

4 August 2015

To: Betsy Morgan
Interim Provost and Vice Chancellor for Academic Affairs

From: Bruce Riley, Dean
College of Science and Health

Re: AY2014-2015 Year-End Report

What follows (first eleven pages) is my summary of activities in the College of Science and Health; more detailed information is presented in the attached unit summaries for AY2014-15. The summary is based on 9 of 11 departmental annual reports, reports from the Statistical Consulting and Murphy Learning Centers, and reports from the McNair Scholars and the First Year Research Exposure (FYRE) programs.

Section 1: Programming and Students.

Programming. Several programs, Nuclear Medicine Technology (NMT), Community Health Education (CHE) and Master's of Public Health (MPH), and Recreation Management and Therapeutic Recreation (RMTR), hosted on-site accreditation reviews in AY2014-15. The NMT program received initial accreditation status with the Joint Review Committee on Educational Programs in Nuclear Medicine Technology, an important step in the further development of the program. The CHE and MPH programs received reaccreditation status (for a seven-year term) with the Council on Education for Public Health (CEPH). RMTR programs are currently responding to the (27-year) accreditation review report from the Council on Accreditation of Parks, Recreation, Tourism and Related Professions (COAPRT); a decision on reaccreditation will follow the program's accreditation hearing at the National Recreation and Parks Association conference in September 2015. For the latter two reviews, CEPH and COAPRT concerns centered on assessment and its relationship to curriculum revision/development. Hopefully, the college's newer standardized assessment processes will help CHE and RMTR address these concerns.

College personnel were involved in the development of new programs, including: the Mathematics Department's participation in a new collaborative online master's degree in data science; the Microbiology Department received entitlement to plan a microbiology master's degree program to replace the current microbiology concentration under the M.S. in Biology program (actually, the curriculum and faculty are already in place for a microbiology master's program, so authorization to implement the master's degree should be forthcoming; and the Physics Department established a dual degree program in physics and composite materials engineering with the Engineering Department at Winona State University.

During AY2015-2016, the Mathematics Department is expected to propose a master's degree program in applied statistics and, once its master's degree program is approved, the

Microbiology Department is expected to propose a dual clinical laboratory science (undergraduate)/medical microbiology (graduate) option and a professional science master's in industrial microbiology option under the M.S. in Microbiology program.

Departments carried-out several curriculum review/update projects, including: the continued review and revision of mathematics and science curricula as part of the Secondary Teacher Education Preparation (STEP) program as well as mathematics and science courses for elementary education students; the Geography and Earth Science Department revised it's GIS curriculum; the Health Education and Health Promotion Department significantly revised its undergraduate community health education curriculum; and the Computer Science Department developed new courses related to computer engineering (it is expected that, in the future, the CS Department will propose a computer engineering concentration within its B.S. in Computer Science program).

At the college level, the college committee reviewed and made recommended revisions to the college core requirements. The college will act on the recommendation in AY2015-16.

Regarding next year's curriculum development plans, the Exercise and Sport Science department will continue its review and revision of the undergraduate physical education teacher education curriculum, the Geography and Earth Science Department will review and revise its core courses in the cultural geography program, the Microbiology Department will review its biomedical concentration program and continue its development of a "math-in-the-major" program, and the Recreation Management and Therapeutic Recreation Department will continue its review and revision of both the undergraduate recreation management and therapeutic recreation programs.

The mathematics and science tutoring services (as well as accountancy and economics tutoring, and public speaking and writing services) offered in the Murphy Learning Center (MLC) continue to serve a significant number of students (student usage of the MLC increased by 19% between AY2013-14 and AY2014-15). MLC director, Lee Baines, also worked with other tutoring services (offered by Student Support Services, Multicultural Student Services, and the Disabilities Resource Center) to better coordinate tutor training and tutoring activities across campus. Dr. Baines is also exploring ways to increase supplemental instruction as a complement to tutoring services. The MLC received funding for AY2015-16 from the students' academic initiatives program; continuing funding for AY2016-17 will be applied for next year.

SAH faculty members administer the (externally funded) WiscAMP Undergraduate Research program and the McNair Scholars program at UW-La Crosse. The Wisconsin Alliance for Minority Participation (WiscAMP) is a state organization, housed at UW-Madison, with a mission to increase the number of underrepresented minorities who receive bachelor's degrees in the STEM disciplines. Each year, through a competitive grant application process, WiscAMP has funded the UW-La Crosse WiscAMP Undergraduate Research program. There were six WiscAMP scholars during AY2014-2015 and, this summer, another six WiscAMP scholars are working with faculty mentors on undergraduate research projects in the sciences and mathematics.

AY2014-15 was the sixth year of the UW-La Crosse McNair Scholars program. There were

twenty-eight McNair scholars with ten graduating in AY2014-15; seven graduates applied to and were accepted into graduate programs for AY2015-2016. Twenty-four program alumni began or continued their graduate studies in AY2014-2015. Ten current McNair scholars are working with UW-La Crosse faculty mentors this summer on undergraduate research projects. Two additional students were supported by competitive external internships (Geological Society of America's MOSAICS program and the National Great Rivers Research and Education Center's internship program), and two others were competitively selected as REU participants at Boston University and Purdue University.

Related to the McNair program, Professor Haro and Jessica Thill, McNair Program coordinator, secured funding (from the SAH) for the First Year Research Exposure (FYRE) program. The program employs an informal learning community model in order to improve achievement and retention of first-year students of color at UW-L in the STEM fields. From 2012 through 2015, the program served 34 eligible students. FYRE students successfully complete general education mathematics and science courses at a higher rate than other UW-La Crosse students of color. Twenty-eight of the 34 participants to date have been retained at UW-La Crosse and in the College of Science and Health.

The Statistical Consulting Center (SCC), staffed by a faculty director, David Reineke this year, and students majoring in statistics, provides advice and assistance in various areas of statistics to members of the UW-L campus community. During AY2014-2015, the SCC assisted 43 clients (16 faculty members, 16 graduate students, 8 undergraduate students, 2 administrators, and 1 analyst) on their research projects. Numerous consultative meetings with undergraduate and graduate student researchers were also held but have not been included in the final client count. Clients were very satisfied with the services offered by the SCC.

The Mathematics Department received a UWS economic development/incentive grant to expand the SCC service to external (to the university) clients. The "external" SCC (ESCC) has accomplished all of its goals for FY14 – FY15 for this incentive grant project:

- Created a marketing plan (created in FY14, revised in FY15),
- Created fee schedule for consulting services,
- Created a standard consulting contract/agreement,
- Created promotion materials including postcards, brochure, and poster (created in FY14, revised in FY15),
- Developed the SCC website for off-campus clients (created in FY14, revised in FY15),
- Setup the structure for accounting and billing clients,
- Continued to build client base through routine networking with potential clients,
- Transitioned to fee for service basis to ensure service sustainability,
- Completed at least 12 projects throughout the year (2014-15) while providing high quality statistical service,

- Guided internship experiences for two statistics students per semester (2 in Summer 2014, 3 in Fall 2014, 2 in Spring 2014, 1 in Summer 2015).

ESCC sent out promotion materials to over 240 local businesses and institutions. Over the duration of the grant period, 13 different clients with 15 completed projects were served. Clients served range from non-profit organizations to federal researchers to for-profit businesses. Two paid marketing internships and 8 paid statistics internships were provided for UWL students.

Of the 8 statistics interns, 6 have graduated from UW-La Crosse with 2 going on to graduate school in statistics (1 for PhD and 1 for Masters degree) and 4 going directly into employment in a statistics-related field. Two of the 8 interns have not yet graduated from UW-La Crosse, but are on track to finish in the coming year.

The mathematics and physics faculty developed and implemented several externally funded professional development programs for in-service K-12 teachers that also provided valuable experience for some of our education students working in the programs.

Collaborative programs continue with local high schools. In particular, the Biology Department offers its introductory biology course through Logan (La Crosse) High School, the Chemistry and Biochemistry Department offers its introductory chemistry course through West Salem High School, and the Computer Science Department offers its first software design course through West Salem High School.

Students. SAH has strong, well-recognized, academic programs that continue to attract a large proportion of UW-La Crosse students as displayed in fall enrollment data, showing over 51% of the students at UW-La Crosse are enrolled in SAH programs,

Fall Semester Enrollment by College

	2006	2007	2008	2009	2010	2011	2012	2013	2014
TOTAL	9,922	9,975	9,900	9,890	9,948	10,074	10,227	10,427	10,558
College of Business Administration	1,602	1,811	1,829	1,758	1,619	1,601	1,624	1,777	1,869
College of Liberal Studies	4,128	4,009	3,822	3,689	3,708	3,524	3,382	3,312	3,265
College of Science & Health	4,191	4,155	4,249	4,397	4,591	4,921	5,210	5,320	5,412
Other	1	0	0	46	30	28	11	18	12
UNDERGRADUATE TOTAL	8,345	8,521	8,634	8,748	8,945	9,119	9,441	9,630	9,777
College of Business Administration	1,558	1,759	1,775	1,686	1,557	1,537	1,576	1,734	1,827
College of Liberal Studies	3,105	3,114	3,125	3,156	3,285	3,170	3,145	3,075	3,049
College of Science & Health	3,682	3,648	3,734	3,903	4,103	4,411	4,719	4,817	4,901
Other	0	0	0	3	0	1	1	4	0
GRADUATE TOTAL	1,577	1,454	1,266	1,142	1,003	955	786	797	781
College of Business Administration	44	52	54	72	62	64	48	43	42
College of Liberal Studies	1,023	895	697	533	423	354	237	237	216
College of Science & Health	509	507	515	494	488	510	491	503	511
Other	1	0	0	43	30	27	10	14	12
Percent CBA	16%	18%	18%	18%	16%	16%	16%	17%	18%
Percent CLS	42%	40%	39%	37%	37%	35%	33%	32%	31%
Percent SAH	42%	42%	43%	44%	46%	49%	51%	51%	51%

Source: Fall Date of Record Enrollment Tables

Other includes Associate Degree and certain Grad Specials classified as "Grad Studies"

and in freshman admissions for AY2015-2016, showing over 57% of incoming freshmen are interested in SAH programs.

Freshmen Admitted for AY2015-2016

Admitted Term	CBA	CLS	SAC	SOE	SAH	TOTAL
Summer 2015	11	14		3	45	73
Fall 2015	328	362	55	102	1127	1974
TOTAL	339	376	55	105	1172	2047

A number of SAH students are pre-professional (pre-allied health and pre-medicine) students that place high demand on general biology, general chemistry, general physics, foundational mathematics and statistics, human anatomy and physiology, and genetics courses. Monitoring and responding to these demands as well as to a shifting mix of students (for example, the increases in exercise science pre-professional and decreases in physical education teacher education majors in ESS, the increases in community health education and decreases in school health education majors in HEHP, and the increases in therapeutic recreation majors in RMTR) are a priority of academic departments and the college. For example, in AY2014-15 the Biology Department adjusted its course-offering schedule to accommodate more students in its genetics course, and this summer a stand-alone building is being constructed next to Cowley Hall to house an additional A&P laboratory that will accommodate up to an addition 200 students per semester in anatomy and physiology courses starting in AY2015-16.

The quality of instruction provided in SAH programs, and the hard work and talent of SAH students, is suggested by the success of students on national professional certification examinations: 100% pass rate for athletic training, clinical laboratory science, medical dosimetry, nuclear medicine technology, radiation therapy, occupational therapy, physical therapy, and physician assistant students; and over 90% pass rate for community health education students.

Over 325 undergraduate and over 175 graduate students conducted research projects during AY2014-2015. Students presented the results of their work through a variety of venues, including:

- A therapeutic recreation graduate student published her thesis in the American Journal of Recreation Therapy;
- Five Health Professions students authored or coauthored, with their faculty mentors, publications in peer reviewed publications, and seventeen additional students gave poster/abstract presentations at national/state conferences;
- Ten graduate students from the Clinical Exercise Physiology program presented their research results at the American College of Sport Medicine national meeting;
- Three athletic training students gave presentations at the National Athletic Trainer's Association national symposium, and graduate students in the human performance program gave presentations at the state and national conferences of the National Strength and Conditioning Association;
- Two students from the Geography and Earth Science program gave presentations at the Annual Meeting of the Association of American Geographers, and a third geography student presented at the Mississippi River Research Consortium;

- Three students from the Computer Science program gave presentations at the Midwest Instruction and Computing Symposium, two students presented at the Third Upper Midwest Regional Celebration of Women in Computing, and a student coauthored, with his faculty mentor, a paper in the Proceedings of the Seventh International Bioinformatics and Computational Biology Conference;
- Two physics students presented their research results at the Conference for Undergraduate Women in Physical Science, and two other students presented at the American Physical Society Division of Nuclear Physics conference;
- Two mathematics students gave oral and poster presentations at the Annual Joint Mathematics Meetings, and six mathematics and statistics students gave research talks at the Meeting of the Wisconsin Section of the MAA; and
- Twelve SAH students gave presentations at NCUR 2015.

Recognitions. Many SAH students were recognized for their activities/accomplishments, including:

- Both 2015 Murphy Awards for Academic Excellence were awarded to SAH graduates: Kali Kramolis graduated in December 2014 with a bachelor's degrees in biology with biomedical concentration and Spanish; and Jacob Gloe graduated in May with a bachelor's degrees in applied mathematics and computational physics;
- The Strzelczyk Award in Science and Health was awarded to Evan Glasgow who graduated in May with bachelor's degrees in biochemistry and biology;
- Josephine Greve, Master of Science in Biology with Microbiology Concentration, received the Rosandich Graduate Thesis Award;
- Kate Noelke, Master of Public Health, and Sara Erickson, Master of Science in Recreation Management, were selected to receive UW-La Crosse Graduate Academic Achievement Awards;
- Microbiology student Julie Merkes received the first place undergraduate oral presentation award at the North Central Branch of the American Society for Microbiology conference;
- Computer Science undergraduate student Amy Higgins received an internship with Google and was named a Google Ambassador for the campus;
- Physics student Lance Hildebrand was selected as an REU student to conduct research at John Hopkins University during summer 2015, and physics students Evan Dowling and Bryan Nestingen received a Wisconsin Space Grant Consortium undergraduate research fellowships; and
- Six mathematics students participated in the (International) William Lowell Putnam Mathematical Competition, the UW-La Crosse team place 64th out of 577 institutional teams and the top UW-La Crosse student was ranked 172nd out of over 4000 students that took part in the competition.

Section 2: Staffing, Resources, and Facilities.

College Staffing. Thirteen tenure-track faculty and fourteen instructional academic staff members joined the college in AY2014-15.

- The new staff increased departmental expertise in targeted areas of study, and provided several departments with opportunities to offer additional sections of high demand courses and laboratories.
- The new staff helped lighten the workload on continuing staff and, with the increased staff, some departments were able to provide faculty with some assigned time to devote to scholarly activities (more departments need to examine how they might use assigned time in this way).
- Based on first year reviews, the new faculty did quite well in the areas of teaching and scholarship during their first year at UW-La Crosse.
- Eight of the new faculty members participated in the College's early start program for grant proposal writing (during the month of August 2014). Six of these first year faculty members had UWL Faculty Research Grant proposals funded for summer 2015, eight external grant proposals were submitted with two receiving funding, three not funded, and three proposals still pending; so the new faculty members did make effective use of the early start program - grant writing time and support/training they received from their departmental colleagues and from the Office of Research and Sponsored Programs staff.

During the year, nine faculty and thirteen instructional academic staff members were hired to begin in AY2015-16 (nine of these are GQA funded positions). These new hires fill consequential needs in the college including the areas of anatomy and physiology, biology, biochemistry, cartography and GIS, chemistry, computer science, exercise physiology, exercise science, geography, mathematics, mathematics education, occupational therapy, physical education, physician assistant, recreation management, statistics, and therapeutic recreation. In addition to meeting departmental needs, including scholarly collaboration within departments, many of the positions were developed to increase the potential for scholarly collaboration across departmental lines. Finally, there were four failed searches during the year.

In AY2014-2015, there was one retirement in each of the Biology, Exercise and Sport Science, Geography and Earth Science, and Recreation Management and Therapeutic Recreation Departments, there was one resignation in each of the Biology, Chemistry and Biochemistry, and Recreation Management and Therapeutic Recreation Departments, two resignations in the Exercise and Sport Science Department, and four resignation in the Health Professions Department. One or two retirements are expected in AY2015-16.

During AY2015-16, the college plans to search for seventeen (eleven tenure-track faculty and five IAS) positions (among these are positions in clinical laboratory science, physical therapy, and therapeutic recreation, which will be challenging to fill). Thus, faculty recruitment will be a major activity in the college during the next academic year.

College Finances/Supplies and Expenses/Facilities. The college was able to invest one-time salary savings dollars and the dean's planning account dollars to help meet needs in the college, including:

- Provide supplemental S&E help to several departments;

- Replace and upgrade equipment used in teaching laboratories (much of this equipment will also be used for faculty and student research projects, and is often referred to as institutional resources available to grant proposal projects);
- Replace faculty computers and computers in departmental computer laboratories;
- Fund small classroom/laboratory modernization projects;
- Supplemental travel and professional development funding for faculty and staff;
- Undergraduate research – S&E for research projects, support research components of the WiscAMP and FYRE programs, and stipends for students and mentors in the Dean's Distinguished Fellowship summer program
- Matching funds for grant proposals.

Equipment needs were identified by departments in memoranda and classroom/laboratory modernization proposals sent to the college office, and in an inventory of equipment owned by the college conducted by the SAH College Committee.

Renovation work in research laboratories in Mitchell Hall is being planned for AY2015-16. Additional, planning/renovations will be required to accommodate the new faculty that will be hired to begin in AY2016-17.

The design process for the Cowley Hall/New Science Building Project is continuing this summer and will continue for approximately one year; followed by two years of construction for Phase I (the laboratory phase) of the project. Faculty members were pleased with the comprehensive pre-design program report, and are deeply involved in the design phase of the project.

AY2015-16 will be a challenging budget year for the college. First, S&E funding in the college was reduced by \$150K as a result of the 2015-2017 biennial budget reductions to UW System. The reduction was managed so that the college office assumed the full reduction leaving departmental budgets intact. In addition, \$75K that was budgeted annually for the college related to indirect cost reimbursement associated with successful SAH grant proposals was removed in AY2014-15. Of course, this means that the dean's planning accounts are greatly diminished (by \$225K), and that the college's ability to provide supplemental funding for departmental programing and research needs, funding for new initiatives, et cetera has been crippled.

Scholarly Activities. SAH faculty members were successful in their external contract and grant writing efforts: 15 federal and 15 non-federal proposals were funded totaling nearly \$2 million in direct and indirect funds coming to the university. In addition, 25 proposals are still pending with the potential of approximately \$5 million in direct and indirect dollars.

In AY2014-15, SAH faculty members were quite active (and successful) in the area of scholarship with over 175 research publications, over 275 talks at professional meetings, and mentoring work with over 325 undergraduate and over 175 graduate students on research projects.

Service Activities. Members of the college have a strong record of university and professional service. For example, the chair (and two other members of the executive committee) of the

Faculty Senate and the chairs of nine Faculty Senate committees were SAH members, and the Mathematics Department's ADA served as chair of the Classified Staff Council. Beyond UW-La Crosse, college members held leadership positions in professional organizations and in the organization of professional conferences, refereed and reviewed research papers and book chapters, reviewed grant proposals, and served as consultants to other academic institutions or professional organizations. SAH faculty, staff, and students were also actively involved in professionally related service with area schools, health care institutions, and civic and other community organizations.

Recognitions. Many SAH members/units were recognized for their professional activities/ accomplishments, including:

- Scott Cooper, Biology, was recognized as the 2014 Wisconsin Professor of the Year by the Carnegie Foundation and the Council for Advancement and Support of Education;
- The Physics Department was ranked number 1 in awarding physics degrees among U.S. bachelor's degree granting programs by the American Physical Society, and the department received the 2015 Judith A. Bouffleur Outstanding Volunteers of the Year Award for their monthly physics demonstrations at the Children's Museum of La Crosse;
- The Mathematics Department received the 2015 UW System Board of Regents Teaching Excellence Award;
- Heather Schenk, Chemistry and Biochemistry, was selected as a 2015 UW System Board of Regents Scholar Awardee and selected as a UW System Teaching Scholar;
- Scott Doberstein, Exercise and Sport Science, received the Outstanding Educator Award from the Wisconsin Athletic Trainers' Association;
- Nadia Carmosini, Chemistry and Biochemistry, was recognized as the 2015 American Chemical Society Outreach Volunteer of the Year Award;
- Bonnie Bratina, Microbiology, was elected President of the North Central Branch of the American Society for Microbiology;
- Jennifer Kosiak, Mathematics, was elected President of the Wisconsin Mathematics Council;
- Edward Kim, Mathematics and Yevgenia Turov, Chemistry and Biochemistry, were selected as 2015 Provost Teaching Award recipients;
- Jennifer Docktor, Physics, was the recipient of the 2015 School of Education Recognition of Excellence for Outstanding Achievement in Scholarship Award; and
- The Mathematics Department was named the 2015 Most Accessible Department, and Robert Allen, Mathematics, named the 2015 Most Accessible Professor by the Students Advocating Potential Ability (SAPA) organization.

Section 3: Outreach Activities.

SAH faculty and student community engagement focus on health and wellness programming, service programs in the areas of adult fitness/cardiac rehabilitation and motor development, adventure education, mathematics and science education enhancement programming, and recreational programming on campus and in community and business organizations, public schools, and senior and assisted living facilities. SAH departments sponsored special events,

distinguished lecture series, and symposia in all the areas of science and health that are open to students and adults from the La Crosse region.

