year period of the proposed grant.

Closing equity gaps

- First Year Research Exposure (FYRE) program served 15 first-year students of color majoring in CSH disciplines. Completion rates for the Math General Education Requirement by FYRE students was 72% (rates for non-FYRE African American and Hispanic students ranged from 32.5% and 58.2%, respectively). Completion rates for passing BIO 105 and CHM 103 with a grade of ‘C’ or better on their first attempt for FYRE students were 100% and 67%, respectively.
- The FYRE Program was selected at the UWL Team/Unit nominee for the University of Wisconsin System 2017 Board of Regents Diversity Award.
- UWL McNair Scholars Program serves 28 students annually, at least 50% of whom have declared STEM majors at the time of program acceptance. In 2016-2017, we had 13 graduates, 10 of whom (77%) will begin graduate school in the fall of 2017.
- Submission of a 5-year grant renewal proposal for the UWL McNair Scholars Program to the U.S. Department of Education (PI-Roger Haro and Co PI-Jessica Thill, \$1,130,382, pending).

Improving campus climate

- In response to the student-produced video “Inclusive Negligence,” CSH sponsored and conducted a workshop for faculty and Instructional Academic Staff on creating inclusive college classrooms in the STEM disciplines.
- CSH submitted and was funded to have a Scholar of Color, Dr. Ruth Washington (Kent State University, Ohio) visit and provide a campus-wide lecture on “Effective pedagogies for inclusivity in the STEM classroom.” She also conducted a faculty workshop on best-practices for inclusive excellence in STEM

Section 6: Plans, Challenges, & Opportunities

- Major goals for CSH in AY 17-18 include:

1. Developing and implementing a college-wide faculty and IAS mentoring program.

2. Expanding experiential learning opportunities for students by increasing the number of Dean's Distinguished Fellowships supported by the college and expanding internship relationships with regional businesses.

3. Enhancing programming opportunities by developing new interdisciplinary minors or certificate programs, developing a new undergraduate major in radiography with Marshfield Clinic, expanding the graduate program in Physician Assistant, and expanding the 3+2 degree program in physics and engineering by completing a new affiliation agreement with UW-Stout.

4. Promoting inclusive excellence (IE) by hosting a Scholar of Color in fall (Dr. S. James Gates, Distinguished University Professor of Physics at the University of Maryland), submit a proposal to host a Scholar of Color in spring 2018, add areas for IE resources to the CSH web site (e.g., links to IE scholarship and fellowship opportunities for STEM students, links for faculty to IE best practices), host at least one college-wide workshop/event on inclusivity in the classroom in fall 2017 and in spring 2018, provide support for writing grant proposals to provide scholarships for students in STEM and health professions.

- Anticipated challenges and opportunities

A major challenge for CSH is the limited fiscal flexibility available to the Dean's office. The inability to carry over unspent college funds into the new fiscal year and the elimination of base support (\$75,000) to replace indirect cost monies from grants and contracts that are now funneled to central administration leaves the College office with only salary savings for equipment repair, S&E startup and early start salary for new faculty, and funding of new initiatives and innovative programs, etc. Because the amount of salary savings varies markedly each year; planning for expenditures is difficult at best and the creativity of CSH to provide new opportunities for faculty, staff, and students is restricted.

Opportunities for expansion of current programs and development of new programs in Health Professions may be possible through existing partnerships with Marshfield Clinic and Gundersen Health Care. In addition, an increase in the number of experiential opportunities for students may be possible through increased faculty partnerships with regional businesses and industry.