

UW-GREEN BAY FACULTY SENATE ACTIONS AND RESOLUTIONS

ACADEMIC YEAR 2018-19

<u>Number</u>	<u>Name</u>	<u>Date Approved</u>
#18-01	Memorial Resolution for Dr. David Jowett	9/12/2018
#18-02	Request for Authorization to Implement a Bachelor of Arts in Writing Applied Arts at UW-Green Bay	10/10/2018
#18-03	Select Mission for UW-Green Bay	10/11/2018
#18-04	Request for Authorization to Implement a Bachelor of Science Degree in Water Science at UW-Green Bay	11/14/2018
#18-05	Change to 50.01 in the Faculty Handbook	11/14/2018
#18-06	Proposal to Merge Psychology and Human Development	12/12/2018
#18-07	Resolution on the Granting of Degrees	12/12/2018
#18-08	Resolution to Continue the “Shared Governance Transition Year” for the Branch Campuses through the 2020-21 Academic Year	12/12/2018
#18-09	Endorsement of the Faculty Representatives’ Response to UW System’s Program Productivity Monitoring Policy	12/12/2018
#18-10	University of Wisconsin-Green Bay University Senate Resolution in Support of the Proposal by the Faculty Representatives to UW-System Addressing Small Program Closure Policy	12/12/2018
#18-11	Request for Authorization to Implement a Collaborative Online Master of Science Degree in Applied Biotechnology	2/6/2019
#18-12	Form K: Reorganization of the College of Science, Engineering and Technology	2/27/2019
#18-13	Request for Authorization to Implement a Master of Science - Sport, Exercise, and Performance Psychology at UW-Green Bay	3/27/2019
#18-14	Resolution on the Granting of Degrees	5/1/2019
#18-15	Memorial Resolution for Prof. Richard Presnell	5/1/2019
#18-16	Memorial Resolution for Prof. Joseph Moran	5/1/2019
#18-17	Resolution on Following Shared Governance Procedures	5/1/2019

Faculty Senate Document #18-01 – Approved 09/12/2018

Memorial Resolution for Dr. David Jowett

Dr. David Jowett, a distinguished member of the University of Wisconsin-Green Bay faculty during the first three decades of the university's existence, died on April 15, 2018 at the age of 83. During his tenure at UW-Green Bay, David was a dedicated contributor to the university's academic mission through his teaching, research, and community outreach and institutional development activities.

David Jowett was born in a working-class section of Liverpool, England, in 1934. His formative years were spent in Liverpool during World War II. After completing high school, he was accepted as an undergraduate student at the University of Wales in Bangor, U.K., where he earned a Bachelor of Science Degree with Honors in 1956. His chosen field of study was botany with a special focus on agricultural botany. He continued his studies in agricultural botany as a graduate student at the University of Wales, earning his Ph.D. degree from there in 1959. Following the completion of his graduate studies, David worked as a scientific officer and agricultural researcher for the British Overseas Service. From 1959 to 1965 he was stationed at the East African Agriculture and Forestry Research Organization headquarters in Serere, Uganda, where he was involved in plant breeding and plant ecology research. His term in Uganda was interrupted when he spent the 1962-63 academic year at Iowa State University supported by a Rockefeller Postdoctoral Fellowship in Statistics. His year studying statistics at Iowa State seems to have brought out the true identification of David's intellectual niche. Thereafter, as he continued his work as an agricultural researcher, he combined his training in botany with statistics and became a bona fide biostatistician. In 1965 he and his family immigrated to the United States. The family moved to Ames, Iowa, where David returned to Iowa State University to teach and continue his own education. During his five-year period at Iowa State, David held academic positions in the statistics laboratory, first as an assistant professor and later as an associate professor. In 1970 he was offered a position at UW-Green Bay, a professional opportunity that he accepted.

David Jowett came to UW-Green Bay with an appointment as an Associate Professor of Ecosystems Analysis, one of the two concentrations in the original College of Environmental Science. He quickly made his mark by enthusiastically embracing his role as a teacher of statistics. Early on, he developed a reputation as an enthusiastic and excellent teacher. He had high academic standards and expected students to share his enthusiasm and effort. And, all students quickly learned that the Central Limit Theorem was a centerpiece of Professor Jowett's statistical thinking! Over the years David developed a number of statistics courses; among them were Design of Experiments, Multivariate Statistical Analysis, Business and Industrial Statistics, Statistical Process Control, and Statistical Computing. David was a member of an interdisciplinary team that taught Ecosystem Analysis I and Ecosystems Analysis II, capstone courses for students majoring in Ecosystems Analysis or studying ecology. He also taught courses off-campus: in the early 1990s he and Professor Dennis Girard taught two courses in

statistical methods at James River Corporation and for several years he drove to Oshkosh to teach evening statistics courses in the UW-Oshkosh MBA Program.

In 1972—the same year he was promoted to full professor—Professor Jowett was appointed Associate Director of Computer Services. This appointment signaled the need for his expertise in helping with the development of the fledgling computer services program on the UW-Green Bay campus. This is a position that he held during much of his time as a UW-Green Bay faculty member. His leadership abilities were recognized in several other ways. From 1973 to 1975 he was the Acting Director of the newly inaugurated UW-Green Bay graduate program, and in 1976 and 1977 he served as a special assistant to the Vice Chancellor for Academic Affairs. In 1981 David was named chair of the UW-Green Bay Committee on the Year 2000. This was a campus group that was charged with the task of looking into the future and producing a report that could provide guidance for the university's academic plan in the years ahead.

Soon after completing his work on the Committee on the Year 2000, David's faculty colleagues elected him to leadership positions in faculty governance. As Chair of the University Committee and Speaker of the Faculty Senate, he played a lead role in fighting for faculty pay increases at a time when the state legislature was holding the line on faculty and staff remuneration. He chaired a campus organization called the Educational Political Action Committee, EDPAC for short. In leading this campus effort, as was his wont, David spoke out clearly and directly on the issue. In one public setting, not forgetting his background as an agricultural researcher, he said: "We are destroying our seed corn ... The younger generation of teachers is passing up our university and the damage already done is incalculable." Later, David was called again to the administrative ranks when he was named Acting Vice Chancellor for Academic Affairs by Chancellor Edward Weidner, in 1985. For a time, he continued in his role as Vice Chancellor when David Outcalt arrived on campus as UW-Green Bay's second chancellor. In September 1987 Jowett returned to his familiar faculty role as a teacher of statistics and as an advisor to faculty and students on statistical methods.

Not to be forgotten are David's scholarship contributions and his community outreach activities. His early academic papers were based on his research in plant breeding and plant ecology. During his years at UW-Green Bay he published papers with faculty colleagues, and occasionally with students, on a variety of topics which required an application of statistical methods. He was a co-author, along with Werner Prange and Barbara Fogel, of a book titled *Tomorrows Universities: New Ends, New Means*. Another example of David's scholarly activity was his service as a visiting lecturer for the American Statistical Association over a two-year period in the 1980s. In this capacity he gave lectures at a number of universities in the mid-west, including several within the UW-System. Throughout his years at UW-Green Bay, David was called upon by area businesses and organizations for statistical advice. The client list of his consultancy work is extensive; a partial list includes the following: Brown County Hospital, United Way, Bellin Hospital, Ob-Gyn Associates, Family Violence Center, Brown Co. Jury Commission, Krueger Metal Co., Kimberly Clark Corp., Fort Howard Paper Corp., Foth and Van Dyke, Frigo Cheese, Employers Health, and USDA Forest Research Laboratory. David was

also a frequent speaker at Optimist and Kiwanis clubs and at area elementary and secondary schools.

It is not enough to provide a list of David Jowett's professional appointments and accomplishments. It is important to emphasize that as a professor his *métier* was teaching statistics and statistical methods. He did this in a variety of ways: teaching introductory statistics to large numbers of students, teaching upper level undergraduate and graduate level statistics courses, and guiding undergraduate and graduate students in the statistical methods they employed in their individualized data analysis projects. He won the deep appreciation and respect of colleagues throughout the campus by skillfully and efficiently assisting many of them with the statistical methodology needed in their research work. David was the go-to faculty resource for many students in the Environmental Science and Policy and Administrative Science Graduate Programs as they sought help and advice for the statistical analysis methods needed in their thesis projects. As a result, he served on many graduate committees; on some he was the major professor, but on many he was the committee member providing statistical advice and review. On one occasion when filling out a personnel form that asked for information about the number of graduate committees on which he was serving, David wrote, "I have lost count, certainly more than ten." David's versatile mind, his facility in expressing himself, and his respect for his colleagues were important assets as he industriously went about his important work as a teacher of statistics and statistical advisor. A driving force in his work was a heightened sense of service to his profession, students, community, and adopted country (he became a US citizen in 1972).

David Jowett retired from UW-Green Bay in May 1999 as Professor Emeritus of Natural and Applied Sciences. During his nearly two-decade retirement period, David and his wife Pat enjoyed extensive international travel and he was known to be a voracious reader of history.

— Robert Wenger

with the assistance of H.J. Harris, Paul Sager, John Katers, and Gregory Davis

Faculty Senate New Business 6c 9/12/2018

**REQUEST FOR AUTHORIZATION TO IMPLEMENT A
BACHELOR OF FINE ARTS IN WRITING AND APPLIED ARTS
AT UW-GREEN BAY
PREPARED BY UW-GREEN BAY**

ABSTRACT

The Department of English at the University of Wisconsin – Green Bay proposes to establish a Bachelor of Fine Arts in Writing and Applied Arts (BFA in Writing and Applied Arts, or BFA-WAA). The development of this undergraduate program responds to high student demand for writing craft as well as professionalizing opportunities in related fields like literary and digital publishing, book editing, writing for entertainment, and arts management. Graduates will be better equipped meet market demand for nonfiction writers, science writers, screenwriters, podcasters, literary outreach coordinators, editors, publishers, librarians, booksellers, literary agents, technical writers, and other arts industries. This program will be comprised of 48 credits, which will include 15 credits of tiered writing workshops; courses in the literary, community, and business contexts of writing; and nine credits of Applied Arts (internships or community-based learning), taken during the student’s senior year.

PROGRAM IDENTIFICATION

Institution Name

University of Wisconsin – Green Bay

Title of Proposed Program

Bachelor of Fine Arts in Writing and Applied Arts

Degree/Major Designation

B.F.A./English

Mode of Delivery

Courses will be delivered mainly via a single institution—UW-Green Bay— which now comprises four campuses across 16 counties. Additional instruction is in development through a partnership with Northeastern Wisconsin Technical College (NWTC). Courses will be delivered primarily via face-to-face or hybrid formats. No more than 50% of courses will be delivered via Distance Education. Supervised practicum, internships, and experiential learning experiences will occur at a number of community sites.

Projected Enrollments and Graduates by Year Five

Table 1 represents enrollment and graduation projections for students entering the program over the next five years. By the end of Year 5, it is expected 122 students will have enrolled in the program and 55 students will have graduated from the program. The average student retention rate is projected to be 90%, based on English department retention rates.

Table 1: Five-Year Degree Program Enrollment Projections

Students/Year	Year 1	Year 2	Year 3	Year 4	Year 5
New Students	20	20	22	25	25
Continuing Students	10	27	42	50	48
Total Enrollment	30	47	66	75	73
Graduating			10	20	25

Tuition Structure

For students enrolled in the B.F.A. program, standard tuition and fee rates will apply. For the current academic year, residential tuition and segregated fees total \$3,939.16 per semester for a full-time student enrolled in 12-18 credits per semester or \$328.26 per credit. Of this amount, \$3,149.16 is attributable to tuition and \$790 is attributable to segregated fees. Nonresident tuition and segregated fees total \$7,074.12 per semester for a full-time student enrolled in 12-18 credits per semester or \$589.51 per credit. Of this amount, \$6,284.12 is attributable to tuition and \$790 is attributable to segregated fees.

Should the English department maintain its existing numbers, the total graduates from the department across the two majors (English B.A. and B.F.A in Writing and Applied Arts) will be 55 to 60 students per year.

Overall English program enrollments will increase from approximately 140 per year to 200 per year. A 60-student increase would generate approximately \$375,000 more tuition to the campus each year.

Department, College, School or Functional Equivalent

The proposed program will be housed in the Department of English within the College of Arts, Humanities, and Social Sciences.

Proposed Date of Implementation

The first class to be admitted to the program will be **September, 2019**.

DESCRIPTION OF PROGRAM

Overview of the Program

The B.F.A. In Writing and Applied Arts consists of four curricular components.

- The Business of Writing (9 credits)
- The Craft of Writing (15-17 credits)
- Literary Contexts (15 credits)
- Applied Arts—see emphases below— (9 credits)

The Applied Arts component consists of 9 credits of experiential learning during a student’s last two semesters. Students may choose from one of three interdisciplinary emphases:

- Community-Outreach Emphasis. Students in the Community-Outreach Emphasis will bring writing to broader communities by organizing regional events and advocating to tell untold stories (ie from veterans, special needs writers, hospice patients, eldercare residents, at-risk youth, prisoners, etc.).

- Editing and Publishing Emphasis. Students in the Editing and Publishing Emphasis will learn the business of storytelling in preparation to become copyeditors, content developers, comic book publishers, and promotional and marketing professionals.
- Digital and Public Humanities Emphasis. Students in the Digital and Public Humanities Emphasis will gain hands-on experience digitizing, researching, and making texts available and accessible in preparation for careers in podcasting, digital storytelling, graphic book designers, library science, museum curation, or further scholarly research.

Student Learning Outcomes and Program Objectives

- Students will create, draft, and revise original works in multiple genres and forms.
- Students will analyze the techniques, construction, and production of various written expressions.
- Students will critique works by peers and published authors alike in various classroom settings, including the writing workshop.
- Students will situate their work within multiple larger audiences of readers, writers, the publishing industry, and other relevant markets.
- Students will interpret, research, and evaluate works of literature and related media by placing them in historical, philosophical, psychological, intertextual, and other contexts appropriate to the discipline.
- Students will articulate their aesthetic choices using appropriate artistic and professional terms.
- Students will develop proficiency in all stages of producing and disseminating various kinds of media projects in an effort to engage communities within and outside of UWGB.
- Students will use reading, writing, editing, and producing literary texts or related media as an opportunity to deepen their insight into their own experiences and as vehicles for personal intellectual and imaginative growth.

Program Requirements and Curriculum

Table 2 illustrates the program curriculum for the proposed program. The program’s requirements are comprised of 48 credits, which will include 15 credits of tiered writing workshops; 36 credits in the literary, community, and business contexts of writing; and nine credits of Applied Arts (internships or community-based learning), taken during the student’s senior year. General education requirements for UW-Green Bay consist of 39 credits, many of which will be able to be fulfilled with B.F.A. in Writing and Applied Arts courses.

Non-degree requirements for graduation include the student’s maintenance of an e-portfolio of course-related, internship-related, and emphasis-related materials, to be evaluated regularly by program faculty.

Table 2: BFA in Writing and Applied Arts Program Curriculum Academic program course requirements (listed by degree components)

Degree Component: The Business of Writing (9 credits)

English 225: Copyediting for Publication 3 credits

One publication practicum: English 324: *Sheepshead*
Review Practicum 3 credits
or English 424: Book Editing Practicum

<u>One arts in society class:</u> Humanities 200 Intro to Digital and Public Humanities; Arts Management 257: Arts in the Community; or Design Arts 131: Intro to Design and Culture	3 credits
<i>Degree Component: The Craft of Writing (15-17 credits)</i>	
English 212: Introduction to Creative Writing	3 credits
English 301: Intermediate Creative Writing	3 credits
<u>Three upper-level writing workshops:</u> English 302: Short Fiction Workshop, English 303: Poetry Workshop, English 304: Creative Nonfiction Workshop, English 305: Novel Writing Workshop (4 credits), English 306: Novel Revision Workshop (4 credits), or English 312: Topics in Creative Writing	9-11 credits
<i>Degree Component: Literary Contexts (15 credits)</i>	
English 290: Introduction to Literary Studies	3 credits
One lower-level literature course: English 206, 214, 215, 216, 217, 218, 219	3 credits
Two upper-level literature courses: 315, 316, 323, 331, 335, 336, 338, 340, 344, 431, 436	6 credits
One historical literary context course: English 340: History of the English Language or English 326: Topics in Publishing: The Illustrated Book	3 credits
<i>Degree Component: Applied Arts (9 credits)</i>	
Internships or community-based learning in Applied Arts area of emphasis (Community Outreach; Editing and Publishing; or Digital and Public Humanities)	6 credits
Capstone Seminar in area of emphasis	3 credits

Assessment of Outcomes and Objectives

Program Assessment will occur on multiple levels. First, the program will meet regularly with current students—both one-on-one, and in groups of faculty meeting with groups of students, to discuss their work and progress towards degree. On this level, students will be evaluated by the end of their first year, and continuing throughout the program, students will keep an **e-portfolio of course-related, internship-related, and emphasis-related materials**. Individual e-portfolios will be assessed for proficiency by the program director during the student's fifth semester of study. A second e-portfolio review will occur before the student's last semester of study, in a meeting with one or two program advisors, in order to provide the student mentorship, direction, and feedback. This e-portfolio will be a living document consisting of:

1. Selected creative work, revisions, and self-analysis related to the creative writing process
2. Selected scholarly analyses of literature, literary markets, and the history of publication
3. Evidence of successful completed work in their program emphasis

4. Applications for grants, scholarships, and/or awards and outcomes therein
5. Professional resume and headshot
6. Biography suitable for various professional contexts

After student graduation, the program will track, gather, and assess job or graduate school placement and satisfaction rates via alumni surveys and events. For context, the program will compare its post-graduate data with data from other BFA programs in the U.S.

Diversity

Through analysis and study, students in the B.F.A. in Writing and Applied Arts program will directly address **issues of diversity in publishing, community engagement, service learning**—and seek out the underrepresented and un-voiced stories in our campus, local, and regional communities. In the last ten years, several national initiatives have focused on analyzing gender, race, social class, and ability as these experiences shape the content of books and media, as well as the hierarchies power in the publishing industry (see, for example, *Vida: Women in the Literary Arts*, or #WeNeedDiverseBooks Inc.). These initiatives align with UW-Green Bay’s commitment to expanding the diversity of the campus community. Our campus engages in several strategic initiatives to recruit a more diverse student population, and offer a wide range of experiences and perspectives throughout a student’s undergraduate years. As part of this process, the Chancellor’s Council on Diversity and Inclusive Excellence initiated a certificate program designed to develop and recognize commitment to the UW-Green Bay Inclusive Excellence Initiative. The first Level 1 Inclusivity and Equity Certificates were awarded in August 2016. Workshops and seminars for the program are ongoing. In fall 2016, the campus added a Director of Student Success and Engagement in the Provost’s Office charged with improving student retention and degree completion. The Office of Admissions on all four campuses also supports recruiters specialized in working with multicultural, bilingual, and international students. Furthermore, unique to Green Bay, the annual UntitledTown Book and Author Festival (April) has made deliberate efforts to recruit student volunteers, develop internships, and create a partnership with UW-Green Bay—**forging enduring links between region’s largest literary arts festival and UWGB’s Multiethnic Students Association (MESA), American Intercultural Center (AIC), and Pride Center.**

Collaborative Nature of the Program

Located in the heart of paper manufacturing country, and a thirty-minute drive from the world-renowned historic Hamilton Woodtype Museum, UW-Green Bay is uniquely situated to connect student writers to the greater world of and various kinds of writing. Our collaborations with **Moraine Park Technical College** and **Northeastern Wisconsin Technical College** are poised to grow; at present, NWTC is developing writing courses in Technical Writing, Natural Sciences, and Communications Skills, and their graphic design program prints in most mediums except books, which UWGB’s Teaching Press will produce. UWGB’s B.F.A. in Writing and Applied Arts will thus be a natural fit for technical college students wishing to complete further study in writing, publication design, and community engagement. In addition, through this program, UWGB looks forward to strengthening connections with area educators at St. Norbert College, Lawrence University, and elsewhere in **arts entrepreneurship, nonprofit management, funding for small projects, and community storytelling.** Finally, Northeastern Wisconsin, as a region, is fertile ground for the B.F.A. in Writing and Applied Arts. Green Bay is quickly becoming a literary and community arts advocacy destination, with the third year of

UntitledTown Book and Author Festival poised to once again draw thousands to its 150+ events. Just 40 minutes north, **Write On, Door County** runs year-round writing programs for all ages; to the east, and near our new branch campus in Manitowoc, are the classes, expertise, and machinery of the **Hamilton Woodtype Museum**. Already, our undergraduates have completed internships for these nonprofits.

Projected Time to Degree

The fastest possible route through this degree is 2.5 years.

Program Review Process and Institutional Review

The UW-Green Bay Academic Affairs Council (AAC) is charged with oversight of all undergraduate programs, including review and approval of all new programs, and all undergraduate credit courses. The AAC will formally review the B.F.A. program on a seven-year cycle. In addition, the B.F.A. in Writing and Applied Arts program will be formally reviewed on a five-year cycle, by the department, and the Dean of the College of Arts, Humanities, and Social Sciences.

Accreditation

The B.F.A. in Writing and Applied Arts will be UWGB's first B.F.A. degree. As such, it will require approval by the Higher Learning Commission.

JUSTIFICATION

Rationale and Relation to Mission

High schools across the state offer creative writing clubs and courses; novel series like *Game of Thrones*, *Harry Potter*, and *The Hunger Games* spend decades on bestsellers lists; markets are exploding for screenplays, game narratives, comic books, graphic memoirs, historical fiction, fantasy series, and young adult fiction. Demand for creative writing instruction is growing, spurring development of UW-Green Bay's curriculum and spawning course waitlists. However, most undergraduate novelists or poets do not march from the commencement stage straight to a multi-book publishing contract. According to studies, even writers with graduate degrees take an average of ten years to publish their first book. Consequently, our graduates struggle to translate their love of writing, and the skills gleaned from our classes, into professional experiences employers (and parents) recognize. To address this "articulation gap," the B.F.A. in Writing and Applied Arts at UWGB will offer not one but three unique paths to **writing-centered careers** on the national, regional, and state level.

As an access-driven comprehensive university, the University of Wisconsin-Green Bay provides an interdisciplinary, problem-focused education that prepares students to address complex issues in a multicultural and evolving world. As Chancellor Miller outlines in his "Urban-Serving Strategic Vision" Statement, UW-Green Bay seeks to connect to "community partners in innovative programs of development, education, and sustainability" through innovative and "distinctive" programs.