Inclusive Excellence. SAH faculty and staff members were engaged in activities consistent with the goals of inclusive excellence (improving access, closing equity gaps, and improving campus climate), for example:

- Faculty members are involved in mentoring minority students in the previously mentioned FYRE, McNair, and WiscAMP programs;
- Faculty members taught for the Academic Success Institute (ASI), the objective of this program is to help multicultural students make a successful transition from high school to college;
- Mathematics faculty members ran the FastTrack program, designed to give incoming freshmen the opportunity to move ahead in their required mathematics coursework and provide support as the students enroll in their first college mathematics course – one of the original goals of FastTrack was to strengthen the retention and graduation of multicultural and low-income students, and STEM majors (admission into the program is partially based on these categories);
- The Health Education and Health Promotion department co-sponsored the Scenic Rivers Area Health Education Center's Native American Students Health Careers Summer Camp;
- SAH faculty members participated in underrepresented minority student recruitment programs in collaboration with the Admissions Office and with their professional organizations;
- SAH faculty members were actively involved in women in science programs on campus and at the state level;
- College staff participated in (and the college office supported) supplemental instruction programs for STEM courses in collaboration with Multicultural Student Services;
- Inclusive excellence topics and speakers were incorporated into courses and seminars, and academic programs offered service-learning opportunities that address issues of vulnerable populations.

International. SAH faculty international activities include presenting research results at international conferences and universities, and engaged in collaborative research with international scholars both abroad and on campus (for example, the Exercise and Sport Science and Health Professions Departments hosted visiting international scholars during AY2014-15).

SAH faculty/departments also offered international academic programs, including:

- The Computer Science department continues to develop MSE contract programs for international students;
- Clinical exercise physiology faculty taught coursework in the Netherlands; and
- The Occupational Therapy program offered international study trip to learn about occupational therapy education and clinical practice in England and Scotland.

Section 4: Activities for AY2015-16.

In the prequel, several activities for the next academic year were mentioned:

- Curriculum implementation, revision, and development projects (including mathematics and science education programing for elementary/middle school education students);
- Monitoring and addressing issues posed by the changing mix of UW-La Crosse students (in particular, the increasing number of pre-professional, community health education, and therapeutic recreation students);
- Faculty recruitment;
- Cowley Hall/Science Building Project design activities;
- Addressing near future space needs in Cowley Hall and Mitchell Hall (and Wing Technology Center as the Computer Science Department's computer engineering and other initiatives begin to stretch the physical facilities available to the department); and
- Securing continuing funding for the Murphy Learning Center.

In addition, high priority is placed on:

- Mentoring the new(er) faculty as needed;
- Continue to find ways to support faculty/staff scholarship and professional development activities;
- Addressing faculty/staff salary inversion/compression issues;
- Continue the work on college wide assessment of student learning processes, especially as we complete the current round of biennial assessment reporting; and
- Continue the work started by departments on the development of (five year) departmental academic plans (with the large number of SAH faculty hires over the past few years, departmental priorities are shifting, professional programs must address changing accreditation expectations, et cetera - the development and review of departmental academic plans would contribute to strategic planning at the college level).

SUMMARY OF ANNUAL ACTIVITIES
BIOLOGY DEPARTMENT
(June 1, 2014 - May 31, 2015)

Section 1: Students and Programming

Implementation of BIO 203 (Organismal Biology) and elimination of BIO 204 (Plant Biology) and BIO 210 (Animal Biology) as required courses for the major occurred in AY 2013-2014 and full implementation of BIO 203 as the only option for that portion of our core curriculum occurred this past year. Major components of the laboratory experience in the course are active learning and skill development activities, including experimental design and statistical analysis of data, figure construction and interpretation, phylogeny construction and interpretation, and scientific literature use, synthesis, and summary.

Four faculty and staff (Litster, Redman, Paluch, Ellis) received a Curriculum Redesign Grant to revise and create new laboratory exercises for our non-majors course in biology (formerly BIO 103; Introductory Biology). Effective fall 2015, BIO 103 has been replaced with BIO 100 (Biology for the Informed Citizen). Unlike, BIO 103, BIO 100 will not be applicable to the major or minor in biology.

Increases in the number of majors (1215 in fall 2015) as well as increased need by non-majors for select courses (e.g., genetics) in our core curriculum has required re-allocation of teaching and facility resources in an attempt to meet course demand. We offered 3 more sections of BIO 306 (60 students) in AY 2014-15 but, based on course demand for fall 2015, it is evident that we will need additional laboratory sections; we are exploring alternatives for AY 2016-17.

Section 2: Staffing, Resources, and Facilities

We welcomed one new tenure-track faculty member, Sierra Colavito, whose primary teaching responsibility is genetics. In addition, two new instructional academic staff, Teresa Mika (BIO 100/105 lab coordinator and lecturer) and Markus Mika (lecturer in BIO 105 and laboratory instructor for BIO 203 & 306) joined the department. We hired Christine Schwartz (tenure-track physiologist), who will begin in August 2015, and are in the process of hiring two new IAS to coordinate and teach laboratories in BIO 312 & 313. We were unsuccessful in our search & screen process for an individual to fill a tenure-track position in biology education. We plan to re-advertise this position in fall 2015 in addition hiring to a tenure-track geneticist to replace Rob Tyser, who retired in May.

Tony Sanderfoot was recommended for promotion to Associate Professor by JPC; Renee Redman was recommended for promotion to Senior Lecturer. Tony Sanderfoot was also recommended for retention and tenure.

Faculty and staff maintained their scholarly productivity and active engagement in undergraduate and graduate education. They submitted more than 55 educational, research, and service grants during AY 2014-2015. Biology faculty authored 36 peer-reviewed publications or book chapters with several publications focused on SOTL. In addition, faculty and staff authored more than 75

presentations at regional, national, and international science conferences. Many publications and most presentations had undergraduate or graduate student co-authors.

Section 3: Outreach Activities

Dr. Judith Li, a multicultural children's book author and aquatic scientist from Oregon State University, made a number of presentations on campus and at a local elementary school. Her visit was funded by a UWS Regent's diversity award to Roger Haro.

The Department hosted Dr. David Tilman, Regents professor and McKnight Presidential chair in Ecology at the University of Minnesota. He presented the first Warner Memorial Lecture, which was open to the campus and public community. The new lecture series is funded by a generous endowment from the late James Warner, a former department member.

Aquatic science faculty are leading the organization and hosting of the biennial conference of the International Society for River Science at the La Crosse Center in August 2015. This conference will bring together 200 to 400 national and international scientists from the physical, natural, and socio-economic sciences.

Section 4: Plans, Focus, Challenges, and Opportunities for 2015-2016.

The Department initiated in AY 2014-15 the development and implementation of a five-year planning and goals document. These activities quickly identified instructional needs for replacing Rob Tyser upon his retirement and will continue during AY 2015-2016. We will continue to develop a new, integrated set of learning outcomes for the Biology program and revise the departmental assessment program to address appropriate outcomes

Beginning fall 2015, Anne Galbraith has been reassigned 3 contact hours to take on more advising responsibilities within the department. The nature of these activities, which will focus on first-year students, are being defined.

As always, our largest challenge is physical space for our students and staff. We currently have departmental staff located in four different buildings on campus, making it difficult to keep everyone connected to the department. Teaching lab space is again at a premium, though the BIO 312/313 lab annex scheduled to open in fall 2015 will help address student demand for the anatomy and physiology series.

SUMMARY OF ANNUAL ACTIVITIES
CHEMISTRY AND BIOCHEMISTRY DEPARTMENT
(June 1, 2014 - May 31, 2015)

Section 1: Success Stories

We hosted a very successful UW-System Chemistry Faculties Meeting in October 2014 with a great keynote speaker, science writer, Sam Kean. We only do this once every fourteen years. Several department members received awards this year, mostly for teaching. Nine department members were nominated for the Provost Teaching Excellence Award, and one of these, IAS member **Eugenia Turov**, was selected. **Nadia Carmosini** received the 2015 ACS Outreach Volunteer of the Year award for her exemplary volunteer outreach efforts. **Heather Schenck** was selected to be one of only five new UW-System Regent Scholars, and award that came with a grant of over **\$36k**. **Keith Beyer** received over **\$390k** in NSF-RUI funding in a grant that will span the years 2014-18.

Section 2: Students and Programming

The Department is externally reviewed and certified by the American Chemical Society–Committee on Professional Training (ACS-CPT). This body has just adopted a new set of “2014 Revisions to the Baccalaureate Program in Chemistry” that will force us to again modify our curriculum for the ACS-Certified B.S. degree that we offer (this comes on the heels of just bringing our curriculum into alignment with the 2008 guidelines). Polymer chemistry will now be required in our curriculum, so we created two new polymer courses **CHM 322, 422** (lecture and lab) that we will use to meet this requirement. We also developed an advanced Gen Chem course **CHM 107** that would save majors and minors some credits and time toward meeting their degree requirements. Our newest upper-level elective course **CHM 405**–Advanced Synthesis Laboratory was offered for the first time in spring 2015. Our major’s biochemistry sequence **CHM 417, 418, 419** was offered in a fully revised and expanded credit and contact hour format was run for the first time this year.

Faculty members collectively mentored **43** undergraduates in independent research projects and co-advised **7** MS degree candidates (from BIO and MIC). We secured **\$20k** in internal teaching development grants this year. The department awarded approximately **\$25k** in scholarships to its majors. We continued and expanded a third year of our Visiting Seminar Speaker series that brought one chemist to campus each month using Foundation funds. These were very well received and attended by our majors, minors and faculty members. A biochemistry major, **Evan Glasgow**, won the top CSH graduating senior Strzelczyk Award.

Section 3: Staffing, Resources, and Facilities

We welcomed one new IAS member, **Dr. Basudeb (“Basu”) Bhattacharya** (102), a biochemist, and he had a very productive first year.

We ran four successful searches that led to the hiring of five new staff members: 1) a new NIAS Laboratory Manager I **Mr. Justin Jens** (102) to replace Laura Roessler, 2) an IAS organic

chemist, **Dr. Joshua Neukom** (102) to replace Derek Salter, 3) **Dr. Laura Herder** as a 1-year sabbatical replacement for Drs. Bryan and Beyer during 2015-16, and 4) two new tenure track faculty members in biochemistry **Dr. Kelly Gorres** (GQA) and **Dr. John May** (a spousal hire requiring conversion of Gustafson's GQA IAS position into a TTF position). **Bruce Gustafson** resigned, effective May 1, to go on permanent medical disability leave.

Two chemists (**Heather Schenck** and **Aric Opdahl**) were away on sabbatical leaves during fall and spring of 2014-15, respectively. Two other chemists (**Jeff Bryan** and **Keith Beyer**) were granted sabbatical leaves for the fall and spring of 2015-16 AY, respectively.

One successful promotion portfolio was advanced for **Aric Opdahl** (to Professor). One IAS member, **Roghaieh "Pari" Ghodsian**, was promoted to Senior Lecturer. **Yevgeniya "Eugenia" Turov** won one of the third annual Provost's Teaching Excellence Awards, which was well deserved. Eight other chemists were nominated for this award, and others were nominated "most accessible faculty" awards from Students Advocating Potential Ability.

Scholarly activity and success continues to be strong. Department members collectively wrote several grant proposals for external and internal funding and were fortunate to receive some good awards this year, despite a tight federal funding environment. Newly funded external grants totaled **\$517k** (one of these was the 4-year \$396k NSF grant to Beyer). Chemists netted **\$51k** in internal UW-L research and faculty development grants. Department members and their students made **45** scholarly presentations at a range of professional conferences. Chemists collectively published **9** peer-reviewed manuscripts and **1** book chapter. Numerous peer reviews of manuscripts and grant proposals were completed.

A number of department members were busy prioritizing needs, obtaining quotes, making purchases, setting up new instruments and equipment, and learning to use these items as a result of three rounds generous "one-time funding" for "major purchases." Approximately **\$143k** in acquisitions this year helped to modernize our teaching and research infrastructure and enhance inter-departmental collaborations.

Section 4: Outreach Activities

In addition to normal teaching loads, several faculty members hosted special outreach teaching workshops for primary and secondary schools, which include the Young Scholars, Mississippi Valley Gifted and Talented Network, and Girls in Science programs. Demonstrations were delivered in several local schools, and we also put on these "Chemistry Magic" shows for busloads of students at the ends of each semester.

Bruce Osterby continued to offer the year long CHM 103-General Chemistry I course for advanced West Salem HS students (the eighth time), and HS students often visit our Radiation Center and NMR Instrumentation Facility for demonstrations. Chemists also continue to offer special laboratory safety training and testing for all Cowley Hall departments three times throughout the year. We have expanded our student tutoring hours in the Murphy Learning Center and now provide coverage for all of the courses in the first two years of our major and minor curricula as well as in biochemistry.

Chemistry faculty members were generally widely engaged in service and university governance at all levels, with a number of us in leadership positions. Likewise, most department members were active in various forms of professional and community service.

Section 5: Plans, Focus, Challenges, and Opportunities for 2015-16

We hope to continue seeking “American Society of Biochemistry and Molecular Biology (ASBMB)-Recognized” status for our biochemistry program, which will allow us to offer a more prestigious “ASBMB-Certified” BS degree in biochemistry. We will continue to engage in more detailed planning for the design and move into a new science building, and hope to continue our instrumentation upgrade and maintenance efforts, as funding permits. We’ll begin preparing for our next ACS-CPT external program review as well as the upcoming UWL APR to follow. This will require solidifying some of our curricular revisions that are already in the works.

Staffing. We will need to hire a new GQA IAS member who would primarily teach General Chemistry and Organic Chemistry laboratories and help us to meet student demand in these areas. This open position will be occupied by sabbatical replacement, Laura Herder, for the year.

Challenges. Our main problem continues to be space. We operate well beyond capacity in Cowley Hall in both teaching and research and do not seem to be able to meet student demand for our (laboratory) courses. Additionally, many parts of the building continue to fail, and we repeatedly need to use department and college funds to make repairs and conduct maintenance. Office spaces, water supplies, ventilation, plumbing/flooding, and general crowding are the main problems. All of these should go away with the new science labs building, but we struggle to deliver quality services to our students and to do good work under the present conditions.

Another challenge for us will be figuring out how to add polymer chemistry content coverage to an already dense and credit heavy curriculum in our ACS-Certified BS degree. We may need to hire a new person with expertise in polymer chemistry to meet this new requirement.

SUMMARY OF ANNUAL ACTIVITIES COMPUTER SCIENCE DEPARTMENT (June 1, 2014 - May 31, 2015)

This summary focuses on notable department activities for the academic year 2014-15.

The Department continues to see strong enrollment in the Computer Science Major and Masters of Software engineering programs consistent with national trends. Enrollments in the three course introductory sequence are the highest they have been since 2000. Employment prospects remain very strong with essentially 100% of graduates finding employment in the field. From student reports of job offers there seems to have been a significant increase in starting salaries.

The Department was delighted this year to have one of our earliest graduates, Mike (Math & CS 73) and Mary (Phy Ed 76) Aspenson visit campus and establish two scholarships, one in computer science and the other in medically related disciplines. Mike spent a career in the aerospace industry rising to Vice President at Lockheed Martin and Senior Directory at Raytheon. We were also delighted to have Jon Otterstatter (CS 85) speak to students on campus. Upon graduation Jon joined IBM but subsequently left to start two companies of his own in medically related fields. Finally, Shelmina Babai Abji (CS 85) was an invited speaker at a campus event hosted by the Provost. Shelmina also joined IBM at graduation.

There were several notable events related to students this year. One of our graduates received an internship with Google and was also named a Google Ambassador for this campus. This involved hosting a number of student events and contests over the academic year. The Women in Computer Science organization begun last year has been very active and plays an important role in the department. Six research papers were published with student authors and were presented at regional and international conferences.

The Department continues its outreach efforts. This includes working with local area high school teachers on computer science. Prof. Gendreau's collaborative project with Marquette University, funded by the NSF, is particularly important in this area helping to improve the presence and quality of computer science education at the high school level. The Department also hosted a very successful Distinguished Lecturer this year. Prof. Kumar from the University of Pennsylvania gave two very well received lectures on aerial robotics. This series attracts a substantial audience from the community and presents important developments in computer science. Prof. Hursey and Prof. Periyasamy received funding from the campus Community Partnerships Incentive Grant program to develop software to support the needs of Habitat for Humanity.

The MSE contract programs with the South Central University for Nationalities (SCUN) and Wuhan University continue to show strong interest with a total of 22 students attending UWL in the Computer Science and MSE programs. This was the second year of the revised 3+2 format for the MSE program with SCUN. This was also the 10-year anniversary of our joint programs with SCUN. In those 10 years, UWL has awarded approximately 80 MSE degrees to students from Wuhan China. In May, a delegation from UWL consisting of Dean Riley, Fred Pierce, Prof. Hunt, Prof. Riley and Becky Yoshizumi traveled to SCUN to host an alumni reception.

The Department has made several significant curricular changes this year. After offering the Internet of Things course for two years the Department decided to propose a three-course sequence in Computer Engineering. Not only have mobile and small embedded computing devices become ubiquitous but the design and construction of devices of this kind has become much more accessible. This is a new departure for the Department but we believe that the combination of software with embedded/mobile devices will be very attractive to students in the coming years. The Department also divided the content of the Computer Graphics and Visualization course into a two-course sequence since the important core material in the area had become too large for a single three-credit course. Finally, the Department decided to make CS 202 (Introduction to Web Design), originally introduced as an offering for non-majors, a prerequisite to CS 402 (Web Application Development).

The Department received approval to search for three tenure-track positions in December. Two of these positions would not add to the FTE capacity of the department but would instead offset the workload associated with managing capstone projects for contract students. These positions would be supported by contract funds. The third position is intended to support the additional load associated with the computer engineering coursework.

One of the new hires works in the area of robotics. This, combined with computer engineering and other initiatives in the department is beginning to stretch the physical facilities available to the department.

SUMMARY OF ANNUAL ACTIVITIES
EXERCISE AND SPORT SCIENCE DEPARTMENT
(June 1, 2014 - May 31, 2015)

SUMMARY OF ANNUAL ACTIVITIES
GEOGRAPHY AND EARTH SCIENCE DEPARTMENT
 (June 1, 2014 - May 31, 2015)

This year has seen changes to the department's faculty, with the retirement of Dr. Rafique Ahmed at the end of the fall 2014 semester after 31 years of service to UW-L, and the hiring of Dr. Paul Reyerson. The department continues to offer strong programming and opportunities for students. The faculty contributed significantly to research, with peer reviewed publications, conference presentations and grants received. Faculty are very involved in innovating teaching pedagogy and materials, supervising undergraduate research, university and professional service, and community outreach.

Section 1: Success Stories

The department continues to be very successful in research, with 9 peer-reviewed papers published and accepted for publication, and one peer-reviewed book chapter published. Faculty gave 10 conference presentations, including 6 national, 2 regional and 2 international conferences.

A successful search was conducted for the two open faculty positions and the GIS lab manager. The department hired Niti Mishra for the Geovisualization/Cartography/GIS position, and John Kelley for the Human Geography position. They both received early start and will join the department in August 2015.

Section 2: Students and Programming

Student accomplishments:

The Geography faculty supervised 16 students on undergraduate research projects. Three students received UW-L Undergraduate Research Grants:

- Dylan Hamel, *Bike Accessibility in La Crosse, WI* (advisor: Dr. Gargi Chaudhuri).
- Jordan Keller, *Obtaining Upper Mississippi River Sediment Samples for Radiocarbon Dating* (advisor: Dr. Joan Bunbury).
- Ryan Sneath, *Climate change and the northern expansion and contraction of Mississippian peoples at Aztalan, AD 1000-1250* (advisor: Dr. Joan Bunbury).

Eight students presented research at conferences this past year, including 2 presentations at national conferences, 1 presentation at a regional conference, and 5 presentations at the UW-L Undergraduate Celebration of Research and Creativity. Two students presented research at the Association of American Geographers annual meeting in Chicago:

- Dylan Hamel, *Bike accessibility in La Crosse, WI*
- Jonas Rugtvedt, *Road Network Analysis of Oslo*

Programming:

The Environmental Science concentration continues attract the most majors to the department. The number of majors in the GIS concentration has increased slightly over the previous year.

This increase should continue as the program re-design is implemented. The GIS curriculum was assessed last academic year, and major revisions were developed. These changes were approved by the UCC and have already started to go into effect. The implementation will continue in fall 2015, with the final changes fully implemented by spring 2016.

Section 3: Staffing, Resources and Facilities

Staffing:

Paul Reyerson joined the department in fall 2014 as a physical geographer faculty. Dr. Reyerson has a Ph.D. from UW-Madison. His specializations include soil science, geomorphology and landform development.

Steve Fulton joined the department in January 2015 as the GIS lab manager. He has a B.S. from the University in Toronto. His hiring as the lab manager has greatly facilitated the use and management of the labs.

Scholarship and Grants:

Faculty members in the department maintain a dynamic scholarship program, continuing to collaborate with colleagues at UW-L in the Departments of Biology and Chemistry, and in the River Studies Center. Faculty also have maintained external collaborations with numerous other universities and organizations, including the Upper Midwest Environmental Sciences Center, U.S. Geological Survey, National Park Service and the American Geographical Society.

