

**UW-GREEN BAY FACULTY SENATE ACTIONS AND RESOLUTIONS**  
**ACADEMIC YEAR 2020-21**

<u>Number</u>	<u>Name</u>	<u>Date Approved</u>
<a href="#"><u>#20-01</u></a>	Resolution in Support of the Guidelines for the Administration and Use of Student Evaluations of Teaching during the Fall 2020-Summer 2021 Academic Year	10/14/2020
<a href="#"><u>#20-02</u></a>	Memorial Resolution for Dennis Bryan, Professor Emeritus	11/11/2020
<a href="#"><u>#20-03</u></a>	Resolution to Delay Implementation of Biweekly Pay for Faculty and Academic Staff in the UW System	11/11/2020
<a href="#"><u>#20-04</u></a>	Request for Authorization to Implement a Bachelor of Science in Community Health Education	12/9/2020
<a href="#"><u>#20-05</u></a>	Proposal for New Collaborative Online Graduate Certificate in Applied Bioinformatics	12/9/2020
<a href="#"><u>#20-06</u></a>	Memorial Resolution for Tian You Hu, Professor Emeritus	12/9/2020
<a href="#"><u>#20-07</u></a>	Resolution on the Granting of Degrees	12/9/2020
<a href="#"><u>#20-08</u></a>	Nominees for 2021-2022 Faculty Elective Committees	2/24/2021
<a href="#"><u>#20-09</u></a>	Proposed Changes to the Faculty Handbook: 52.02 and 52.07 (Amended, then Tabled)	4/7/2021
<a href="#"><u>#20-10</u></a>	Resolution to Continue Faculty Senate and University Committee Representation for the Additional Locations through the 2023-24 Academic Year	4/7/2021
<a href="#"><u>#20-11</u></a>	Proposed Changes to the Faculty Handbook: Committee Vacancies	4/7/2021
<a href="#"><u>#20-12</u></a>	UW Green Bay Institutional Guidance for Lecturers and Teaching Professors	4/7/2021
<a href="#"><u>#20-13</u></a>	Amended Proposed Changes to the Faculty Handbook: 52.02 and 52.07	5/5/2021
<a href="#"><u>#20-14</u></a>	Water Science Form K	5/5/2021

<a href="#"><u>#20-15</u></a>	Economics Reorganization Form K	5/5/2021
<a href="#"><u>#20-16</u></a>	Resolution on the Granting of Degrees	5/5/2021
<a href="#"><u>#20-17</u></a>	“Surprise” Resolution of Thanks to Clifton Ganyard	5/5/2021

**Faculty Senate Document #20-01 – Approved 10/14/2020**

**Resolution in Support of the Guidelines for the Administration and Use of Student Evaluations of Teaching during the Fall 2020 – Summer 2021 Academic Year**

WHEREAS, students “have a right to structured opportunities to provide feedback to their instructors regarding the quality of the course and performance of the instructor” [Faculty Handbook, p. 109],

WHEREAS, academic units have used the Course Comments Questionnaire (CCQ) in conjunction with other questions as a primary tool in providing students with the opportunity to provide feedback to their instructors,

WHEREAS, academic units have incorporated CCQ data, along with other evidence, to evaluate the teaching effectiveness of faculty and academic staff for purposes of annual reviews, merit reviews, and decisions regarding retention, tenure and promotion,

WHEREAS, standard evaluation tools such as the CCQ are best used when comparing an instructor’s performance over time when the instructor teaches the same course,

WHEREAS, the unprecedented shift to online delivery of classes during the COVID-19 emergency has continued to make comparisons of instructors’ performance in courses to previous semesters difficult,

WHEREAS, an alternate evaluation instrument for students to complete and an optional self-reflection by instructors regarding the Fall 2020- Summer 2021 academic year, rather than including CCQ results and similar data in their Professional Activity Reports (PARs), could provide insightful information to better support students and enhance teaching effectiveness;

BE IT RESOLVED that as a faculty, we support the recommendations of the Co-Chairs of the Evaluating Teaching Effectiveness Working Group including, but not limited to:

- 1) To administer a simplified, online Qualtrics survey similar to the one presented to the Faculty Senate on Wednesday, October 14, 2020 for students to evaluate their instructors, their courses, and their experiences,
- 2) That, at their option, if faculty members would like to include information concerning their teaching during the Fall 2020 – Summer 2021 academic year, they would provide a self-reflection in the teaching section of their PAR.

**Faculty Senate New Business 5a 10/14/2020**

## **Faculty Senate Document #20-02**

### **Memorial Resolution for Dennis Bryan, Professor Emeritus**

On August 21, 2020, Dennis Bryan's family lost their beloved husband, father, grandfather and uncle. The University lost another retired faculty member who was deeply committed to his career and to the colleagues and students with whom he worked. He was one of the original faculty members in the Professional Program in Education.

Dennis was born in Cincinnati, Ohio on June 4, 1937 to Roy and Bessie Bryan. The family moved to Kalamazoo, MI when he was one month old, and he attended Western Michigan University's Campus School from kindergarten through grade 12. This is where in the seventh grade, he met a new student at the school, Ann Malotte, the love of his life. They became high school sweethearts and were married in 1958.