As UWGB strategically looks forward to better serving the northeast region of Wisconsin (and beyond), we must create and strengthen connections between our students, businesses, and arts culture. For that reason, our proposed BFA program eschews traditional writing program models

focused solely on craft, in isolation from the greater community, existing only within the pages of a book or a college classroom. To this end, our B.F.A. in Writing and Applied Arts pairs craft-focused instruction with community-facing applied learning, offering, wherever possible, **arts- and creativity-based intervention to help achieve meaningful, lasting impacts for the region.** Accordingly, our proposed BFA program will help our university to position itself as an effective leader in the UW-System—both as a destination and a career path for writers seeking craft, culture, and community through partnerships with local schools, NWTC, nonprofits, businesses, and populations in need.

Institutional Program Array

UW-Green Bay currently offers an English major with an emphasis in Creative Writing. This emphasis follows Association for Writers and Writing Program (AWP) guidelines: courses are tiered (featuring Introductory, Intermediate, and Advanced levels), varied in subject (Novel Writing, Novel Revision, Creative Nonfiction, Short Fiction, Flash Fiction, Poetry, Topics in Creative Writing), and consistent with high-impact workshop practices. Students in the emphasis also enroll in an array of literature courses; and they take a course devoted to publication of an internationally-distributed journal, which offers students professionalization in editing, management, outreach, layout, copyediting, and aesthetic judgment. The B.F.A. in Writing and Applied Arts will build on this foundation by **balancing artistic craft with practical application through community-facing projects.** Existing curriculum guides students through the collection of oral histories from the community and encoding digital editions of texts for archival research and public consumption. New curriculum will expand our students' expertise into areas of publication history, print and digital production, copyediting, writing for entertainment, funding for small projects, and community storytelling.

Resources: Faculty. **No additional resources will be required to mount this program.** The UWGB English department consists of seven tenure-track faculty members; of these, three possess MFA degrees in the fields of dramaturgy, fiction writing, and poetry. All English faculty members have PhDs; of these, two have doctorates in programs offering creative dissertations; several have published award-winning creative works. Six are scholars of the history of the book, the history of the English language, rhetoric and writing, and/or Digital Humanities; most have been editors of publications; all teach in more than one discipline. Additionally, this interdisciplinary program will benefit from courses taught by faculty in Arts Management, Communications, Design Arts, Printmaking, and Humanities programs—as well as from faculty seeking to build writing emphases and publications in the Sciences. The UW-Colleges/UWGB merger (**Project Coastal**) adds resources to the proposed B.F.A., and incoming faculty are eager to teach scriptwriting, romance writing, print-making, and community engagement. The merger, and the additional resources it brings, has **actually accelerated the program's timeline** and eliminated an immediate need for new FTE positions.

Resources: The UWGB Teaching Press. In 2016, the College of Arts, Humanities, and Social Sciences funded the development of a student-run UWGB Teaching Press to enhance enrollment and retention in multiple disciplines. This **in-house press is a distinctive resource** as well, enabling UWGB students to utilize technologies both ancient and emergent: with its current technology book binding, trimming, printing—and the use of a historic letterpress—UWGB will host **one of the only undergraduate-run bookmaking labs in the United States.** In partnership

with county libraries, health care providers, educators, and statewide community arts groups, the Teaching Press and the B.F.A. in Writing and Applied Arts will link our most creative communicators to the untold stories, research areas, local history, and career opportunities in Northeastern Wisconsin.

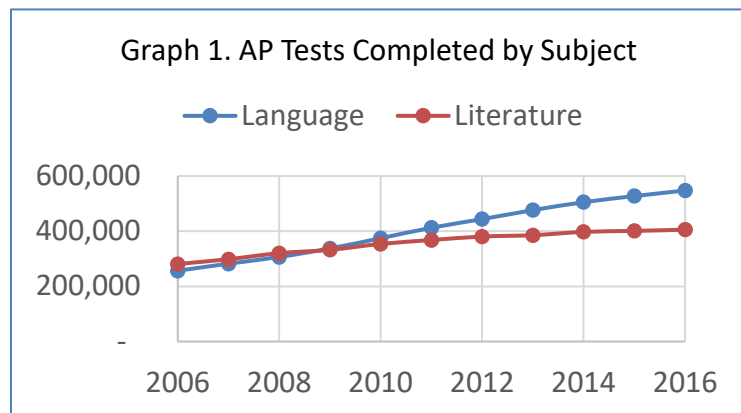
Other Programs in the University of Wisconsin System

As a degree, a “B.F.A.” is usually reserved for the Fine Arts (e.g. Textiles, Ceramics), wherein students focus on artistic craft in classes and in studio. Writing degrees that focus on craft and technique and “studio” production are generally found at the graduate level (i.e. the M.F.A.). The B.F.A in Writing is a rare degree: only 42 colleges in the U.S. offer a program, and only one program (Lakeland College) exists in Wisconsin. **No college in the UW-System offers a B.F.A. in Writing.**

The existing B.F.A. in Writing programs in the U.S. are, in keeping with their studio-origins, built almost exclusively from courses in English: literature, literary theory, and creative writing. Most include thesis hours for the completion of a publishable product. A few require credits in a fine or performing arts area. **Fewer still offer curriculum linked to an on-site, undergraduate-run, independent press.** Likewise, UWGB’s B.F.A. in Writing and Applied Arts will require a final, lengthy writing project and promote hands-on publication experience with both UWGB’s new Teaching Press and the student-run, internationally-distributed arts journal, *Sheepshead Review*. Yet even among these programs, UWGB’s B.F.A. in Writing and Applied Arts will be **unique, for two reasons.** First, it will be truly **interdisciplinary**, encouraging students to actively utilize skills from the fields of English, Design Arts, Communications, Humanities, Arts Management, Business, and/or Theater. Second, it will be the only program that is **explicitly outward-facing**, requiring sustained student engagement with communities in Northeastern Wisconsin—and with writers and writing professionals across the world.

Need as Suggested by Current Student Demand

The B.F.A. in Writing and Applied Arts addresses current—and growing— incoming student demands for college creative writing, specifically crafting original works, and for community service and outreach.

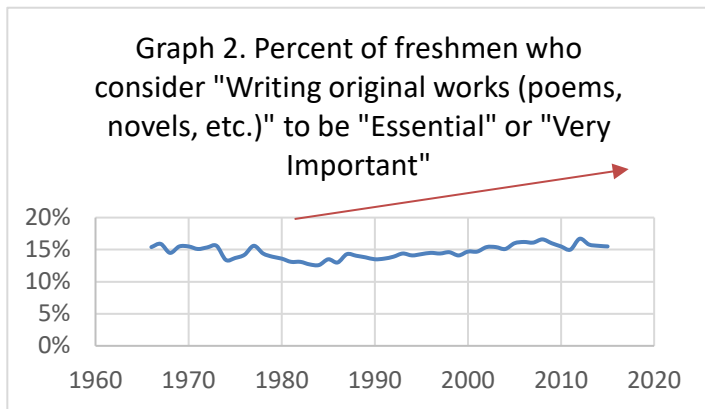


First, statistics show that within the world of English curriculum, **interest among U.S. high school students in writing has been growing much more rapidly than interest in literature.** In 2016, the most common AP course for students to complete in the United States was English Language and Composition (550,000 student or 12% of all AP tests), followed by U.S. History (490,000, 10%) and then English Literature/Composition (405,000,

9%). The total number of AP tests taken has grown an average of 8% per year since 2007. The growth rate for the English Language/Composition area has grown by an average rate of 9% per

year, each year, while the growth rate for the Literature AP test has averaged only 4% per year (see graph 1).¹

Second, potential and current students are interested in **writing original artistic works**. Over the past 50 years, the Higher Education Research Institute has conducted a national survey of new



freshmen and that survey has regularly asked students to indicate the importance to them of “Writing original works (poems, novels, etc.)”. Since the mid-1980s, the number has risen steadily a rate of 0.1% per year (R-Square = 0.78) (Graph 2). To put the 2015 interest rate of 15.5% into context, that same year 15.8% of students indicated it was “Essential” or “Very Important” to become

“accomplished in one of the performing arts” and 15.4% gave those ratings to “Creating artistic work”.²

Third, high school and first-year college students show significant interest two key aspects of the proposed B.F.A. in Writing and Applied Arts: **writing in college, and participating in community service and engagement**. In a March 2017 survey completed by 5888 ACT test-takers whose results were sent to UWGB, students were asked about their participation during high school for a range of activities, and about their plans to participate in these activities when they attend college. The percent of students planning to be involved in writing-based activities in college is slightly higher than for instrumental music, vocal music and drama. In addition, the table below shows that almost half of all ACT test takers plan to remain engaged with service activities at college³.

	Writing*		Instrumental Music		Vocal Music		Drama		Community Service		Athletics	
Total students rating this activity	4683		4689		4686		4678		4689		4694	
Did the activity in high school and plan to do it in college	233	5%	575	12%	526	11%	480	10%	1395	30%	1565	33%
Did not do the activity in HS but plan to do it in college	615	13%	216	5%	206	4%	254	5%	817	17%	323	7%
<i>Sub total for planned involvement during college</i>		18%		17%		16%		16%		47%		40%
Did the activity in HS but do not plan to do it in college	292	6%	751	16%	492	10%	302	6%	786	17%	929	20%
Never had an interest in this activity	3543	76%	3147	67%	3462	74%	3642	78%	1691	36%	1877	40%

*The survey wording asks for involvement or interest in "Publications (newspaper, yearbook, literary magazine)"

Finally, the trend within UWGB’s current English major illustrates the increase in **student interest in writing and the stagnation of interest in the other two emphases, for English Education and Literature**. Although the slope of the line through the graduation trend for the

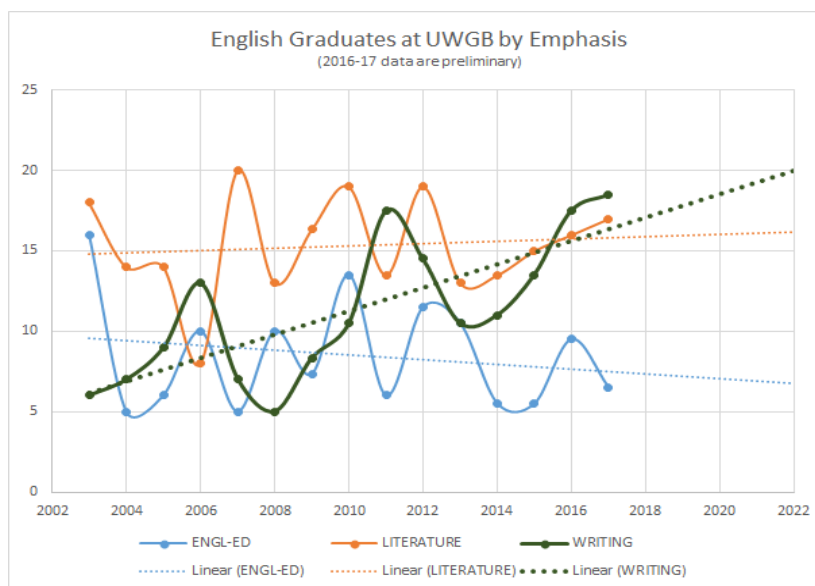
¹ Source: The College Board, AP Program Participation and Performance Data, March 2017

² Source: The Higher Education Research Institute, 2016 Freshman Survey, March 2017

³ Data compiled by Debbie Furlong, Director of Institutional Research, UW-Green Bay, March 26, 2017

Writing emphasis has only increased from around 5 to around 15 students per year, this increase has been accomplished without providing students with an actual full major in writing. Without making any changes, these trends indicate the overall size of the English program will continue to graduate around 40 to 45 students per year, with the decline in graduates in the Education track being offset by shifts into the Writing track.⁴

Building a complete major in writing should accelerate the trend line associated with the current writing emphasis. Even a modest increase in the slope of the writing trend projects that the major could graduate 30 students per year within a decade of its inception, **making it approximately the size of UW-Green Bay’s majors in Accounting, Social Work and Biology.** (See chart below)



Need as Suggested by Market Demand: National, Regional, and State

On a **national level**, according to the U.S. Bureau of Labor Statistics, employment of writers and authors is projected to grow 8% from 2016 to 2026, about as fast as the average for all occupations. Strong competition is expected for full-time jobs because many people are attracted to this occupation⁵. In fields related to creative writing, the Department of Labor projects 11% growth in jobs for technical writers and 10% growth in public relations and fundraising managers.

On the **regional and state levels**, a recent analysis of employment sources like CareerLocker and Worknet shows there are 676 employers in Wisconsin in the area of Publishing and Publications. While forecasts indicate that jobs related to journalism are in decline, jobs for writers and editors in Wisconsin for other sectors —like technical writing, education, digital editing, social media, library sciences, community relations, and social services— are expected

⁴ Data compiled by Debbie Furlong, Director of Institutional Research, UW-Green Bay, March 26, 2017

⁵ Source: The Bureau of Labor Statistics, U.S. Department of Labor, accessed March 27, 2018

to grow between 7% to 10%.⁶ In addition, the B.F.A. in Writing and Applied Arts will uniquely prepare students for the **numerous “hybrid” positions** requiring skill sets UWGB students are already merging through double majors: graphic arts/editing, or writer/editor. The B.F.A. in Writing and Applied Arts will create a coherent program of craft-focused, community-facing, adaptable skills, speeding time to degree completion and increasing the experience—and therefore the immediate earning power— of graduates.

Two other recent trends in indicate the skills students develop in the B.F.A. in Writing and Applied Arts will meet employer needs both directly and indirectly. First, the industry for making, publishing, editing, and producing **books**—especially printed books— is strong and improving: book sales are up for the third year in a row, according to the Association of American Publishers, particularly for the genres undergraduate creative writers most enjoy writing: Young Adult, Middle Grade, and Adult Fiction. In addition, revenue was up for paperbacks in 2016 to \$5.57 billion from \$5.29 billion in 2015—the most popular format for Adult non-fiction book readers.⁷ Second, and indirectly, students of the B.F.A. in Writing and Applied Arts program will develop skills in communications, audience-awareness, listening, empathy, communicating complex ideas, and critical thinking—**skills ranked among seven top characteristics of success at Google.**⁸ Furthermore, a recent survey of 260 employers by the nonprofit National Association of Colleges and Employers, which includes both small firms and behemoths like Chevron and IBM, ranks **communication skills** in the top three most-sought after qualities by job recruiters, who “prize both an ability to communicate with one’s workers and an aptitude for conveying the company’s product and mission outside the organization.”⁹

Emerging Knowledge and Advancing New Directions

The implementation of the B.F.A. in Writing and Applied Arts benefits from **excellent timing**, as emerging knowledge of storytelling production, and markets for writing in numerous genres—especially the entertainment, industry— have exploded in recent years. Multiple platforms now exist for listening to well-crafted stories, especially in **audiobooks** (a market with 24.7% growth since 2015), where both unit sales and revenue have more than doubled since 2012, growing from \$299 million to \$643 million in 2016.¹⁰ Beyond this, audio storytelling in the form of **podcasting** has expanded its market exponentially, as industry watchers report an 88% increase in those who listen to podcasts at least once a week, a 33 percent increase in those who report ever having listened to podcasts and a 25 percent increase in awareness of the term “podcasting”

⁶ Data from WORKNET: Occupations: Search Results: ‘Author/Writer’ “Public Relations Skills,” “Copywriter Skills,” “Desktop Publishers”; CAREERLOCKER “Technical Writers—Expected Employment, 2022”; Brown County Workforce Economic Profile 2015, State of Wisconsin Department of Workforce Development. Accessed February 5, 2017.

⁷ Source: “Book Publishing Annual StatShot,” American Association of Publishers, August 1, 2017

⁸ Source: Valerie Strauss, “The Surprising Thing Google Learned about Its Employees—and What it Means for Today’s Students.” *The Washington Post*, February 20, 2017

⁹ Source: Valerie Strauss, “The Surprising Thing Google Learned about Its Employees—and What it Means for Today’s Students.” *The Washington Post*, February 20, 2017

¹⁰ Source: “Book Publishing Annual StatShot,” American Association of Publishers, August 1, 2017

since 2014. In fact, the online magazine Slate now realizes 25 percent of its revenue from its suite of two dozen podcasts, up from 0 percent in 2014.¹¹

The future is equally exciting in the area of **comic book and graphic novel writing and publication**. In 2016, total comics and graphic novel sales to consumers in the U.S. and Canada reached \$1.085 billion in 2016, a \$55 million increase over sales in 2012—due in part to increased variety of content by new audiences for comics, including kids and women. In 2018, “Black Panther”—a movie written by screenwriters from comic books written by well-known literary writers as well as comic industry mainstays — is the highest-grossing superhero film of all time in North America, and the lucrative relaunch of the Star Wars line in 2015 and DC’s 2016 “Rebirth” event further strengthened comic sales.¹²

Finally, two recent business models have increased the need for creative writers, the demand for business-savvy publishers, and the appetites of consumers: **streaming television services like Amazon and Netflix; and crowdfunding resources like Kickstarter**. As the creators of films, series, television shows, documentaries— for all audiences and ages— writers are driving profits skyward for entertainment industries. With global online distributors like Netflix, and now Amazon, the market for content created by writers is truly the entire world.¹³ Creating content is therefore becoming highly competitive, as executive Mark Gordon puts it: “Hit shows are driven by **great writing** and stars, and for broadcast TV, it’s more difficult to secure the best writers and top-tier actors.”¹⁴ However, for those writers, editors, community arts advocates, and publishers wishing to fund their own projects, there are now, more than ever, various **independent means to success**. For example, Chicagoan David Dewane used Kickstarter to found Mouse Books, printing 48-page themed books the size of a smartphone¹⁵; while numerous independent comic book publishers, aspiring to diversify the market, have been funded through Kickstarter¹⁶.

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¹¹ Source: Eric Zorn, “Listen Up—Again! The Podcast Boom is Just Getting Started!” *Chicago Tribune*, February 16, 2018

¹² Source: John Jackson Miller, “Comic and Graphic Novel Sales up 5% in 2016,” *Comichron*. Accessed March 28, 2018

¹³ Source: Writer’s Guild of America East, “State of the Industry 2017: Unprecedented Prosperity,” accessed March 28, 2018

¹⁴ John Erlichman, “Forget the Ratings: Television is a Growth Business with Record Profits,” *Forbes*, January 17, 2017

¹⁵ Cheryl V. Jackson, “Pocket-sized Dostoyevsky? Chicago's latest Kickstarter hit offers classic lit to go,” *Chicago Tribune*, July 7, 2017

¹⁶ Abraham Reisman, “Pushing Diversity Is a Tough Business for Four Indie-Comics Publishers,” *Vulture*, January 11, 2018

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Select Mission for UW-Green Bay

The University of Wisconsin-Green Bay is a multi-campus comprehensive university offering exemplary undergraduate, masters, and select doctoral programs and operating with a commitment to excellence in teaching, scholarship and research, and service to the community. The University provides a problem-focused educational experience that promotes critical thinking and student success.

The culture and vision of the University reflect a deep commitment to diversity, inclusion, social justice, civic engagement, and educational opportunity at all levels. Our core values embrace community-based partnerships, collaborative faculty scholarship, and innovation.

Our commitment to a university that promotes access, career success, cross-discipline collaboration, cultural enrichment, economic development, entrepreneurship, and environmental sustainability is demonstrated through a wide array of programs and certifications offered in four colleges: College of Arts, Humanities, and Social Sciences; College of Science, Engineering, and Technology (including the Richard Resch School of Engineering); College of Health, Education, and Social Welfare; and the Austin E. Cofrin School of Business, leading to a range of degrees, including AAS, BA, BAS, BM, BS, BSW, BBA, MS, MSW, MSN, and Ed.D.

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**REQUEST FOR AUTHORIZATION TO IMPLEMENT A BACHELOR OF SCIENCE
DEGREE IN WATER SCIENCE**

AT UW-GREEN BAY

PREPARED BY UW-GREEN BAY

ABSTRACT

The University of Wisconsin-Green Bay proposes to establish a Bachelor of Science in Water Science (B.S. in Water Science). The development of this program responds to a number of local, national, and global needs in water science. Establishing the program at UW-Green Bay will provide students with an interdisciplinary curriculum focused on all aspects of water. With its four coastal campus locations, UW-Green Bay is positioned in a unique geographic region of Wisconsin that allows for high-impact teaching opportunities and research opportunities on the greatest diversity of surface water and groundwater settings of any UW institution. In addition, graduates will be well-equipped to enter graduate school or to start a water science career across an array of industry, governmental, and academic disciplines. We have designed the Water Science major at UW-Green Bay to leverage and complement the UW System-wide “Freshwater University” initiative being led by UW-Milwaukee.

The program will be comprised of 71 credits, which will include 33 credits of supporting courses, 25 credits of upper level core courses, and 13 credits of upper level electives. Students would need a total of 120 credits to graduate, along with the existing general education requirements in effect at UW-Green Bay. The curriculum will be designated as an interdisciplinary major at UW-Green Bay.

PROGRAM IDENTIFICATION

Institution Name

University of Wisconsin-Green Bay

Title of Proposed Program

Water Science

Degree/Major Designations

Bachelor of Science - Major

Mode of Delivery

Single institution, residential, primarily face-to-face instruction. However, there is intent to allow future collaboration with “Freshwater University” being developed by UW-Milwaukee and other UW campuses. This could include a selection of online courses, field immersion experiences, or short courses that could substitute for certain core or upper level elective courses.

Projected Enrollments and Graduates by Year Five

We used the draft proposal “Freshwater University: University of Wisconsin System Discussion Draft (3-20-2018)” prepared by the UW-Milwaukee School of Freshwater Sciences as the template for enrollment and attrition projections. UW-Green Bay would serve as one of the 4-7 campuses that offer a bachelor’s degree in water science.

Table 1 represents enrollment and graduation projections for students entering the program over the next five years. The enrollment projections use the UWGB year-to-year retention rate model calculated by Institutional Research at UW-Green Bay. They are nearly identical to the 78% average retention rate model used by UW-Milwaukee in their Freshwater University proposal. The model used assumes a 75% retention rate in year 1, followed by 81%, 91%, and 95% retention rates for an overall retention rate of 53% of entering freshman reaching graduation. By the end of year five, it is expected 83 students will have enrolled in the program and 20 students will have graduated from the program. It is expected that some students might graduate in year 3 of the program due to new transfer students or those who might switch from present majors at UW-Green Bay, but this pertains only to the first year.