Faculty members were active in research publication, publishing 5 academic journal papers and one edited book chapter. These include:

- Perroy, R., **Belby, C.**, Mertens, C. (2014). Mapping and modeling three-dimensional lead contamination in the wetland sediments of a former trap-shooting range. *Science of the Total Environment*, 487, 72-81. (Accepted: March 2014, Published: July (3rd Quarter/Summer) 15, 2014).
- Hargan, K., Ruhland, K., Paterson, A., Holmquist, J., MacDonald, G., **Bunbury, J.**, Finkelstein, S., Smol, J. (2015). Long-term successional changes in peat lands of the Hudson Bay Lowlands inferred by the ecological dynamics of multiple proxies. *To appear in The Holocene*, 25(1), 92-107. (Published: January (1st Quarter/Winter) 2015).
- Loisel, J., **Bunbury, J.** (2014). A database and synthesis of northern peat land soil properties and Holocene carbon and nitrogen accumulation. *The Holocene*. (Published: September 2014).
- Mishra, N. B., **Chaudhuri, G.** (2015). Spatio-temporal Analysis of Trends in Seasonal Vegetation Productivity across Uttarakhand, Indian Himalayas, 2000-2014, *Applied Geography*, 56, 29-41. (Published: 2015).
- **Chaudhuri, G.**, Clarke, K. C. (2014). Temporal accuracy of urban growth modeling: A study of SLEUTH application. *Transactions in GIS*, 18(2), 302 - 320. (Published: 2014).

- **Chaudhuri, G.**, Oxley, S., Wenzlaff, S. (2014). In Elmes, G., Roedl, G., Conley, J. (Ed.), *Mapping spatio-temporal patterns of liquor law violation citations in college town of La Crosse, Wisconsin* in *Forensic GIS: The Role of Geospatial Technologies for Investigating Crime and Providing Evidence* (vol. 11, pp. 201-220). *Geotechnologies and the Environment* series, Springer. (Submitted: June 1, 2013, Published: October (4th Quarter/Autumn) 2014).

In addition to the above, 3 peer-reviewed journal papers have been accepted for publication:

- **Belby, C.**, Perez, C. R., Gerrish, G. Understanding ecosystem change in upper Mississippi River backwaters through geochemical and biological analyses of sediment cores. *To appear in River Systems*. (Submitted: December 11, 2014, Accepted: May 2015).
- **Belby, C.**, Knox, J. C. Historical Floodplain Lake Sedimentation in the Upper Mississippi River. *To appear in Physical Geography*, 33. (Accepted: September 2014).
- Dutta, S., **Chaudhuri, G.** Mapping Environmentally Sensitive Areas of Rajasthan in Western India. *To appear in Geographical Review*. (Submitted: June 2014, Accepted: February 2015).

The faculty received \$19,095 in internal UW-L funding. This included:

- 2 UW-L Faculty Research Grants (\$6920 to Dr. Chaudhuri; \$8825 to Dr. Sambu)
- An International Development Grant (\$3350) for Dr. Sambu to travel to Kenya in summer 2014.

The faculty was very active in presenting papers at academic conferences, including

- 2 international (Canada and Poland) conference presentation (Bunbury, Cravins)
- 6 national conference presentations (Belby, Berlin, Chaudhuri, Sambu)
- 2 regional meeting presentations (Bunbury, Sambu)

Resources and facilities:

The departmental research facilities, including the paleoenvironment, soils and field labs continue to be heavily used by faculty and students. Undergraduate research projects regularly require the use of these labs. All of the physical geography courses utilized at least one of the labs and many of the GIS/remote sensing courses use them as well. The teaching labs, including the geomorphology and GIS labs, are also very heavily used. With the exception of a few human geography courses, all other courses offered by the department use the GIS labs. The scheduling of classes and research time in the labs is challenging, and would not be possible without the collaboration and compromise of our faculty. We look forward to the new Cowley facility.

The GIS labs and the GIS lab manager continue to be critical in supporting the department curriculum as well as the GIS activities of numerous other departments and programs (e.g., Biology, River Studies, Archaeology, Business). The lab manager works closely with IT to maintain our facilities.

The department transferred its large format printer to the College this spring, and it is now housed in Cowley 209. With the transition of maps from paper to primarily digital format, the department no longer used the printer enough to maintain its full functionality.

Section 4: Outreach Activities

International activities and opportunities:

Dr. Sambu travelled to Kenya in July 2014 to conduct research and establish contacts for a possible international experience for UW-L undergraduates. He worked with community leaders on issues of wildlife conservation and water resources. He also conducted outreach to local communities by giving presentations on natural resource conflicts at three different high schools. These presentations were open to local community members and very well attended.

Dr. Cravins conducted a second trip to Cuba in May 2015. He continued his collaborations with the University of Havana. A UW-L undergraduate student, Evan Weiss, accompanied Dr. Cravins to Cuba.

Dr. Cravins attended the International Geographical Union Regional Conference, Krakow, Poland, IGU, Krakow, Poland in August 2014. He presented the paper *The Changing Nature of Geography as an Academic Discipline*.

Engagement:

Faculty members in the department maintain an active service program to UW-L, professional organizations and the community. Engagement included extensive service to the university, CSAH, the department and profession. Only a few selected professional examples are provided here:

- Dr. Cravins serves as the UW-L Faculty Representative to the UW Board of Regents.
- Dr. Belby is serving on the planning committee for the fourth Congress of the International Society of River Science (ISRS) that will be held at the La Crosse Convention Center from August 23 – 28, 2015.

The department faculty are very involved in professional and community engagement. A sample of activities include:

- Jeff Kueny taught workshops for Boys in Science and Kids College.
- Dr. Belby gave a guest lecture at Winona State University on lead contamination in the La Crosse River Marsh.
- Dr. Belby served as the outreach event coordinator for the Earth Fair 2015 Science Experience.
- Dr. Reyerson gave an interview and provided information on topsoil remediation at the La Crosse county landfill.
- Dr. Bunbury and Dr. Chaudhuri served as judges for student paper presentations at the Geological Society of America and Association of American Geographers annual meetings.

Section 5: 2015-2016

Plans and focus for 2015-2016:

The department's primary focus for the upcoming academic year is completion of the academic program review. The department recognizes that we are very late in completing the self-study, extending beyond the agreed upon date for completion. We are working on finishing this document over the summer, with plans to invite a reviewer to campus for the fall semester.

A second focus is a review of the general geography major, with particular emphasis on the cultural, regional and human geography core courses.

We will continue our efforts to attract new majors. The department has been successful in recruiting majors from students with undeclared majors and from those who enroll in our courses as minors or for general education credit. We will work on developing better methods of attracting incoming freshmen and high school students to our program.

Challenges and opportunities:

The department is looking forward to a more stable future. The continual faculty turnover during the past several years has been detrimental to maintaining a strong and growing program. The successful hires of two faculty replacements will allow us to build our programs, attract diverse majors and minors, and enhance the faculty's already dynamic research program.

The addition of Dr. Reyerson to the department presented the department with the opportunity to enhance our Environmental Science and GIS concentrations. The department has been short two faculty members this past year, and it has been a challenge to cover our class needs, to maintain a strong undergraduate research program and to increase the number of majors. The incoming cartography/geovisualization geographer will provide new opportunities for the GIS program to grow as well as maintain a strong Environmental Science program. The new human geographer hire fits well with the department focus and goals, and offers an opportunity to strengthen the Geography major.

The challenge for the department going forward will be to maintain this new stability, retain gifted faculty and attract majors. With the retirement of Dr. Ahmed, the department is functioning without a dedicated climatologist. Although there are faculty members able to teach the current climatology courses, this will draw them away from teaching courses more specifically aligned with their expertise. This has already resulted in not offering a course in the regular rotation for spring 2015 (Meteorology and Weather Forecasting) and will reduce the regularity of course offerings in subject areas that contribute directly to our strongest program, the Environmental Science concentration. The department will be challenged to develop a new course rotation schedule that keeps opportunities available to students.

SUMMARY OF ANNUAL ACTIVITIES
HEALTH EDUCATION AND HEALTH PROMOTION DEPARTMENT
(June 1, 2014 - May 31, 2015)

**SUMMARY OF ANNUAL ACTIVITIES
HEALTH PROFESSIONS DEPARTMENT
(June 1, 2014 - May 31, 2015)**

Health Professions Graduate Degree Programs:

- Medical Dosimetry
- Occupational Therapy
- Physical Therapy
- Physician Assistant

Health Professions Undergraduate Programs:

- Nuclear Medicine Technology
- Radiation Therapy

Health Professions Service Courses

- HP 105 (formerly SAH 105): Analysis of Health Wellness and Disease for the Health

Care Consumer: Gen Ed Course

- HP 106: Introduction to Health Care Careers
- HP 250: Medical Terminology

Prepared by: Peggy Denton and Tom Kernozek

1. Success Stories: Programs

- University of Wisconsin- La Crosse and its affiliate, University of Wisconsin Hospitals and Clinics, has achieved initial accreditation status with the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT).
 - Since NMT is now an accredited program, we will be able to develop other clinical affiliates for the senior year of coursework (two such affiliations were initiated this year). In this accredited program, UW-L faculty members are teaching the senior year coursework and the clinical sites are supervising the internships.
 - We will continue to participate in the same relationships with our current partners as well as teach our own program. This will allow us to be able to provide students with internship sites should some of our current partners decide to close their programs. It will also allow modest growth in the program over the next 5-10 years.
- A post-doctoral student in biomechanics has spent this year with our faculty/students in the LIMS laboratory. Naghmeh Gheidi, PhD, from Iran has studied with Dr. Thomas Kernozek and assisted students with research projects in the lab all year.
- The physician assistant students used the Mayo-Rochester Simulation Center to assess first and second year students' critical thinking, history-taking and physical examination skills.

- The educational outcomes for the professional programs in our department are excellent again this year. The programs all measure the following outcomes:
 - Pass Rates on National Certification Examinations:
 - Graduates of all six programs achieved a 100% pass rate on their national certification examinations.
 - Graduates scores from each program are well above the national average on these certification examinations. Physical therapy had 1 student who obtained a perfect score on the examination.
 - Quality of Students Admitted to the Program
 - Applications for all of the programs in the department remain high with academically strong students accepted into the programs. For all programs combined admitted in 2015 (n=148 students) about 2/3 are women. For graduate programs, about 1/3 of the newly admitted students are UW-L graduates.

Program	Applications	Accepted	% Acceptance Rate	Cohort Mean GPA
GRADUATE				
Medical Dosimetry	45	21	47%	3.40
Occupational Therapy	171	25	15%	3.64
Physical Therapy	319	45	14%	3.79
Physician Assistant	598	19	3%	3.90
UNDERGRADUATE				
Nuclear Medicine Technology	20	19	95%	2.99
Radiation Therapy	34	19	56%	3.45

- Student Retention
 - Collectively, all six programs have a 98% retention rate from first to second year of the programs. This high retention rate reflects the high student commitment to the health profession, the student-centered curricula of the programs, and the intensive professional advising provided by program faculty.
- Employment. Typically, nearly all students get jobs within six months (of those we can track). This year in particular, the Physician Assistant class has done well. They graduated in May and at the time of this report, just 2 months later, 78%

already have jobs. Of the employers that give us feedback, the majority was very satisfied with the quality of UW-L graduates that they hired from our programs.

Success Stories: Department

The department teaches three service courses for the university. The enrollment in HP 250, Medical Terminology continues to rise (22% increase from last year) (n=147). HP 106, Introduction to Health Care Careers remains the same as the enrollment is fixed in that course (n=140). The general education course, HP 105, declined 59% this year (n=197 compared to n=334 last year) due to staff resignations and no funding to refill the positions. The lack of funding to hire replacements to teach the general education course HP 105 (formerly SAH 105) is worrying. In AY 15-16, the department will be able to only offer 1 section of HP 105 each semester (total of ~60 students for the year). If this course fades away, it will leave just two other courses as options to fulfill the Health and Physical Well-being: Learning to Create Healthy Lives general education requirement (GE 09).

Opportunities with these success stories:

Although we at UW-L are used to the Health Professions programs having such strong outcomes each year, it is not that common that programs should have these strong outcomes year after year and it is unique that all of the health professions programs in a department have such good outcomes and strong national reputations, especially in a small comprehensive university not attached to a medical center. These achievements could be celebrated as not only are we educating health care workers badly needed, we are educating them very well.

2. Students and Programming

- 74 students attended national and/or state professional organization conferences this past year.
- A Health Professions student interdisciplinary team (2 PT and 1 PA) placed third in the Wisconsin Area Health Education Centers Healthcare Case Competition
- 4 Joint publications of students with faculty in peer reviewed journals
- 1 publication and several papers submitted papers by students alone in peer reviewed journals
- 4 joint poster presentations of students with faculty at national/state conferences
- 13 poster/abstract presentations by students alone at national/state conferences
- 2 program grants, 5 research grants, and 8 travel grants
- Radiation therapy student selected to participate in the national American Society of Radiologic Technicians leadership development program.
- Student service remains very high. In addition to individual service that students provide, the student associations undertook the following activities this past year.
 - Radiation Therapy students raised enough funds to help establish a Kimberly Graham scholarship fund. The first scholarship was awarded this past year.

- Radiation Therapy students donated \$500 to a local family to fund a family vacation after the mother had been in isolation for 100 days.
- Occupational Therapy students donated to St Claire Mission, Caitlyn's Table, AOTAPAC, and St. Kate's Research Challenge. They also participated in community fundraising events: MS fundraiser, Polar plunge, Rotary lights, and the Walk for life fundraising events.
- Physician assistant students participated in Highway cleanup on HWY 90 and Salvation Army Red Kettle bell ringers.

3. Staffing Resources and Facilities

- 2 retirements (Hussey and Hong)
- 5 hires: (Johnson, Jepson, Rutherford, Schaffer, Hayes)
- 6 resignations (Hayes, Johnson, Jepson, Burton, Olsen, Czosynka (effective 12/15))
- 1 request to reduce work hours (Binsfeld)
- 5 FLMA Leave: (Greiner, Czosynka, Binsfeld, Fater, Denton)
- 1 promotion: (Thorman) to full Clinical Professor

Summary of Staffing resources: Two areas were affected the most by staffing changes: physical therapy and the general education course HP 105. The challenges are different for each. Physical therapy is challenged to hire enough qualified permanent faculty to teach the curriculum. HP 105 is challenged as there is no funding to teach this course to more than ~60 students/year.

Scholarship and Grant Activity:

In addition to the 4 faculty/student publications and 4 faculty/student poster presentations at conferences, the Health Professions Faculty published an additional 15 papers and presented 8 abstracts/posters at national and international conferences. Productivity remained about equivalent to last year in spite of the revolving door of faculty coming and leaving UW-L.

Additional Faculty Achievements of Note:

- Faculty awarded interdisciplinary lesson plan grant about teaching interprofessional practice skills (Gronwaldt, Sieck, Thorman).
- Carol Dobrunz grant was awarded (to Staffaroni) at the Annual meeting of the Society of Nuclear Medicine and Molecular Imaging
- Radiation therapy faculty (Carpenter) accepted to the ASRT Leadership Academy for Educators in 2015
- Two faculty made progress on advanced degrees (Carpenter, Lenards)
- Mentor scholar from Eagle Apprenticeship program (Staffaroni)

4. Outreach

- We consider internships outreach to the clinical community because students are sharing the latest information and methods with clinicians as well as learning from the professionals at the internships sites. This past year, students in the health professions department attended internships at 198 different clinical sites around the country.
- Occupational therapy, physical therapy, ESS and PTA students served ~100 people last year in the EXPAND program and the occupational therapy adult and pediatric clinics.
- Faculty presented continuing education in-service and courses for local clinicians (Thorman, Denton)
- Occupational therapy students sponsored a distinguished lecturer for occupational therapy students, faculty, and clinicians. Over 40 community clinicians attended this event.
- NMT students sponsored a 4 hour continuing education workshop for the Central chapter of their national organization with 45 people attending
- As a result of classroom learning activities occurring in the community, Health Professions students interacted with the following local organizations:
 - Hope Lodge
 - Coon Valley Elementary
 - La Crosse County Department of Health
 - Misty's Dance Studio
 - Onalaska YMCA
 - Riverside Corporate Wellness
 - YMCA Teen Center
 - La Crosse YMCA
 - St. Clare's Health Mission
 - Gundersen Cancer Center
 - Bethany on Cass
 - First Presbyterian
 - Gundersen Health Care Center – Cancer Center
 - Hillview Terrace Care Center
 - Hillview Terrace Assisted Living
 - Lakes State Lumber
 - Villa St. Joseph Convent
 - St. Rose Convent
 - Mosher Home
 - Valley View Mall
 - UW-L Child Care Center

Fundraising/Alumni Relationships

- Physical therapy in collaboration with the foundation, put on a alumni outreach event in Milwaukee (11/14) that raised \$500 for the Straker Scholarship Fund
- NMT students hosted the first UW-L NMT program alumni gathering
- OT program in collaboration with UWM and UW occupational therapy programs, hosted an all Wisconsin Occupational Therapy Alumni Reception at the annual conference
- Occupational therapy and physical therapy job fair raised \$7000 for student scholarships
- PT collaborated with J. Jorstad, Melin family and alumni to produce a memorial video featuring Erin Melin shown at the UW-L Foundation Scholarship Awards Ceremony.
- All programs made some small steps in increasing contact with alumni.

5. International Activities

- Occupational Therapy Program continued to develop relationships with Robert Gordon University in Aberdeen Scotland and Brighton University in Brighton, England. This year, six OT students traveled to the UK (four to Scotland and two to England) for a weeklong exposure to occupational therapy education and clinical practice in those countries. Four Students from Robert Gordon came to visit us for a week for a similar experience.
- The physical therapy program proposed and was approved to offer a service-learning trip to Guatemala in winter term of 2015-2016.

6. Plans and focus for 2015-2016.

Department Goals:

1. Continue to provide high quality, student centered education in each of our programs
2. Maintain excellent outcomes (as directed by our programmatic accreditors)
3. Hire and orient faculty/IAS for all open positions
4. Continue to develop international experiences for students in the department
5. Continue to increase alumni relationships with our programs
6. Continue to provide undergraduate service courses to the university

Foreseeable challenges

1. Hiring staff for our programs continues to be the biggest challenge that we have. Physician Assistant, Occupational Therapy and Physical Therapy programs around the country have expanded their cohort size and many new programs have opened this year making the competition for faculty even more intense than it has been. There are not enough faculty in the country to service all of these programs. To cope with this situation, we have “grown our own” by educating IAS with higher degrees and/or by using a combination of adjunct instructors (local clinicians) and UW-L faculty working overloads. Adjunct faculty and continual faculty overloads are not adequate solutions to these ongoing staffing issues. Having too many adjunct faculty threatens the quality of the program by fragmenting the cohesive nature of a professional education curriculum while expecting the faculty to continually work overloads isn’t a viable solution in the long term leading to burn out. The salaries in the Health Profession programs are higher and workloads lower at comparable institutions around the country. We are simply having difficulty competing with other universities for available faculty. This is especially true for faculty in tenure eligible positions where there is a more favorable balance between teaching, scholarship and opportunities for collaboration. Further, we appear at risk for losing faculty that currently work with us to other universities for the same reasons: salary and workload. Right now, PT has lost about half of their faculty including academic clinical education supervisors. We have tapped the clinical

community dry for adjunct faculty and any more faculty resignations will place the program over the tipping point.

2. The number of clinical sites that are willing to accept students continues to decline dramatically every year (OT, PT). We have managed to find enough sites for our students so they do not have to sit out a semester waiting for a fieldwork placement. We anticipate that this might soon happen, perhaps even as early as the coming academic year. In addition, the sites are asking for much more detailed information regarding the students prior to accepting them for internships (i.e. detailed onboarding procedures, more extensive drug and criminal background check information, additional forms and certifications, etc.) Finally, the programmatic accreditation agencies have developed standards for fieldwork internships that have made our academic programs “responsible” for these additional requirements and paperwork from the clinical sites that add even more work to the academic fieldwork educators at UW-L. All of these extra strains have created more openings throughout academia for academic fieldwork coordinators. We are required to have both a program director and academic fieldwork educators on staff in each of our programs and so when one resigns/retires, it throws the rest of the program into more disarray than if a faculty member without these important administrative responsibilities leaves.
3. Scholarship is at risk. Occupational therapy has one tenured faculty (+1 tenure track) and physical therapy has four tenured (+ 2 tenure track) increasing demands to teach more to compensate for faculty shortages reduces the amount of time available for faculty and student scholarship. Despite the staffing challenges this past year, the department managed to produce about as much scholarship productivity as the year before. However, this also came at a cost of faculty working harder and longer to make progress on their projects. The department is already hampered in scholarship productivity by the faculty/IAS mix heavily weighted to IAS (8 TT or T vs. 18.6 IAS). So a very few people have been producing all of the scholarship in the Health Professions Department. The increased teaching and changing administrative demands are going to reduce research productivity next year. One goal for the graduate programs is to educate our students as scholarly clinicians and it is not clear how we will be able to sustain this goal given the current staffing and scholarship issues.
4. Increased demands on faculty have also been placed by accreditation agencies for additional curricular content; increase in faculty credentialing, and most recently, the verification of faculty clinical competence. Many of the faculty hired in our programs no longer practice clinically as they are teaching full time and this is not factored into workload. Yet, now the accreditation agencies (Physical Therapy and Occupational Therapy) are discussing a requirement about faculty to demonstrating currency in clinical competence. We have had to demonstrate currency in the content that faculty teach and

faculty competence as an educator up to now, but this would be an additional requirement. It has not been determined yet what types of verification will be required. Most of the discussion to date has been to require faculty to have a clinical practice as well as to teach. This will change dramatically the workload requirements for faculty as well as create large challenges for faculty who have been out of clinical practice for many years (many for 30+ years). How faculty are hired to practice clinically, how much they would have to work, etc. are all issues that will need to be resolved should this standard be imposed.