Dennis worked for the City Forestry Department in Kalamazoo during the summers while in high school. Throughout college he owned and operated his own landscaping and tree trimming business. He entered college planning to become a forester, but changed to education after being a counselor at a YMCA summer camp and enjoying his work with young people. His freshman and sophomore years were spent at Carthage College in Kenosha, and then he transferred to Western Michigan University where he earned a bachelor's degree, master's degree and his teaching license.

After teaching sixth grade for three years in Portage, Michigan, the family moved to Lansing where Dennis attended Michigan State University, earning a Ph.D. in Education. In 1969, Dennis and Ann moved the family to Green Bay. Dennis was one of the first faculty members in the Education Department at UWGB. During his 27 years as a professor, he helped build the four-year program and was instrumental in developing a master's degree offering. He greatly missed his contact with students after his retirement in 1996. Dennis owned an educational consulting business that provided long-term strategic planning studies for public schools in Wisconsin and Michigan.

Dennis and Ann built the house of their dreams in the country (in New Franken) in 1971. They felt blessed to have such a wonderful, natural sanctuary. Dennis was an avid gardener, a talented birder, and a true naturalist. He enjoyed experimenting with various types of heirloom tomatoes in his greenhouse to get a jump start on the growing season.

His love of hunting and fishing started during his childhood and became a lifelong passion. He hunted throughout the Midwest, but his favorite hunting trips were to Saskatchewan with his friend, Lyle Martens, and their labradors, Charlie and Teal. He fished throughout Michigan, Wisconsin, the Florida Everglades and fly-in trips to Canada.

Dennis is survived by his wife, their four children, eight grandchildren, and three great-grandchildren, along with nieces and nephews in Michigan, Indiana, Pennsylvania and Washington.

**Faculty Senate New Business 5c 11/11/2020**

**RESOLUTION TO DELAY IMPLEMENTATION OF BIWEEKLY PAY FOR FACULTY  
AND ACADEMIC STAFF IN THE UW SYSTEM**

**WHEREAS** many monthly employees have constructed budgets that revolve around receiving their paychecks at the beginning of every month,

**WHEREAS** there was no formal consultation by the UW-System administration with any shared governance entities regarding a timeline for possible changes to the payroll system prior to the announcement on October 30, 2020,

**WHEREAS** the rapid change in the payroll system will most disproportionately impact the budgets of our lowest paid monthly employees,

**WHEREAS** the current proposal will result in all monthly deductions for February being deducted from a February 1 paycheck even though the February 1 paycheck will only include 50% of their monthly salaries, thus further increasing hardships on the lowest paid employees,

**BE IT RESOLVED** the Faculty Senate strenuously objects to the proposed timeline forcing monthly employees to move to a biweekly pay system and requests the implementation date be moved to July 1, 2021. Moving the implementation date to July 1 will allow monthly employees the time to adjust their budgets and will reduce the immediate impact on nine-month employees.

**BE IT FURTHER RESOLVED** that we call on the University of Wisconsin System administration to formally consult with all shared governance entities regarding the timeline for implementation and to do everything possible to mitigate the impact of the payroll changes on our most vulnerable employees.

*Upon approval, this resolution shall be transmitted to Chancellor Michael Alexander, Interim UW System President Tommy Thompson, and Regent President Andrew Petersen.*

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

**ABSTRACT**

Program and student learning outcomes for this major align with the National Commission for Health Education Credentialing (NCHEC) competencies for health education practice. This program is based on coursework from a variety of disciplines and culminates in the completion of a semester-long practicum at a community-based agency where students will apply their knowledge and skills in a workplace setting. High impact practices that increase rates of student retention and engagement are included within the major. Graduates will be able to assess, plan, implement, and evaluate health education programs for a variety of populations and communities. They will work collaboratively with community partners/stakeholders to advocate for programs that address community needs. Content in didactic courses as well as field experiences will offer students opportunities to engage with diverse individuals in the community, receive feedback on strategies and practices specific to diverse populations, and reflect on their learning relative to their own experiences and cultures. Similar types of community health programs regionally and across the country have shown significant enrollment growth in the past decade and the employment outlook for students is very good. In addition, findings from EAB reports suggest growing student demand for a Community Health Education program. According to the Bureau of Labor Statistics, overall employment of community health educators is projected to grow 11% from 2018 to 2028, which is much faster than the average for all occupations. Graduates will find jobs in health care (e.g., hospitals, public health departments, health insurance), non-profit organizations, and private businesses.

**PROGRAM IDENTIFICATION**

**Institution Name:** University of Wisconsin-Green Bay

**Title of Proposed Academic Program:** Community Health Education

**Degree Designation(s):** Bachelor of Science

**Mode of Delivery**

Single Institution - degrees for the Community Health Education major will be awarded by UW-Green Bay. The program will be primarily in-person with some hybrid and online courses and learning experiences, utilizing many existing courses from a variety of disciplines along with a field experience and capstone project completed at appropriate community organizations.