Table 1: Five-Year Degree Program Enrollment Projections

Students/Year	Year 1	Year 2	Year 3	Year 4	Year 5
New Students	10	15	18	20	20
Continuing Students	0	8	17	29	34
Total Enrollment	10	23	35	49	54
Graduating Students	0	0	3	5	12

Tuition Structure

For students enrolled in the B.S. in Water Science program, standard undergraduate tuition fee and rates will apply. For the current academic year at the main UW-Green Bay campus, the residential tuition and segregated fees total \$3,939 per semester for a full-time student who is enrolled in 12-18 credits per term. Of this amount, \$790 is attributable to segregated fees and \$3,149 is attributable to tuition. For students enrolled part-time in the program, the residential cost of tuition and segregated fees is \$328.26 per credit.

Differential tuition will not be charged. Course fees may apply to elective field courses and online courses. There are no planned tuition increases beyond those that might otherwise apply to all other UW-Green Bay programs. Students will need to cover textbooks for most courses. In addition, field appropriate clothing and supplies (e.g., rain gear, boots, sunscreen) may be required for certain elective courses.

Department or Functional Equivalent

Department of Natural & Applied Sciences

College, School, or Functional Equivalent

College Science, Engineering, and Technology

Proposed Date of Implementation

Fall 2019. Implementation would begin in the semester following approval, with appearance in

the undergraduate catalog likely to occur in Fall 2019.

DESCRIPTION OF PROGRAM

Overview of the Program

The UW-Green Bay Water Science program will be an integrated program designed to provide students with the tools necessary to solve the water related challenges of today and tomorrow. The intended program duration will be 4 years. The curriculum will be interdisciplinary, with a core set of courses drawn from geoscience, chemistry, environmental science, biology, physics, math and statistics, and public and environmental affairs. In addition, a diverse set of elective courses will allow students to focus on subdisciplines in water science that can meet their career needs and interests. The anticipated comprehensive major (71 credits) will have a principal focus on water's role in natural processes in Earth's systems. These skills include a solid understanding of the chemistry, surface water hydrology, groundwater, and biology of freshwater systems. UW-Green Bay Water Science majors will have opportunities to work as research assistants on faculty projects, develop internships, or to conduct their own independent projects. UW-Green Bay faculty members are very active in research on water and wastewater treatment, runoff pollution, stream hydrology, groundwater quality, limnology, and aquatic ecology.

Student Learning Outcomes and Program Objectives

1. Students will demonstrate knowledge of the role water plays in the lithosphere, hydrosphere, cryosphere, atmosphere, and biosphere, with emphasis on interactions between these reservoirs.
2. Students will apply the scientific method to investigations of hydrologic processes, Earth systems, and interactions among the various physical and biological realms utilizing standard scientific field and laboratory methods.
3. Students will demonstrate an understanding of the hydrology of streams and lake systems and the role water has in landscape-forming processes that act on the Earth's surface.
4. Students will demonstrate an understanding of the processes of and importance of groundwater flow and aquifer systems.
5. Students will demonstrate an understanding of chemical interactions that occur in various hydrologic settings and their importance to water resources, geological and biological systems, and water/wastewater treatment.
6. Students will demonstrate an understanding of the role water plays in atmospheric systems and the climate system.
7. Students will demonstrate an understanding of the interactions between water systems and ecosystems.
8. Students will demonstrate an understanding of the challenge of maintaining surface and ground water quality.
9. Students will apply their knowledge base and research skills to current issues pertaining to water resources, management, and remediation, with emphasis on related economic, social, and public policy dimensions.

10. Students will analyze, interpret, and report on laboratory and field findings using appropriate statistical techniques and computer applications.

In addition to the Water Science learning outcomes, the general education program at UW-Green Bay enables students to strengthen academic skills, broaden knowledge, reflect on personal values, and integrate concepts and ideas across a variety of subject areas. Students take courses from several broad domains: biological sciences, natural sciences, ethnic studies perspective, fine arts, global culture, humanities, sustainability perspective, and social sciences. In addition, students are required to take a first-year seminar course and demonstrate quantitative literacy.

Program Requirements and Curriculum

There are no specific admission requirements, test scores, or prerequisites required for entry to the program, although competency of Math 104, 202 or 203 must be demonstrated before graduation.

Table 2 illustrates the program curriculum for the proposed program. The curriculum has the campus-wide requirement of a total of at least 120 credits. A total of 71 credits are required in the major program, which includes 33 credits at the supporting level (11 courses), 25 credits in the upper level core (8 courses), and 13 credits of upper level electives (~4 courses). Two additional credits are required for a prerequisite GIS course. An additional 24 credits would be required in the General Education program that are not otherwise completed via supporting courses. In total, 96 credits are required between general education, required prerequisites, core major requirements, and major elective courses.

**Table 2: Bachelor of Science in Water Science Program Curriculum
General education courses required for graduation (24 of 36 unique):**

First Year Seminar	3 credits
Fine Arts	3 credits
Social Sciences	6 credits
Humanities	6 credits
Global Culture	3 credits
Ethnic Studies Perspective	3 credits
Biological Sciences*	3 credits
Natural Sciences*	3 credits
Sustainability Perspective*	3 credits
Quantitative Literacy*	3-7 credits

* Denotes courses that are also covered by program requirements. Duplicate credits not counted toward total.

Program Prerequisites or support courses (35 credits):

Water 201 – Intro to Water Science (new course)	3 credits
Biology 203 & 204 – Principles of Biology (w/lab)	4 credits
Geoscience 202 – Physical Geology	4 credits
Geoscience 222 – Ocean of Air	3 credits
Chem. 211 & 213 – Principles of Chemistry I (w/lab)	5 credits
Chem. 212 & 214 – Principles of Chemistry II (w/lab)	5 credits
Math 260 – Introduction to Statistics	4 credits
PUENAF 250 – Intro. to GIS (<i>prereq. for Env. Sci. 337</i>)	2 credits
Physics 103 or 201 – Concepts or Fund. of Physics	5 credits

In addition, competency of Math 104, 202, or 203 must be demonstrated.

Academic program or major course requirements (25 credits):

Env. Sci. 335 – Water & Waste Water Treatment	3 credits
Env. Sci. 330 – Hydrology	3 credits
Geoscience 432 – Hydrogeology (Gen Ed. Captstone)	3 credits
Env. Sci. 305 – Environmental Systems	4 credits
Env. Sci. 401 or 403 – Stream Ecology OR Limnology	4 credits
Env. Sci. 433 OR PUENAF 351 – Groundwater: Resources & Regulations OR Water Resources Policy & Management	3 credits
Env. Sci. 337 – Environmental GIS	2 credits
Water 3XX – Geochem. of Natural Waters (new course)	3 credits

Upper Level Elective Courses (Any 13 credits required):

Bio 341—Ichthyology	4 credits
Env. Sci. 325 – Regional Climatology	3 credits
Env. Sci. 323 – Pollution Prevention	3 credits
Econ 305 – Natural Resource Economics	3 credits
Env. Sci. 320 – The Soil Environment	4 credits
Env. Sci. 322 – Environmental Microbiology	4 credits
PUENAF 378 or 379 – Environmental Law OR Natural Resources Policy, Law, & Administration	3 credits
Env. Sci. 401 or 403 – Stream Ecology OR Limnology	4 credits
Env. Sci. 424 – Hazardous and Toxic Materials	3 credits
Env. Sci. 425 – Global Climate Change	3 credits
Env. Sci. 433 OR PUENAF 351 Groundwater: Resources & Regulations OR Water Resources Policy & Management	3 credits
Water 321 – Stable Isotopes in the Environment	1 credit
Water 491 – Senior Thesis/Research in Water Science	1-3 credits
Env. Sci. 492 – Practicum in Environmental Science	1-4 credits

Total Credits **97 credits**

The program prerequisites, core, and elective courses occur primarily in the Department of Natural and Applied Sciences, although alternative and elective courses in Public and Environmental Affairs and Economics are also available. Two new water science courses will be required in the program (Introduction to Water Science and Geochemistry of Natural Waters). These two additional courses will be covered by approximately 0.5 faculty FTE. Funding for this may come from new funding initiatives associated with Freshwater University or by faculty overloads. Alternatively, existing general education sustainability courses could be transitioned to Introduction to Water Science, while Environmental Engineering, Geoscience, or Chemistry faculty could teach the Geochemistry of Natural Waters course. An additional 1.0 FTE is budgeted for support courses in Chemistry, Biology, and other disciplines that will require

additional sections when the Water Science major reaches the projected level of enrollment.

Depending upon the semester and course options, students will likely take courses from between 15 and 20 different faculty members while taking the supporting, core, and elective portions of the Water Science major. Campus facilities and resources are well established in existing disciplinary and interdisciplinary programs in Biology, Chemistry, Environmental Science, Geoscience, and Physics.

Assessment of Outcomes and Objectives

The program will use several forms of assessment. Courses in the proposed major have individual course assessments such as exams, presentations, writing assignments, and other standard forms of assessment. In addition, written anonymous comments on student evaluations of instructor teaching performance can also be used to make program adjustments, where appropriate.

In addition, the Provost's Office at UW-Green Bay requires that programmatic assessments be done on student learning outcomes on a regular basis. Typically, two student learning outcomes are addressed specifically in appropriate courses each year. Results of these assessments are available online: <https://www.uwgb.edu/assessment/> The results of the assessment are used to inform curricular and programmatic decision-making.

Diversity

UW-Green Bay's Strategic Vision includes a commitment to a diverse university that reflects the community (see <http://www.uwgb.edu/graduate/university-mission/strategic-vision>). The development of the B.S. in Water Science was not linked with any specific plans or strategic initiatives at UW-Green Bay. However, the proposed curriculum is interdisciplinary in nature and would draw upon students and faculty from wide educational, socioeconomic, and ethnic backgrounds.

Collaborative Nature of the Program

In the response letters to our 2016 Notice of Intent, UW-Milwaukee requested a brief pause in our pursuance of a standalone major in Freshwater Science. During the course of 2017 and early 2018, UW-Milwaukee's School of Freshwater Science has proposed an exciting new initiative called "Freshwater University". During this time, staff from UW-Green Bay have participated in joint conferences with staff from UW-Milwaukee, including a meeting on the UW-Green Bay campus in June 2018.

Freshwater University (FWU) is a cohesive state-wide platform described as an integrated university within a university system that can leverage the strength, diversity, and collective resources of the entire University of Wisconsin System. It includes a vision establishing Wisconsin as an international leader in freshwater science, technology, entrepreneurship, and economic growth that, according to Val Klump (Dean of the School of Freshwater Sciences) has support from the community and legislators of Wisconsin. UW-Green Bay plans to be an integral part of FWU (a degree granting campus), and our proposed B.S. degree in Water Science positions us to be a foundational partner in this endeavor.

Students who would receive diploma recognition or certification may require that students acquire experiences at another UW campuses, including a semester immersion/certificate, experiential learning (field or short courses), or online experiences. In this regard, we hope that the opportunities for collaboration with several different FWU campuses will enrich the educational experience of all UW students, regardless of their home campus.

Because FWU is not yet approved, we have not included this as part of our proposed curriculum at this time. Any necessary modifications will be made at a later date.

Projected Time to Degree

The program is full time and intended to be completed within four years. Part time students will take longer, particularly if students miss certain courses that are offered only on a once-every-other-year basis. In these cases, it is likely that part time students would need 6 years to complete the degree.

Program Review

UW-Green Bay performs regular program reviews of all academic programs on a seven-year cycle. The program reviews evaluate trends in enrollment and graduation rates, program effectiveness, and student learning outcome assessments. The approval chain includes the department, Dean of the College of Science, Engineering, and Technology, The Academic Affairs Council (AAC), and the Provost. The AAC forwards all recommendations and decisions to the Faculty Senate.

Accreditation

There are no particular accreditation requirements for a B.S. in Water Science. However, the Freshwater University proposal, led by UW-Milwaukee, would require that our curriculum align with an approved array of courses to allow students to earn the “Freshwater University” designation. The suggested curriculum presented above is consistent with the current draft proposal and would require minimal modification to align field immersion experiences, etc.

JUSTIFICATION

Rationale and Relation to Mission

UW-Green Bay’s mission is based on a commitment to provide a problem-focused educational experience in which students apply critical thinking skills to solve the world’s complex problems. Water Science (a.k.a. Freshwater Science) is the study of water and its interaction with solids, liquids, gases, and organisms in various Earth systems. Water is essential to life, and it plays a critical role in nearly every natural process in Earth’s lithosphere, atmosphere, hydrosphere, biosphere, and cryosphere.

There are two principal reasons for proposing the B.S. Degree in Water Science. First, water is likely going to be the single greatest resource challenge of the 21st century. The world faces significant challenges regarding water quantity, quality, and ecological function that are expected to worsen during the 21st century. It is rare to find a real-world system in which water does not play a significant role. The global need for water science professionals to solve critical water issues is accelerating and expected to continue indefinitely. Recent examples include the lead contamination crisis in Flint, Michigan, the ongoing arsenic exposure in Bangladesh, and the water crisis in Cape Town, South Africa.

Second, UW-Green Bay has had a long history of research and teaching related to the field of freshwater science and to related sustainability issues. Graduates in our existing programs have gone on to work in water related fields in industry and government positions. The continuing development of significant relationships between the UW-Green Bay Water Science program and community partners will put our students in a stronger position to fill the

employment needs of our region and beyond.

We will be an integral partner in the proposed UW-System Freshwater University, an endeavor led by UW-Milwaukee to make Wisconsin a hub for freshwater science in the world. The new B.S. Degree in Water Science will allow UW-Green Bay the ability to attract more students, not only from within Wisconsin, but also from elsewhere in the nation and globally.

The B.S. Degree in Water Science will contribute directly to the mission of the UW System by preparing our citizens to face the water-related challenges of the 21st century. The proposed major in Water Science has a strong fit with UW Green Bay's mission, strategic plan, and existing programs. The program will also closely match the university's Select Mission to provide an interdisciplinary, problem-focused educational experience. The proposed major will greatly expand opportunities for collaboration in our region by greater engagement with businesses, non-profits, and governmental agencies. It will prepare students for career opportunities in private industry, water utilities, geotechnical consulting, natural resource management, state and federal government agencies, or environmental policy organizations. For students interested in pursuing graduate work, the program will help to set a solid foundation for students interested in UW Milwaukee's School of Freshwater Science graduate program or other programs nationwide.

Support for the program has been expressed by leaders and members of academic, government, and private industry (see attached support letters). These include the Wisconsin Rural Water Association, Green Bay Water Utility, the Bellevue Water utility, Natural Resource Solutions, LLC, NEW Water, U.S. Fish & Wildlife Service, Clean Water Action Council.

Institutional Program Array

The B.S. in Water Science will be distinctly different from existing majors in Environmental Science, Environmental Engineering Technology, and Geoscience at UW Green Bay, the programs that have the most water-focused courses. Water Science will pair well with minors in many subfields, including biology, chemistry, geoscience, environmental policy, business, economics, etc. The program will also provide expanded opportunities for undergraduate research and internship experiences. The anticipated non-faculty resources needed for the overall program are limited and might be obtained through one-time funds and campus laboratory modernization funds.

Two new courses will be required as part of the Water Science curriculum that are not presently offered. One of these will be Introduction to Water Science, which is a 3-credit hour lecture course at the 200 level. This was added to the curriculum after the initial Notice of Intent following discussions with UW-Milwaukee regarding alignment with the proposed Freshwater University requirements. This course will likely be proposed as part of the Sustainability General Education requirements. A second new course in the Geochemistry of Natural Waters would be a 3-credit lecture course at the 300 level. This course was already targeted as a course to be added soon for the existing Environmental Engineering Technology major at UW-Green Bay. Neither course will require new resources beyond an annual commitment of 3 credit hours of faculty instruction.

Other Programs in the University of Wisconsin System

UW-Milwaukee and UW-Madison have graduate programs in Freshwater Science. Both universities were supportive of UW-Green Bay's proposal for a B.S. in Water Science (originally Freshwater Science), noting the potential for students to continue on for graduate degrees.

Devarajan Venugopalan (Vice Provost, UW-Milwaukee) agreed in his response to the Notice of Intent that with regard to Freshwater Science, “an undergraduate degree and major (has been identified) as a void within the UW System and applauds UW-Green Bay for proposing the creation of such a degree.” Their graduate program would be a perfect fit for graduates with a B.S. in Water Science from UW-Green Bay. As such, both UW-Milwaukee and UW-Madison would be logical choices for collaboration, which is addressed in the section below.

Few institutions offer Bachelor level degrees directly in Water Science. However, there are some UW programs that are similar to the proposed B.S. degree in Water Science. In the letter from Steven H. Kolison, Jr., Ph.D. dated 23 December, 2016, one of the concerns was for potential impacts that a Freshwater Science degree program might have on programs or concentrations at UW-La Crosse, UW-Oshkosh, and UW-Stevens Point.

The concerns expressed by UW-La Crosse were from faculty in the Department of Biology. Specifically, they felt that the proposed program at UW-Green Bay might be redundant to UWL’s well-established Biology Major: Aquatic Science Concentration. However, we do not believe this is the case. The confusion may have arisen due to the perceived meaning of “freshwater science” to biologists, as well as space limitations in the original Notice of Intent, which did not allow for a curriculum to be included. A simple comparison of the course curricula of the two programs shows that the proposed Water Science program at UW-Green Bay is considerably different than UWL’s established program. In fact, UW-Green Bay’s existing biology and environmental science majors would probably compete more closely with UWL’s program than the proposed Water Science major. Avoidance of this confusion is one of the reasons why our proposed major is now “Water Science” instead of “Freshwater Science”. Similar confusion appears to exist with UW-Oshkosh’s Geology Major – Hydrogeology emphasis, which was identified in the Approval to Plan Letter. The identified major at UW-Oshkosh is a geology degree. The existing Geoscience major at UW-Green Bay, an environmentally oriented geoscience degree, already includes a thorough focus on hydrogeology and soil science. Hydrogeologists are typically certified by the State of Wisconsin as geologists, and students seeking such certification require training in geology. The proposed B.S. in Water Science would not compete with UW-Oshkosh’s Hydrogeology emphasis because the Water Science curriculum would not yield students trained in geology.

One program identified as being similar to UW-Green Bay’s proposed B.S. in Water Science is the UW-Stevens Point Fisheries and Water Resources major (Water Resources option). UW-Stevens Point expressed concern that a new program in this area would diminish enrollment in their program, and they questioned student demand. While we recognize that there will be some overlap to the two programs, there are many aspects of UW-Stevens Point’s programs that we would not duplicate, such as the Center for Watershed Science and access to high-capacity well issues in the Central Sands region. The proposed Water Science program at UW-Green Bay will have unique resources and opportunities for students that are not readily available at UW-Stevens Point, and we feel that collaboration between campuses would provide a greater benefit to students at both campuses.

The biology, geology, and chemistry of surface water and groundwater bodies in northeastern Wisconsin are distinctly different in many ways from those in central Wisconsin. Close proximity to these areas provides the best and most diverse set of field education and research opportunities for students in Wisconsin. For example, UW-Green Bay’s four campuses are uniquely set along the coastline of Lake Michigan. The Lower Green Bay and Fox River Area of Concern (AOC) provides students with first-hand opportunities to observe PCB

remediation, habitat restoration, etc. that is not available elsewhere in the state. Green Bay is the world's largest freshwater estuarine system, with a complex industrial history, aquatic ecology, and nutrient management problems. With regard to groundwater, and aquifer geology, the region near Green Bay provides students with an incredibly diverse array of problems compared to most other parts of the state. For example, the Kewaunee County water crisis, which has received national attention, is an active area of research in the karsted Silurian bedrock of northeastern Wisconsin. Other aquifers in the region have significant water quality concerns such as arsenic, strontium, radium, boron, fluoride, and others that relate directly to the bedrock geology. Close access to inland lakes in glaciated regions is also available in northeastern Wisconsin and upper Michigan. Nutrient management challenges from one of the state's most highly concentrated dairy farming areas, as well as storm water problems in urbanized regions of Green Bay and Appleton allow excellent learning and research opportunities for students interested in water.

We believe that the geographically unique opportunities available at UW-Green Bay, coupled with student interest and our strong desire to be a cornerstone partner in the proposed UW System Freshwater University (see below) make UW-Green Bay's proposal for a B.S. Degree in Water Science a logical choice to support.

Need as Suggested by Current Student Demand

A survey was circulated to 1074 students at the UW-Green Bay main campus in late August 2018, of which 135 had responded within two weeks. The students had declared majors in biology, human biology, chemistry, environmental policy & planning, engineering or engineering technology, environmental science, geoscience, and the environmental science & policy graduate program. The results of the survey clearly show that there is strong student interest among existing UW-Green Bay students. Ninety-six percent of the respondents ranked the importance of "water related issues locally, nationally, and globally" as very or extremely important. Over 68% of respondents stated that they were highly likely or somewhat likely to consider majoring in Water Science at UW-Green Bay (26.6% were highly likely). Over 90% of the respondents stated "definitely yes" or "probably yes" when asked "Do you think UW-Green Bay should offer a major in Water Science?" (63.7% definitely yes). Similarly, 80.7% of the respondents stated "definitely yes" or "probably yes" when asked "Do you think prospective college students would be attracted to UW-Green Bay if it offered a Water Science degree?"

While it is likely that there may be attrition from other programs, we believe that the B.S. in Water Science has the opportunity to bring in new students to UW-Green Bay, or to retain students from our three satellite campuses (Manitowoc, Sheboygan, and Marinette) that might otherwise transfer away from UW-Green Bay.

According to the U.S. Bureau of Labor and Statistics, the job outlook for water science professionals across the nation is anticipated to grow by 10% or more. It is difficult to find precise statistics for Water Science as a category because water professionals are employed in many industries. Table 2 shows projected 10-year employment changes in water-related sectors.

Table 2: Projected national increases in Water Science related fields (2016–2026. Industry titles shown are those in which water science professionals are most likely to be employed.