5. The individual programmatic accreditation agencies are tightening the standards about obtaining alumni and employer feedback. At present our rate of return for surveys of these two groups is very low and we do not have the resources, time, or expertise to do more than a very simple survey of those alumni who happen to keep in touch with us. We will have to do better than this in the near future and it would help considerably if all of the programs, including the graduate programs, could have assistance with obtaining alumni and employer satisfaction data from university personnel who know how to do this more effectively and efficiently.

Opportunities/suggestions for ways to help

1. Evaluate the viability of some of the Health Professions programs in the next 5-10 years. We have an opportunity now to determine the direction for these programs. It may be that some of them may not be able to survive the staffing challenges long term. We have managed to maintain good student outcomes despite the growing amount of staff turnover due to efforts of existing faculty to working longer and harder. That effort should not be continually required of our existing faculty. We have patched and held together the programs to the best of our ability and we are not sure how we can continue that in the long term given some of the changes that are coming in our accreditation standards (i.e. increase in entry level degree and thus increase in faculty credentials, increased clinical skills competency for faculty required, etc.).
2. If the university decides to keep all of the programs, something needs to change to help us recruit and retain faculty. Despite our fondness for the geographic and cultural area, it is not enough to draw people to a town hours away from a major city to be paid less and work harder than they would have to in many other programs. We cannot sustain these programs with fewer tenure track positions while hiring adjuncts especially in our graduate programs. The teacher scholar model where graduate and undergraduate students are mentored in research and clinical opportunities that distinguishes each of our programs will fade away resulting in mediocre programming and outcomes.

SUMMARY OF ANNUAL ACTIVITIES
MATHEMATICS DEPARTMENT
 (June 1, 2014 - May 31, 2015)

The Mathematics Department had an award-winning 2014-15. The success of the department can be attributed to the hard work of its faculty and staff, including many years of careful and successful hiring to replace and expand the membership of this group.

Enrollment Information

Enrollment records indicate that there were 151 declared mathematics majors in 2013-14, distributed among the various categories. Of these 151 majors, approximately one-third are regular math majors, another one-third are math education majors, and the remaining third consists of students with majors in the math/engineering, applied, statistics or statistics with actuarial concentration. The number of statistics, and statistics with actuarial concentration majors continues strong. Of the remaining categories, the actuarial emphasis continues to be the most popular.

		Fall 2009	Fall 2010	Fall 2011	Fall 2012	Fall 2013	Fall 2014
Majors	Math	40	38	53	57	56	52
	Math Education	64	68	64	55	51	40
	Statistics	10	13	6	2	4	14
	Statistics with Actuarial Concentration	8	20	22	26	34	29
	Applied Emphasis	5	12	12	5	9	9
	Math/Engineering	8	7	9	5	6	7
	TOTAL	135	158	166	150	160	151
Minors	Math	46	68	70	84	98	124
	Math Education	77	66	52	50	43	62
	Statistics	2	6	6	5	9	8
	TOTAL	125	140	128	139	150	194

Table 1. Number of Majors/Minors per Year, by Type.

As a traditional academic discipline, mathematics is involved in the academic programs of virtually all UW-L students and the curriculum offered by the Mathematics Department serves many different needs for the UW-L student population. There are non-credit remedial courses for those students who need to improve their mathematics background before taking college level math courses, general education and service courses which provide all students with a solid foundation for their area of study, and there are the courses for the mathematics majors/minors. Student demand for mathematics courses continue to increase as the student population grows.

Semester	Course Type	No. of Sections	Enrollment	SCH
Fall 2014	Remedial	11	326	730
	General Education/Service*	67	2179	8920
	Major/Minor	30	648	2433
	Special Topics/Ind. Study	13	20	35
	TOTAL	121	3173	12118
Spring 2015	Remedial	9	203	447
	General Education/Service*	61	1918	7800
	Major/Minor	34	693	2602
	Special Topics/Ind. Study	15	22	42
	TOTAL	119	2836	10891

Table 2. Student Credit Hours by Course Type (*Through MTH 207, not counting 135/136)

Curricular Changes

This year the Mathematics Department initiated a comprehensive review of its curriculum to strengthen courses and programs to meet the changing needs of students enrolled in mathematics courses. Significant results of this review will likely be a part of next year's annual report.

- The first step in the comprehensive curricular review the writing of student learning objectives for each of the programs within the Department. This will also help to strengthen the departmental assessment program. This summer, the executive committee will work on mapping current curriculum to these outcomes and begin to address any holes that are found.
- With a funded Curricular Redesign Grant, a revision of MTH 145: Elementary Statistics was completed. The project resulted in new student learning outcomes, revised course outline and standardization of the course.
- The Department developed and received approval for the initiation of a Mathematics Honors Program.
- Along with five other campuses, UW-La Crosse became a part of the collaborative Online Masters' Degree in Data Science, which will be housed in the Mathematics Department. Jeff Baggett serves as the Academic Director and worked hard to successfully move the degree through all the required steps for approval.
- The course description and outline for MTH 353-Differential Equations was updated.
- Chad Vidden and Song Chen are designing a Freshmen Seminar course for mathematics majors.

Departmental Staffing.

The instructional staff of the department consisted of 29 faculty members and 9 instructional academic staff in the Fall 2014 semester, and 29 faculty members and 8 instructional academic staff in the Spring 2015 semester. During the academic year the department chair had release time, one member taught half-time time in the Mathematics Department and served half-time as

the director of the UW-La Crosse Statistical Consulting Center, one member (with a .5 appointment in mathematics) served as chair of the Computer Science Department, and only taught one course for mathematics, and one member had release time to serve in the Grants Office.

- Resignations: William Heider and Crystal Vesperman both resigned effective May 24, 2015
- New Faculty: Two new tenure-track faculty joined the Department in the fall of 2014.
 - Whitney George – Ph.D. in Mathematics (Topology) from the University of Georgia (2012)
 - Nathan Warnberg – Ph.D. in Mathematics (Graph Theory/Combinatorics) from Iowa State University (2014)
- New Instructional Academic Staff: Four new instructional academic staff members joined the Department in Fall 2014.
 - Crystal Vesperman – originally hired for a tenure-track position in Mathematics Education, but had not completed her degree from Indiana University at the time of hire.
 - Susan Gitter – hired as full-time IAS to teach primarily the developmental math courses.
 - William Heider – hired as full-time IAS to teach developmental and elementary mathematics courses.
 - Brett Townsend – hired as an IAS member with release time to continue research/scholarship. Ph.D. in Mathematics (Logic) from Wesleyan University (2013).
- Searches: The department had another busy, and successful, year in hiring. The Department was given permission to fill the position last held by Bob Hoar. It was determined that the department needed to fill this with an additional tenure-track position in mathematics education. This position was filled in December 2014. In a second search, the department filled two new IAS positions, and one replacement IAS position. One of the new positions was the GQA IAS position that was not filled last year and the other was an additional position funded through the Remedial Mathematics fund. This search was completed in April 2015 using a new search method called a “Panel Search.” This approach worked especially well for these positions.

New assistant professor beginning Fall 2015:

- David Liss II, Ph.D., University of Georgia, Mathematics Education (2015)

New Instructional Academic Staff beginning Fall 2015:

- George Cherveny
- Phillip Loehmer
- Bill Truttschel

Student Activities/Accomplishments

UW-L continues its strong representation in state, national, and international mathematical modeling competitions. In October, the Department hosted the 6th annual Wisconsin Mathematical Modeling Challenge. Seven teams participated from 5 different schools (UWL, UW-Eau Claire, UW-Stevens Point, Augsburg College and Bemidji State University). One of the

UW-L teams, consisting of Marissa Eckrote, Katie Gerdtz and Brandi Hagen, were awarded for the best executive summary. Students also continued their participation in the Midwest Undergraduate Data Analytics Competition held at Winona State University and the Interdisciplinary Contest in Modeling and the Mathematical Contest in Modeling through COMAP (the Consortium for Mathematics and its Applications). This year's COMAP team received a meritorious award (top 15%). The members were Jacob Gloe, Yu Guan, and Fan Ou.

This was a great year for UW-L participants in the William Lowell Putnam Mathematical Competition - or simply the Putnam Exam. Huiya Yan has been running a Putnam review course, and the results speak for themselves. This year six UW-L students participated along with over 4000 others. The UW-L team ranked 64 out of 577 institutions with the following individual scores and rankings:

Thong Le: score 39, rank 172	Jacob Gloe: score 12, rank 1288
Lingxiao Ye: score 11, rank 1444	John Mac Gallagher: score 9, rank 1801
Daniel Morrison: score 4, rank 1995	Tony Mottaz: score 1, rank 2662

Several mathematics students continue their work in undergraduate research, including 2015 Deans Distinguished Fellows Casey Shiring – mentored by Whitney George, and Andy Garza – mentored by Eric Eager. These students have presented their work in various venues. At the Wisconsin Sections MAA meeting in Ripon this spring, our two student teams placed first and second in the student "Face Off Challenge" and six math/stats students gave talks (Thong Le, Katie Gerdtz, Mac Gallagher, Yu Guan, Mary O'Driscoll, Jacob Gloe). Mac Gallagher and Mary O'Driscoll, both gave excellent talks at the Joint Mathematics Meetings. Later the same day, both students presented posters at the undergraduate research poster session. In addition, Shelby Graham and Merissa Eckrote had their NCUR abstract accepted.

Overall, the Mathematics Department had one of the best crops of graduating seniors in recent memory. At least ten mathematics or statistics graduates will be attending graduate school in Fall 2015.

Faculty and Staff Activities/Accomplishments

The Mathematics Department faculty continues to be active and engaged in teaching, scholarship and service. This is shown by our faculty on a daily basis, but this year it is highlighted by the following special recognitions:

- The Department was awarded the 2015 Regent's Excellence in Teaching Award.
- The Department was named the 2015 Most Accessible Department by SAPA (Students Advocating Potential Ability).
- Robert Allen was named the 2015 Most Accessible Professor by SAPA (Students Advocating Potential Ability).
- Jenn Kosiak was a 2015 YWCA Tribute to Outstanding Women honoree. These awards are presented to women in the Coulee Region whose community impact demonstrates leadership and a commitment to the core values of the YWCA.
- Jenn Kosiak was named President Elect of the Wisconsin Mathematics Council.
- Eric Eager was chosen to serve as the director of Project

Teaching

In addition to their regular teaching assignments, 9 different faculty members advised or co-advised 16 students in undergraduate research projects. Some of these projects were funded through the NSF.

Collaborations on Riverine Ecology (CORE) grant, Undergraduate Research and Creativity Grants, or SAH Dean's Distinguished Fellowships. Results of these projects were presented by the students at various local, state, national and international venues including the UW-L Celebration of Research and Creativity, the College of SAH Summer Research Poster Session, the Wisconsin Section MAA Meeting and the Joint Mathematics Meetings. Faculty members also taught 28 different special topics/independent study courses in areas such as Mathematical of Biomechanics, Representation Theory, Introduction to Operator Theory, and Hyperbolic Geometry. Finally, the FastTrack program continued in 2014-15 with two very successful cohorts at UW-L. The program was also extended to include cohorts at UW-Milwaukee and UW-Oshkosh.

Scholarship/Creativity

The level of scholarly activity in the Department continues to be high. Over twenty journal articles and one book chapter were accepted/published by eighteen different faculty members. Eighteen additional journal articles were submitted. The variety of backgrounds of our faculty really shows in the wide variety of journals in which they publish, including:

- Letters in Biomathematics
- Involve
- Ecosphere
- Theoretical Population Biology
- The Journal of Student Affairs Research and Practice
- Environmental Pollution
- Acta Scientifica
- Numerical Methods for Partial Differential Equations
- Journal of Humanistic Mathematics
- Teaching Children Mathematics
- Discrete Applied Mathematics
- Educational Studies in Mathematics
- Journal of Mathematical Biology

Seven different mathematics faculty were invited to give presentations:

- Song Chen gave an invited Mathematics colloquium talk at UW – Stout.
- Tushar Das gave four invited presentations: the 49th Spring Topology and Dynamics Conference at Bowling Green State University, the Geometry & Topology Seminar at Yale University, the RTG Logic and Dynamics Seminar at the University of North Texas, and the AMS Special Session on Fractal Geometry and Ergodic Theory at the AMS Southeastern Sectional Meeting at the University of Alabama in Huntsville.
- Eric Eager gave two invited talks: one at the MAA Wisconsin Section Meeting at Ripon, and a second at the 2015 Joint Mathematics Meetings in San Antonio, Texas.
- Eddie Kim gave an invited talk at Ecole des Ponts, Paris Tech, in Paris, France.

- Jenn Kosiak gave two invited talks in her role with the Wisconsin Mathematics Council: one in Oconomowoc and one in Wausau.
- James Peirce gave an invited talk at the Iowa State Mathematics Career Day.
- Nathan Warnberg gave an invited talk at the American Mathematical Society - Sectional Meeting at UW - Eau Claire.

In addition, multiple presentations were given by 22 different faculty at state, national and international conferences.

Faculty in the Mathematics Department were also involved in many review activities for various mathematical competitions, conferences and journals. Several faculty serve on journal editorial boards. Heather Hulett and Todd Will are Editorial Board Members for the College Mathematics Journal, Jenn Kosiak is a member of the Editorial Panel for the Wisconsin Mathematics Council and in this capacity is co-editor of the Wisconsin Mathematics Teacher along with Josh Hertel and Jenni McCool. In addition to these editorial review activities, seven different faculty members reviewed multiple articles for a wide variety of journals, including Discrete Mathematics, Letters in Biomathematics, AMS Math Reviews, and Complex Analysis and Operator Theory.

The grant writing activity of department faculty has brought in nearly \$151,000 this year, not counting continuing funding for multi-year grants previously awarded. About \$30,000 of this came from local UW-L grants including two summer Faculty Research Grants and two Curricular Redesign Grants. Also included are three UW-System Grants. The remaining amount is in external grants, including grants from the Center for Undergraduate Research in Mathematics (CURM) and the Wisconsin Space Grant Consortium. Four additional external grants are currently under review by the National Institute of Standards and Technology (\$199,722), Excel Energy (\$8,000) and two grants from the National Security Agency (\$39,672 and \$31,694).

In a less familiar area of mathematical scholarship/creativity, Karl Kattchee displayed a piece of mathematical art at the Exhibition of Mathematical Art at the AMS/MAA Joint Mathematics Meetings.

Service

The Mathematics faculty are involved in a wide range of service activities at the departmental, college, university and professional level. The success of a department depends, in great part, on faculty involvement in all areas involved in the running of the department. Every department member is actively involved in one or more departmental activities. Along with annual department activities such as merit reviews, retention and promotion, running the Math and Statistics Club, etc., this year faculty were involved in 2 separate search and screen committees (for 5 positions), various curricular committees, math modeling contests, and much more. This year there were some new departmental activities in addition to the “typical” ones.

- Doug Baumann and Nathan Warnberg began working on a Math/Stats Tutor Training Initiative.
- Chad Vidden and Song Chen started a Mathematics Modeling Club. This club meets weekly to work on modeling problems with the idea of exposing students to the use of

mathematics in industry.

- In order to find interesting problems for the Mathematics Modeling Club, Chad Vidden and Song Chen have been networking with local companies and organizations including Fastenal, Ipsos, Excel Energy, and the Coulee Region Tennis Association.
- Robert Allen and Chad Vidden organized and implemented a UW-L Math Department Colloquium. In addition to talks by local and invited faculty, a new focus of this series is student involvement and recruitment to the major. Feedback from students shows great interest in the exposure to mathematics that they might not have seen otherwise.
 - Fall2014
 - 12 total presentations
 - 2 student colloquiums, totaling 12 student presentations
 - 5 outside speakers from industry (Epic, Ipsos, John Deere, Newport Group, Fastenal)
 - 1 outside speaker from UW-Stout
 - 5 math faculty talks
 - Spring2015
 - 8 total presentations
 - 3 student colloquiums totaling 23 student speakers
 - 1 graduate recruitment talk (NDSU)
 - 3 math faculty talks
 - 1 physics faculty talk

At the college and university levels, math faculty and staff left their mark as well.

- Chairing major university committees
 - Undergraduate Curriculum – Robert Allen
 - Academic Program Review – Barb Bennie
 - Academic Planning – Melissa Bingham
- Chairing major college committees
 - STEP Admissions Committee – Matt Chedister
 - STEP Curriculum Committee – Josh Hertel
- Faculty Fellow in the Office of Sponsored Research – James Peirce
- Membership on over 14 different college or university-wide committees including:
 - College Committee
 - Faculty Senate
 - Minority Affairs
 - College Assessment Committee
 - Undergraduate Research
 - Undergraduate Curriculum
 - Joint Planning and Budget
 - Joint Promotion
 - Grant Writer Search and Screen Committee

Mathematics faculty are also very involved in professional and community service activities. Activities for the past year included the following:

- Session Chair for MathFest (Robert Allen)
- Session Chair for Nebraska Conference for Undergraduate Women in Mathematics

(Melissa Bingham)

- Session Chair for MAA-Project NExT (Nathan Warnberg)
- Director of Project NExT-Wisconsin (Eric Eager)
- MAA Committee on Early Career Mathematicians (Eric Eager)
- Board of Advisors of the Wisconsin Mathematical Association of America (Jenn Kosiak)
- Board of Advisors of the Wisconsin Mathematics Council (Jenn Kosiak)
- President Elect of the Wisconsin Mathematics Council (Jenn Kosiak)
- Administrator of Mathematics Education Researchers Facebook Group (Josh Hertel)
- Wisconsin Mathematics Leadership Council (Jenni McCool)
- Editorial Board of the College Mathematics Journal (Heather Hulett and Todd Will)
- Editors of the Wisconsin Mathematics Teacher (Jennifer Kosiak, Jenni McCool and Josh Hertel)
- Member of the Wisconsin State Leadership Team for the Department of Public Instruction (Jenn Kosiak)
- Judging high school/undergraduate poster, research papers and various science fairs
- UW-L Girls/Boys in Science Program Director (Sue Kelly)

The Mathematics Department ADA, Karry Auby, continues to be very active in service to the department and the university. In addition to her regular job duties on campus, Karry was once again elected Chair of the Classified Staff Council, chaired the University Personnel Systems (UPS) Committee, served on the Cowley Hall Planning Committee, the Joint Planning and Budget Committee as well as the Budget Council, and the Calendar Advisory Committee. Karry also gave two presentations at the Joint Mathematics Meeting, one on the on boarding of new faculty, and second on the FastTrack Program. Karry continues to pursue opportunities to learn new technology and share it with other campus ADAs.

Inclusive Excellence

The Mathematics Department is working towards the central goals for the Inclusive Excellence initiative in several ways.

- The FastTrack Program
- Robert Allen is Co-PI of the UW-System Grant “UW-L Summer Research Program for Increasing Student Retention and Graduation.” This is a grant through WiscAMP (Wisconsin Alliance for Minority Participation). Robert has been involved in this area for several years
- Abdul Elfessi taught math for the Academic Success Institute (ASI) for 13 years. The objective of this program is to help students make a successful transition from high school to college. The ultimate focus of ASI is to provide each student an opportunity to graduate from the University.
- Jenn Kosiak is Co-PI on an external grant, “UW-System Developmental Education R & D Award”, to continue working on the efficacy of developmental education within the UW-System.

SUMMARY OF ANNUAL ACTIVITIES
MICROBIOLOGY DEPARTMENT
(June 1, 2014 - May 31, 2015)

The Microbiology Department had a challenging but successful 2014-2015 school year. Noteworthy accomplishments in *Teaching*, *Scholarship* and *Service* categories are highlighted on pages 1-4. Highlights formatted according to the instructions from the Provost's Office can be found on pages 4-9.

Teaching

The retirements of two Microbiology faculty members at the end of May 2014 and the instructional academic staff vacancy in our Clinical Laboratory Science program created a challenge for the department to offer its complete array of classes and lab sections for majors and non-majors. We were successful in managing to offer all of our usual core and elective courses for Microbiology Majors. We unfortunately had to withhold offering one general education lecture class and reduce the number of laboratory sections offered in one other general education class.

Microbiology Majors

Microbiology Majors were introduced to two new faculty members. Dr. James Parejko began teaching MIC 230 Fundamentals of Microbiology lecture and laboratory in fall 2014. In spring 2015 Dr. Parejko taught MIC 425 Bacterial Physiology lecture and laboratory for his first time. In Dr. Parejko we have found a successful replacement for Dr. Mike Winfrey who taught these courses previously.

Dr. Xinhui Li was hired in January 2015 one week before his specialty course – MIC 380 Food Microbiology lecture/laboratory began. We were grateful for Dr. Li's willingness to teach this course with so little time to prepare prior to classes starting. This was because Food Microbiology has become a very popular elective and provides our students with training that prepares them for employment in the areas of food production, research and development and food safety and quality control. Many of our senior Microbiology majors were grateful for the opportunity to take Dr. Li's Food Microbiology course before they graduated in May 2015. Dr. Li replaces Dr. Rajagopal who was our food microbiologist prior to his retirement in May 2015.

Our pool hire Andrea Peirce, M.S., covered three sections of MIC 230 in the fall and two sections of MIC 230 in the spring, allowing us to offer our maximum number of eight sections of MIC 230 lab. Demand for MIC 230 continues to be very high. We have had to wait-list between 75 and 140 students wishing to enroll in this class prior to each of the last four semesters. The MIC 230 lab sections run back to back from 9:55 am to 6:20 pm Monday through Thursday every semester, with the lecture and one lab section available in the summer. Lab space and staff constraints limit our capacity to expand the number of lab sections for this class.

MIC 310 Immunology continues to attract large numbers of students in its separate lecture format. Fall and spring semester enrollments were 84 and 78 students respectively. The

separated immunology lab enrollments for fall and spring were 44 and 39 students respectively. Thus we are teaching about twice as many students in immunology lecture (~160/year) as in lab (~80/year) at this point. Dr. Peter Wilker taught Immunology lecture for the first time this year, taking over from Bernadette Taylor who became department chair.

Non-majors and General Education

MIC 130 Global Impact of Infectious Disease served 257 students this year – a relatively small drop in number from last year (273 students) considering our staff shortage. This was in large part due to Sue Anglehart and Marisa Barbknecht accepting teaching overloads in order to cover extra class sections.

MIC 100 Microbes and Society was significantly affected by the staff shortage this year. In 2013-14, we served 237 students while in 2014-15 we served 191 students despite a continued high demand for this class.

SAH 307 Changing the Culture: Women in Science was not offered as usual in spring semester due to the staff shortage.

Graduate research students and undergraduate research students continue to receive a great deal of laboratory and critical thinking skills training from Microbiology faculty and academic staff. In 2014-15, faculty and staff:

- Served as Master's thesis advisors for nineteen graduate students.
- Collectively provided forty-five Master's thesis committee members for Microbiology and Biology graduate students. The number of thesis committees served ranged from 1-13 per graduate faculty member with an average of 5 thesis committees per graduate faculty member. This illustrates the significant amount of time that Microbiology faculty and staff dedicate to graduate education.
- Directly mentored thirty undergraduate students in independent research projects in microbiology.

Scholarship

Faculty in Microbiology spend a great deal of time training research students one-on-one in the laboratory in addition to classroom teaching yet they continue to strive to find time to write grant proposals and publications. In 2014-2015:

- Microbiology faculty received \$41,377 in new grant or contract funding (\$33,000 of which came from external funding agencies).
- Grant proposals requesting a total of \$957,337 were either submitted or underwent review during 2014-15.
- Four grant proposals totaling \$770,239 are currently undergoing review.
- Six grant proposals totaling \$187,098 were not funded. Some of these proposals will be resubmitted following receipt of reviewers' comments.
- Four manuscripts reporting original laboratory research were submitted. Two were accepted for publication.

- Seven presentations on original research were made by microbiology faculty, two at international meetings and five at regional meetings.
- Seven presentations were made by undergraduate and graduate research students, two at international meetings and five at regional or local meetings.
- Eight manuscripts were reviewed by microbiology faculty for scientific journals.
- Two faculty members acted as consultants for textbook publication companies working on new editions of microbiology textbooks.

Service

University and College of Science and Health

Microbiology faculty and staff served the university and college in many roles and on many committees during 2014-2015, including:

- Faculty Senate
- Instructional Academic Staff- Chair
- Academic Program Review Committee
- Graduate Council
- Institutional Biosafety Committee
- Distinguished Lectures in the Life Sciences Committee – Chair
- CSAH Undergraduate Student Research Travel and Supplies Grant Committee
- Institute of Biomolecular Sciences Seminar Series Committee
- CSAH Sabbatical Committee
- CSAH Dean's Distinguished Summer Fellowship Committee
- CSAH Assessment ad hoc committee
- Health Science Center Academic Team and Safety Committees
- Instrumentation Innovator Search and Screen Committee
- New Cowley Hall Planning Committee
- Faculty Academic Representative for UWL athletes for NCAA
- Director of International Education Search and Screen Committee
- Clinical Microbiology Graduate Program – Director
- Clinical Laboratory Science Program – Director

Professional Service

In October 2014, UWL Microbiology faculty assumed the leadership roles for the North Central Branch of the American Society for Microbiology (ASM). Dr. Bonnie Bratina (who served as secretary in 2014) was elected President and Marisa Barbknecht was elected Secretary. Along with Dr. Bratina and Ms. Barbknecht, additional faculty and staff members have begun preparations for UWL to host the North Central Branch ASM meeting in October 2015. Other notable professional service contributions in 2014-2015 included:

- Organization of the Second Wisconsin Virology Symposium at UWL in October 2014. This meeting brings together research scientists from the University of Minnesota and the University of Wisconsin-Madison as well as faculty and students from UWL.
- WiscAMP liaison – Dr. Marc Rott reviewed grant proposals, attended presentations and worked with regional collaborators to plan improvements to the program

- Microbiology and clinical laboratory science presentations to 2nd grade, 3rd grade, 7th grade, middle school and high school students in the local community.
- Judging the Medical Laboratory Science Student Bowl competition at the regional American Society for Clinical Laboratory Science meeting in Appleton, WI in April 2015.

Annual Report Sections Requested by the Provost

Section 1: Success Stories

- The Microbiology Department received approval from UWL's Faculty Senate and from UW System to plan for the Masters in Microbiology entitlement. Consultation regarding our proposed Microbiology Masters entitlement with other UW System campuses, led to some very favorable comments and encouragement, particularly from UW Extension. UW Extension expressed a particular interest in collaborating with us in the future as we plan our Professional Science Master's in Microbiology program. This is extremely encouraging given the mission of UW Extension to "extend the boundaries of the university to the boundaries of the state.... through continuing education, cooperative extension and business and entrepreneurship".
- The Microbiology Department developed a successful research collaboration with a community organization that was mutually beneficial for faculty, students and the community organization. Dr. Bonnie Bratina and her graduate student Daniel Liska developed a project to study the effect of waste incinerator ash on microbial decomposition of landfill materials. This project has the potential to influence management practices at the La Crosse County Landfill.
- Top virology researchers from UW-Madison and the University of Minnesota judged the first ever Wisc-e-sota Virology Symposium organized by the Microbiology Department in 2013 to be so successful that they decided to make this meeting an annual event. The Second Annual Wisc-e-sota Virology Symposium occurred at UWL in October 2014.
- Microbiology faculty and staff were elected President (Bonnie Bratina), and Secretary (Marisa Barbknecht) of the North Central Branch of the American Society for Microbiology for 2015. UWL was selected to host the North Central Branch ASM meeting in October 2015.

Section 2: Students and Programming

- The Microbiology Department's Clinical Laboratory Science students earned the highest scores in the region in all six subject areas on the Medical Technology Pre-Clinical Competency Exam in fall 2014. UWL's Clinical Laboratory Science students had a 100% pass rate on the competency exam, continuing to build on the strong reputation of the UWL CLS Program. UWL's CLS students also won the Medical Laboratory Science Bowl competition at the regional American Society for Clinical Laboratory Science meeting in Appleton, Wisconsin in April 2015.
- The Microbiology faculty are noticing some changes in the mix of students in some courses. For example, MIC 416 Microbial Genetics is attracting an increasing number of Biochemistry majors, which is putting pressure on seat availability for Microbiology majors. The international exchange program that brought a significant number of

Brazilian science students to UWL last year created some unforeseen problems. Brazilian students were given early registration appointments for fall 2015 and took up seats in Virology that would previously have been available to Microbiology majors. Apparently, the Brazilian program will in the future focus more on computer science, so hopefully this problem will be resolved.

- The Microbiology faculty and staff are spending a significant and increasing amount of time handling waiting lists for students unable to get into MIC 230 Fundamentals of Microbiology. The waiting list ranged from 75-140 students per semester in 2014-15. The department will analyze the needs of the students enrolling in this class and explore the possibility of separating the lecture from the lab for non-majors. If there are non-majors that do not need the laboratory we may be able to reduce pressure on enrollment in the MIC 230 lab by offering a separate lecture. Staff and lab space constraints preclude our ability to offer more lab sections.

Section 3: Staffing, Resources and Facilities

- The Microbiology Department hired Dr. James Parejko in August 2014 to replace Dr. Mike Winfrey who retired in May 2014. We hired Dr. Xinhui Li in January 2015 to replace Dr. Rajagopal who also retired in May 2014. Dr. Parejko has expertise in bacterial physiology and environmental microbiology while Dr. Li is an expert in food microbiology.
- The Microbiology Department hired Ms. Anne Mach, MS for a Microbiology Laboratory Manager I position. Ms. Mach will replace Angie Ratekin who leaves July 1, 2015. Because Angie Ratekin prepares lab materials for seven different intensive Microbiology and Clinical Laboratory Science classes, and one of those course instructors, Dr. Bill Schwan will be on sabbatical in fall 2015, we requested and were granted an overlap between Anne and Angie. Anne Mach was hired half-time starting April 1st to learn as many preps as possible from Angie before Angie leaves. This overlap has been absolutely indispensable and we are grateful to Dean Riley for his support in this endeavor.
- The Microbiology Department benefitted from the services of Andrea Peirce, MS, a pool hire from 2013-2014. Andrea taught multiple lab sections of MIC 230 Fundamentals of Microbiology Laboratory. This enabled us to offer our maximum number of MIC 230 lab sections, despite being short one faculty member and one IAS and having a new faculty member with a light teaching load in his first semester.
- The Microbiology Department was unsuccessful in its attempt to fill a vacant instructional academic staff position in our Clinical Laboratory Science program. This position became vacant due to our previous CLS Director, Dr. Diane Sewell's retirement and our CLS IAS, Dr. Michael Lazzari's movement into the directorship position. Evidence suggests that the compensation package offered by UWL for this position was not very attractive when compared to compensation being received by qualified individuals in the clinical arena. We may also need to re-prioritize the teaching obligations that we are requiring of this position, since we found it almost impossible to find an individual capable of teaching Fundamentals of Microbiology as well as clinical laboratory science classes as the position description required.
- Dr. Bill Schwan was awarded a one-semester sabbatical for fall 2015 (his first sabbatical at UWL). He will work off campus with collaborators at Concordia College, WI to

investigate novel antimicrobial compounds with activity against *Staphylococcus aureus*. We have secured the services of two UWL Microbiology alumni to replace Bill in Pathogenic Bacteriology lecture and laboratory. Sarah Stoner, MS will teach lecture and Amanda Sanders, CLS, almost MS, will teach lab. Both of these well-qualified individuals took the classes they will teach from Dr. Schwan as UWL Microbiology students. They currently work in the Microbiology Diagnostic Laboratory at Gundersen Clinic in La Crosse.

- Due to Dr. Schwan's sabbatical, the Microbiology Department was forced to offer two fewer lecture sections of our general education MIC 130 Global Impact of Infectious Disease class in fall 2015. We were reluctant to do this because this course is useful for freshmen interested in life sciences and public health, and such students are coming to UWL in increasing numbers. This means that 60-70 fewer seats will be available to incoming freshmen and lower classmen.
- The Microbiology Department explored and decided to go ahead with assigning two Microbiology graduate students to teach MIC 100 Microbes and Society Laboratories in 2015-2016. This idea became overwhelmingly attractive in 2014-15 as we struggled with short staffing, and having to reduce the number of sections of our 100-level general education classes. We have also become quite concerned about several staff members getting burned out from teaching overloads in too many consecutive semesters. For 2015-2016, we have secured two new incoming graduate students to teach MIC 100 labs. Each student will receive a graduate assistantship (funded through salary savings from our vacant IAS position), to teach two MIC 100 lab sections. This boost of four 100-level general education lab sections was appreciated by admissions dealing with the demand from incoming freshmen. Marisa Barbknecht, the MIC 100 coordinator will receive a small reduction in course load to train the new graduate assistant lab instructors. If this endeavor proves successful, we will likely work toward continuing it in future years because it could provide our department with some much needed flexibility in fielding our other classes.
- The Microbiology Department benefited from a substantial input of GQA and one-time funding from the College of Science and Health for equipment and supplies used in undergraduate laboratory classes and undergraduate research. Classes that especially benefitted included Immunology Laboratory, Clinical Laboratory Science and Bacterial Physiology lab classes.
- The lack of computer labs available for reservation by faculty to teach computer-based exercises has become a significant problem for several microbiology lab classes including Immunology Laboratory and Bioinformatics. Information Technology tried to help by providing several laptops for us to use, but these were rather old and slow and required a lot of prep time to get them to communicate with the Internet in Cowley Hall. Geography may be able to help us out because they have a computer lab. We will pursue that option in 2015-2016. If an existing Cowley computer lab is not available, we will likely need to request dedicated computers for the Microbiology lab classes in the future from internal or external funding agencies. Computer analysis is becoming increasingly important in Microbiology due to advances in genome sequencing and computer-driven advanced instrumentation for cellular and molecular diagnostics and research.
- Bernadette Taylor took over as Microbiology Department chair from Dr. Rajagopal in July 2015. Susan Betts, the Microbiology ADA and all the faculty and staff of the

Microbiology Department have been extremely helpful and supportive with this transition. Dean Riley has also been very helpful (and patient) and provided funds for Dr. Taylor to attend a chair's leadership conference in July 2015. Other chairs in the College of Science and Health and across campus have also proven to be great sources of information for the new chair. The College of Liberal Studies has a nice web site with a guide to chair's duties. The information sessions (e.g. Budget 101) provided by administration have been very helpful also, and I hope that these sessions continue to be offered.

Section 4: Outreach Activities

- Microbiology faculty engaged in collaborative research in the La Crosse community with the La Crosse County Landfill. See section 1 above for details.
- Microbiology faculty and staff led young girls and boys in science exploration through the Young Scholars Program and Girls and Boys in Science programs in summer 2014.
- Microbiology faculty presented laboratory exercises and informational sessions at five different schools in the La Crosse and surrounding community.
- Microbiology faculty and students raised funds to help children in need of adult mentorship through the Bowl for Kids Sake program of Big Brothers Big Sisters of the Coulee Region.
- Microbiology faculty, staff and students volunteered as coaches for local schools' and YMCA youth sports teams.
- Microbiology faculty volunteered for many other community and charitable programs including the Hunger Task Force, Kane Street Community Gardens, Roadside Cleanup, Boy Scouts of America, Science and Math Expo 2015 and La Crosse's Thanksgiving Community Dinner.
- It has proven difficult to obtain information from the UWL Foundation on our fundraising efforts for Microbiology Scholarships. Repeated requests for information have been unsuccessful. We will pursue this further in 2015-16.

Section 5: 2015-2016

- The Microbiology Department holds an annual "retreat" every summer to revisit previous years' goals and establish goals for the coming year. The retreat to plan goals for 2015-16 will not occur until July 2015. During the 2014-15 academic year, the Microbiology Department achieved the following goals that were identified in summer 2014:
 - Offer one umbrella (MIC 260 or 460) 1-credit lecture course per year to enhance low credit elective options for our majors. Dr. Parejko will offer MIC 260 The Science of Brewing in fall 2015 and this new course already has a high enrollment (>30 students).
 - Change the course title of Microbial Genetics to Prokaryotic Molecular Genetics. This has been done and appears in the new online catalog. The new title is more accurate, and responds to a criticism from our last Academic Program Review that our department should offer a course that can be clearly identified as a molecular biology course.
 - Change the Microbiology: Biomedical Concentration program requirement to allow a greater number of biology courses to count for the 2nd Biology course

requirement. This has been done and appears in the new online catalog. This better distributes the pressure on high-demand Biology classes and provides more options for Microbiology majors to tailor their program to their needs and interests.

- Monitor Biochemistry major enrollment in Microbiology courses. This has been done and discussions with Biochemistry faculty will be planned for 2015-16 to discuss pressure from Biochemistry majors on Prokaryotic Molecular Genetics. In the near term, enrollment in this class will be capped and managed to ensure that graduating Microbiology seniors can enroll first.
- Hire a new Laboratory Manager I to replace Angie Ratekin and have the new hire overlap with Angie in spring semester to learn some of Angie's seven class preps. This has been successfully achieved with the hire of Anne Mach.
- Hire a new tenure track food microbiologist – achieved with the hire of Dr. Xinhui Li.
- Obtain an entitlement for our own Masters in Microbiology degree. We have made good progress on this goal. We have approval from UW System to plan. We are on schedule to receive our master's entitlement in 2015-16. This will facilitate our forward progress in developing a dual Microbiology MS/Clinical Lab Science BS degree, and a Professional Science Masters degree.
- Improve the process for hiring and managing student help for the Microbiology Prep Room. We have a new improved application process that attracted 16 applicants in spring semester. We hired 3 new students and set up a D2L web site for students to access lab safety information, standard operating procedures, equipment instructions and communication/networking so that they can switch shifts with other students when needed and communicate in a responsible fashion with prep room staff.
- Goals not met in 2014-15 that we will like continue to work on in **2015-16** include:
 - Hire an IAS lecturer in Microbiology/Clinical Laboratory Science. Currently Dr. Michael Lazzari is holding up the CLS program single handedly.
 - Explore splitting MIC 230 Fundamentals of Microbiology from a combined lecture/lab class into separate lecture and lab classes in order to alleviate pressure on the lab.
 - Explore expanding Microbial Diversity lecture from 3-4 credits in order to include more coverage of evolution and ecology.
 - Prepare to implement a "Math in the Major" program analogous to the Writing in the Major program we already have. This is aimed to improve graduating seniors' math skills that we feel could improve based upon analyzing assessment results.
 - Find out how many Microbiology majors drop out of the Microbiology major before even taking MIC 230. Lack of seats in MIC 230 lab could be hampering our efforts to retain and recruit more students in the Microbiology major.
 - Examine the Microbiology Minor program. Find out how well it is performing, analyze what course selections are preferred by non-majors and identify possible improvements.
 - Explore the concept of MIC 100 Microbes and Society being an accepted alternative to BIO 105 Introductory Biology for Microbiology majors' first biology requirement.

- Formalize a workload policy that acknowledges and supports faculty and staff directly supervising research students and engaging in grant and manuscript writing.
- Create time and a venue for Microbiology faculty to informally discuss and support each other's grants and publication efforts and to facilitate collaborative research.
- Continue to explore mechanisms to improve productivity in grants and publications.

The Provost may be of assistance to the Microbiology Department in light of our finding that we are unable to hire a Microbiology/CLS IAS lecturer with the offered compensation based on the CUPA data. Because we are competing with compensation packages offered by Clinics, we may need to seek some flexibility on this point. The Clinical Laboratory Science program is a highly successful and valued program in the States of Wisconsin and Minnesota (Mayo Clinic rates our graduates extremely highly), and we are very concerned that right now we have only one staff member taking care of the entire program.

Inclusive Excellence

Improving access

The Microbiology Department faculty and staff participate in the following programs, both as program administrators and as undergraduate research mentors:

- Wisconsin Alliance for Minority Participation (WiscAMP)
- The McNair Program at UWL
- The Eagle Mentoring Program
- The Murphy Learning Center

Dr. Marc Rott received a nomination for most accessible instructor for students with disabilities. The Microbiology faculty and staff in general work hard to provide equal access for students with disabilities.

Closing equity gaps

The Microbiology Department was pleased to hire a Chinese citizen for the tenure track position in food microbiology in spring 2015. We continue to keep our eyes open for opportunities to enhance the diversity of our faculty and staff.

Improving campus climate

The Microbiology Department teaches two general education courses that expose students to diversity issues:

- MIC 130 Global Impact of Infectious Disease explores the interrelationships between poverty, culture and politics and access to prophylaxis and treatment of infectious disease
- SAH 307 Changing the Culture: Women in Science explores the challenges experienced by women and minorities in gaining access to, and advancing in science, math and technology fields. (Sadly we did not have sufficient staff to offer this course in spring 2015).

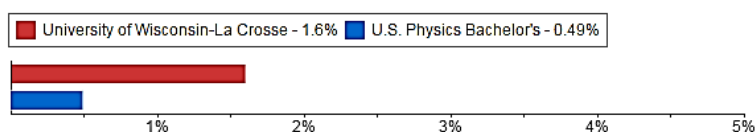
SUMMARY OF ANNUAL ACTIVITIES PHYSICS DEPARTMENT (June 1, 2014 - May 31, 2015)

SECTION 1: SUCCESS STORIES What accomplishments would you like to highlight this year:

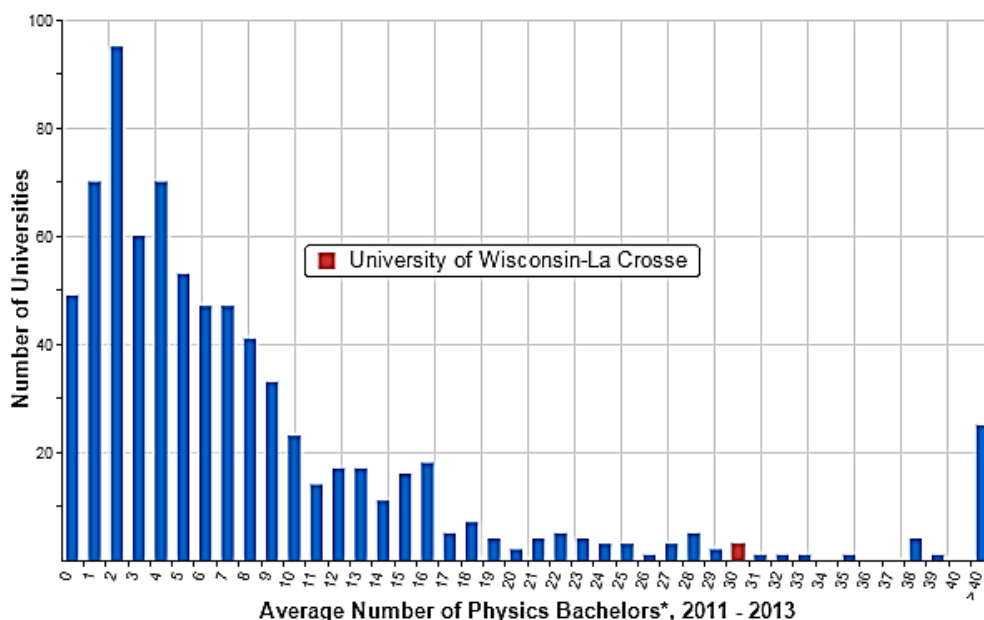
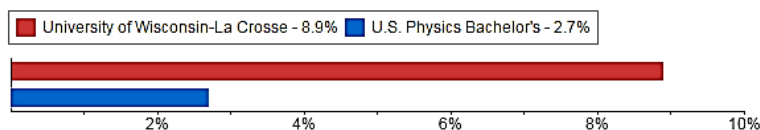
- American Physical Society (APS) Data Confirms UW-L Physics as a Top Performer in the Nation**

Bachelor's Degree Data

What percentage of all bachelor's degrees granted is physics degrees?