U.S. Bureau of Labor and Statistics Industry Title	U.S. BLS Industry Code	Ten-year growth rate (%) from 2016 to 2026
Hydrologists, total employment	19-2043 TE1000	9.9
Environmental Scientists (entire field)	19-2041 TE1000	11.1
Env. Scientists and Specialists - Utilities: Water, Sewage, and other sys.	19-2041 221300	15.1
Env. Science & Protection Technicians, mining quarrying and gas extraction	19-4091 210000	18.9
Environmental Science and Protection Management, scientific, and technical consulting services*	19-4091 541600	25.4
Water Wastewater Treatment Plant System Operators: Professional, scientific and technical services (Management, scientific and technical consulting services section)	51-8031 541600	12.8
Environmental Engineers	17-2081 TE1000	8.3

**According to Brookings.edu, this category includes services such as Water Quality Inspection*

According to the Wisconsin Department of Workforce Development’s 2026 employment growth projections, demand for hydrologists and environmental science professionals with baccalaureate degrees has improved significantly over the 2022 projections to 6.98% and 11.76%, respectively.

Other substantive information exists that supports an increasing demand for water science professionals. According to the American Water Works Association (2017 State of the Water Industry Report), workforce issues continue to be a concern in the water industry. They specifically cite “aging workforce/anticipated retirements” and “certification and training” as important issues facing the industry. In a recent survey, only 1% of the respondents indicated that “the water industry was fully prepared to cope with any expected retirements in the next five years.” According to the Task force on Workforce Sustainability Final Report, published by the Water Environment Federation, it is projected that during the next 10 years more than 30% of water and wastewater utility workers will retire.

On January 26, 2018, the United States Government Accountability Office published a report that analyzed workforce needs in the drinking water and wastewater sectors. Their report provides recommendations to U.S. EPA and the U.S. Congress regarding actions the federal government could take to avoid these anticipated workforce shortages.

During 2017, UW-Milwaukee did an Exploratory Study of Water-related Workforce Needs for Wisconsin. The survey, which focused on water professionals in southeastern Wisconsin, indicated that over 70% of the 114 respondents anticipated that their organization

would be hiring water-related professionals in the next three years.

Letters of support from water utilities, consultants, and others speak to the particular need for water-related professionals in northeastern Wisconsin due to demographics and retirements. For example, Nancy Quirk, General Manager of the Green Bay Water Utility, indicates that the anticipated loss of current utility employees will be “30 to 50 percent in the next 10 years.” Additional letters of support from community members are attached to this document.

Emerging Knowledge and Advancing New Directions

Because of its interdisciplinary nature, Water Science has not traditionally been one of the foundation sciences (e.g., Chemistry, Physics, Biology, Geology). Yet, water is a major component in the employment duties of many scientific professionals. It is obvious that water and wastewater utilities deal with water. However, most environmental consultants also work on water-related issues, such as water and soil pollution, wetlands restoration, drinking water protection, nutrient management, storm water management, etc.

New programs in Water Science are beginning to appear across the nation in response to this need for water trained professionals. For example, Virginia Tech began a new B.S. program in Water: Resources, Policy, and Management in 2015, which has seen very strong enrollment.

References

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- Office of Economic Advisors, Wisconsin Department of Workforce Development, July 2018. Wisconsin Long Term Occupation Employment Projections, 2016-2026. <https://worknet.wisconsin.gov/worknet/downloads.aspx?menuselection=da&pgm=occprj>
- United States Government Accountability Office, Water and Wastewater Workforce. GAO-18-102. January 2018.

**REQUEST FOR AUTHORIZATION TO IMPLEMENT A
BACHELOR OF SCIENCE
IN WATER SCIENCE
AT UNIVERSITY OF WISCONSIN-GREEN BAY
PREPARED BY UW-GREEN BAY**

COST AND REVENUE PROJECTIONS NARRATIVE

Introduction

The Water Science program includes two new courses and relies heavily on existing courses offered at UW-Green Bay. For this reason, only limited new resources are needed to staff the additional sections of courses. At this time, no immediate plans for distance education, differential tuition, or collaborative program delivery are included in the budget. Future modifications might be proposed in the event that the UW-Milwaukee-led “Freshwater University” concept comes to fruition.

Section I – Enrollment

The enrollment projections in Section I use the UWGB year-to-year retention rate model calculated by Institutional Research at UW-Green Bay. They are nearly identical to the 78% average retention rate model used by UW-Milwaukee in their Freshwater University proposal. The model used assumes a 75% retention rate in year 1, followed by 81%, 91%, and 95% retention rates for an overall retention rate of 53% of entering freshman reaching graduation.

Overall New Student Headcount was estimated based on student interest surveys, course capacity estimates, and estimates made by UW-Milwaukee for “Freshwater University”. In Section 1, the FTE numbers shown indicate an estimated 80% full-time and 20% part-time student body.

Section II – Credit Hours

A standard of 120-credit hours is necessary for graduation with a Bachelor of Science degree at UW-Green Bay. Two new courses will be developed for the Water Science program, along with new sections of existing lower and upper level support and major program courses. Credit hours for the two new courses were calculated assuming that Intro to Water Science would be offered every semester by Year 2, and that Geochemistry of Natural Waters would be offered annually. Estimates of additional new sections not previously offered by the institution were made based on a full-time 9-month faculty load. Courses requiring new sections will likely include chemistry, physics, environmental systems, physical geology lab, biology lab, GIS, statistics, and water & wastewater treatment. Existing capacity in other core and upper level electives can likely absorb the predicted additional enrollment in most cases.

Section III – Faculty and Staff Appointments

The program requires the addition of 1.5 FTE of faculty in the sciences, phased in over 3 years as the program grows. This could potentially be accomplished through *ad hoc* lecturers, but the program will be best served by hiring tenure-track faculty for at least 1.0 FTE because the core introductory course and the upper level specialty courses necessitate expertise in the field of water science. The additional 0.5 FTE might be accomplished with tenure-track faculty, lecturer, or even two graduate teaching assistant positions (for chemistry, geoscience, or physics labs).

Section IV – Program Revenues

Total Tuition: We model an enrollment of 9 new FTE students in Water Science in Year 1, growing to 18 new FTE students each year by years 4 and 5. Based upon student surveys and UW-Milwaukee’s Freshwater University projections, this is likely an underestimate of actual interest. We also expect higher retention rates in the sciences, relative to UW-Green Bay’s overall statistics for year-to-year retention.

The main revenue source will be student tuition. All calculations are based on a full-time single semester tuition rate of \$3149.16 (UWGB Fall 2018 tuition rate), with a 2% increase in tuition and fees in years 3 and 5. This was matched by a 2% annual increase in faculty salaries beginning at the same time. To reach the 120-credit requirement for graduation, it was assumed that students would enroll in 15 credit hours per semester (on average), which is within the 12 to 18-credit plateau. New tuition revenue within the Water Science Program was calculated assuming that students would average approximately 20 of 30 credits per year in supporting courses, core major courses, or major electives to reach the approximately 80 total credits students will likely take related to the major before graduation.

Because the overall investment in new faculty and expenses is limited, relative to many newly proposed majors, our projections predict a small net positive revenue would begin in Year 1, although Year 2 will see the first substantial net revenue. By years 4 and 5, net revenue for the program is modeled to be between \$100,000 and \$150,000 per year, based upon a total enrollment of 49 student FTE in the program. No new administrative costs are requested at this time because the chair of the Geoscience disciplinary unit will also chair Water Science.

The additional faculty FTE would hopefully be accomplished through General Program Revenue (102 funds).

Section V – Program Expenses

Salaries and Fringe: Salaries for the 1.5 FTE were estimated at \$60,000/year (9-month contract), plus a 45% fringe benefit rate. A 2% salary increase was budgeted in Year 3 and Year 5. Additional new expenses related to the Water Science program include increases in professional development, supplies and expenses, marketing, and equipment.

Facilities Costs and Accreditation costs are not anticipated at this time. *Professional Development and Supplies and Expenses:* Ongoing professional development for faculty/staff is critical in a water science program, and amounts are estimated at ~\$1000 per faculty/staff per year, including modest S&E. *Marketing:* We include \$2,000/year for print, radio, and digital marketing of the new program to build brand awareness of the UWGB Water Science program. *Equipment:* Funding for new equipment related to groundwater wells and geophysical logging equipment is budgeted for years 1 through 5. Installation of new wells would occur in years 1 and 2 to improve the limited existing well-field that exists on the UW-Green Bay campus, with the highest expenses in years 3 and 4 when geophysical logging equipment would be purchased. *Central Tax:* A 30% Central tax on total tuition is also budgeted in New Expenses.

Section VI – Net Revenue

The budget model shows significant positive net revenue beginning in Year 2, with substantial net revenue emerging in years 4 and 5. Remaining net revenue could be reinvested into a number of programs in the College of Science, Engineering, and Technology at UW-Green

Bay. Reinvestment might include purchasing analytical equipment, field sampling and measuring equipment, computer software, etc.

We believe the risk for net loss in this new program is limited. A loss would occur only if the actual enrollment falls significantly short of the predicted enrollment. In this case, the Water Science program could be adequately run with funding of the two newly proposed courses, while available capacity in existing courses could absorb a small number of new majors. Expenditures for new equipment could be curtailed, if necessary, without leading to actual negative net revenue for the program. Based on student and community support, along with the potential for the University of Wisconsin's "Freshwater University" concept, we believe there is current demand to meet or potentially exceed the modeled enrollment targets.

University of Wisconsin - Green Bay						
Cost and Revenue Projections For Bachelor of Science in Water Science						
	Items	Projections				
		2019	2020	2021	2022	2023
		Year 1	Year 2	Year 3	Year 4	Year 5
I	Enrollment (New Student) Headcount	10	15	18	20	20
	Enrollment (Continuing Student) Headcount	0	8	17	29	34
	Enrollment (New Student) FTE	9	13	16	18	18
	Enrollment (Continuing Student) FTE	0	8	15	26	31
II	New Course Credit Hours (2 new sections 3 credits per section)	6	3	0	0	0
	Additional New Credit Hours (new sections of existing courses)	3	12	8	0	0
	Total New Credit Hours	9	15	8	0	0
	Total Existing WS Program Credit Hours (not including Gen)	11	20	40	60	80
III	FTE of New Faculty/Instructional Staff	1	0	0.5	0	0
	FTE of Current Fac/IAS	0	1	1	1.5	1.5
	FTE of New Admin Staff	0	0	0	0	0
	FTE Current Admin Staff	0	0	0	0	0
IV	New Revenues					
	<i>From Tuition</i>	\$56,682	\$132,258	\$199,144	\$282,656	\$321,048
	<i>From WS Program Tuition (total prog. credit hours x FTE)</i>	\$37,788	\$88,172	\$130,159	\$184,741	\$205,735
	<i>From WS Program Tuition (new credit hours x FTE)</i>	\$17,005	\$66,129	\$52,063	\$0	\$0
	<i>From Segregated Fees</i>	\$14,220	\$33,180	\$49,960	\$69,520	\$78,968
	Total New Revenue	\$70,902	\$165,438	\$249,104	\$352,176	\$400,016
V	New Expenses					
	Salaries plus Fringes					
	<i>Faculty/Instructional Staff</i>	\$87,000	\$87,000	\$133,110	\$133,110	\$135,772
	<i>Other Staff</i>	\$0	\$0	\$0	\$0	\$0
	Other Expenses					
	<i>Facilities</i>	\$0	\$0	\$0	\$0	\$0
	<i>Equipment</i>	\$5,000	\$5,000	\$20,000	\$20,000	\$5,000
	<i>Marketing</i>	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
	<i>Professional Development & S&E</i>	\$2,500	\$2,600	\$2,700	\$2,800	\$2,900
	<i>Central tax (30% of total tuition)</i>	\$17,005	\$39,677	\$59,743	\$84,797	\$96,314
	Total Expenses	\$113,505	\$136,277	\$217,553	\$242,707	\$241,987
VI	Net Revenue	-\$42,603	\$29,161	\$31,550	\$109,469	\$158,030
Narrative: Explanation of the Numbers and Other Ongoing Commitments that will Benefit the Proposed Program						
See appended Budget Narrative.						
Provost's Signature:			Date:			

Faculty Senate Old Business 4a 11/14/2018

Faculty Senate Document #18-05 – Approved 11/14/2018

Change to 50.01 in the Faculty Handbook

50.01 University of Wisconsin-Green Bay Faculty Defined

The University of Wisconsin-Green Bay Faculty (hereafter in this chapter called Faculty) consists of professors, associate professors, assistant professors, instructors, and such other persons as may be designated as having University faculty status **at any of the four campuses – UW-Green Bay, UW-Green Bay|Marinette, UW-Green Bay|Manitowoc, or UW-Green Bay|Sheboygan**. Faculty status for academic staff members with training, experience and responsibilities comparable to those in the professorial ranks may be granted by the Provost/Vice Chancellor for Academic Affairs, on recommendation of the interdisciplinary unit executive committee, and with the approval of the University Committee, for a definite term and may be renewed.

Faculty Senate New Business 5a 11/14/2018

Faculty Senate Document #18-06 – Approved 12/12/2018

Proposal to Merge Psychology and Human Development

(Eliminate HUD Major and Minor; Create Developmental Emphasis in Psych Major)

Proposal: The Human Development faculty propose to eliminate the Human Development major and minor, concurrently, beginning with the 2019-2020 school year. The Psychology major and minor will continue, as an interdisciplinary program, with a new added emphasis in Human Development. The Psychology major already has the following areas of emphasis: 1) General emphasis, 2) Brain, Behavior and Health emphasis, and 3) Mental Health emphasis. In 2019-2020, a new emphasis in the Psychology major will be added entitled “Human Development.” Faculty and instructors with backgrounds in psychology, social ecology, political science, cognitive neuroscience, and Human Development will teach courses in the new psychology curriculum. The current Human Development curriculum will be merged into the existing psychology curriculum.

Background: The merger of the two majors has been discussed by the faculty multiple times in the last seven years. Over time, the make-up of the faculty composition has slowly shifted from Human Development to Psychology due to the rising popularity of the Psychology program and the possibility of developing graduate programs in Psychology. In fact, the curriculum presently available in Human Development pales in comparison to the Human Development curriculum that was once offered. Because of this, the faculty have been concerned about the quality of the Human Development curriculum for quite some time. In addition, the Human Development faculty were concerned that the Human Development and Psychology majors were not unique enough to justify the existence of two separate majors. Therefore, in the 2017-2018 school year, the faculty gathered data regarding the issue so that a data-driven decision could be made regarding the future of each major.

Results: In the pages that follow, a summary of the findings is provided. These findings were used to inform the unit’s decision and develop the proposal.

Finding #1: Psychology generates more interest as a potential major than Human Development.

	Human Development	Psychology
# of Majors (Source: Debbie Furlong; Oct 2017)	245	478
Summer or Fall 2017 “Leads” who indicated interest in HUD or Psychology (Source: Jen Jones (Admissions))	198/34,986 (0.006%)	1923/34,986 (5.50%)
% of transfer students enrolled Fall 2017 who came with HUD or Psych credits (Source: Debbie Furlong)	36% (290/796) <small>(Note: Majority of these cases were Developmental Psych courses (Psych Prefix))</small>	75% (596/796)

Finding #2: Students report the content across the Human Development and Psychology majors overlaps.

Human Development and Psychology Students were surveyed in the fall of 2017. Response Rate:

TOTAL: 363 completed surveys out of 634 majors = Overall Response Rate of 57.2%

HUD Majors: 80 completed out of 156 = 51.3%

Psych Majors: 197 completed out of 389 majors = 50.6%

Double Major: 86 completed out of 89 double majors = 96.6%

Results:

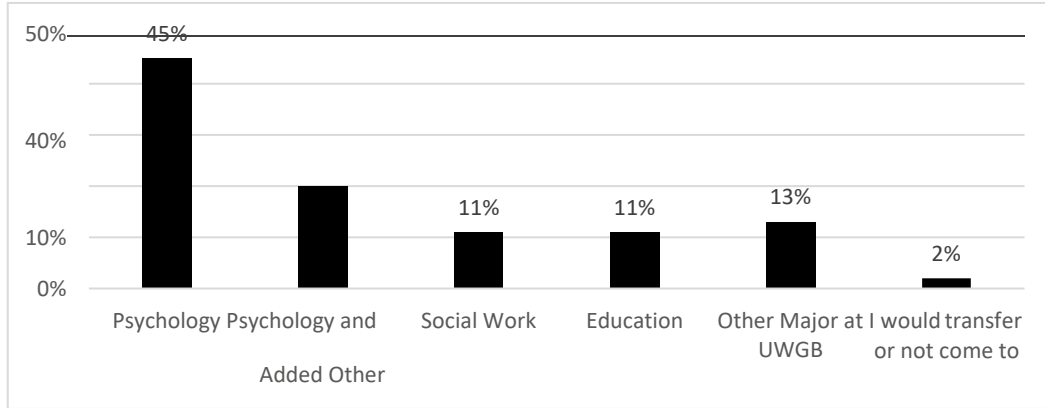
- 92% of HUD and Psych majors reported courses across majors have overlapping content.
- 78% of HUD and Psych double-majors reported double-majoring because of the ease of double-majoring (so much curricular overlap regarding requirements in the major).
-For example, in 2017-2018, if majoring in Human Development, a student only needed 6 additional classes to declare a major in psychology.

Finding #3: Most Human Development students reported they would have picked psychology should Human Development not have been an option when they first declared.

Survey results found that 65% of current Human Development majors reported that if Human Development was not offered when they declared their major, they would have picked psychology, 11% said they would have picked social work, 11% said they would have picked Education, and 13% said they would have picked another major at UWGB. Only 2% of Human Development students reported they would have transferred or not have come to UWGB if Human Development had not been an option. However, according to admissions, Summer and Fall 2017 “Leads” who indicated interest in Human Development was just 198/34,986 (0.006%), compared to Psychology being 1,923/34,986 (5.50%). Therefore, Human Development is a “discovery” major – and although 2% of current Human Development students reported they would have transferred if Human Development was not an option to them, this is likely a high estimate (because students would never have ‘discovered’ Human Development if it wasn’t offered here when they declared).

If HUD was not offered at UWGB when you declared your major, what major would you have chosen?

(Includes only HUD Majors and Double HUD/Psych Majors) (Source: Fall 2017 Student Survey)

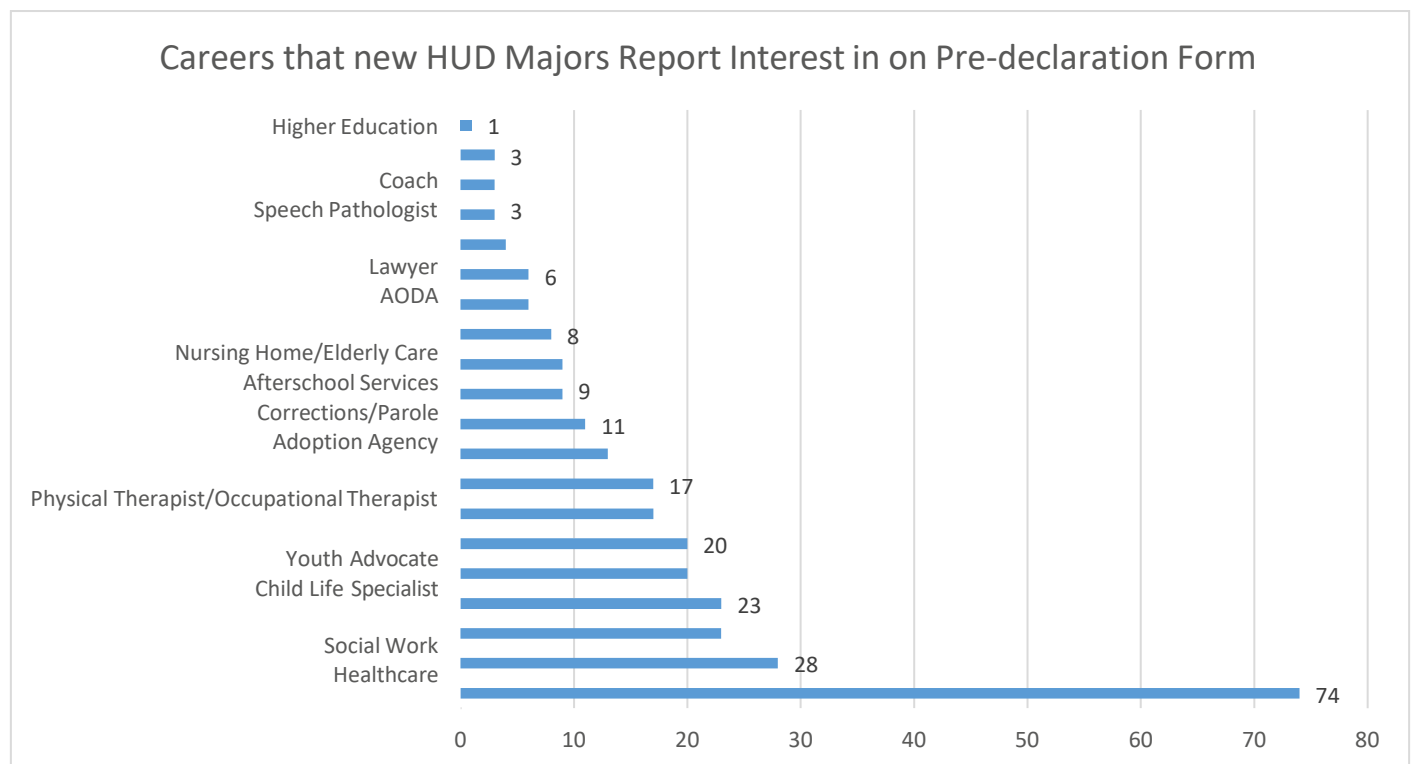


Finding #4: When students declare a major in Human Development or Psychology, there is little difference in career aspirations or career placement upon graduation. Human Development students (who do not double major in psychology) are accepted into non-Human Development graduate programs.

Up until the fall 2017 semester, every student wishing to declare a major in Psychology or Human Development was required to complete a “Pre-declaration Form.” On this form, students listed their intended career path. Review of the data demonstrated that every career aspiration listed by Human Development students could be accomplished by a Psychology degree. In fact, the majority of Human Development students said they aspired to be a Counselor, Psychologist, or work in Mental Health. In these cases, students actually picked the wrong major – as a degree in psychology would have been better suited for such careers.

Review of “First Destinations – Graduate Follow-up” survey from Career Services revealed no difference between career placements of Psychology or Human Development students. In fact, reviewing the list of “first jobs” to determine which list belonged to which major proved difficult.

Human Development students often apply for graduate programs that are not in the area of Human Development specifically. In fact, zero Human Development graduates from spring 2016 attended graduate programs in Human Development in fall of 2017. Instead, Human Development graduates attended graduate programs in School Counseling, School Psychology, Social Work, and Public Health. Therefore, if these students had majored in psychology, they would have likely been equally successful in acceptance to graduate school.