What percentage of STEM bachelor's degrees granted is physics degrees?



Sources:

All degree data used in the institutional comparison graphs are presented as 3-year averages using the most recent three years of available data. Degree data is collected from the [IPEDS Completion Survey by Race](#). IPEDS data is collected from every institution that participates in the federal student financial aid programs. Each school appoints a person to complete the IPEDS survey from which the data is gathered.

Data include all physics degrees as well as degrees that are frequently awarded in physics departments, such as engineering physics/applied physics, astrophysics, and physics teacher education. At institutions that have separate departments for e.g. applied physics or astrophysics, the data reflect the total number of degrees awarded in physics and allied departments.

- University of Wisconsin-La Crosse Physics Department Ranked #1 in the Nation**
 According to the American Physical Society (APS) 2015 rankings, the UW-L Department of Physics is now ranked **#1 in the nation** for the average number of physics degrees conferred (31 during 2011-2013) in a Bachelor's Degree institution.

**Undergraduate Physics Degrees:
Bachelor's Degree Institutions 2011-2013**

Institution	Average Degrees/Year
University of Wisconsin La Crosse	31
SUNY College at Geneseo	29
United States Naval Academy	29
St Olaf College	28
Carleton College	23
California Polytechnic State University San Luis Obispo	22
Reed College	21
University of Wisconsin Eau Claire	21
Rowan University	20
Illinois State University	20
Western Washington University	19
Whitworth University	18
University of Wisconsin River Falls	17
Bethel University (St Paul, MN)	17
College of Charleston	17
College of New Jersey	17
Harvey Mudd College	17
Kutztown University of Pennsylvania	17
Williams College	17

- Distinguished Lecture Series in Physics (DLS)**
 The Physics Department celebrated the fifteenth anniversary of its successful *Distinguished Lecture Series in Physics* (DLS) in October 2014. **Dr. Adam Riess** (co-winner of the 2011 Nobel Laureate in Physics), the Thomas J. Barber Professor in Space Studies at the Krieger School of Arts and Sciences, Johns Hopkins University, served as the UW-L Physics Department's Distinguished *Lecture Series in Physics* speaker on October 2-3, 2014. Dr. Riess gave a public lecture entitled "**Supernovae Reveal an Accelerating Universe**" and a physics seminar entitled "**Precision Measurements of the Hubble Constant and PASS**".
- Public Lecture Series in Physics (PLS)**
 On April 8-9, 2015, Dr. Helen Quinn, Professor Emerita of Particle Physics and Astrophysics at Stanford Linear Accelerator Center (SLAC) National Accelerator Laboratory visited UW-L. Her physics seminar on April 8th was entitled "**The interconnection of the smallest and the largest things: How thinking about cosmology helped suggest an answer to a puzzle in fundamental particle physics, and how that answer predicts the existence of an elusive particle type that could possibly be the dark matter in the Universe.**" Dr. Quinn's public lecture on April 9 was entitled "**Three Dimensions for Science Education: What are they? Why do they all matter?**"

- **Physics Department Volunteer Award** The Children's Museum of La Crosse awarded the Physics Department the 2015 *Judith A. Bouffleur Outstanding Volunteers of the Year* award for their monthly physics demonstrations at the Children's Museum every semester since 2009.
- **Faculty Award**
Dr. Jennifer Docktor is the recipient of the 2015 *School of Education Recognition of Excellence for Outstanding Achievement in Scholarship* award.
- **New Physics General Education Course**
A new Physics general education course, PHY 142 (Navigating Global Nuclear Issues), was offered for the first time in Spring 2015. This course was developed and taught by **Dr. Shelly Leshner**.
- **Benefit Dinner for Jolene Harris**
Last year, the UW-L Physics Family received the news that Jolene Harris (wife of the physics department technician, Steve Harris) was diagnosed with multiple myeloma. To help Steve and Jolene with the cost of the treatment, **Dr. Eric Barnes** chaired the Jolene Harris Benefit Committee in the fall of 2014 to organize a benefit dinner, which was held on Saturday, November 8, 2014. The event included an authentic Indian dinner, a silent auction, and raffles. Physics Department faculty and students served dinner at the benefit, which drew over 200 attendees.

SECTION 2: STUDENTS AND PROGRAMMING

Any update on students' accomplishments/successes during the year that you would particularly like to highlight:

- **Jacob Gloe** (Class of 2015) received the **2015 Murphy Award for Academic Excellence** (each year two graduating seniors from UW-L are selected to receive this award). Jacob graduated in May 2015 with a BS degree in Physics and Applied Mathematics, and a minor in Computer Science.
- UW-L Physics majors selected for Summer 2015 Research Experience for Undergraduates (REU) programs:
 - o **Lance Hildebrand** – *Johns Hopkins University* (Applied Physics Laboratory), Baltimore, MD.
- Visiting REU Students being hosted by UW-L in Summer 2015:
 - o **Christopher Case** of Missouri State University will be conducting research with **Dr. Seth King**.
 - o **Tegan Marianchuk** of Arizona State University will be conducting research with **Dr. Taviare Hawkins**.
- UW-L Physics majors **Evan Dowling** (Mentor: **Dr. Eric Barnes**) and **Bryan Nestingen** (Mentor: **Dr. Eric Gansen**) received Wisconsin Space Grant Consortium (WSGC) 2015

Undergraduate Research Fellowships.

- UW-L physics majors **Brandon Harris** (Mentor: **Dr. Taviare Hawkins**) and **Tanner Wolf** (Mentor: **Dr. Eric Gansen**) received UW-L Summer 2015 Dean's Distinguished Fellowships.
- Four UW-L physics majors (**Miranda Elkins**, **Scott Erickson**, **Cole Paulsen**, and **Matthew Wawiorka**) presented their research findings at NCUR 2015 at Eastern Washington University, Cheney, WA. **Taylor Bailey** and **Miranda Elkins** presented at the Conference for Undergraduate Women in Physical Sciences (WoPhyS) at the University of Nebraska-Lincoln in November 2014 where they received the *Outstanding Poster Award*. **Marcus Lowe** and **Zachary Tully** presented at the APS Division of Nuclear Physics Conference in Waikoloa, HI, in October 2014.

An update on new programs and changes to existing programs: Currently, the Physics Department is collaborating with the Winona State University Engineering Department to set up a Dual Degree Program in Physics and Composite Materials Engineering beginning from Fall of 2015.

SECTION 3: STAFFING, RESOURCES, AND FACILITIES

A holistic summary of scholarship and grant activity:

Funded External Grants: New and Continued

- **Gansen, Eric** (Principal), "RUI: Optimizing the Performance of Quantum-Dot-Based Single-Photon Detectors" (Funded), External Grant, Sponsored by National Science Foundation (NSF), \$127,879. (May 31, 2014 - May 31, 2017).
- **Gansen, Eric** (Principal), **King, Seth** (Co-Principal), "The Development of ZnO-Based Electro-Absorption Modulators" (Funded), UW-System Grant, Sponsored by Applied Research WiSys Technology Advancement Grant (AR-WiTAG), \$25,685. (May 31, 2014 - May 31, 2015).
- **Hawkins, Taviare** (Principal), "Mechanics of Microtubules with Lattice Defects" (Funded), External Grant, Sponsored by Wisconsin Space Grant Consortium, \$16,000. (September 2014 – August 2015).
- **Hawkins, Taviare** (Supporting), **King, Seth** (Supporting), **Sudhakaran, Gubbi R.** (Supporting), "A pilot distributed REU site focused on serving physics and astronomy students from comprehensive and community colleges (senior per)" (Funded), External Grant, Sponsored by CUR Physics and Astronomy Division, REU National Science Foundation, \$19,913. (June 2015 – August 2015).
- **King, Seth** (Principal), "Development of Low-Resistance Zinc Oxide/Zinc Magnesium Oxide Nanolaminate Films" (Funded), External Grant, Sponsored by

Wisconsin Space Grant Consortium, \$10,000. (June 1, 2014 - May 31, 2015).

- **Leshner, Shelly R.** (Principal), "RUI - Vibrational Structure of the Gd Isotopes" (Funded), External Grant, Sponsored by National Science Foundation, \$145,000. (May 14, 2012 - May 13, 2015).
- **Docktor, Jennifer** (Principal), **Sudhakaran, Gubbi R.** (Co-Principal), "Revitalizing Physics Teacher Education at the University of Wisconsin-La Crosse" (Funded), External Grant, Sponsored by Physics Teacher Education Coalition (PhysTEC), via National Science Foundation and American Physical Society, \$152,203. (August 1, 2012 - July 31, 2015).
- **Ragan, Robert J.** (Principal), "RIP: Predicting Collisionless Equilibria in Dark Matter Simulations" (Funded), External Grant, Sponsored by Wisconsin Space Grant Consortium, \$10,000. (June 1, 2014 - May 31, 2015).

Other Activities:

- Physics Department faculty members published ten research papers in peer-reviewed journals and gave 24 presentations at national/international conferences during the 2014- 2015 academic year.
- Physics Department faculty members (Drs. **E. Barnes, J. Docktor, E. Gansen, T. Hawkins, S. King, S. Leshner, R. Ragan, R. Salgado, and S. Sallmen**) mentored 43 undergraduate students on various research projects during the 2014-2015 academic year.
- **Drs. R. Ragan, G. R. Sudhakaran, and S. Verrall** served as external evaluators/examiners on Promotion and Graduate thesis committees.

SECTION 4: OUTREACH ACTIVITIES

Information on what sorts of fundraising and community engagement activities have been attempted, and their outcomes, this year: Please see Appendix I attached.

SECTION 5: 2015-2016

Plans and Focus for 2015-2016:

- **Assessment of Student Learning** The Physics Department is committed to assessing its courses and making sure that it is meeting its program goals. Our instructors employ several assessment tools and regularly modify their courses in response to both direct and indirect measures of student achievement. The Physics Department has a special committee that oversees its assessment activities and strives to assess all of its program goals by monitoring both the knowledge and skills of its current students and the achievements of its alumni. In addition to assessing individual courses, the Department

has developed a “Capstone in Physics” course (PHY 491) for seniors that directly probe student proficiency in several program goal areas. It also developed an alumni survey to assess how well the program prepares its students for jobs and graduate studies and to determine the impact the physics program has played in the lives of its alumni. In addition, the Department tracks the grade-point averages of its many dual-degree students at their engineering schools to measure the success of these students in their engineering coursework.

Notable results of this year’s assessment activities include the following:

- Curricular changes in PHY 203 and 204:** Previous assessment data collected in our introductory calculus-based physics sequence (PHY 203/204) indicated that students in these courses were spending an inadequate amount of time on course homework and that students were not seeking help when they needed it. The homework in PHY 203 and PHY 204 was not graded, and some students indicated that receiving credit for the homework would help motivate them to spend more time on it. As a result, this year we implemented changes aimed at increasing student accountability in regards to homework and provided students with more help in real time. We introduced a new textbook (*University Physics*) and an online resource (“Mastering Physics”) in PHY 203 and PHY 204. With the new online resources, instructors were able to monitor and grade student homework. Instructors were also able to (i) selectively activate help functions within Mastering Physics so that students could get immediate help; and (ii) randomize problem variables to encourage students to work problems independently. The hope was that by making students more accountable for their homework and by providing students with more real-time help; we would increase student productivity outside of class and, as a result, see better performance and understanding.

To track how the format changes impacted our students’ knowledge and problem solving skills in the areas of Newtonian mechanics and electricity and magnetism, we implemented the *Mechanics Baseline Test* (MBT) in PHY 203 and the *Conceptual Survey and Electricity and Magnetism* (CSEM) in PHY 204. A summary of recent results is given in the Table below. In addition, student perceptions of the new format were collected through SALG surveys specifically tailored to these courses.

PHY 203: MBT Results	2011	2012	2013	2014
Pre-Test Average Score (%)	41.7	39.0	42.1	41.6
Post-Test Average Score (%)	57.8	54.7	57.0	54.6
Average Gain (%)	27.6	25.7	25.9	21.8

PHY 203: CSEM Results	2012	2013	2014	2015
Pre-Test Average Score (%)	27.8	29.4	29.4	27.2
Post-Test Average Score (%)	56.9	56.3	60.3	50.6
Average Gain (%)	40.5	38.9	43.7	32.5

The assessment data indicates that the new textbook and the use of Mastering Physics has not improved the proficiency of the students in the areas assessed by the MBT and CSEM. In fact, gains are lower than previously reported. This outcome is consistent with instructor observations that students were overly preoccupied with the final numerical answers to homework problems as opposed to learning the underlying concepts and problem solving strategies. While students did indicate on surveys that they spent more time on homework than previous years, many students also indicated that they used poor problem solving strategies (e.g. online searches; trial and error; reliance on tutors, instructors and other students) to arrive at their answers. Based on the direct and indirect assessment data, the instructors for PHY 203 and PHY 204 are considering making changes to how homework is graded during the 2015/2016 academic year.

- **Assessment of undergraduate research:** One of the hallmarks of the UW-L Physics Program is its dedication to undergraduate research. Recently, we began assessing our undergraduate research program with a focus on determining how many of our physics majors are getting involved in research, either with UW-L faculty or through external REUs, and how many are presenting their research results at conferences. Overall, we would like to know how getting involved in undergraduate research impacts the ability of our students to gain acceptance and funding to graduate programs or to obtain jobs in STEM fields. Over the past year (summer 2014 and the 2014/2015 academic year), 42 physics majors took part in student/faculty collaborative research. These research experiences produced 17 student presentations at local, state, or national conferences.
- **Offering two sections of PHY 343 in spring of 2015:** Thermodynamics (PHY 343) is a required course for both physics majors and physics/engineering dual-degree majors. Until this year, there was only one section of this course, which was taught from an engineering perspective to accommodate the curricular requirements of our partnering engineering programs. In response to student feedback, we offered for the first time an additional section of PHY 343 in the spring of 2015 that is better suited for our physics majors. The course emphasized concepts of statistical mechanics that are particularly important for graduate studies in physics.

APPENDIX I

Inclusive Excellence

To encourage recruitment and retention of historically underrepresented groups in physics, we continue to send out a revised recruitment letter, which is more welcoming. In addition, various faculty members have completed professional development activities relating to student retention issues in STEM. In Spring 2015, the department sponsored its fourth Public Lecture Series (PLS) in Physics. During these meetings, the female speaker discussed her pathways to her career in academia as both a scientist and woman. The department continues to maintain its sixty percent diversity statistics (four women, four minorities).

- **Public Lecture Series in Physics**
On April 8th and 9th, 2015, **Dr. Helen Quinn**, Professor Emerita of Particle Physics and

Astrophysics at Stanford Linear Accelerator Center (SLAC) National Accelerator Laboratory, visited UW-L. Her physics seminar held on April 8 discussed: "The **interconnection of the smallest and the largest things: How thinking about cosmology helped suggest an answer to a puzzle in fundamental particle physics, and how that answer predicts the existence of an elusive particle type that could possibly be the dark matter in the Universe.**" Her public lecture on April 9 discussed, "Three dimensions for Science Education: What are they? Why do they all matter?"

- **School of Education “Come Take a Look” Event**
Physics faculty member, **Dr. Jennifer Docktor**, and three undergraduate students organized a booth on “Teaching Science with Technology” with demonstration equipment at a School of Education open house event on March 11, 2015. The event was organized by Bethany Brent, the School of Education Multicultural Adviser / Recruiter and explicitly targeted participation by minority groups from local high schools.
- **Science & Math Expo**
Dr. Jennifer Docktor served as the physics faculty representative on the steering committee. She reviewed abstracts and recruited volunteers from the department to judge at the science fair. **Drs. Jennifer Docktor** and **Taviare Hawkins**, together with three physics students, participated. The Science & Math Expo was held on May 12, 2015 and was designed to demonstrate the importance of science to middle school children. During the Expo, students presented their science projects to reviewers, other participants, and visitors. Reviewers created a learning dialog between student and scientists.
- **Physics Laser Show**
The physics faculty and student members of the Physics Club and Women in Physics performed a laser and physics show called “The Physics and Light Show Extravaganza,” holding two performances a day during the week of May 18-22, 2015. The show is designed to excite interest in science and technology in elementary- and middle-school-aged children. The shows are free to the public and are a popular field trip for many local schools. A typical show begins with a series of interactive demonstrations and climaxes with a 20-minute laser and light show set to music. Each show lasts for about an hour.
- **Girls and Boys in Science Exploration Camp**
Physics faculty member, **Dr. Jennifer Docktor**, and Biology faculty member, **Dr. Megan Litster**, held sessions called *Light Bright!* with demonstrations and activities about light and color during the Girls and Boys in Science Exploration camp on June 27, 2014. Physics faculty member **Dr. Seth King** held a physics workshop on rollercoasters during the same camp.
- **Physics shows for Rufus King International School Students from Milwaukee**
Physics faculty performed the physics show “**The Magic of Physics**” for thirty-five 8 graders from Rufus King International School, Milwaukee, WI, on July 9, 2014. The students were on an Academic Field Trip to UW-L, which was sponsored by the UW-L Admissions Office.

SUMMARY OF ANNUAL ACTIVITIES RECREATION MANAGEMENT AND THERAPEUTIC RECREATION DEPARTMENT (June 1, 2014 - May 31, 2015)

During the 2014-2015 academic year, the Department of Recreation Management and Therapeutic Recreation completed a re-accreditation self-study (January 2015) and hosted an external re-accreditation visit (April 2015). It received the visitation report mid-June and will make a final defense at the National Park and Recreation Association Annual Congress in September. Re-accreditation was a central focus of staff in the Department during the 2014-2015 academic year.

Section 1: Success Stories

A few of the highlights of the year are:

Departmental accomplishments

Re-accreditation Although the final decision on national accreditation of the undergraduate programs in both Recreation Management and Therapeutic Recreation will not be made until September 2015, the major work of the self-study report and the external visit occurred during the 2014-2015 academic year. Every seven years, this re-accreditation is a major task of the department. See Appendix A for the final report by the visitation team.

McPoe The Department of Recreation Management and Therapeutic Recreation, along with the Philosophy Department, hosted the first workshop of the newly created Midwest Consortium of Philosophy and Outdoor Education. The purpose is to bring more academic environmental philosophy into outdoor recreation courses and programs, while simultaneously contributing practical nature-human interaction into academic philosophy. UW-L will host a second conference September 2015

Progress on Tourism Institute One project that is far from complete, but worthy of mention, is the initial efforts toward a UW-L Tourism Institute. This would be a research/service-oriented institute to attract small regional research projects related to tourism. Dan Plunkett is heading this project.

Opportunities to further leverage these accomplishments in terms of public relations or strategic planning

Re-accreditation, McPoe, the Tourism Institute, and the in-progress curricular changes (described below in Section 2) are all public relations opportunities. One of the main reasons for re-accreditation is to promote UW-L's program as the only accredited program in the state of Wisconsin. The Tourism Institute (once it is up and running) and McPoe are both outreach programs that have public relations benefits.

In Summer 2015, the Department of Recreation Management and Therapeutic Recreation will be the featured department in the College of Science and Health's newsletter. Accomplishments and plans for the future will be highlighted. Additionally Guy Herling, along with Gretchen Newhouse and Boon Murray, wrote an excellent companion piece that demonstrates the quality of the Department's internship program.

Section 2: Students and Programming

The following are accomplishments of students and notable changes in programming:

Update on students' accomplishments/successes

As always, students in Recreation Management and Therapeutic Recreation conduct a great deal of service. This may be through classes, through internship or required field experience, or through research. Of special note is the first year of Rec 351 Civic Engagement in the Recreation Profession. In this course, students each semester conduct a case study of a local recreation resource. They interview stakeholders about issues concerning the resource and submit a report/make an oral presentation to the managers of the resource. In 2014-2015, the resources were Hixon Forest and UW-L's Rec Center.

Examples of other community-based class projects include:

- Rec 400 Planning for Park and Recreation Facilities undertakes community projects each semester. Fall 2014, students worked on the redesign of La Crosse's Powell Park to include an all-inclusive playground. Spring 2015, they worked with Onalaska Parks & Recreation on the redesign of Holiday Heights Park and the design of new park in the Nathan Hill area.
- In Rec 306 Environmental Ethics, Outdoor Recreation and Natural Resources, students trimmed trees on the Trempealeau National Wildlife Refuge oak savannah in preparation for a prescribed burn and helped to construct a portion of a new trail at the Aldo Leopold Center in Baraboo.
- Each semester, Rec 300 Program Planning in Recreation and Rec 340 Evaluation Methods and Practices also take on community projects as part of their education.

Each individual community-based class project may not be significant unto itself, but the examples mentioned here show the Department's overall commitment to experiential education and service learning.

In addition to class-related group projects, individual students have made worthwhile accomplishment over the past year. Examples are:

- Therapeutic Recreation major Megan Barrett started UW-L's newest Student Club "love your melon" and now serves as President
- Recent Therapeutic Recreation graduate Annalise Doyle published her graduate project in the *American Journal of Recreation Therapy*. The title of her article is "Developing a therapeutic recreation identity: A graduate researchers' personal narrative of grant writing and program design."

- Recreation Management student Sara Erickson received the UW-L Graduate Student Academic Achievement Award for her thesis on the economic impact of salmon, bass, and walleye tournaments in Wisconsin.