Finding #5: Employers in Northeast Wisconsin who traditionally hire Human Development or Psychology majors report no preference regarding Human Development or Psychology as a major for their new employees.

In the fall of 2017, twenty local businesses who traditionally hire UWGB Psychology and Human Development majors were contacted via phone calls. Staff at these organizations were asked what majors they preferred new employees to have. All employers contacted reported accepting both majors for potential hires, with no preference reported between the majors.

Summary and Implications of this Proposal:

As shown by the findings listed above, the Human Development unit proposes to eliminate the Human Development major and minor, concurrently, beginning in the 2019-2020 school year. However, given the history of Human Development at UWGB, the Human Development and Psychology faculty are strongly committed to preserving Human Development as an integral part of the Psychology major. As such, a Human Development emphasis will be created within the Psychology major.

- 1) Students will continue to be able to declare a Human Development major or minor until the beginning of the Fall 2019 semester. All current and newly declared Human Development majors/minors will have their degree satisfied. In other words, Human Development courses will be phased out or transitioned to Psychology, ensuring all Human Development majors and minors are able to complete their major/minor requirements to graduate with a degree in Human Development.
- 2) Because this change involves the creation of a Human Development emphasis within the Psychology major, many of the Human Development courses presently offered will continue to be offered (even after the Human Development major/minor end). However, the number of sections of such courses will be lowered, saving valuable resources for the unit as well as the opportunity to grow new graduate or certificate programs.

Human Development courses required for other programs such as Social Work, Education, or Nursing will continue to be offered (Hum Dev 102: Intro to Human Development, Hum Dev 331: Infancy and Early Childhood, Hum Dev 332: Middle Childhood and Adolescence, Hum Dev 343: Adulthood and Aging). These courses will be changed from a Human Development prefix to a Psych prefix, and the course number may need to be adjusted. As changes occur, those will be communicated clearly to programs impacted to ensure course catalogs remain up-to-date.

The only course which is anticipated to not be taught by Psychology and is required of another program is Hum Dev 353: Family Development. This course is currently taught on an Ad Hoc basis; the Human Development/Psychology department do not have full-time faculty who can teach this course. However, current Ad Hocs who teach this course will be referred to impacted departments.

- 3) Because all current Human Development faculty are also in the Psychology department, limited issues regarding personnel are anticipated. All faculty will remain in Psychology. No change in governance structure will occur.

- 4) Finally, an important implication of this proposal is that students will only be able to major or minor in Psychology (as opposed to double-majoring in Psychology and Human Development or completing a combination of major in Psychology and minor in Human Development (or vice versa)). This is an important factor, considering that in the fall 2017, only **26%** of current Psychology or Human Development students had academic plans outside of Human Development and Psychology. In fact, **45%** of students (n=287) were double-majoring or completing a major/minor combination in Psychology and Human Development. Although students are advised to not double-major or pursue a major/minor combination in Psychology and Human Development in lieu of exploring other options across campus, few students listen to this advice. If this proposal is accepted, students will have increased opportunity to double-major or minor in other areas. It is anticipated that this change will help other areas of campus to grow, as students will have increased ability to choose additional academic plans.

Faculty Senate Old Business 4a 12/12/2018

Faculty Senate Document #18-07 – Approved 12/12/2018

RESOLUTION ON THE GRANTING OF DEGREES

Be it resolved that the Faculty Senate of the University of Wisconsin-Green Bay, on behalf of the Faculty, recommends to the Chancellor and the Provost and Vice Chancellor of Academic Affairs of the University that the students certified by the Registrar of the University as having completed the requirements of their respective programs be granted their degrees at the Fall 2018 Commencement.

Faculty Senate New Business 5a 12/12/2018

Faculty Senate Document #18-08 – Approved 12/12/2018

Resolution to Continue the “Shared Governance Transition Year” for the Branch Campuses through the 2020-21 Academic Year

WHEREAS, the former two-year campuses at UW-Marquette, UW-Manitowoc, and UW-Sheboygan joined UW-Green Bay (four campuses, one university) on 1 July 2018, and

WHEREAS, after one year of the four campus, one university model, those campuses have expressed their desire for guaranteed representation in shared governance in the Faculty Senate and University Committee,

THEREFORE, be it resolved that each of the three Branch Campuses shall elect one faculty member from their respective campuses to serve on the Faculty Senate through the 2020-2021 academic year, and

Be it resolved that one of those three Branch Campus faculty members elected to serve on Faculty Senate shall be also be selected to serve on the University Committee through the 2020-2021 academic year, and

Be it resolved that one faculty member from among the three Branch Campuses shall be elected to serve on the Committee on Committees and Nominations through the 2020-2021 academic year.

Faculty Senate New Business 5b 12/12/2018

**Endorsement of the Faculty Representatives' Response to
UW System's Program Productivity Monitoring Policy**

To: Carleen Vande Zande-Associate Vice President UW System Administration Office of Academic Programs & Educational Innovation

We, the undersigned Faculty Representatives, submit the following revision to the SYS 102_6.3 Program Productivity Monitoring Policy

Proposal- the Faculty Representatives of the UW System campuses recommend that final decisions regarding program closure occur through shared governance at the campus level.

We recommend that all decision processes regarding the closure or continuation of a program should remain at the campus level. We believe that local shared governance and local campus administration should be the only ones empowered to initiate the process of program closure.

We also recommend specific revisions regarding the following:

1. Use of “hard” cut-off measure (average of 5 graduates/year over 5 years): Using a metric that doesn't take into account student enrollment on a given campus is mathematically unsound.

Our first area of concern is the use of a “hard” cut-off (numbers) measure to determine the value of a program (i.e., programs are considered underperforming). One recommendation is that campuses choose the metric for their campus (similar to the performance based funding metrics) to measure program productivity. The existing proposed measurement does not take into account campus size, campus budgets, nor does it take into account the possibility that a program can exist without any actual FTE cost to the campus itself.

We recommend developing multiple measures from which campuses can select. These measurements should include, but would not be limited to, the following: percentage of campuses within the UW System that currently offer the program; the ratio of majors/FTE (i.e., cost); graduates as a percentage of the overall graduating class; and the number of general education student credit hours/FTE.

2. In addition to our concerns regarding the metric, the timeframe in the current draft is far too short for a program to successfully meet the new target goals.

The following timeframe is recommended as the current timeframe does not allow programs/campuses sufficient time to increase the number of graduates. Even if a program were to make a substantial effort to recruit new majors as soon as they are informed they are under consideration for closure, and thus eventually increase the number of graduates, three years is

simply not enough time for said new students to actually matriculate and improve the program graduation average. We recommend that the time frame for remediation be increased from 3 to 5 years. For example:

- a. Year 0- identification of programs do not meet the identified metric,
- b. Year 1- Action Plan is developed to increase enrollment,
- c. Year 2-4- campuses implement the plan to increase enrollment in the major.
- d. Year 5- Program performance (e.g., # of graduates) is evaluated

3. Campus-level Appeal Process- with the campuses retaining the decision making authority, it is imperative that the campuses identify an appeal process that involves shared governance.

We recognize that System should play a role in ensuring campuses are offering the appropriate array of programs, but we must also recognize that curricular control lies within the hands of the faculty, not the System administration. We would also argue that local campus governance bodies and administrations are far better equipped than System administration to effectively determine the long-term viability of the programs housed on their respective campuses. Shared governance works best when all parties involved trust each other to do what is best for both own campuses and for the System as a whole.

Sincerely,

Christine Vandenhouten PhD, RN
Chairperson Nursing & Health Studies
Faculty Representative to the University of Wisconsin System
University of Wisconsin – Green Bay

Nick Sloboda
Chair, Department of World Languages, Literatures, and Cultures
Faculty Representative to the University of Wisconsin System
University of Wisconsin – Superior

Kristian O'Connor, Ph.D.
Chair, University Committee
University of Wisconsin – Milwaukee

Geoffrey D. Peterson
Chair of the Department of Political Science
Faculty Representative to the University of Wisconsin System
University of Wisconsin-Eau Claire

Stuart Hansen
Associate Professor of Computer Science
University of Wisconsin –Parkside

Stephen P. Bentivenga
Faculty Senate President
Faculty Representative to the University of Wisconsin System
Professor, Department of Biology
University of Wisconsin Oshkosh

Charles Cornett
Faculty Representative to the University of Wisconsin System
University of Wisconsin-Platteville

Mialisa A. Moline, Ph.D.
Chair of Faculty Senate and
Faculty Representative to UWS for
University of Wisconsin - River Falls

Petre Nelu Ghenciu
Professor of Mathematics
Chair, Faculty Senate UW-Stout

David L. Simmons, Ph.D.
Chair, Faculty Senate
Associate Professor, Philosophy & Religious Studies
University of Wisconsin—Whitewater

Mary R. Bowman
Chair of Common Council
Faculty Representative to the University of Wisconsin System
University of Wisconsin – Stevens Point

David L. Simmons, Ph.D.
Chair, Faculty Senate
Associate Professor, Philosophy & Religious Studies
University of Wisconsin—Whitewater

The Following Faculty Senates have endorsed this proposal:

University of Wisconsin –Parkside
University of Wisconsin – Milwaukee
University of Wisconsin-Platteville

Cc: System President Ray Cross,
Karen Schmitt VP ASA
Laura Dunek, Special Assistant

Faculty Senate New Business 5d 12/12/2018

Faculty Senate Document #18-10 – Approved 12/12/2018

University of Wisconsin-Green Bay

Faculty Senate Resolution

in Support of

**THE PROPOSAL BY THE FACULTY REPRESENTATIVES TO UW-SYSTEM
ADDRESSING SMALL PROGRAM CLOSURE POLICY**

WHEREAS, the Chancellor of each institution in consultation with their faculties shall be responsible for designing curricula and setting degree requirements (WISCONSIN STATUTE 36.09[3]); and

WHEREAS, the Faculty shall have the primary responsibility for advising the chancellor regarding academic and educational activities (WISCONSIN STATUTE 36.09[4]); and

WHEREAS, the proposed UW-System policy regarding small programs (SYS 102_6.3 Program Monitoring Policy) would supersede the authority of the Chancellor and faculties; and

WHEREAS, the faculty representatives to UW System have proposed alternative reasonable policies that would keep intact local campus control of small programs.

BE IT THEREFORE RESOLVED that the Faculty Senate of the University of Wisconsin-Green Bay fully and heartily endorses and supports the proposal by the faculty representatives to UW-System addressing the small program closure policy.

BE IT FINALLY RESOLVED, that upon passage, a copy of this resolution be sent to UW System President Ray Cross and Chancellor Miller.

Faculty Senate New Business 5e 12/12/2018

**REQUEST FOR AUTHORIZATION TO IMPLEMENT A
COLLABORATIVE ONLINE
MASTER OF SCIENCE DEGREE
IN
APPLIED BIOTECHNOLOGY**

ABSTRACT

The University of Wisconsin-Madison, as lead campus and on behalf of the defined academic partners, proposes to establish a collaborative online Master of Science in Applied Biotechnology (M.S. in Applied Biotechnology). The development of this program responds to the recognized growth of the Biotechnology industry and corresponding increased demand for well-qualified professionals in the field. The program represents a comprehensive, multidisciplinary curriculum that prepares students to advance their careers and pursue their academic ambitions through leadership and management positions within the biotechnology field. Defined core courses provide students with a solid foundation in biotechnology, leadership, ethics, research, communications, product development, quality control, and regulatory and compliance practices. In addition, the program offers three unique tracks to assist students in tailoring their coursework to meet their career goals: quality assurance and compliance; business management; and research and development. The M.S. in Applied Biotechnology represents a fully online, asynchronous curriculum comprised of 31 credits to include a culminating, project-based Capstone experience. Graduates of the program will gain the core competencies required to manage functions across a wide range of biotechnology industries.

PROGRAM IDENTIFICATION

Institution Name

University of Wisconsin-Green Bay

University of Wisconsin-Madison

University of Wisconsin-Oshkosh

University of Wisconsin-Parkside

University of Wisconsin-Platteville

University of Wisconsin-Stevens Point

University of Wisconsin-Stout

University of Wisconsin-Whitewater

With administrative and financial support from the University of Wisconsin System – Division of Continuing Education, Outreach and E-Learning (referred hereafter as CEOEL)

Title of Proposed Program

Master of Science in Applied Biotechnology

Degree/Major Designations

Master of Science

Mode of Delivery

Collaborative and Distance Education (100% Online)

Projected Enrollments and Graduates by Year Five

Table 1 represents enrollment and graduation projections for students entering the program over the next five years and is based, in part, on experience with comparable University of Wisconsin collaborative online programs. It is assumed that the majority of students will enroll part-time. As shown, we are anticipating strong enrollments with 340 students enrolling in the program and 48 students having graduated from the program by the end of year five. Based on experience with similar collaborative online graduate-level programs, it is anticipated that the annual attrition rate will be moderate—approximately 20 percent—for students moving through the M.S.in Applied Biotechnology program.

Table 1: Five-Year Degree Program Enrollment Projections

Students/Year	Year 1	Year 2	Year 3	Year 4	Year 5
New Students	35	70	75	80	80
Continuing Students		31	83	126	152
Total Enrollment	35	101	158	206	232
Graduating Students	0	0	4	16	28

Tuition Structure

Program tuition for the M.S. in Applied Biotechnology program will be set at \$850/credit for 2019–2020 and will be identical at all eight partner institutions. The tuition rate is based on market demand estimates as well as comparisons with other master’s level online programs offered by the University of Wisconsin (UW) System and nationally, and will be charged outside the credit plateau, if approved by the Board of Regents. Students will not be required to pay any additional fees as part of the program, except for the cost of their books. There is no tuition differential for out-of-state students. This tuition pricing approach and structure follows the current UW System pricing guidelines for distance education programs.¹⁷

Department or Functional Equivalent

This is a highly collaborative, interdisciplinary program that follows a home campus model. Students will select and enroll at a home campus from which they will receive academic

¹⁷ University of Wisconsin System (2001). *UW System Administrative Policy 130: Programming for the Non-Traditional Market in the University of Wisconsin System*. Retrieved from <https://www.wisconsin.edu/uw-policies/uw-system-administrative-policies/programming-for-the-non-traditional-market-in-the-uw-system/>.

supports and the degree is conferred. The schools/colleges and departments that will offer courses for this program at each institution are as follows:

- UW-Green Bay, College of Science, Engineering and Technology, Biological Science Department
- UW-Madison, School of Medicine and Public Health, Department of Cell and Regenerative Biology
- UW-Oshkosh, College of Business, Management and Human Resources Department
- UW-Parkside, College of Natural and Health Sciences, Chemistry Department
- UW-Platteville, College of Business, Industry, Life Science & Agriculture, Department of Biology
- UW-Stevens Point, College of Letters and Science, Department of Biology
- UW-Stout, College of Science, Technology, Engineering, Mathematics and Management, Biology Department
- University of Wisconsin-Whitewater, College of Letters and Science, Biological Sciences Department

CEOEL Division of Continuing Education, Outreach and E-Learning will provide administrative and financial support for the program. UW-Madison will serve as the lead institution representing the proposed collaborative program when seeking authorization from UW System and program accreditation through the Higher Learning Commission (HLC).

Proposed Date of Implementation

September 2019 pending approval of the Higher Learning Commission (HLC)

DESCRIPTION OF PROGRAM

Overview of the Program

The M.S. in Applied Biotechnology represents a fully online, asynchronous curriculum comprised of 31 credits to include six core courses, three concentration or track courses, a Capstone preparation course and a project-based Capstone course. Students will be able to complete more than one program track. Graduates of the program will gain the core competencies required to manage functions across a wide range of biotechnology industries. UW-Green Bay, UW-Madison, UW-Oshkosh, UW-Parkside, UW-Platteville, UW-Stevens Point, UW-Stout, and UW-Whitewater will offer the program jointly. The required capstone course, which represents the culminating experience in the program, will provide students with the opportunity to apply skills acquired from coursework through a project-based experience in their concentration area.

Student Learning Outcomes and Program Objectives

Students completing the M.S. in Applied Biotechnology degree will gain the following core competencies and learning outcomes:

Competency A – Demonstrate professional and scientific communication appropriate for biotechnology settings

Upon completion of the program, students will be able to:

- Select the most appropriate modalities, methodologies, tools, and practices to communicate complex ideas effectively across diverse audiences
- Demonstrate effective listening, written, verbal, and nonverbal communication skills
- Construct and deliver effective professional presentations

Competency B – Demonstrate comprehensive understanding of organizational processes and product development pipelines

Upon completion of the program, students will be able to:

- Evaluate and describe systems of product research, development, and production
- Analyze the potential for commercialization for innovations within the biotechnology industry
- Critique and integrate changes to an existing product development pipeline
- Compare organizational processes employed by biotech firms

Competency C - Distinguish among diverse methods and technologies and their applications in biotechnology

Upon completion of the program, students will be able to:

- Compare and contrast emerging with existing technologies
- Exhibit strong technical knowledge to evaluate and choose appropriate technologies
- Demonstrate the ability to read, interpret and apply scientific literature
- Demonstrate competency in data analyses and statistics

Competency D – Demonstrate strategic leadership and decision-making skills necessary in biotechnology.

Upon completion of the program, students will be able to:

- Compare best practices in leadership required for executive action
- Demonstrate the skills and processes that maximize team performance to successfully meet goals both as an effective team member and leader
- Identify and provide evidence-based solutions to problems in compliance, development, personnel, and finance

Competency E – Appraise the current regulatory, quality control, and legal frameworks that impact biotechnology

Upon completion of the program, students will be able to:

- Demonstrate understanding of relevant domestic and global regulatory agencies, laws, policies and guidances
- Assess intellectual property considerations in biotechnology
- Justify the importance of quality and risk management in biotechnology and explain current good practices

Competency F – Demonstrate professional and ethical behaviors that foster positive and productive interactions in diverse biotechnology settings

Upon completion of the program, students will be able to:

- Recognize, foster and apply principles of ethical and professional conduct
- Identify professional opportunities and personal success by acquiring knowledge, networking, and other career development strategies
- Understand cultural differences that exist in the global marketplace

Program Requirements and Curriculum

Admission requirements for the M.S. in Applied Biotechnology program will include a Bachelor's degree and a 3.0 undergraduate GPA. Program prerequisites will include General Biology and General Chemistry. Students will be required to satisfy all program prerequisites prior to formal admission into the program. There will be no required aptitude tests for admission in the program (e.g. GRE, GMAT, other). Students must maintain an overall cumulative GPA of 3.0 or better to graduate.

Table 2 illustrates the 31 credit fixed curriculum for the proposed M.S. in Applied Biotechnology program. Students will complete 10 three-credit courses and a one-credit capstone preparation course to satisfy degree requirements.

Table 2: M.S. in Applied Biotechnology Program Curriculum

Course Number	Course Title	Number of Credits	Campus
Core Courses			
ABT 700	Principles of Biotechnology	3	Platteville
ABT 705	Ethics, Safety, and Regulatory Environments in Biotechnology	3	Green Bay
ABT 710	Professional and Technical Communication in Biotechnology	3	Stout
ABT 715	Techniques in Biotechnology	3	Parkside
ABT 720	Experimental Design and Analysis in Biotechnology	3	Whitewater
ABT 725	Leadership in Organizations	3	Oshkosh
Track 1 – Quality Assurance and Compliance			
ABT 735	Quality Control and Validation	3	Madison
ABT 740	Regulatory Practice and Compliance	3	Madison

ABT 745	Industrial Applications in Regulatory Affairs	3	Green Bay
Track 2 – Business Management			
ABT 750	Biotechnology Marketing and Entrepreneurship	3	Parkside
ABT 755	Global Operations and Supply Chain Management	3	Whitewater
ABT 760	Quality and Project Management	3	Stout
Track 3 - Research and Development			
ABT 765	Assessing Innovation in Biotechnology	3	Platteville
ABT 770	Product Development	3	Stevens Point
ABT 775	Tools for Data Analysis	3	Oshkosh
Capstone Courses			
ABT 789	Pre-Capstone	1	Stevens Point
ABT 790	Capstone	3	Stevens Point

Assessment of Outcomes and Objectives

The assessment of student learning outcomes for the M.S. in Applied Biotechnology degree program will be managed by the academic program directors from each partner campus as well as the CEOEL program manager. This assessment team will identify and define measures and establish a rubric for evaluating how well students are meeting the program's six competency areas. The team will also identify what data will be needed and serve as the collection point for the data. As a part of the course development process, the assessment team will determine which examples of student work will be most appropriate to demonstrate competency.

The team will receive data collected from institutions by CEOEL each semester. CEOEL will also monitor data on new enrollments, retention rates, and graduation rates. The assessment team will compile these various sources of data and complete annual reports summarizing the data, the assessment of the data, and decisions regarding improvements to the curriculum, structure, and program delivery. The report will be shared with the faculty of the program and other stakeholders at each partner institution. The assessment team is responsible for ensuring that recommendations for improvement are implemented.

Diversity

The collaborative online program model was established, in part, to increase access to higher education for primarily nontraditional students and to maximize the educational benefits of diversity. Many students from underrepresented minority groups, first-generation Americans, first-generation college students, and low-income students are included in the definition of non-traditional students. Nontraditional students may have family or work responsibilities that prevent them from attending school in traditional formats. The online delivery format will provide opportunities to those students who are time and place bound, and do not reside within close proximity to an existing UW institution. The program design recognizes that non-traditional students come to the learning environment from diverse backgrounds, with unique knowledge and experiences, and looking for opportunities to share that knowledge with others. The strength of this program and the success of our students is, in large part, based on our ability to attract and retain a diverse adult student audience.

CEOEL has several initiatives currently underway to attract more students from underrepresented groups into the UW System. Through UW HELP, brochures and materials specific to Hispanic and Hmong students are sent to those respective potential students groups. The program manager for the M.S. in Applied Biotechnology program employed by CEOEL will conduct outreach, working with employers to encourage and support the education of their employees, especially focusing on underrepresented minorities. In addition, a program advisory board (described below) will provide support in this area by helping the program extend its reach to diverse prospective students and communities.

Ensuring that diverse student populations enter the M.S. in Applied Biotechnology program is important, but equally important is providing the support services that enable all students to feel comfortable and to succeed. The CEOEL success coach will work closely with all students to self-identify barriers to their success to either help them overcome those barriers directly or to point them to home campus and other resources that will be of assistance to them. CEOEL will maintain online student environments that will allow individuals from diverse ethnic backgrounds to connect with other students over both cultural similarities and over programmatic interests to help build points of commonality and understanding. Social media opportunities for student connection will be made available through Facebook, Twitter, and LinkedIn, to name a few. Simply put, an essential goal of this program is to increase both the access for diverse audiences to this degree and the success of those students once they enter the program.