Changes to the overall student mix and plans for addressing these changes

The number of undergraduate students who want to major in Therapeutic Recreation has grown dramatically to over 300 students. Equally important, the number of undergraduate students majoring in Recreation Management reached a low about a year ago and is beginning to rise again (bottomed out around 80 and now approaching 100). The therapeutic recreation numbers are actually more than the Department can handle well, and the TR faculty members are meeting this summer to develop an enrollment management plan.

At the graduate level, numbers remain steady at approximately 20 new students each fall. In the past, the makeup of those 20 students was predominately Recreation Management, with as few as two students majoring in Therapeutic Recreation. Over the past four years, the number of Therapeutic Recreation graduate students has increased. For 2014-2015, new TR graduate students actually exceeded new Recreation Management graduate students.

Update on new programs and changes to existing programs

Other than re-accreditation, the most noteworthy developments in the Department might be program development in progress. These include:

- **Renewed efforts for a 2+2 agreement with UW Baraboo/Sauk County** During 2013-2014, UW-L completed an articulation agreement with the two-year recreation program at the Madison Area Technical College (now Madison College). Now, with new leadership at the UW-Baraboo/Sauk County campus, the Department has renewed efforts to have a similar agreement with that campus. Whereas Madison College was a general recreation program, efforts with Baraboo/Sauk County have a tourism emphasis. Daniel Widuch and Dan Plunkett are heading this project.
- **Curriculum revision of undergraduate programs** Recreation Management and Therapeutic Recreation independently are making revisions to their curricula. Recreation management is looking into emphasis areas, as opposed to its current generalist program. Emphasis areas might include tourism, outdoor recreation, and community recreation. Therapeutic Recreation is looking at reducing the number of required courses by identifying and eliminating unnecessary duplication. This step coincides with a recommendation of the re-accreditation visitors. Also fewer required courses would help the TR faculty handle the high enrollment in the program.

Programs requiring additional monitoring or redesign

A couple of programmatic elements deserve additional monitoring. They are:

- Evaluation of graduate assistants. The Department has policies for GA assessment, but the policies have not been carefully followed and documented

- TR's enrollment management plan. Therapeutic Recreation is developing a plan for heavy enrollment. Once in place, the Department needs to monitor the plan for 1) actually managing enrollment and 2) making sure criteria are fair to all students).

Non-curricular programs and an analysis of the strengths and weaknesses of the programs

The recent re-accreditation report identified strengths and weaknesses as identified by external reviewers. Of 47 standards, the Department met 41 (a range of topics, including mission statement, quality of instructional staff, institutional support of Department). Five (5) standards were partially met, and one (1) was unmet. The unmet standard was a chair full time in the Department (Steve Simpson is only 50% in the Department). The partially met standards involved:

- Recently updated strategic plan with explicit completion dates of goals/objectives
- Involvement of students in curricular decisions
- Involvement of practitioners in curricular decisions
- Most recent assessment results on website
- Presentation of most recent assessment results and curricular changes as a result of assessment

Section 3: Staffing, Resources and Facilities

Staffing

The Department has great potential in the next half dozen years. Recent hires have been excellent, and positive changes will occur as new staff members become acclimated to UW-L. The only threat to this promising future is the need to fill current and upcoming tenure track vacancies.

Staffing changes for 2014-2015 and into 2015-2016 are:

- Nancy Richeson (TR), Kate Evans (RM), and Dan Plunkett (RM) joined the Department as tenure track faculty August 2014.
- Jin Young Chung resigned December 2014 to return to his home country of South Korea
- Patricia Ardovino retired the end of Spring semester 2015
- The Department had a failed search for a tenure track TR faculty member Fall 2014
- Sara Moore was hired as a full-time, long-term IAS to begin Fall 2015
- Wayne (Tommy) Means was hired as a full-time, one-year IAS to begin Fall 2015
- Steve Simpson (currently chair) informed the Department that he will resign from the Department at the end of December 2015. He will remain 50% for the University, but in the Office of Graduate Studies. Gretchen Newhouse will be chair-in-training Fall 2015 and then complete Steve's term as chair.
- Boon Murray (currently undergraduate TR director) intends to retire at the end of the 2015-2016 academic year. To help with this transition, Nancy Richeson was TR program director-in-training Spring 2015 and will assume full responsibilities Fall 2015.

With 1) the failed search Fall 2014, 2) Chung's resignation, 3) Ardovino's retirement, 4), Simpson's pending resignation, and 5) Murray's pending retirement, **the Department currently has three tenure track vacancies and will have two more by the end of the 2015-2016 year.** Two will be in recreation management, and three will be in therapeutic recreation.

The nationwide shortage of faculty in therapeutic recreation has an effect on the Department. The department chair and the TR faculty are developing an alternate plan if they are not able to fill its three vacancies (see Plan B below in Section 5).

Resources The Department is able to function on its current budget. During 2014-2015, the only purchase exceeding \$5,000 was a remote operating underwater vehicle (ROV) to support Laurie Harmon's teaching and scholarship.

Facilities In terms of space, RM&TR is in relatively good shape now, but there are four issues that may be problems in the future. In order of concern, they are:

1. *Adequate gymnasium space for the department's handful of courses that require a large open area.* RM&TR currently uses the Wittich gyms. As soon as Wittich Hall is closed permanently, the department will need to compete for space in the heavily used Mitchell Hall gyms (or perhaps move to wherever the women's gymnastics team relocates). Also in regards to Wittich, the Department was forced to discontinue its therapeutic recreation aquatics course when the Wittich Pool was closed.
2. *Classroom space.* Three or four institutions (WTC, UW-L, Gundersen, La Crosse Schools) biannually negotiate for classrooms in the Health Science Center. While collegial, it is difficult to schedule courses certain times of the day.
3. *Storage.* RM&TR has one storage area, which is filled with wheelchairs (for class use) and camping equipment. Even when the Department has the funding for certain pieces of equipment, the chair sometimes rejects a request to purchase because the Department has no place to store large items.
4. *Faculty and staff have outgrown the Department's suite of offices on the 2nd floor of the Health Science Center.* The two offices on the 4th floor and the GA suite (Room 049) in the basement should cover our long-term needs, although the GA suite historically has been used by the Biology Department. Each year, Biology (i.e., Brad Seebach) and the RM&TR chair renegotiate the best use of Room 049.

Scholarship and Grants

Earlier in this report it was suggested that the influx of new and enthusiastic faculty will lead to positive changes for the Department. This statement was referencing the future, but there already have been improvements – as evidenced by a slight increase in scholarly activity for the 2014-2015 academic year. The faculty and staff published six (6) refereed articles, eight (8) non-refereed articles, four (4) book chapters, and two (2) technical reports. They made 30 professional presentations, acquired just over \$24,000 in research/service grants, and obtained

\$16,237 in teaching improvement grants. See Appendix B for details on individual faculty members' scholarship.

Staff Development Plan for the Year

Other than a continued effort to get the majority of faculty and staff to take the training for on-line instruction, there is no set plan for staff development. Gretchen Newhouse has reassigned time Fall 2015 for chair-in-training. She also will attend a leadership conference Summer 2015. Some the Department's travel funds will be available for staff development (tenure track usually use funds to present at a conference; IAS are more likely to use travel funds specifically for faculty development).

Section 4: Outreach Activities

Inclusive Excellence opportunities, events, and ideas put forward during the year

Therapeutic recreation continues to teach a wide range of courses about providing recreation services to people with disabilities. In addition, Dr. Murray heads the child-life emphasis courses for the University, and Dr. Richeson is part of the University's gerontology group,

A summary of international activities and opportunities offered this year

No travel courses were offered during the 2014-2015. Gretchen Newhouse has interest in developing international courses and internship opportunities. She recently made exploratory trips to both Central America and Ireland. Steve Simpson continues with on-going collaboration with colleagues in China and Taiwan.

Fundraising and community engagement activities

As always, the students and faculty in RM&TR provided many hours of off-campus service. This includes faculty serving on recreation-related boards (e.g., Onalaska Recreation and Park Board, Mental Health Coalition of the Greater La Crosse Area, Wisconsin Conservation Corps, Landscape Architecture Alumni Advisory Board, Northeast Recreation Research Symposium, Midwest Association of Graduate Schools) and making service presentations in the community (e.g., Gundersen Lutheran, YMCA, Central Wisconsin Center). All undergraduate and most graduate students provide 50-100 hours of service, and then complete a full semester internship in a recreation-related agency. Students, through their employment, volunteerism, internships, and service learning opportunities, work at dozens of agencies in the Coulee region (e.g., Boys and Girls Club, Hillview, Chileda, YMCA)

Section 5: 2015-2016

Plans and focus for 2015-2016

Plans for the 2015-2016 academic year include:

Re-accreditation Through COAPRT (Council on Accreditation of Parks, Recreation, Tourism and Related Professions), the Department will attend a national conference to complete the re-accreditation process.

Academic Program Review The Department's APR always follows one-year after the re-accreditation visit. The APR reports must be done during 2015-2016. Both the RM and the TR graduate programs have volunteered to pilot new graduate APR guidelines (yet to be developed).

Enrollment Management Therapeutic Recreation will complete its enrollment management plan

Curriculum Revision Both the Recreation Management and the Therapeutic Recreation undergraduate programs will bring significant curricular changes to Undergraduate Curriculum Committee.

UW-Baraboo and Winona State University Two efforts that have are not high on the department's priority list, but remain long-term projects are articulation agreements with UW-Baraboo and Winona State University. The Baraboo project is a 2+2 program for Dells area students interested in tourism. A couple of obstacles have put us back to the beginning of the planning process. The Winona State project is an agreement to make it simple for graduate students at UW-L and Winona to take courses at each other's institution. This collaboration is near complete and could be finalized in the coming year.

Plan B for Therapeutic Recreation The Department will go into this Fall's search and screen with the assumption that solid people will be hired for the available vacancies. However, the TR faculty will develop a backup plan if the search again fails.

A summary of foreseeable challenges and opportunities going forward

Successful search and screens in both Recreation Management and Therapeutic Recreation may be the most significant challenge/opportunity for the 2015-2016 academic year. After the departures of Boon Murray and Steve Simpson, Jearold Holland and Gretchen Newhouse remain the only two tenured faculty members in the Department. With both tenure track faculty and IAS, the Department has strong people with limited experience at UW-L, and the upcoming searches will result in even more staff with limited UW-L experience. The challenge is to attract more topnotch faculty members, especially in Therapeutic Recreation (where previous searches have failed). The opportunity is having a very large contingent of new people with fresh ideas.

The second major challenge is addressing the large demand for the undergraduate Therapeutic Recreation major. The Department cannot serve well all of the qualified students who want to major in TR, so an enrollment management plan must be developed.

Suggestions for how the Provost and Associate Vice Chancellors might be of assistance in your efforts

The Department would appreciate continued support and patience in filling TR tenure track positions. The Provost helped by allowing our searches to include associate professors (not just assistant professors). Any other ways to make the vacancies more attractive would be appreciated.

In terms of TR faculty, a grow-our-own concept has occasionally come up in discussion. The Department has quality IAS in TR, and it also graduates a few promising masters students each year who go on to Ph.D. programs. The Department would welcome any incentives it could provide that would encourage UW-L affiliated TR professionals to seek terminal degrees and then return to UW-L.

SUMMARY OF ANNUAL ACTIVITIES STATISTICAL CONSULTING CENTER

(June 1, 2014 - May 31, 2015)

Over the summer of 2014 and the 2014-2015 academic year, the SCC served a total of 43 clients. Clients were comprised of 16 faculty, 16 graduate students, 8 undergraduates, 2 administrators, and 1 analyst. Some clients were seen in more than one semester such that 17 separate clients were served in summer 2014, 12 in fall 2014, and 26 in spring 2015. Multiple meetings were held with some clients as well.

The SCC served the following departments, programs, and offices departments and programs on campus during between May 22, 2014 and May 31, 2015:

Aquatic Science/Environmental Studies	Educational Studies
Biology	Exercise and Sports Science
Chemistry/Microbiology	Health Ed/Health Promotion
Computer Science	Health Professions - Physical Therapy
Economics	Institutional Research
Education Studies	Mathematic
Microbiology	Recreation Management and Therapeutic Recreation
MOOC	School of Education
Murphy Library	School Psychology
Occupational Therapy	Sociology and Archaeology
Psychology	Theater
Recreation Management	

This year enrollment counts for the Statistical Consulting course MTH 440 were 1 in summer 2014 (first time for a summer enrollment), 7 in the fall 2014 semester and 6 in the spring 2015 semester.

Dave Reineke, Director

Economic Development Incentive Grant

2014-15 Annual Report

Directions

Please submit the annual report as a **Word document via email** to ttalukdar@uwsa.edu (no hard copies please). The annual report is due by **Friday, July 3, 2015 at noon**. The following information must be provided:

Institution Name(s): UW – La Crosse	Project Title: Expansion of Statistical Consulting Center to Serve Business Needs
Principal Investigator: Barbara Bennie	Person submitting Report: Barbara Bennie
Email: bbennie@uwlax.edu	Contact Phone #: 608-785-6605
Grant Award Amount: \$126,248.00	Report Date: July 3, 2015
Grant Funding Spent (to date):	Date project began: December 2013
	Date project ends (projected): December 2015

I. Status Report

Discuss project activities in relation to meeting the proposal's expected outcomes for FY15. Please include any activities related to sustainability if appropriate at this time.

The Statistical Consulting Center (SCC) at the University of Wisconsin-La Crosse (UW-L) has accomplished all of its goals for FY14 – FY15 for this incentive grant project:

- Created a marketing plan (created in FY14, revised in FY15),
- Created fee schedule for consulting services,
- Created a standard consulting contract/agreement,
- Created promotion materials including postcards, brochure, and poster (created in FY14, revised in FY15),
- Developed the SCC website for off-campus clients (created in FY14, revised in FY15),
- Setup the structure for accounting and billing clients,
- Continued to build client base through routine networking with potential clients,
- Transitioned to fee for service basis to ensure service sustainability,
- Completed at least 12 projects throughout the year (2014-15) while providing high quality statistical service,
- Guided internship experiences for two statistics students per semester (2 in Summer 2014, 3 in Fall 2014, 2 in Spring 2014, 1 in Summer 2015)

We have sent out promotion materials to over 240 local businesses and institutions. Over the duration of the grant period, we served 13 different clients with 15 completed projects. Clients served range from non-profit organizations to federal researchers to for-profit businesses. We provided 2 paid marketing internships and 8 paid statistics internships.

Of the 8 statistics interns, 6 have graduated from UW-L with 2 going on to graduate school in statistics (1 for PhD and 1 for Masters degree) and 4 going directly into employment in a statistics-related field. Two of the 8 interns have not yet graduated from UW-L, but are on track to finish in the coming year.

II. Updated Goals/Performance Metrics and Assessment Plans

Use the attached Excel spreadsheet and this document to report the current status of project goals/performance metrics, anticipated completion date(s), actual completion date(s), and assessment plans. If there were any changes in the project activities, outcomes or evaluation, they should be identified in this section. Discuss any key findings and how the institution used collected data to improve the project in FY15.

III. Project/Program Budget and Expenditures

Please provide a report of project/program expenditures detailed by category and source of funds.

This table shows the original budget as given in the grant proposal from October 2013 and the final revised budget. The variance between the original and final budget is shown in the far right column. Items in red font are yet to be spent under our no-cost extension of the grant through 12/31/15.

Budget for Incentive Grant funding

SCC Expansion Budget						
Item	Description	Original budget		Revised budget		Variance
		Amount	Fringe	Amount	Fringe	
	SCC Director					
1	2013-14 (6 credit release for Spring 2014)	12,000.00	6,174.00	12,000.00	6,174.00	0.00
2	2014-2015 (Summer 2014, 6 credit release for Fall 2014 and Spring 2015)	32,000.00	16,464.00	32,000.00	16,464.00	0.00
3	2015 (Summer 2015)			6,680.00	3,695.38	-10,375.38
4	Fall 2015, 3 credit release			8,000.00	4,425.60	-12,425.60
5	Statistics summer internship support (2 for Summer 2014)	10,000.00	271	5,625.00	234.92	4,411.08
6	Statistics June internship support (1 for June-July 2015)			3,600.00	275.4	-3,875.40
7	Statistics semester internship support (2 per semester, Fall 2014/Spring 2015) - ended up 2 Fall and 3 Spring	6,000.00	162.6	7,000.00	25.86	-863.26
8	Statistics semester internship support (2 for Fall 2015)			3,000.00	0	-3,000.00
9	Marketing intern, Spring 2014			1,500.00	0	-1,500.00
10	Marketing intern, Summer 2014	5,000.00	135.5	5,000.00	255.07	-119.57
11	Website development intern, Spring 2014	1,500.00	40.65	1,500.00	0	40.65
12	Computer hardware (3 computers to stay in SCC for director + 2 interns, secure data storage)	10,000.00		6,688.97		3,311.03
13	Software licensing	10,000.00		146.99		9,853.01
14	Accounting fees (approximately 20 hours @ \$200 per hour)	4000		0		4,000.00
15	Legal consulting fees (approximately 10 hours @ \$250 per hour)	2500		0		2,500.00
16	Project related travel and supplies	0.00		684.99		-684.99
17	Marketing costs (\$532.12 spent as of 6/30/15 with remainder to be spent by 12/31/15)	10,000.00		1,270.00		8,730.00
	Total		126,247.19		126,246.18	1.01

The main deviations that were realized between our original budget outlined in the grant proposal and the final budget were connected to computer hardware, software, legal, accounting, and marketing costs all coming in well below our projected amounts. The funds that were saved in these categories were redirected to create more student internships and to extend the support of the SCC director. We originally had budgeted support for 6 statistic student interns, but our final budget supports 10 statistics student interns. Our original budget supported the SCC director through May 2015; we extended this support through December 2015.

Budget for funds received from consulting clients during the 2013-2015 biennium

Instead of providing an initial five hours of statistical support free of charge to new clients, we decided to offer a 60% fee discount to the first project of new clients through December 2014. We carried this discount over into 2015 for two clients who initiated projects in 2014. We did end up doing a few projects for no charge – two of these were for non-profits organizations. All revenue received from SCC clients during the 2013-2015 biennium will be used to support the operation of the SCC in the following year (faculty director, student internships, marketing, etc.).

IV. Changes

Describe any additional changes (staff, program direction, etc.).

A portion of the marketing budget for Spring 2014 was used to hire a marketing intern student to help develop a marketing plan for SCC. A total of \$1500 out of the \$10,000 was used for this purpose.

We found that effectively marketing the SCC was a greater challenge than anticipated. Direct mailings were the primary strategy that was outlined in our 2014 marketing plan. However, this strategy did not prove successful. We have continually revisited marketing ideas throughout the grant period.

The Incentive Grant has helped us in successfully establishing the infrastructure needed for extending our SCC to serve clients outside of the University. We are set to sustain the SCC into the future, but on a smaller scale than what we were able to run with the grant support.

SUMMARY OF ANNUAL ACTIVITIES
MURPHY LEARNING CENTER
(June 1, 2014 - May 31, 2015)

Submitted by Lee Baines
Murphy Learning Center Director

The Murphy Learning Center (MLC) provides tutoring services in Mathematics, Sciences, and Writing, housing more than 100 student employees or volunteer tutors. The following items summarize MLC activities for the 2013-2014 Academic Year. The MLC daily usage counts exceeded 20 000 students for AY 2013-2014, representing a substantial increase from 2012-2013.

- 1) Background
- 2) Finances
- 3) Student Usage
- 4) Tutors
- 5) Tutor Training
- 6) MLC Advisory Committee
- 7) Faculty and Staff
- 8) Grants and Presentations
- 9) Supplemental Instruction
- 10) Writing Center
- 11) Outreach

Background

The Murphy Learning Center (MLC) was established in the fall semester of 2009. Prior to that point, departments on campus offered tutoring services in classrooms, office spaces, and even the basement of the Whitney Dining Center. Student-led initiatives spurred on the development of a single primary location for the tutoring services. UW-L Differential Tuition mainly funds the MLC with departments providing some additional funds for tutoring expenses; a proposal is submitted each fall to the Academic Initiatives Oversight Committee, which allocates funding out of Differential Tuition. The MLC has been funded through AIOC since 2010.

During summer 2013, major renovations were undertaken in the MLC, resulting in the floor space and capacity of the MLC more than doubling. In addition to increased space and capacity, the MLC received new technology to support tutoring, a centralized log-in system for students, a flexible floor plan that can be adjusted as needs change and a dedicated space for tutors to sign in for their shift, store their belongings and study when not working.

The primary purpose of developing the MLC was to house a variety of tutoring services in one area (Murphy Library) where students go to study and learn. In 2009, the MLC offered tutoring in the areas of Mathematics, Physics, and Writing. Throughout the following semesters, Biology, Chemistry, Microbiology and Earth Science were added. The Public Speaking Center was added to the MLC in fall 2013 and Accountancy was added in spring 2014.

The mission of the Murphy Learning Center is to foster an inclusive environment where academic learning flourishes. This goal is accomplished in several ways: 1) by providing a welcoming environment where students can undertake group learning with and without tutors 2) enhancing the academic learning and content understanding of students and 3) enhancing the skills of tutors to become content experts and peer mentors.

Finances

For academic year 2013-2014 the MLC was awarded \$138, 858 from AIOC. Total expenses amounted to \$135, 537.

Student Usage

Students continue to utilize all of the resources at the Murphy Learning Center. Our student contacts continue to show an enormous increase in the overall number of times students utilize the MLC.

Table 1 shows data for 2012-2013 and 2011- 2012. Science counts include the disciplines of Biology, Chemistry, Physics, Microbiology, and Earth Science.

Table 1. MLC student usage data for academic years 2012-2013 and 2011-2012.