While the proposed degree does not project a significant number of new faculty and staff, the partner institutions will continue to be committed to recruiting a culturally diverse campus community. The program will work toward achieving equity in the gender distribution of faculty, and faculty of color will be encouraged to participate in this program.

Collaborative Nature of the Program

The M.S. in Applied Biotechnology is a collaborative degree program that benefits from the shared academic and administrative resources of all partnering institutions. UW System

encourages and supports system-wide cooperative and collaborative efforts among institutions as a means to develop need-based programs of mutual interest, benefit, and value to all partners; add to the existing base of quality academic offerings within the System; leverage limited resources; and, more effectively and efficiently address the needs of both traditional and nontraditional learners, as well as employers within the state. This degree, like other collaborative programs currently offered within the System, provides each of the participating academic institutions the ability to offer a high-quality, sustainable graduate program without a requirement to extend significant local resources or a risk of compromising existing programs.

Faculty and staff from eight partner institutions (UW-Green Bay, UW-Madison, UW-Oshkosh, UW-Parkside, UW-Platteville, UW-Stevens Point, UW-Stout, and UW-Whitewater) collectively developed and approved the program curriculum, program competencies, student learning outcomes, and admission requirements. These partner institutions will be responsible for identifying qualified faculty and instructional staff to deliver coursework and assess student learning and conduct program review.

Each partner institution will appoint an academic program director who will work with their respective academic units to implement the program. Collaboratively, these directors along with a designated campus continuing education representative or designate and the CEOEL program manager will comprise the program workgroup. This team will oversee the ongoing growth, development and performance of the M.S. in Applied Biotechnology degree program. The committee will meet quarterly in person and via teleconferencing, as needed. Instructional development and delivery of the online courses will be supported and hosted by CEOEL. This cohesive development and offering of courses will ensure students have a consistent experience even though the faculty reside at multiple partner institutions.

Students will choose a home institution from where their degree will be conferred. All courses will be listed in each of the partner institutions course catalog and registration system. The student record will be maintained in the student information system of the home institution. Local program stakeholders to include continuing education staff, academic support office leads, host department representatives, and instructional, and business office personnel from each institution will also meet biannually to review local processes and concerns, and to make adjustments as necessary. Program evaluation regarding the collaborative nature of the model will help assess processes critical to the success of the collaboration, such as the financial model, marketing, student recruitment and advising, admission and enrollment processes and trends, and curriculum and course design. CEOEL will regularly report on program performance. All partners will share equally in the net revenues from the program, once realized.

CEOEL will coordinate external engagement, input, and advice through a Program Advisory Board consisting of 12 to 15 representatives from industry who will also serve as advisors, ambassadors and referral agents to the program. The academic directors from each of the eight partner institutions will also hold seats on the Board. The M.S. in Applied Biotechnology Advisory Board will meet biannually. The board members will be asked to help host students working on capstone projects, and to help create school-to-work transitions so that as students graduate from the program, they will move to gainful employment. The program

manager will provide assistance to the board, coordinate meetings, and so on. The academic directors of the program and program manager will engage with board members and ensure that the board is connected to the program in constructive and positive ways. Board meetings will provide opportunities to present program progress and successes, and to gather feedback regarding changes in the industry and how those changes may affect program graduates. The meetings will also help to ensure that the program and curriculum stays relevant to trends in the field.

One of the many recognized and significant benefits of the collaborative program model is the extended reach or scope of contacts provided through the involvement of multiple academic partners located within unique markets throughout the state. Our academic partners have established significant relationships, reputation, and strength-of-brand within their individual regions, which has proven valuable in identifying regional interest in the program and will help raise awareness of this opportunity throughout the state and expand program reach. This will ultimately result in greater success in reaching and serving students throughout the state, supporting student and regional business needs and interests, promoting program growth, and positioning the program for sustainability.

It is anticipated that the program will establish several unique partnerships with various companies that represent products and tools commonly used by biotechnology professionals that may be incorporated into the curriculum/courses. These connections will serve to better prepare and position students for success in the field upon graduation as they put their new knowledge to work.

Projected Time to Degree

Based on experience with similar collaborative offerings within the System and the typical adult online student profile, it is assumed that most students will enroll part-time and take an average of three to four courses per year. At this rate, the majority of students would complete the program within 3 to 4 years. Students may enter the program for the spring, summer, or fall semester. Students will be encouraged to take courses in sequence and as influenced by defined internal course prerequisites. The capstone, which represents the culminating experience for students, must be taken in the final semester of study.

Program Review

Program review and evaluation occur on a more frequent schedule than in traditional academic programs. As previously discussed, assessment relative to student learning will be reviewed annually. The M.S. in Applied Biotechnology program will go through an internal 3-year review focusing on program, administrative and fiscal matters. In addition, the program will conduct a comprehensive 5-year review. Academic directors, faculty, and administrators from all partners will have input into programmatic changes and upcoming needs. CEOEL, as the fiscal agent for this program, will manage resources to ensure that funds are available to support scheduled program reviews and to invest in the program as deemed necessary and valuable. The decision about how to invest in the program will be made collaboratively by all partners, as will recommendations related to the continuation of the program. Data collected, analyzed and

reported as part of the above-defined processes will be shared with each of the partner institutions for inclusion in their unique local comprehensive academic program review processes.

Accreditation

Partners will be securing authorization to offer this program as a consortial online degree from the Higher Learning Commission, the regional accrediting body for all eight partner institutions.

JUSTIFICATION

Rationale and Relation to Mission

The online M.S. in Applied Biotechnology degree program contributes directly to the institutional mission of the University of Wisconsin System which clearly defines a commitment *to discover and disseminate knowledge, to extend knowledge and its application beyond the boundaries of its institutions*. The degree addresses a recognized high-need area as supported by research that included extensive input from employers and industry representatives throughout the state. Students will develop advanced knowledge and skills that will enable them to serve an important function and role within the biotechnology workforce. It is a degree targeted at adult and nontraditional students possessing a bachelor's degree and thus broadens access for alumni and others to advanced study within the UW System. The M.S. in Applied Biotechnology also supports the institutional missions of the eight academic partner institutions by building upon the undergraduate experience of working adults in the state and region by advancing proficiencies in communication, critical thinking, problem solving, analytical, leadership, teamwork, and collaboration skills. Furthermore, this multidisciplinary degree will serve to build bridges between disciplines and develop students' abilities to think in terms of systems and interrelationships, and within complex organizations. Strong support for the degree has already been realized through interactions with leaders from over 30 biotechnology companies and professional associations within the state and region.

Institutional Program Array

There is consensus among the eight academic partners that the M.S. in Applied Biotechnology degree program will serve as a valuable complement to the existing graduate program array at each of their institutions and will not compete with any program currently offered. Statements of support have been provided by each of the partner campuses as follows:

At UW-Green Bay, the proposed online MS in Applied Biotechnology Degree Program complements and integrates well with programs within the College of Science, Engineering, and Technology, including Human Biology and Natural and Applied Sciences. UW-Green Bay has a strong record of academic success in preparing individuals for careers in biotechnology-related fields such as biology, chemistry, engineering, business, and pre-professional human and veterinary medicine. Graduates from UW-Green Bay are highly competitive for careers in industry or government, as well as graduate or professional education programs. Presently our

institution does not offer a graduate level program in Biotechnology; however, students would benefit from this program for placement or advancement in biotechnology careers.

At UW-Madison, the Department of Cell and Regenerative Biology in the School of Medicine and Public Health offers a face-to-face, two-year Master of Science in Biotechnology degree with traditional fall and spring semesters (no summer courses). This biotechnology program was designed for working professionals and focuses on life science product development and commercialization, integrating science, law, regulatory, business, and ethical issues in biotechnology. It also includes intensive hands-on laboratory courses in the multi-disciplinary curriculum. The course structure is such that students can continue to work full-time while completing the program, which culminates in an independent capstone thesis project. The MS in Applied Biotechnology will complement the existing program through its fully online delivery and unique specialization tracts not covered as in depth by the existing program. The Applied Biotechnology program also provides a way to grow UW–Madison’s commitment to biotechnology education, and serve a new group of students unable to travel to campus for the existing program. The extended reach to address all of the Wisconsin biotechnology related communities fits well with the Wisconsin Idea.

At UW-Oshkosh, the M.S. in Applied Biotechnology program will enhance our current portfolio of graduate programs, including our Master in Business Administration (MBA) and Executive Master of Business Administration (EMBA) by offering students another avenue for career advancement. The course structure and capstone thesis project strongly aligns with our current MBA focus on full-time working adults. The program also strongly aligns with our expertise in Human Resources and Management, including strategy, leadership, creativity and innovation, ethics and social responsibility, change management, project management and entrepreneurship.

At UW-Parkside, the M.S. in Applied Biotechnology program will fit nicely with our array of current collaborative programs. Currently, the College of Natural and Health Sciences houses five master’s programs including M.S. in Applied Molecular Biology, Clinical Mental Health Counseling, Health and Wellness Management, Sport Management, Sustainable Management (online). The proposed Applied Biotechnology program will provide another online M.S. program for students interested in pursuing further education in the biological sciences; however, these programs have distinct outcomes. Currently, the Applied Molecular Biology program provides an intensive laboratory experience without the management, regulatory, and product development aspects provided in the Applied Biotechnology program. Thus, it is possible that students will wish to pursue both the Applied Biotechnology and Applied Molecular Biology degrees sequentially, or even concurrently. Furthermore, while other master’s programs on campus, including the college’s own Sustainable Management program, teach some aspects of business, marketing, and management similar to those provided by the Applied Biotechnology program, the focus of these existing programs falls outside of the specific requirements of the biotechnology industry.

At UW-Platteville, a graduate degree-awarding program in the biological sciences does not currently exist. Both an emphasis in molecular/genetics biology as well as a minor in

biotechnology are popular educational tracts, with many alumni currently employed in the biotech sector. The M.S. in Applied Biotechnology degree will complement our existing program by continuing to support Platteville alumni as they advance their careers.

At UW-Stevens Point, the proposed MS in Applied Biotechnology strongly aligns with its current program array within the College of Letters and Science. Our interdisciplinary undergraduate major in Biochemistry has a history of academic success preparing individuals for careers in biotechnology, molecular biology, and biochemistry, as well as preparing them for graduate and professional schools. Therefore, the MS in Applied Biotechnology would nicely complement our Biochemistry program.

At UW-Stout, the proposed MS in Applied Biotechnology strongly aligns with the designation of Wisconsin's Polytechnic School and its diverse array of undergraduate and graduate programs. With the new B.S. in Applied Biochemistry and Molecular Biology, the proposed MS in Applied Biotechnology provides continued career advancement in biotech industries to serve northwestern Wisconsin. Moreover, curriculum offered by Stout for the proposed degree draws on the expertise of faculty in our B.S. in Professional Communication and Emerging Media, M.S. in Technical and Professional Communication, and seven undergraduate and three graduate programs in management.

At UW-Whitewater, the proposed M.S. in Applied Biotechnology complements the strong undergraduate program in Biological Sciences, the Integrated Science Business major and the new bioinformatics minor. While these undergraduate programs have successfully prepared students for entry-level careers in biotechnology laboratories, the institution does not currently offer graduate-level programs in Biotechnology for students to pursue. This program, therefore aligns with the University's Academic Plan goals for graduate programs that forge new regional partnerships and that address regional employer workforce needs using innovative approaches to design and deliver courses in order to reach a broad range of audiences.

Other Programs in the University of Wisconsin System

UW–Madison, an academic partner and lead campus in this program, currently offers the only M.S. in Biotechnology degree within the University of Wisconsin System. The existing Master of Science in Biotechnology Program is a cohort-based program with students moving through the coursework as a group in a defined sequence. It offers a 32-credit hands-on laboratory curriculum and is delivered evenings and weekends in a face-to-face format, which allows students to continue to work fulltime. The program intertwines the business, science, law, regulatory, and ethical aspects of biotechnology to highlight the issues involved in life science product development and commercialization, including therapeutics, diagnostic testing and devices, agricultural, and tool biotechnology. Given the depth and breadth of faculty and guest speakers, and the connection with local and regional biotechnology companies, the program also offers students extensive networking and career development opportunities. The program focuses on effective communication and critical thinking skills.

Unique features of the proposed collaborative online M.S. in Applied Biotechnology degree program include its fully asynchronous online delivery format, statewide focus consistent with the geographical locations of the eight academic partners, and unique primary target

audience to include mid-level managers currently working in diverse biotechnology and related settings who require more flexibility as provided through a fully online academic program. The audience may also include those with a science background who reside in areas distant from Madison that want to expand their knowledge of the biotechnology industry so they can enter the field and expand their career options.

Need as Suggested by Current Student Demand

It is anticipated that the online M.S. in Applied Biotechnology will predominantly attract adult and nontraditional students who possess a minimum of a completed bachelor's degree, currently work in the field, and have a desire to continue their education toward a master's degree primarily to expand knowledge and specialized skills in the field and for career advancement. Student demand for this degree is greatly influenced by market demand as indicated by current and future employment opportunities within the Biotechnology industry (see Market Demand data below). Similar to other need-based collaborative online programs developed and administered through CEOEL, the M.S. in Applied Biotechnology represents a program designed to satisfy a recognized workforce gap within the state and region as defined through research conducted and/or commissioned by CEOEL to include industry focus groups and interviews with biotechnology professionals to include those self-identifying as prospective students for a M.S. in Applied Biotechnology degree program.

Need as Suggested by Market Demand

In early 2018, CEOEL commissioned the *Center for Research and Marketing Strategy* at the University Professional and Continuing Education Association (UPCEA) to conduct a Feasibility Analysis for the possible development of an online Master of Science degree in Biotechnology. The analysis included a review of biotechnology trends, occupational demographics, internet and library scans, and in-depth interviews with key opinion leaders from the biotechnology field representing a variety of organizations in several different states. Additionally, UPCEA conducted a secret shopper survey of eight potential competing programs. Key findings from the report include the following:

- The demand for talented biotechnology professionals is at an all-time high. This demand is expected to continue to grow throughout 2018 and beyond.
- There is consensus among the opinion leaders interviewed that there is a significant need for a master's in biotechnology that prepares working biotechnology professionals to succeed in leadership and management positions within the industry.
- Opinion leaders identified support for an online program based, in part, on its accessibility and flexibility for working professionals.
- The current master's in biotechnology marketplace is competitive throughout the United States. Nationally, there are at least five competing institutions that offer their master's level biotechnology program through a hybrid or online delivery.
- Within the region contiguous to the University of Wisconsin there are at least five competing programs that offer a master's level degree in biotechnology. However, none of these programs are offered through online delivery. In addition, there are no competing online programs located in Wisconsin.
- Nationally, biotechnology professionals highlighted in the occupational analysis are projected to experience an annual growth rate of 1.8% over the next 10 years.

- A favorable environment exists for launching the online graduate degree program in Applied Biotechnology.¹⁸

A more extensive occupational and demographic analysis revealed that over the past five years, biotechnology professionals in Wisconsin have experienced an average annual growth rate of 0.8%, less than the national average for biotechnology professions (1.2%). Forecasted growth rates for all biotech occupations are either equivalent to the national average or higher, ranging from 0.7% to 1.1% annually on the national scale. Additionally, biotech professionals have a low unemployment rate (3.1%), significantly lower than the national average of 4.3% for all occupations.¹⁹

¹⁸ University Professional and Continuing Education Association (UPCEA), Center for Research and Marketing Strategy (April 2018). *Feasibility Analysis: Online M.S. in Biotechnology*. Commissioned by the University of Wisconsin-Extension, Division of Continuing Education. Outreach and E-Learning.

¹⁹ <https://data.bls.gov/timeseries/LNS14000000>

UNIVERSITY OF WISCONSIN COLLABORATIVE DEGREE

**COST AND REVENUE PROJECTION NARRATIVE
MASTER OF SCIENCE (M.S.) IN APPLIED BIOTECHNOLOGY**

**University of Wisconsin-Green Bay
University of Wisconsin-Madison
University of Wisconsin-Oshkosh
University of Wisconsin-Parkside
University of Wisconsin-Platteville
University of Wisconsin-Stevens Point
University of Wisconsin-Stout
University of Wisconsin-Whitewater**

**With administrative and financial support from the University of Wisconsin System –
Division of Continuing Education, Outreach and E-Learning (referred hereafter as
CEOEL)**

Introduction

The M.S. in Applied Biotechnology will be implemented as a collaborative program. Each UW partner institution will provide qualified faculty, develop curriculum, deliver a share of the instruction, assess student learning, and conduct academic program review. Partner institutions will also provide local administrative support and direct academic and student support services. CEOEL will provide the administrative management and resources to provide ongoing implementation support to convene academic, industry and government expertise to discuss relevant curriculum; provide instructional design and media support services to faculty in the development and delivery of online courses; market and recruit students to the program; provide student services from admissions through graduation; and serve as the fiscal agent for the program to include accounting, budgeting, forecasting, analysis, and reporting.

A zero-based budgeting model was used to create the cost and revenue projections. While GPR and other program revenue sources will be used to establish the program, the program is expected to be self-supporting through tuition revenues within three to five years of enrolling students, and thus leading to revenue sharing among the partner campuses.

Section I – Enrollment

Approximately 35-80 new students will enroll in the program each year. Retention is expected to be approximately 80% based on a review of similar programs. It is anticipated the vast majority of students will enroll part-time. Further, tuition revenues will be based on projected credit and course enrollment, and charged outside of the credit plateau.

It is difficult to estimate the student FTE enrollments, given the anticipated course enrollment patterns of the non-traditional students. Based on enrollment data for other collaborative online programs, the vast majority of students will enroll part-time. Further, students may vary the number of courses in which they enroll each term. For the purposes of this proposal, headcount are converted to FTE by identifying the total credits hours enrolled per student (headcount) each year and dividing this number by 24 credit hours. Twelve credit hours

per each fall and spring semester is used by the UW System to convert headcount to student FTE.²⁰ Based on this formula, the mean conversion quotient calculated over five years is 0.36.

Section II – Credit Hours

Nine courses will be offered/taught in the first academic year. Beginning in year two, each of the 16 courses will be offered and taught at least once during the academic year, and offerings will increase as enrollment grows as reflected in the *Cost and Revenue Projection Spreadsheet*. It is anticipated that each student will enroll in 3-5 courses each year. Projected total credit hours represent projected student course enrollments multiplied by 3 credit hours per course.

Section III – Faculty and Staff Appointments

The FTE faculty and instructional staff in this section reflect contributions that will be made by several faculty and staff who hold current appointments at one of the partnering UW institutions. Faculty teaching workload that is contributed to the delivery of the proposed program will constitute a proportion of their workload. Faculty and instructional staff positions listed in this section reflect the aggregated FTE required to develop online course content, review course content, and deliver instruction and student evaluation. Each of the 16 courses will be developed over a 2-year period and will be reviewed and revised every 2 to 3 years.

Similarly, administrative staff figures reflect the aggregated FTE attributable to several positions. FTE administrative staff positions listed in this section represent, at CEOEL, the program manager and student coordinator, instructional media design staff, student technical support staff, and marketing and recruitment staff. At the partner institutions, these include an academic director and student services staff.

Section IV-Program Revenues

Revenue will accrue from tuition charged at the rate of \$850.00 per credit, and will not include segregated fees. Tuition revenue is calculated based on the total number of projected credit hours in which students will be enrolled.

Section V – Program Expenses

Salary and Fringe

Expenses are separated into academic and student support activities, as implemented at the UW partner institutions and administrative activities as provided by CEOEL. Note that, although the FTE listed in section III represent a number of current appointments, the FTE contribution at each institution will be accounted as a direct program expense.

Academic and Student Support (UW Partner campuses):

Each partner institution will receive \$20,000 per year, plus fringe at \$6,130, to support the assignment of an academic director to coordinate the program at their respective campus.

²⁰ See UW System Administration Accountability Dashboard technical notes available at <https://www.wisconsin.edu/accountability/access/>.

Faculty and instructional staff salary and fringe costs will be attributable to course development, revision, and instruction, and paid to faculty and staff as an ad hoc sum on a per course rate. The 16 online courses will be developed over 2-year period at a cost of \$5,000 per course developed, plus fringe. Courses will be reviewed and revised every 2-3 years, with 4 course revisions occurring each year at a cost of \$3,000 per revision, plus fringe. Online instructional salary costs are anticipated to be \$9,000 per course, plus fringe. Finally, each partner institution will receive \$5,000, plus fringe to cover the cost of student support services. All figures represent salary and fringe costs calculated at the rate of 30.65% of salary.

Administrative Support (CEOEL):

Administrative staff salary and fringe costs will be attributable to services provided by CEOEL. All figures represent salary plus fringe costs calculated at the rate of 34.42% of salary. Expenses include program management, online instructional design and media services, student technical support, and marketing and recruitment staff. A 0.50 FTE dedicated program manager and student coordinator will direct the overall delivery of the program at a cost of \$107,114 per year.

CEOEL places a high value and investment in the instructional design and media services provided to UW institutional partners as a means to assist faculty in development, review and revision of online coursework. Online courses offered in this program will be media rich and offer students a highly interactive learning experience. This award winning instructional design serves to best engage students, and subsequently support student retention and success. In turn, this student success record yields a return on investment that sustains the delivery of quality educational programming. Further, instructional design and media staff provide ongoing professional development and support to UW partner faculty and instructional staff who develop course content and provide instruction. Development of the 16 online courses will occur over a 2-year period at a cost of \$355,924 per year for the first two years, and thereafter the cost to support the review and revision will occur at a cost of \$86,956 per year. A help desk provides support to students for the learner management system and other technologies used in online coursework at a cost of \$10,599 per year. Finally, CEOEL will provide dedicated marketing and recruitment staff who will be assigned to the program at a cost of \$41,456 per year.

Other Direct Expenses

Projected expenses related to instructional supplies and expenses are estimated to be \$500 per course section taught. Each partner campus will receive \$7,000 per year to locally promote and market the program. CEOEL will broadly promote and market the program using search engine optimization, web sites, email, direct mail, and other strategies at an estimated cost of \$80,000 per year.