	AY 2011-2012	AY 2012-2013
Mathematics	4400	4550
Science	2400	2250*
		(missing CHM Spring '13)
Writing	1600	1870
Total	8400	8670+

Table 2. MLC student sign-in data for academic year 2013-2014, broken down by each department.

	Fall 2013	Spring 2014	Total
Accountancy	Not in MLC	165	165
Biology	2366	1241	3607
Chemistry	1306	2276	3582
Earth Science	40	63	103
Mathematics/Statistics	5206	4276	9482
Microbiology	59	48	107
Physics	510	436	946
Public Speaking Center	139	331	470
Writing Center	1020	895	1915
Total	10646	9731	20377

Table 3. MLC student sign-in data for academic year 2014-2015, broken down by each department.

	Fall 2014	Spring 2015	Total
Accountancy	180	283	463
Biology	2949	959	3908
Chemistry	2339	2111	4450
Economics	27	92	119
Earth Science	50	17	67
Mathematics/Statistics	6547	3740	10287
Microbiology	62	77	139
Physics	993	445	1438
Public Speaking Center	786	461	1247
Writing Center*	1137	645	1782
Other	302	129	431
Total	15372	8959	*24331

*The Writing Center independently reported 2509 appointments. Discrepancy and be explained be students not signing in. This gives a total of **25058** recorded students using the MLC for AY 2014-15.

Table 2 and 3 show data for academic year 2013-2014 and 2014-2015, gathered via Qualtrics as students enter the MLC. Qualtrics allows for the gathering of more detailed data than was previously possible. Student net IDs are recorded with data on whether they are at the MLC to see a tutor or for office hours and the subject and class they are there for. The MLC saw an increase of 19% year-on-year between 2013-2014 and 2014-2015. The MLC continues to benefit from the expansion in 2013 with fall 2014 being the most heavily utilized semester ever in the MLC with a 50% increase over the previous fall semester. The increase in students utilizing the MLC can be attributed to a variety of factors. In previous

semesters the demand for the services in the MLC outstretched the physical space available for the students to sit. The new space has attracted more instructors to hold office hours in the MLC, increasing the awareness of many students of the MLC. Instructors from Math, Biology, Chemistry and Physics utilize the MLC daily. In addition to this, a general increase in faculty knowledge of the MLC services, a push for faculty to put a standardized line about MLC services on course syllabi, an online presence (website continually updated), and a greater attention by tutors and front desk workers to the sign-in process and classroom visits by tutors, has helped increase usage of the MLC.

Attendance at the MLC in spring 2015 was somewhat lower than expected significantly lower than fall, but also approximately 800 visits lower than spring 2014. There are several possible explanations for this. Biology saw a decrease that can be attributed to the availability of Supplemental Instruction (SI) to two sections that reduced the need for tutoring. The largest decrease was in Mathematics/Statistics. The MLC was heavily used in fall 2015, but especially so in Mathematics/Statistics, with a shortage of seating and tutors on a daily basis. It is possible that with the MLC being so busy that many students were reluctant to return in the spring.

A survey of student usage in the MLC conducted by the BUS230 class indicated that among respondents, those students who used the MLC, but did not return again, 29% said that their reason for not returning was that the MLC was too busy. The survey also asked free-response questions.

From the BUS203 report:

From our results we've gathered that students are aware of the MLC, they just only visit it on an 'as needed' basis. But we also wanted to uncover if students had a certain perception or stigma that was attached to the MLC. A majority of respondents said that students who need help on an assignment are the type of student to visit the MLC; no respondent thought it was for 'weak' students. Students had the opportunity to write in a response when asked what their personal perception of the MLC was. Quite a few students said that it is a place to go to receive help on assignments, but that it is intimidating to go there. This is because at times the MLC is crowded or there are not enough tutors to provide proper assistance to meet student needs. We received some responses that indicated that sometimes students feel that it's not worth their time because if it is too crowded then they know they won't get the help they need, so they seek help elsewhere. However, students do feel that the MLC is a very helpful resource on campus when they can get help from tutors.

Based on what students responses were we came up with a couple recommendations. When asked why students don't frequently visit the MLC, many respondents said that there weren't enough tutors available to help. An easy fix to this issue would be to hire more tutors. For the same type of question the next popular response was that there wasn't enough space in the MLC and at times it gets to be too crowded for students to feel comfortable there, another solution for this problem- if it's in the MLC's budget- would be to expand the tutor space.

Tutors

The Murphy Learning Center has over 110 students who are employed or volunteer as tutors. All tutors must apply for a position; MLC advisors conduct interviews with each potential tutor before hiring. The MLC also employs work-study students to assist in front desk coverage and daily operations. Four work-study students have been requested to

work on the front desk for the AY 2015-2016. This increased coverage will ensure that the MLC attends to its mission of creating a welcoming space for all students.

Tutor Training

Fall 2015 will see the introduction of a formal, mandatory tutor-training program. The class will be team-taught and initially use the ENG299 course designation (currently the class for training writing center tutors). Involvement in the class will be at the discretion of each department with current commitment from the Mathematics, Biology, Chemistry, English and Geography departments. The class will cover general best practices of tutoring as well as subject-specific content.

MLC Advisory Committee

Within each discipline, a faculty or staff member has committed to assisting with various processes of the MLC. The MLC Director is hired as a 50% position. In fall 2013 Drs. Lee Baines and Jim Sobota took over Directorship of the MLC on an interim basis. Dr. Baines was appointed Director in January 2014. Of the remaining MLC Advisors, Dr. Virginia Crank has the only paid position as she receives a half-time buyout to run the Writing Center. All other MLC advisors have agreed to this duty as part of service to their departments (Table 3).

Table 3 MLC advisory committee members.

Name	Department
Dr. Lee Baines	MLC Director, Biology
Dr. Virginia Crank	Writing Center Director, English
Dr. Jim Sobota	Mathematics
Dr. Eric Barnes	Physics
Eugenia Turov	Chemistry
Jeff Kueny	Earth Science
Suzanne Anglehart	Microbiology
Dr. Tony Docan-Morgan	Public Speaking Center
Dr. Ken Winter	Accountancy
Dr. Donna Anderson	Economics

Faculty and Staff

Faculty and staff from the University can often be seen at the MLC throughout the course of a regular day. The MLC Advisors often assist in the tutoring center, providing a model of best practices for their tutors in addition to general supervision and evaluation of tutors.

Furthermore, faculty and staff from instructors utilized the MLC as a place to house office hours. In general, the faculty and staff reported an approximate increase in the number of students who would visit them at the MLC of 100% versus their personal office. Some have attributed this to a more casual, flexible learning environment and students not feeling like they are imposing on the instructor. The presence of faculty in the MLC aids the tutors in viewing more models of teaching practices.

Grants and Presentations

Drs. Sobota and Baines presented at the Wisconsin Learning Assistance Network in Oshkosh, outlining the philosophy and experiences of the UW-L learning center. The presentation was well received, offering a view of a very different structure compared to most other learning centers.

The MLC was awarded with an UW-L internal grant – Strategic Initiative Fund to implement Supplemental Instruction (see below).

Dr. Baines traveled to the University of Missouri, Kansas City for training in concepts and implementation of a Supplemental Instruction program.

CATL Teaching Day presentation on the MLC in September 2014.

MLC Promotional presented at the Chair's meeting in January.

2015,

Dr. Baines collaborated on a Title III grant application (see abstract below) that would, if awarded, restructure the MLC and increase staff, implement a full Supplemental Instruction program (targeting 28 STEM class sections) and introduce academic coaching.

Title III SIP: University of Wisconsin-La Crosse Student Engagement and Learning

The University of Wisconsin-La Crosse (UW-L) is a comprehensive, four-year public university that is part of the University of Wisconsin System (UW-System). Serving over 10,000 undergraduate and graduate students, the campus offers bachelor's degree programs in business administration, the sciences, the liberal arts, and teacher education; master's degrees in select fields; and a single doctoral degree in physical therapy. UW-L proposes \$2,159,540 in Title III Strengthening Institutions Program (SIP) funding to accomplish the following objectives through the Student Engagement and Learning Readiness (STELR) program:

- 1. Narrow the gap in second- to third-year retention rates for first-time, full-time (FTFT), low-income students as compared to their peers by 2% a year.*
- 2. Increase six-year graduation rates for low-income students by 3% by the conclusion of the five-year grant period, with a similar anticipated increase for all students.*

The above objectives would be met through the implementation of evidence-based, high-impact best practices delivered to students organized into academic learning communities aligned with STELR students' academic and professional goals. To increase academic engagement, STELR students would engage in first-year seminars; prescribed academic pathways; proactive academic advising; supplemental instruction in science and math gateway courses; and paid internships, research experiences, or on-campus work study related to their academic and professional interests.

In the past three academic years, the retention rate for all UW-L FTFT undergraduates who are transitioning from their second year to their third year has remained generally consistent at 90%-91%. However, the second- to third-year retention rate of FTFT low-income undergraduate students has ranged from 76%-88% over the same period; this represents a significant gap – as high as 15% – between low-income students' retention rates as compared to their peers.

Title III SIP funding will enable the STELR program to address these gaps by (1) supporting the expansion of first-year seminars that introduce students to academic best practices and campus support services; (2) creating supplemental instruction and academic coaching programs to proactively address students' academic needs; and (3) adding personnel to provide proactive academic and professional development support tailored to STELR students' individual interests, with the end goal of connecting STELR students' with institutional resources.

Supplemental Instruction

With funds for the Strategic Initiative fund, Supplemental Instruction was trialed in two classes – BIO105 (two sections) and ENG110. The SI leader attended class each period and then offered two one-hour out-of-class study sessions per week. We met regularly to plan the SI sessions and discuss how to best serve the students in our class. Biology SI saw a total of 345 visits to sessions (mean= 16.4, median=14). These attendance figures are within what is considered the optimal numbers for SI. With the support of the Dean of SAH, SI will be expanded in fall 2105 to serve BIO105, CHM303 and MTH150.

Writing Center

The Writing Center is open 39 hours per week, Sunday-Friday, with 2-3 tutors available per hour (meaning a potential for 156-234 individual appointments per week). These hours include appointments for evenings and weekends.

The Writing Center employed 16 tutors during the 2014-15 academic year, with tutors holding majors in English, CST, Psychology, ESS, Accountancy, Chemistry, and Biology. These tutors were all trained by the WC Director through Eng 299: Writing Tutor Practicum, which was offered in the fall semester. In addition to the training course, each new tutor was paired with a mentor tutor who guided and observed him or her through the first semester. One tutor, Brittany Maule, served as Assistant Director of the Writing Center and met regularly with the faculty director to plan, troubleshoot, and manage Writing Center activities.

During the academic year, the Writing Center offered ten 90- to 120-minute workshops for all students; three of the workshops were cancelled due to lack of participants, but seven of them were successful. These included "Writing Scholarship Application Essays" on Oct. 21, 2014 (co-created with the UWL "It Makes Cents" Money Management Center), attended by 29 people; "Writing Grad School Application Essays" on Oct. 30, 2-14 (co-created with Career Services), attended by 12 people; "Writing for the edTPA" on Nov. 5, attended by 40 people; "Pre-finals Writing Hunker" on Dec.10, 2014, attended by 32 people; "Praxis CORE Writing" on Feb. 19, 2015, attended by 5 people; "Writing for the edTPA" on Mar. 25, 2015, attended by 9 people; and the "Finals Writing Hunker" on May 6, 2015, attended by 13 people. The workshops were planned, created, and led by Writing Center tutors and the Writing Center Director. In addition to these campus-wide workshops, Writing Center tutors offered class or program specific workshops for the Eagle Mentoring Program and for Professor Jessica Sim's Social Psychology class. Writing Center staff also visited 53 classes in the fall semester and 24 classes in the spring to offer information about the Writing Center and show students how to make appointments; these classes varied widely, from Eng 110 to Mus 110 to PSY 241 to ESS 322 to REC 720 and many others.

The Writing Center continues to closely serve the remedial English program and provides four tutors who are integrated into the class each semester in order to work closely with students. Because of this collaboration, the Writing Center uses some of the federal money provided for remedial courses to pay tutors who work with students in the ENG 050 class and the Writing Center each semester.

The Writing Center was the subject of nine undergraduate research projects in AY14-15; most of these were class-based primary research projects, but one was a project funded by an Undergraduate Research grant and presented at the Annual Celebration of Undergraduate Research and Creativity. The projects examined various facets of Writing Center work, including demographic shifts in usage, content of individual sessions, tutor-client interactions, student and faculty perception of the WC, student satisfaction with tutoring, and interactions with ESL/International clients. Much of this work has or will lead to specific changes in Writing Center operations, such as training for more consistent reporting of sessions and shifting the standard approach for working with ESL/International clients.

Outreach

Students from BUS230 collaborated with the MLC to produce surveys on the Writing Center, Public Speaking Center and the MLC as a whole. Both students and instructors were surveyed.

A Facebook page for the MLC was created in spring 2014 and is maintained by student MLC staff. It can be found at <https://www.facebook.com/uwlmlc>.

Close ties were forged with the Office of Multicultural Student Services (OMSS). This has allowed for additional promotion of the MLC to OMSS students. OMSS provides individualized tutoring for their students. The MLC works closely with OMSS to provide contact information for reliable and experienced tutors that their office can utilize.

Collaborations have been maintained with the Language Resource Center (LRC) and fliers to advertise both the MLC and LRC produced for student welcome packs for fall 2015.

**SUMMARY OF ANNUAL ACTIVITIES
McNAIR SCHOLARS AND FYRE PROGRAMS
(June 1, 2014 - May 31, 2015)**



The McNair Scholars program at UW-L began in 2009 and serves 28 students annually, at least 50% of who have STEM majors. Our objectives are to increase the number of underrepresented students of color, and low-income, first-generation students, who prepare for, pursue, and persist in graduate studies in fields leading to a Ph.D. We are funded by the U.S. Department of Education with additional financial support from the Provost and the College of Science and Health.

In the summer of 2015, we will support 10 on-campus undergraduate researchers. Two additional students were supported by competitive external internships (Geological Society of America's MOSAICS program and the National Great Rivers Research and Education Center's internship program). Two others were competitively selected as REU participants at Boston University and Purdue University.

In 2014-2015, we had 10 graduates, 7 of whom (70%) will begin graduate school in the fall of 2015:

- UW-L (Student Affairs Administration, Human Performance, Public Health)
- University of Wisconsin-Milwaukee (French)
- University of Washington (Archaeology)
- Johns Hopkins University (Health Care Management)
- University of Minnesota-Twin Cities (Public Health)

24 program alumni began or continued their post-baccalaureate studies in 2014-2015, 17 in Master's programs, and 5 in doctoral programs, 1 in medical school, and 1 in law school.

Three program graduates completed Master's degrees in 2014-2015, bringing the total number of Master's degrees earned to 11:

- Rutgers University, M.S.W., Social Work
- University of Iowa
- UT-Austin, M.A., African & African Diaspora Studies
- UMN-Duluth, M.A., English
- UMN-Twin Cities, M.S.W., Social Work
- UW-L, M.S.E.D., Student Affairs Administration – x 4
- UW-L, M.S., Biology
- UW-L, M.S., Recreation Management

73% of program alumni to date have earned an advanced degree or are still enrolled in graduate programs.



The First Year Research Exposure (FYRE) program is an academic diversity initiative in the UW-L College of Science and Health.

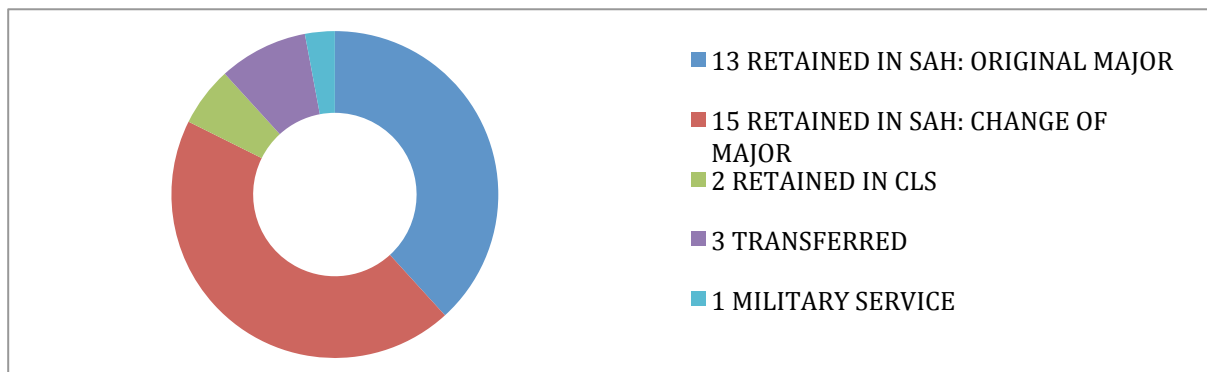
It employs an informal learning community model in order to improve achievement and retention of first-year students of color at UW-L in the STEM fields. From 2012-2015, we have served 34 eligible students.

Students each year participate in a minimum of 12 distinct research Exposure Modules, where they earned about current STEM research happening on campus and in the community.

Research Exposure Modules in 2014-2015 included:

- participation in UW-L's Faculty Research Day;
- tour of Mayo Graduate School;
- visits to UMESC and U.S. Fish and Wildlife;
- an afternoon at the Bell Museum of Natural History; and
- hands-on experience in field research with graduate students in Biology.

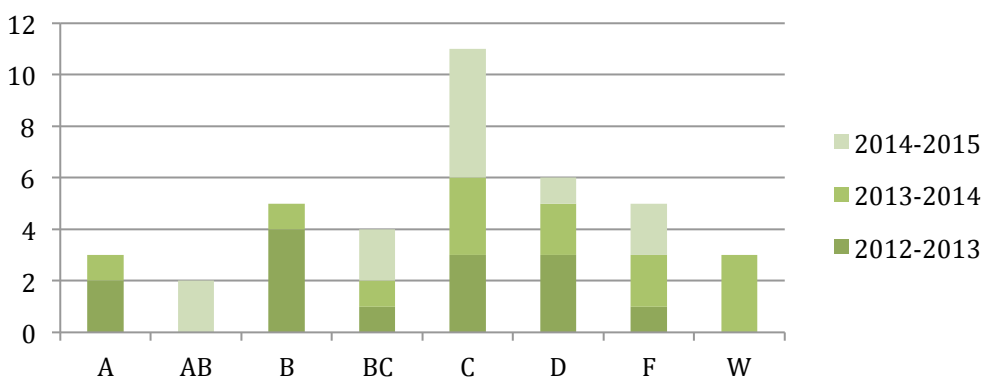
Twenty-eight of our 34 participants to date (83%) have been retained at UW-La Crosse and in the College of Science and Health.



In 2014-2015:

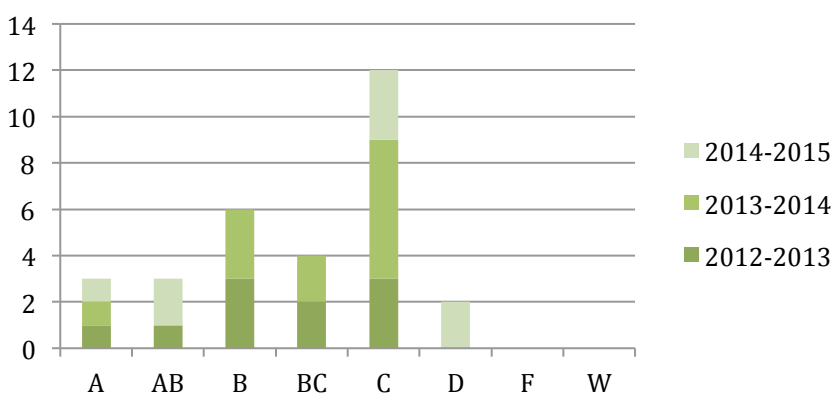
- 75% of FYRE students earned a grade of “C” or better in MTH 145, 150, 151, or 207;
- 75% of FYRE students earned a grade of “C” or better in BIO 105; and
- 80% earned a grade of “C” or better in CHM 103.

MTH 145, 150, 151, 207 PERFORMANCE, 2012-2015



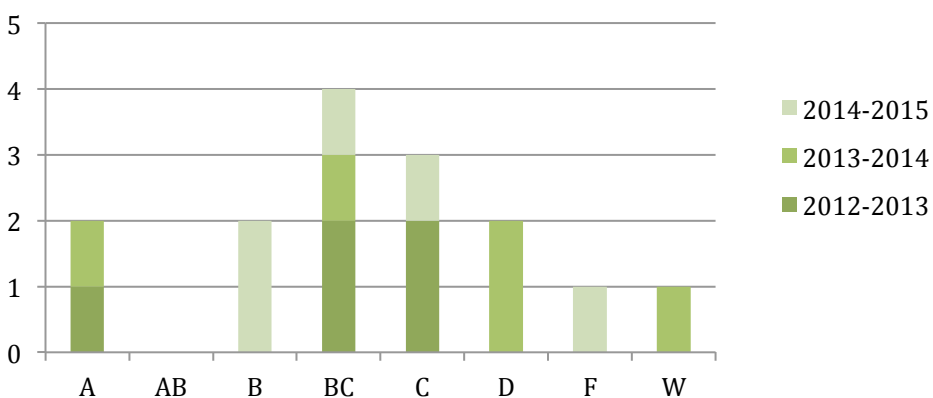
**MTH: 64.5%
ABC rate
over 3 years.**

BIO 105 PERFORMANCE



**BIO: 93.3% ABC rate
over 3 years.**

CHM 103 PERFORMANCE, 2012-2015



**CHM: 73% ABC
rate over 3 years**