Section VI – Net Revenue

As part of the Adult Student Initiative, General Purpose Revenues (GPR) allocated to CEOEL will be used as temporary start-up funding to cover the expenses associated with the development and initial delivery of the proposed M.S. in Applied Biotechnology program. The projected contribution from these revenue sources will offset program losses reflected in section

VI. It is expected the program will become self-supporting from its tuition program revenues within five years of enrolling students.

UW partner campuses academic expenditures will initially be funded with 3-years of GPR from CEOEL. The GPR serves two purposes: 1) to pay for the costs associated with planning and developing the curriculum in year one and 2) paying the instructional and program support costs related to offering the degree program in years two and three. It is expected by the third year of enrolling students and beyond the program will be generating sufficient program revenues that will be used to pay for the academic expenditures at the partner campuses.

CEOEL's program support expenditures will be funded from a combination of program revenues and GPR and will eventually transition to being funded exclusively from program revenues as the program generates. Program deficits, expenditures greater than revenues, will be absorbed and funded with CEOEL carryforward funds. Program surpluses, revenues greater than expenditures, will be shared equally among the eight partners with the intent of those funds to be reinvested back into growing the program.

The collaborative partners will meet annually to review and discuss program trends and financial results. The partners will jointly develop and implement programming strategies aimed at growing the program and for the program to be self-supporting within three to five years of enrolling students, and thus leading to revenue sharing among the partner campuses.

Faculty Senate Old Business 4a 2/6/2019

Faculty Senate Document #18-12 – Approved 2/27/2019

FORM K

9/21/18

**UW-Green Bay
Academic Unit Actions**

Note: Due to the complexity of the proposed action and the limitations and inaccuracies of the current, published Form K, this Form is being created to track governance actions and approvals.

Academic Unit(s): Computer Science, Engineering, Mathematics and Statistics, Natural and Applied Sciences

Proposer: John Katers

Form Prepared By: John Katers

Action(s) Requested:

1. Move Computer Science (CS) in the College of Science, Engineering, and Technology (CSET) from Natural and Applied Sciences (NAS) to the Richard J, Resch School of Engineering (ENG).
2. Move Mathematics and Statistics (MATH) in the College of Science, Engineering, and Technology (CSET) from Natural and Applied Sciences (NAS) to the Richard J. Resch School of Engineering (ENG).

New Unit Information:

1. Natural and Applied Sciences will be composed of Biology, Chemistry, Environmental Science, Geoscience, and Physics and will begin operation July 1, 2019.
2. The Richard J. Resch School of Engineering will be composed of Computer Science, Engineering Technology (Electrical, Environmental, and Mechanical), Mathematics and Statistics, and Mechanical Engineering and will begin operation on July 1, 2019.

Rationale:

The changes outlined above are being made as part of an overall reorganization of the College of Science, Engineering and Technology to reflect the recent addition of Computer Science the establishment of the Richard J. Resch School of Engineering and the Mechanical Engineering program. Computer Science and mathematics are more closely aligned pedagogically with engineering, with faculty in CSET expressing strong interest in being aligned in this manner. The University will benefit from the continued growth of these programs, which will likely be enhanced by this new academic configuration.

Personnel:

Tenure and Appointment Assignments:

Iftekhhar Anam – Assistant Professor – CSET/ENG [new assignment]

Ankur Chattopadhyay – Assistant Professor – CSET/ENG [new assignment]
Benjamin Geisler – Lecturer – CSET/ENG [new assignment]
Golam Ahsan – Assistant Professor – CSET/ENG [new assignment]
Woo Jeon - Associate Professor – CSET/ENG [new assignment]
Tetyana Malysheva - Assistant Professor – CSET/ENG [new assignment]
Mark Norfleet - Assistant Professor – CSET/ENG [new assignment]
Megan Olson Hunt - Assistant Professor – CSET/ENG [new assignment]
Theresa Adsit- Senior Lecturer – CSET/ENG [new assignment]
Mary Guy - Senior Lecture – CSET/ENG [new assignment]
James Meyer - Senior Lecturer – CSET/ENG [new assignment]
Devin Bickner - Associate Professor – CSET/ENG [new assignment]
Dennis Crossley - Senior Lecturer- CSET/ENG [new assignment]
Synde Kraus - Senior Lecturer – CSET/ENG [new assignment]
Phillip Walkenhorst - Senior Lecturer – CSET/ENG [new assignment]
Yongjun Yang - Associate Professor – CSET/ENG [new assignment]
Laxmi Chataut - Assistant Professor – CSET/ENG [new assignment]
Tonya Meisner – Lecturer – CSET/ENG [new assignment]
Brian Murphy - Associate Professor – CSET/ENG [new assignment]
Megumi Onoda - Associate Professor – CSET/ENG [new assignment]
Christopher Deubler – Instructional Academic Staff - CSET/ENG [new assignment]

Program Assignments:

Richard J. Resch School of Engineering

Computer Science

Iftekhar Anam (Assistant Professor)
Ankur Chattopadhyay (Assistant Professor)
Benjamin Geisler (Lecturer)
Golam Ahsan (Assistant Professor)

Mathematics and Statistics

Woo Jeon (Associate Professor)
Tetyana Malysheva (Assistant Professor)
Mark Norfleet (Assistant Professor)
Megan Olson Hunt (Assistant Professor)
Theresa Adsit (Senior Lecturer)
Mary Guy (Senior Lecture)
James Meyer (Senior Lecturer)
Devin Bickner (Assistant Professor)
Dennis Crossley (Senior Lecturer)
Synde Kraus (Associate Lecturer)
Phillip Walkenhorst (Senior Lecturer)
Yongjun Yang (Associate Professor)
Laxmi Chataut (Assistant Professor)
Tonya Meisner (Lecturer)
Brian Murphy (Associate Professor)

Megumi Onoda (Associate Professor)
John Phillips (Lecturer)

Program Chair Assignments:

NAS:	Mike Draney
Richard J. Resch School of Engineering:	Patricia Terry
Computer Science:	Mike Zorn
Mathematics:	Woo Jeon

Reviews and Recommendations:

Natural and Applied Sciences

Date: October 4, 2018
Chair: Mike Draney
Recommendation: NAS votes unanimously (28-0-0) to support this.

Richard J. Resch School of Engineering

Date: September 25, 2018
Chair: Patricia Terry
Recommendation: Engineering votes unanimously (6-0-0) to support this.

Computer Science

Date: October 2, 2018
Chair: Mike Zorn
Recommendation: Computer Science voted unanimously (6-0-0) to support this.

Mathematics and Statistics

Date: October 11, 2018
Chair: Woo Jeon
Recommendation: Mathematics and Statistics Faculty voted unanimously (13-0-0) to support this.

Academic Affairs Council

Date: 12/12/2018
Chair: Mimi Kubsch
Recommendation: The AAC voted unanimously (5-0-0) to support this.

Personnel Council

Date: 12/18/2018
Chair: Heidi Sherman
Recommendation: The PC voted in favor of the reorganization.

Authorizations:

Dean CSET – John Katers

Date: October 18, 2018
Approved: X
Denied:

University Committee

Date:
Chair: Courtney Sherman
Approved:
Denied:

Faculty Senate

Date:
Speaker: Gail Trimberger
Approved:
Denied:

Provost – Gregory Davis

Date:
Approved:
Denied:

Chancellor – Gary Miller

Date:
Approved:
Denied:

**REQUEST FOR AUTHORIZATION TO IMPLEMENT A
MASTER OF SCIENCE – SPORT, EXERCISE, AND PERFORMANCE PSYCHOLOGY
AT UW–GREEN BAY
PREPARED BY UW-GREEN BAY**

ABSTRACT

The University of Wisconsin-Green Bay seeks a Master of Science in Sport, Exercise, and Performance Psychology in the College of Arts, Humanities, and Social Sciences. The M.S. in Sport, Exercise, and Performance Psychology (MS SEPP) is an interdisciplinary subfield of psychology that applies psychological knowledge and clinical approaches to optimize the performance and well-being of athletes, exercisers, and other performers (e.g., military, musicians). The field considers the developmental and social aspects of sport and performance participation, and systemic issues associated with sport and performance settings and organizations. The proposed degree requires 39 credits offered primarily through face-to-face meetings during the fall, spring, and summer semesters. Students will complete the program in five semesters (2 years), with one course required in the summer semester between the first and second year. The program aligns with the city of Green Bay’s internationally recognized sport and entertainment industries, UW-Green Bay’s Division 1 athletic classification, our large and highly acclaimed Psychology program, and ongoing efforts to increase graduate offerings aligned with campus and regional strengths. Program coursework satisfies the application requirements to be a certified mental performance consultant (CMPC) under the Association for Applied Sport Psychology (AASP). Performance psychologists work as behavior coaches, as consultants in private practice or with performance improvement consulting firms, for university athletics departments, sports clubs or youth academies, or in related occupations focused on performance improvement (e.g., Army, pilots, surgeons). These positions require educational attainment of a master’s degree or higher and the market for youth sports is growing rapidly. Health behavior coaches work for health-related companies such as Bellin Health, Prevea, and Aurora to design and implement programs aimed at preempting and preventing health-related problems, a growing need in the United States. The American Psychological Association (APA) released the Annual Trend Report in November 2018 and highlighted the growing demand for sport psychologists, indicating a current growth in the job market for this profession.

PROGRAM IDENTIFICATION

Institution Name

University of Wisconsin – Green Bay

Title of Proposed Program

Sport, Exercise, and Performance Psychology

Degree/Major Designation

Master of Science

Mode of Delivery

The program will be delivered from a single institution, UW-Green Bay. Courses will be delivered using a combination of predominately face-to-face instruction, with some independent work and online course offerings.

Projected Enrollments and Graduates by Year Five

Table 1. Enrollment projections for the MS SEPP across the first five years. Student completion rates are expected to be 90%, based on retention rates for other graduate programs at UW-Green Bay; for simplicity we assume attrition occurs between year one and two of the program. By the end of the fifth year we expect 94 students to have enrolled, and 66 students to have graduated. Additional capacity needs will be addressed based on demand.

Table 1: Five Year Degree Program Enrollment Projections (Headcount)

	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
New Student Admits (#)	16	18	20	20	20
Continuing Students (#)	0	14	16	18	18
Total Enrollment (#)	16	32	36	38	38
Cumulative Graduating Students (#)	0	14	30	48	66

Tuition Structure

Students enrolled in the MS SEPP will pay the standard UW-Green Bay graduate tuition rate, which for the Academic Year (AY19) was \$432.97 per credit or \$3,896.73 per semester for students within the plateau (≥ 9 credits). Student segregated fees are \$87.78 per credit or \$790.00 per semester for full-time students; these funds are not directly available to the program. Students who opt to take a course via distance delivery pay an additional \$25 per credit; these funds are not directly available to the program. We assume a 2% increase in tuition for the 2021-2022 academic year, and an additional 2% increase in 2023. We assume no changes in student segregated fees or distance education fees.

Department, College, School or Functional Equivalent

The proposed program will be housed in the Department of Psychology within the College of Arts, Humanities, and Social Sciences.

Proposed Term and Year of Implementation

Fall 2020

DESCRIPTION OF PROGRAM

Overview of the Program

The program requires 39 credits consisting of thirteen graduate-level courses, with only one elective. Classes will be infused with a variety of hands-on and applied activities. Supervised practicum and internships will also be offered. An emphasis will be placed on teaching and student learning. The program will admit approximately 20 new students per year. Students will

take courses in both regular 14-week semesters (fall and spring), in addition to one course in the Summer between years one and two of the program. Courses will be delivered using a combination of predominately face-to-face instruction, with some independent work and online course offerings.

Student Learning Outcomes and Program Objectives

The curriculum includes specialized knowledge in the eight areas of knowledge identified by AASP for the development of competence of sport psychology practitioners:

1. Professional Ethics and Knowledge
 - a. Understanding of the ethics and standards related to professional practice
2. Sport Psychology
 - a. Understanding of theory and research in sport psychology
 - b. Ability to apply these theories and research
3. Sport Science
 - a. Understanding of physiological, biomechanical, motor, sociocultural, and philosophical bases of behavior in sport
4. Psychopathology
 - a. Understanding of abnormal human behavior
 - b. Ability to identify various mental health disorders
5. Helping Relationships
 - a. Understanding of counseling theories
 - b. Ability to apply counseling theories
 - c. Understanding of helping and consulting processes
6. Research Methods and Statistics
 - a. Understanding of methodology and statistical analysis
 - b. Ability to critically consume research
7. Psychological Foundations of Behavior
 - a. Understanding of the biological, cognitive, affective, social, and individual difference bases of behavior
8. Diversity and Culture
 - a. Understanding of diversity, multiculturalism, and cultural awareness

Students will develop skills in:

1. Developing rapport, explaining their professional roles, and adjusting expectations of clients
2. Assessment of clients
3. Setting consultation goals, planning for specific outcomes, and deciding on interventions
4. Choosing and applying sport psychology theories that best fit different performance and exercise psychology cases
5. Evaluating the outcomes of the consultation with clients
6. Considering ethical and diversity factors when working with various clients

Program Requirements and Curriculum

The M.S. in Sport, Exercise, and Performance Psychology will accept students who hold an undergraduate degree in psychology, sport sciences (or another related major), or demonstration of equivalent professional experience as determined by the graduate selection committee. UW-Green Bay graduate policy states that all students should carry a cumulative undergraduate GPA of 3.0 or higher for admission. The program requires students to complete 39 credits of graduate coursework (Table 2), with three courses offered each 14-week session, and one offered in summer. Teaching responsibilities will be part of the regular teaching load of faculty.

Table 2: Program Requirements

Required Graduate Courses (39credits)	Existing Credits	New Credits
First-Year Fall		
Professional Ethics in Psychology		3
Counseling Theories and Practices		3
Theories of Sport, Exercise, and Performance Psychology		3
First-Year Spring		
Statistics		3
Applied Sport and Performance Psychology		3
Multicultural Counseling and Mental Health	3	
First-Year Summer		
Research Methods in Psychology		3
Second-Year Fall		
Sport Sociology		3
Internship I/Thesis I		3
Abnormal Psychology OR Principles of Sport Physiology (Hum Bio 333)	3	
Second-Year Spring		
Internship II/Thesis II		3
Psychology of Sport Injury		3
Elective (Bus Adm 589, Management 750, Management 730, PU EN AF 615, Social Work 727, Social Work 767, HWM 740, HWM 750, Psych 555 Group Dynamics, Psych 589 Cogneuro)	3	
TOTAL	9	30
TOTAL CREDITS	39	

Assessment of Outcomes and Objectives

Assessment of student learning outcomes will be managed by a psychology graduate assessment committee. The committee will establish an assessment plan for evaluating how well students are meeting the program's learning outcomes. Assessment will be carried out using an embedded assessment plan comprised of rubrics and assignments collected each semester from various instructors and courses. The committee is responsible for suggesting necessary curricular changes to the curriculum committee. Furthermore, the internship site personnel (e.g., coaches,

coordinators) will be asked to provide feedback regarding students' ability to provide effective services.

Diversity

UW-Green Bay is committed to achieving a diverse workforce and to maintaining a community that welcomes and values a climate supporting equal opportunity and difference among its members. The campus engages in several strategic initiatives to recruit a more diverse student population, and offers a wide range of experiences and perspectives to students. As part of this process, the Chancellor's Council on Diversity and Inclusive Excellence offers a certificate program to develop and recognize commitment to the UW-Green Bay Inclusive Excellence Initiative. The Office of Admissions also supports recruiters specialized in working with multicultural, bilingual, and international students. In fall 2017, UW-Green Bay added a Vice Chancellor for Student Affairs and Campus Climate to the Chancellor's Cabinet to improve, in part, campus initiatives on diversity and inclusivity. This position will play a critical role in furthering campus efforts to attract and support a diverse campus community reflective of the metropolitan area that UW-Green Bay serves.

UW-Green Bay has a broad array of student organizations and institutional resources and offices that offer resources and services to promote academic success and personal growth of students. For example, a number of student organizations provide an environment for students to share their own culture, gain leadership skills, and participate in co-curricular activities. The UW-Green Bay's Multicultural Academic Centers promote a better understanding of diverse communities and serve as resources for students, faculty, and staff. The CATL also offers regular workshops and panel discussions to address the complexities of inclusivity and diversity. Finally, the Office of International Education facilitates international student success while at UW-Green Bay.

The M.S. in Sport, Exercise, and Performance Psychology program establishes learning outcomes that are embedded in curricular programming. Historically, diversity content and preparing students to work a multicultural society has been, and will continue to be, an important part of the learning outcomes. Therefore, a number of courses that are part of the M.S. in Sport, Exercise, and Performance Psychology curricula include multicultural awareness and diversity content.

The UW-Green Bay graduate student applicant review process embraces diversity and inclusion by taking a holistic approach to student admission. No single metric serves as the sole basis for campus admission at the graduate level. This approach is a proven best practice for accurately predicting student readiness and academic success, and more importantly, for instilling the diversity of life and work experiences into the classrooms to build a rich graduate-level pedagogical environment for the students. Further, the College of Humanities, Arts, and Social Sciences, in collaboration with the Office of Graduate Studies, is committed to attracting diverse applicants by recruiting from professional networks that reflect the communities they serve.

Collaborative Nature of Program

The University of Wisconsin – Green Bay will be the single institution to deliver the M.S. in Sport, Exercise, and Performance Psychology instruction. Program faculty and staff will involve industry leaders from Green Bay area and beyond in various capacities. The M.S. in Sport, Exercise, and Performance Psychology will engage local partners in curriculum development and adoption, as guest lecturers, and as placement opportunities for internships and practicums.

Projected Time to Degree

The projected time to degree is four semesters (2 years), including one summer course. Students will take three separate courses each 14-week session. Students failing to complete a course will need to wait for the next offering cycle.

Program Review

The UW-Green Bay Graduate Academic Affairs Council (GAAC) is charged with oversight of all graduate programs, including review and approval of all new programs, and all graduate-level credit courses. The GAAC will formally review the M.S. in Sport, Exercise, and Performance Psychology program on a seven-year cycle. In addition, the program will be formally reviewed on a five-year cycle, by the department, and the Dean of the College of Arts, Humanities, and Social Sciences. This five-year cycle coincides with the required self-study documents that the accrediting agency requires. Informally, the program will be reviewed by students and organizations after each class to ensure the courses are having their intended impact on the various stakeholders.

Accreditation

There are currently no official accrediting bodies for Sport, Exercise, and Performance Psychology programs. However, the Association for Applied Sport Psychology (AASP) offers a certification (CMPC) for consultants and many job openings will request applicants to have that accreditation. Obtaining that certificate requires students to complete particular courses, have a minimum of 400 hours of monitored experience, and complete a certification exam. The proposed M.S. curriculum is designed to help students obtain this certification. AASP is currently working on a formal accreditation, but it could take several years until it is finalized. UW-Green Bay will work with AASP to establish our program on a national stage, and to assure that our students receive industry accreditation standards when available. This plan has taken into account expected costs for accreditation.

JUSTIFICATION

Rationale and Relation to Mission

The proposed Master of Science in Sport, Exercise, and Performance Psychology is consistent with UW-Green Bay's current mission, "to provide an interdisciplinary, problem-focused educational experience that prepares students to think critically and address complex issues in a multicultural and evolving world." Sport, exercise, and performance psychology is an interdisciplinary subfield of psychology that brings together aspects of counseling psychology, health psychology, kinesiology, human biology, and other disciplines. The program is also consistent with the mission of the College of Humanities, Arts, and Social Sciences: "We create unique communities of learners that engage critically and creatively around issues, problems, and

solutions. Central to our mission is the promotion of problem-based, engaged learning through close relationships with our students to ensure successful, fulfilling careers and lives.” Importantly, this program aligns with where the University is strategically headed. UW-Green Bay approved a revised mission in fall 2018, and while Board of Regents approval is still pending, the revised mission clearly addresses an intent to meet the Green Bay Metropolitan region’s need for professional graduate programming, and build upon our regional economic and cultural strengths. Sports and performance related industries are strong in NE Wisconsin, allowing opportunities for the program to develop the “community-based partnerships, [and] collaborative faculty scholarship and innovation” emphasized in the revised mission. In addition to the Packers, NE Wisconsin supports multiple other professional and semi-professional teams, including the Green Bay Blizzard (indoor football), Green Bay Booyah (baseball), Green Bay Gamblers (hockey), and Wisconsin Timber Rattlers (baseball). The region also supports robust and thriving performing arts communities in Door Co., the Green Bay Metropolitan area, and the along the Fox River Valley. As articulated by Chancellor Gary L. Miller, this vision will serve the region “through the power of innovation, the power of higher education as an agent of transformation, and the power of place...”

The proposed program compliments the suite of undergraduate, graduate, and certificate programs developed around the central theme of health, sports, and performance at UW-Green Bay (e.g. BS in Psychology, BS in Human Biology (Health Sciences, Exercise, and Nutritional Science emphases), Masters in Athletic Training, Masters in Nutrition and Integrated Health, BA in Theatre & Dance, BA in Music, MS in Health and Wellness, etc.). UW-Green Bay’s Division I athletic status and world-class theater, the Weidner Center for the Performing Arts, provide a valuable opportunity for partnership, allowing for high quality on-campus internship and consultation experiences. Similar relationships already exist between the Psychology department and the athletics department. Furthermore, high school teachers and coaches in the region have expressed their interest in starting classes and/or receiving services in sport psychology. These organizations and personnel offer numerous opportunities for student internships and consultation experience. Undoubtedly, this M.S. program fits the economic signature of our region.

Institutional Program Array

Building on the existing foundation of the undergraduate programs in the College of Arts, Humanities, and Social Sciences, the proposed M.S. in Sport, Exercise, and Performance Psychology will expand available graduate coursework in research methods, statistics, counseling, and sport psychology. Curricula will align with the standards of the Association of Applied Sport Psychology for master’s-level programs. The addition of graduate students in this area will further expand faculty scholarship in the Department of Psychology and partner programs. Having a graduate program in psychology will provide additional research opportunities for faculty and undergraduates as well, increasing student opportunities for high impact experiences. Opportunities for graduate students to complete internships in the community will build upon existing partnerships.

To date, UW-Green Bay psychology students complete their undergraduate psychology degree,

then apply to other schools to obtain their Masters; many at out-of-state or private institutions. UW-Green Bay has a strong undergraduate program in psychology, and many of our alumni desire a UW-Green Bay Masters degree. Psychology is an existing strength and area of future emphasis within the College of Arts, Humanities, and Social Sciences. The proposed M.S. in Sport, Exercise, and Performance Psychology aligns with UW-Green Bay's current array of business, health-initiatives, and medical programs, and our growing array of professional graduate programs, and our focus to better align our curriculum with the regional economy (manufacturing, sports, hospitality, entertainment, business, and healthcare). This program meets unmet student demand within the broader mid-west. Faculty currently meet HLC accreditation requirements to teach at the graduate level.

Other Programs in the University of Wisconsin System

There is only one other program related to sport psychology in the state of Wisconsin, at the University of Wisconsin-Milwaukee; the M.S. in Kinesiology with an emphasis in Integrative Human Performance program. The M.S. in Kinesiology, however, is quite different than the Sport, Exercise, and Performance Psychology program we are proposing at UW-Green Bay. For example, it is located in the Department of Health Science, rather than in a psychology department. Therefore, it focuses more on exercise physiology and kinesiology than our proposed program, which focuses on psychological aspects of exercise and performance. The low number of sport psychology programs in WI is unusual for the Midwest, where most states have multiple programs: Illinois (4), Indiana (2), Iowa (2), Minnesota (2), and Michigan (2).

Need as Suggested by Current Student Demand

The Association for Applied Sport Psychology (AASP), the leading organization of sport psychology in the U.S., administered a member needs assessment survey and created a strategic plan for 2016–2018 (<https://appliedsportpsych.org/about/strategic-plan/>). With a 40% student membership, AASP has prioritized increasing the offerings and standardization of graduate programs aligned with specific certification requirements. This focus is linked with a call for increased awareness and connection of higher education to specific post-graduation employment opportunities. The proposed MS SEPP meets this call; the minimum degree requirement is a master's degree to practice as a sport psychology professional. Additionally, UW-Green Bay will actively pursue a partnership with AASP as they seek stricter curriculum and training accreditation requirements for this field of study to ensure we prepare students to pass certification requirements.

The Division 47 (Sport, Exercise, and Performance Psychology) of the American Psychology Association (APA) also updated a petition for recognition of sport psychology (<https://www.apa.org/ed/graduate/specialize/sport.pdf>), indicating an increasing but still insufficient number of available SEPP graduate programs. Specifically, there are currently over 100 sport psychology graduate programs in kinesiology (i.e., sport science) departments, only 12 programs nationally (none in Wisconsin) satisfy recognition as a sport psychology specialty in psychology. In addition, the Bureau of Labor Statistics reports that sport psychologists are expected to grow in number by 11% nationwide between 2012 and 2022. The field of Sport Psychology can expect to see approximately 1,400 new jobs by 2022, according to BLS projections (source: Occupational Employment Statistics, Bureau of Labor and Statistics, July

2015).

With a very large student body (550+ majors) and two tenure-track faculty members with specialization in sport psychology (the only certified mental performance consultants in Northeast Wisconsin) within UW-Green Bay's Psychology Department, our City's international reputation for sports, and our region's robust performance economy, UW-Green Bay is positioned to be a national leader in sports, exercise, and performance psychology. After reviewing similar master's programs across the Midwest, we have concluded that we are well positioned to meet a demand that currently surpasses available programmatic space. For example, 40-60 applicants apply to the Sport Psychology Master's program at Minnesota State University in Mankato, MN, with only 10-12 students accepted. Similarly, 45-60 applicants apply to the Sport Psychology Master's program at Ball State University in Muncie, IN, for 12-17 spots.

Need as Suggested by Market Demand

As an emerging field there is relatively little direct market data on Sport Psychologist demand. For example, the Occupational Outlook Handbook, does not list sports psychologists as a separate career from psychologists. However, the American Psychological Association describes the field as a "Hot Career" (<http://www.apa.org/gradpsych/2012/11/sport-psychology.aspx>), and included the growing demand for sport psychologists in its 2018 Annual Trends Report (Trend #3). The Association for Applied Sport Psychology (AASP) also describes the area as an up and coming field that has seen a substantial increase in attention over the last decade (<http://www.appliedsportpsych.org/about/about-applied-sport-and-exercise-psychology/>).

It is hard to define the exact number of Sport, Exercise, and Performance Psychologists currently working full-time in the field because many have private practices, open consulting businesses (e.g., Vision Pursue LLC), or work with a more diversified clientele (e.g., counseling). Still, AASP has reported growth in the number of professionals hired by the Army, professional teams, and athletic departments across the country. In addition, AASP has seen a rise in its membership and conference attendance, especially by students who are increasingly interested in the field. The latest move by AASP involves the improvement of its certification process and development of an accreditation process for Sports Psychology graduate programs. These changes are expected to build confidence within the job market for certified sports psychology professionals. This AASP initiative is ideally timed with the development and launching of this proposed MS Degree at UW-Green Bay.

Graduates of UW-Green Bay's Sports, Exercise, and Performance Psychology program will find numerous job opportunities within the well-developed sports and medical economy of NE Wisconsin. For instance, graduates with interest in exercise psychology could work as health behavior coaches for health programs such as Well Wisconsin; for health-related companies such as Bellin Health, Prevea, Aurora; for insurance companies (e.g., designing and implementing programs for prevention of health-related problems); or could improve their personal training career by understanding psychological aspects of exercise and health. Graduates interested in working with sport psychology could also work with companies such as Bellin Health, Prevea, and Aurora to serve athletes going through various psychological issues associated with their

physical problems. Graduates can work for one of the local professional or Collegiate teams aforementioned, work with other performers, such as surgeons, pilots, musicians, and actors, or develop their own private practice. High School and club athletes are the largest portion of private practice clients for sport and performance psychologists. This master's program will also take advantage of its faculty's strengths in research methods and practice to prepare its students for a PhD or PsyD programs.

**COST AND REVENUE NARRATIVE
MASTER'S OF SPORT, EXERCISE, AND PERFORMANCE PSYCHOLOGY
AT UNIVERSITY OF WISCONSIN (UW)-GREEN BAY**

Introduction

The University of Wisconsin-Green Bay proposes the establishment of a MS in Sport, Exercise, and Performance Psychology in the College of Arts, Humanities, and Social Sciences. The proposed program will admit students annually and requires 39 credits offered primarily through face-to-face meetings during the fall and spring semesters. Students will complete the program in five semesters (2 years), with one course required in the summer between the first and second year. The program aligns with the city of Green Bay's internationally recognized sport and entertainment industries, UW-Green Bay's Division 1 athletic classification, our large and highly acclaimed Psychology program, and ongoing efforts to increase graduate offerings aligned with campus and regional strengths. Two existing tenure-track faculty lines are already in place for the proposed program. The program seeks standard UW-Green Bay graduate tuition.

Section I - Enrollment

Enrollment projections assume an annual matriculation of 16 new students in year one, growing to 20 students annually by year 4. A retention rate of 90% from start to finish is assumed, based on retention rates for other graduate programs. Based on these parameters, we expect the program to carry 38 students by year 4, and to graduate 66 cumulative students by the fifth year.

Section II - Credit Hours

A total of 39 credits are required of students; 30 credits are new to the university, and nine credits are available from existing courses.

Section III - Faculty and Staff Appointments

The Department of Psychology has strategically hired two tenure track lines to meet student interest in Sport, Exercise, and Performance Psychology. Revenue generated from the proposed MS program will support additional instructional academic staff to offset instruction re-directed from the undergraduate Psychology program. In total, two FTE of instructional academic staff will shift to the MS program when at full enrollment. In year one, an increase of 0.17 FTE of administrative support will coordinate and support prospective and active graduate student activities. The instructional support budget also includes chair effort during the academic year (2 course releases to support clinical placement) and summer (approximately 1 month of support spread across the summer).

Section IV - Program Revenues

Program revenue projections are based on expected tuition generated at the standard UW-Green Bay tuition rate. Tuition estimates use the Spring 2019 (plateau of \$3,896.73/semester; and \$432.97 per credit during summer) graduate tuition rate as a starting point, assuming a 2% increase over this level for year 1, another 2% increase in year 3, and another 2% increase in year 5 for cost of living adjustments.

Section V - Program Expenses

Expenses - Salary and Fringe

Direct faculty and instructional staff costs for program delivery are estimated using an average annual salary of approximately \$55,000 plus fringe (45% of salary), which reflects the salary of an average tenure track assistant professor line in the Psychology Department. An additional ~\$10,000 is budgeted annually for the 17% administrative support position (University staff) at \$16.50 per hour with a fringe rate of 66% in year 1. Annual increases of 2% to total salary and fringe are included in all estimates.

Other Expenses

Startup: Includes \$17,600 over the first two years to support the development and significant modification of new and existing courses, and to cover small, general expenses.

Program Marketing: Includes \$10,000 per year (plus 2% annual increases) for integrated marketing of UW-Green Bay Psychology programs via print, radio, outdoor, and digital marketing.

Accreditation, travel, and memberships: Assumes \$2,000 per year per faculty FTE for programmatic-based conferences, an additional \$2,000 per year for anticipated accreditation costs, plus 2% annual adjustments.

Professional Development, and S&E: Assumes \$2,000 per year per faculty FTE for professional development and general program S&E, roughly \$1,3000 per year per FTE for computers, licensing, and support, a \$1,000 per year for travel to clinical sites, and 2% annual adjustments.

Indirect Expenses: A central tax of 30% of total tuition will be charged to the program beginning in year four, once the program is established. This appropriation will cover indirect institutional costs associated with library subscriptions, facilities, administration, and systems support.

Section VI - Net Revenue

Net revenues will be directed to support continued growth within the College of Arts, Humanities, and Social Sciences.

University of Wisconsin - Green Bay						
Cost and Revenue Projections For Newly Proposed Program in Sport, Exercise, and Performance Psychology						
	Items	Projections				
		2020	2021	2022	2023	2024
		Year 1	Year 2	Year 3	Year 4	Year 5
I	Enrollment (New Student) Headcount	16	18	20	20	20
	Enrollment (Continuing Student) Headcount	0	14	16	18	18
	<i>Enrollment (Total Student) Headcount</i>	16	32	36	38	38
	Enrollment (New Student) FTE	16	18	20	20	20
	Enrollment (Continuing Student) FTE	0	14	16	18	18
	<i>Enrollment (Total Student) FTE</i>	16	32	36	38	38
II	Total New Credit Hours (# new sections x credits per section)	15	15	0	0	0
	Existing Credit Hours	3	24	39	39	39
III	FTE of New Faculty/Instructional Staff	0.00	0.00	0.00	0.00	0.00
	FTE of Current Fac/IAS	1.00	2.00	2.00	2.00	2.00
	FTE of New Admin Staff	0.17	0	0	0	0
	FTE Current Admin Staff	0	0.17	0.17	0.17	0.17
IV	New Revenues					
	<i>From Tuition (new credit hours x FTE)</i>	\$127,189	\$272,927	\$313,522	\$332,441	\$339,090
	Total New Revenue	\$127,189	\$272,927	\$313,522	\$332,441	\$339,090
V	New Expenses					
	Salaries plus Fringes					
	<i>Faculty/Instructional Staff</i>	\$79,750	\$168,810	\$172,186	\$175,630	\$179,143
	<i>Other Staff - Director of DPD</i>	\$9,685	\$9,879	\$10,076	\$10,278	\$10,483
	Other Expenses					
	<i>Startup</i>	\$11,000	\$6,600	\$0	\$0	\$0
	<i>Marketing</i>	\$10,000	\$10,200	\$10,404	\$10,612	\$10,824
	<i>Accreditation, travel, memberships:</i>	\$4,000	\$6,000	\$6,120	\$6,242	\$6,367
	<i>Professional development, S&E:</i>	\$4,300	\$7,752	\$7,907	\$8,065	\$8,226
	<i>Indirect Expenses:</i>	\$0	\$0	\$0	\$99,732	\$101,727
	Total Expenses	\$118,735	\$209,241	\$206,694	\$310,560	\$316,771
VI	Net Revenue	\$8,454	\$63,686	\$106,828	\$21,881	\$22,319
Provost's Signature:			Date:			

Assumes a fixed annual cohort of 20 students					
Assumes a 90% retention rate					
	assumes 2% of S19		assumes 2% of YR1		assumes 2% of YR3
	YR 1	YR 2	YR 3	YR 4	YR 5
Semster	\$ 3,974.66	\$ 3,974.66	\$ 4,054.16	\$ 4,054.16	\$ 4,135.24
Summer	\$ 1,324.89	\$ 1,324.89	\$ 1,351.39	\$ 1,351.39	\$ 1,378.41
spring '19	\$ 3,896.73				
summer '19	\$ 1,298.91				

Faculty Senate Old Business 4a 3/27/2019

Faculty Senate Document #18-14 – Approved 5/1/2019

RESOLUTION ON THE GRANTING OF DEGREES

Be it resolved that the Faculty Senate of the University of Wisconsin-Green Bay, on behalf of the Faculty, recommends to the Chancellor and the Provost and Vice Chancellor of Academic Affairs of the University that the students certified by the Registrar of the University as having completed the requirements of their respective programs be granted their degrees at the Spring 2019 Commencement.

Faculty Senate New Business 5a 5/1/2019

Faculty Senate Document #18-15 – Approved 5/1/2019

Memorial Resolution for Richard W. Presnell, Professor Emeritus

Dr. Richard W. Presnell, a longtime UW-Green Bay faculty member who taught in the Professional Program in Education, died on March 7, 2019 at age 85. He was described by many as an impassioned environmentalist, an outdoor enthusiast, wood carver, and waterfowl hunter. Dick's appreciation of nature and his vision of Earth's human population in balance with its ecology was embodied by his teaching at UW-Green Bay.

He was born March 4, 1934 to Dr. William H. and Helen M. Presnell in Iowa. He attended Cornell College of Iowa then served in the Army, stationed in Japan for two years during the Korean conflict. Upon his return, he married his high school sweetheart, Sandra Hulting, and then attended the University of Iowa to complete both his undergraduate and master's degrees. Dick began his career in education as a middle school teacher. With his interest and qualifications in science, he assumed a position on the faculty of Mesabi Range College.

Dick and his family enjoyed many outdoor activities including camping, hiking, canoeing, skiing, and ice fishing in beautiful northern Minnesota. When Dick received a grant to study at Cornell University, the family moved to Ithaca, New York. In 1971, he completed his doctorate in environmental education and accepted a position with the Education faculty at UW-Green Bay, where he retired in 1996. It was here that he developed a summer course, taking students on extended backpacking trips to the Boundary Waters Canoe Area of Minnesota. He also taught classes at The Clearing and conducted field trips at The Ridges Sanctuary in Door County.

Throughout their lives together, Dick and Sandy travelled extensively, visiting 49 states, ten Canadian provinces, Europe and New Zealand. Living by the beautiful waters of Green Bay, they bought a boat and taught themselves how to sail. Happy wanderings between their retirement home in Door County and a cabin on Lake Constance in Canada kept the couple in harmony with each other and with nature for their sunset years. It was in Canada that Dick carved and painted most of the intricate birds and decoys he gave as gifts to those he loved and donations to causes he supported.

A friend and colleague had this to say... "Dick possessed a bright mind, a kind heart, and a lively spirit, and played an important role in environmental education at UW-Green Bay from 1971 until he retired in 1996." Another UWGB colleague noted, "Dick was truly an environmentalist and conservationist and showed great respect for our planet. He was well liked by his students, faculty, staff, and the school administrators he dealt with as Director of Student Teaching at UWGB. He will be missed."

His dedication to the restoration and preservation of the natural world has been passed on to another generation of committed environmentalists through his students, colleagues and family.

On another note to Canada Geese, you are safer now. Dick is hunting somewhere else.

Faculty Senate New Business 5c 5/1/2019

Faculty Senate Document #18-16 – Approved 5/1/2019

Memorial Resolution for Joseph M. Moran

Dr. Joseph Moran began his career at the University of Wisconsin-Green Bay in the fall of 1969 as a teaching instructor while he finished his Ph. D. dissertation. Upon completion he dedicated himself to the university in almost every possible way as is spelled out in later paragraphs. He was born on February 14, 1944, and died on June 20, 2018, at the age of 74. He retired from the university on August 30, 2001, as Professor Emeritus. During 1975-1976, he spent a year as a visiting professor at the University of Illinois.

Joe's academic training after high school began at Boston College where he earned a B.S. degree in 1965, and then continued to study at Boston College to earn a M.S in Geophysics (1967). He continued his formal education at the University of Wisconsin-Madison where he earned a Ph. D. in Geophysics.

UWGB's innovative curriculum was generously enhanced by the variety of courses he developed and taught: Introduction to Environmental Science, Introduction to Weather and Climate, Air Pollution and Meteorology, Introduction to Earth Science, Oceanography, Regional Climatology, Physical Geology, Glacial Environments, Climate and History, Meteorology (Calculus Based), and Perspectives in Environmental Science for the Graduate Program. Professor Moran also served as a member of graduate students' thesis committees.

The quality of Dr. Moran's teaching and research was recognized by several prestigious awards. In 1974, he was recognized by UWGB for Outstanding Innovative Scholarship. He was further recognized on the state level in 1993 when he received an award from the University of Wisconsin Board of Regents for outstanding teaching; one of only two given annually. Boston College, of which he was an alumnus, awarded him for Excellence in Science. In 1993, he was awarded the Barbra Hauxhurst Cofrin Professor of Natural Science for a five-year term at UWGB.

Both UWGB students and students at several hundred other universities benefited from textbooks which he coauthored with several different colleagues. Overall, he was a major contributor in the publishing of 20 different books and editions. One of the goals of the University's new innovative program was to have courses that centered on environmental problems and the science of solutions to them. No such text existed then, therefore, he and two of his other colleagues took up the challenge to develop a text for nonscience students that was first published in 1972. The success of this text is verified by the fact that five editions were ultimately published.

The range of topics covered under his authorship is demonstrated by the following partial list of titles:

Introduction to Environmental Science, J. M. Moran, M. D. Morgan, and J. H. Wiersma (Five Editions)

Meteorology, The Atmosphere and the Science of Weather, J. M. Moran and M. D. Morgan

Introduction to Weather and Climate, J. M. Moran and M. D. Morgan

Wisconsin Weather and Climate, J. M. Moran and E. J. Hopkins

Earth Science, S. I. Dutch, J. S. Monroe and J. M. Moran.

Dr. Moran also developed texts for precollege level students for programs sponsored by the American Meteorological Society. Two of the titles are:

Water in the Earth System (2001) and *Ocean Studies* (2011-2012).

Professional reviewed articles for scientific publication were yet another major focus of his. Over his career he published approximately 150 such articles. He remained current in his areas of expertise by belonging to the following professional societies: American Meteorological Society, Association of American Geographers, American Quaternary Society, National Science Teachers, National Association of Geology Teachers, Wisconsin Geographical Society, Wisconsin Academy of Science and Sigma Xi. Though out his career, Joe also reviewed many manuscripts, books, and films for scientific journals and publishing companies.

Service to UWGB and local community included serving as the Chair Natural and Applied Sciences, and the Earth Science Discipline. He served on the Committee of Six Full Professors, the Faculty Senate and as the Coordinator of the Environmental Science and Policy Program. He was a member of the Graduate Board of Advisors. High school teachers benefited from his involvement in the Northeast Wisconsin Teachers' Meetings held on the UWGB campus and for many years he and other colleagues led field trips for those teachers. Off campus he served on the American Meteorological Societies Board of Education. He consulted for various companies and organizations on the effects that weather and climate had on their activities and operations.

Professor Moran's career constituted a wide range of interests and contributions. His publication list of papers, books, and abstracts from professional conferences includes student text books and technical topics in meteorology, past climates, and geology and indeed is impressive. One of his special attributes was his ability to work with colleagues and students whether doing research, team teaching or publishing. Most of us learned something each time we collaborated with him in such opportunities. Beyond research and writing Joe was dedicated to teaching and was concerned for and dedicated to students. He loved taking them on field trips to introduce them to the fundamentals of the subject of focus. When students were reluctant to participate in field discussions or answer questions, he often demanded that they "get down to touch and feel the rock!" During his retirement, Joe continued to produce new projects, revise and update books, and to work with American Meteorological Society with which he spearheaded several nationwide educational projects and led summer field courses for high school teachers. Even more telling, was in spite of declining health, he retained his unique sense of humor. Although born, raised and educated in Massachusetts, Joe lost most of his New England accent unless he wanted to turn it on. He even learned to root for the Milwaukee Brewers against the Boston Red Sox whom he sometimes affectionately called the "Red Flops."

Submitted by: Professors J. H. Wiersma, R. D. Stieglitz and M. D. Morgan

Faculty Senate New Business 5d 5/1/2019

Faculty Senate Document #18-17 – Approved 5/1/2019

Resolution on Following Shared Governance Procedures

Whereas Chancellor Miller reaffirmed his support of Shared Governance in a 17 August 2015 memo and noted that “existing shared governance organization and procedures will continue at UWGB as allowed by law” and that “the collaboration of students, staff and faculty governance bodies will be even more important in the coming years,” and

Whereas Instructional Academic Staff at the UW-Green Bay Branch Campuses were sent a memo on 30 January 2019 stating that “...all branch campus IAS appointments (including contracts, titling, and compensation) will be aligned with UW-Green Bay policies,” and

Whereas that memo sets the minimum pay rate for associate lecturers at the Branch Campuses at UW-Green Bay’s minimum rate of \$27,270 per year rather than at the minimum rate currently used for associate lecturers at Branch Campuses (\$40,696 per year), and

Whereas the Committee on Workload and Compensation is charged with “i. Identifying the various existing and potential components of workload and forms of compensation for Academic Staff, University Staff, and Faculty, ii. Identifying areas of concern and stress among personnel relating to workload and compensation, and iii. Formulating options for remedying perceived workload and compensation shortcomings, dysfunctional procedures, or inequities on this campus,” and

Whereas the Committee on Workload and Compensation was not made aware of the 30 January 2019 memo regarding changes to the compensation of instructional academic staff at the Branch campuses, and

Whereas the Committee on Workload and Compensation only learned about the 30 January 2019 memo because concerned personnel with IAS appointments at the UW-Green Bay Branch Campuses reached out to UW-Green Bay (main campus) faculty and shared the memo, and

Whereas the Committee on Workload and Compensation was not sought out to help formulate options for remedying compensation shortcomings, an important part of its charge, and

Whereas the 30 January 2019 memo generated concern and stress among personnel related to compensation, and

Therefore, the UW-Green Bay Faculty Senate reminds the administration at UW-Green Bay of the critical importance of following shared governance procedures, something that it has committed to doing.

Faculty Senate New Business 5e 5/1/2019