**Department or Functional Equivalent:** Nursing and Health Studies

**College, School, or Functional Equivalent:** College of Health, Education and Social Welfare

**CIP Code:** 51.22 Public Health

**Proposed Date of Implementation:** Fall 2021

### **Projected Enrollments and Graduates by Year Five**

The expected enrollment pattern (Table 1) is based on the timely nature of this major (i.e., pandemic), knowledge of enrollments in professional programs at UW-Green Bay, and the enrollment pattern from similar programs. This program will draw from recent high school graduates, non-traditional career changers, transfer students, and students transitioning from another major. Continuing students in Year 1 (Table 1) reflect anticipated interest from students already enrolled at UW-Green Bay. This major is not a cohort model and students can enter the major in fall, spring, or summer.

**Table 1: Five-Year Academic Program Enrollment Projections**

Students/Year	Year 1	Year 2	Year 3	Year 4	Year 5
New Students	12	24	28	32	34
Continuing Students	6	14	29	43	51
Total Enrollment	18	38	57	75	85
Graduating				8	11

A retention rate of 75% was used, which is based on UW-Green Bay data provided by the University of Wisconsin System (2019). This rate is approximately the Full-Time First-Time class of Fall 2017 from year 1 to year 2. In the above projection, initial enrollment of 18 students in Year 1 steadily increases yearly resulting in a total student enrollment of approximately 85 students in year 5. By the end of year 5, 19 graduates of the program are anticipated.

### **Tuition Structure**

The current UW-Green Bay tuition is \$262.43/credit for resident students. No tuition increase is anticipated. The cost and revenue model presented anticipates 100% residential students. Tuition and fees for a full-time Wisconsin resident is \$7,874 for the academic year. The nonresident tuition rate is \$670.47/per credit/per semester (includes segregated fees). No additional program or course fees are planned. Segregated Fees are assessed for all credits up to a maximum of 12 credits for undergraduate students. The current full-time segregated fee is \$787.56 per semester. A standard distance education fee of \$25.00 per credit is applied to online courses. Additional costs students need to cover include

books/supplies (estimate of \$800); housing, if used (\$4,020); and a meal plan (\$2,790) for the academic year.

## **DESCRIPTION OF PROGRAM**

### **Overview of the Program**

This major is planned within the 120-credit requirement for graduation. Based on the proposed curriculum, this includes 65 credits for the major (48 upper level credits). With proper planning, all but 15 credits of the general education requirements are covered by this major. General education requirements that are not covered include First Year Seminar (3 cr), Fine Arts (3 cr), Humanities (6 cr), and Natural Science (3 cr). Courses with a CHE prefix on Table 2 are the only courses that need to be developed; All other courses currently exist at UW-Green Bay.

The Association of American Colleges & Universities identifies many high impact practices that have been widely tested and shown to be beneficial for college students from many backgrounds. This major will include the following practices that educational research suggests increase rates of student retention and student engagement:

- Learning communities –During the students’ junior year, a sequence of Community Health Education courses is required and culminates with capstone and field practicum courses in the senior year. Throughout this course sequence, students will learn together and be exposed to real-life examples in the field of Community Health Education.
- Writing-intensive courses – Each course will require assignments and activities that will enhance the written communication skills of students. Effective communication is a key component of being a successful community health educator.
- ePortfolios – This allows students to collect their work over time, reflect upon their growth, and share selected items with others (e.g., instructors, potential employers).
- Community-based learning – Field-based experiential learning (9 credits) with community partners will be a culminating activity for students in this major. Students will have the opportunity to apply what they are learning in a real-world setting.
- Capstone course – This course will require students to create a project that integrates and applies the knowledge and skills they have learned across the program.

### **Student Learning and Program Outcomes**

Program outcomes align with the NCHEC responsibilities, competencies, and sub-competencies for health education specialist practice.<sup>1</sup> By the end of the program, students will:

---

<sup>1</sup> National Commission for Health Education Credentialing (NCHEC) (n.d.). Responsibilities and Competencies for Health Education Specialists. Retrieved from <https://www.nche.org/responsibilities-and-competencies>

1. Understand the structure of contemporary healthcare including public, non-governmental, and health systems.
2. Use an interdisciplinary approach to addressing complex population health issues and factors that influence health.
3. Apply the steps of assessment, planning, implementation, and evaluation in the design of community health campaigns.
4. Gather, analyze, and synthesize multiple sources of community/public information.
5. Identify and engage priority populations, partners, and stakeholders to design and implement health education programming.
6. Apply established ethical principles and principles of cultural humility, inclusion, and diversity in the development of community/population health campaigns.
7. Apply education and communication theories and/or models in developing community/population health campaigns.
8. Evaluate communication channels and current emerging technologies most appropriate for the audience and message.
9. Promote the health education profession to stakeholders, the public, and others.

Upon completion of the program, graduates will be able to assess, plan, implement, and evaluate health education programs for a variety of populations and communities. Graduates will work collaboratively with community partners/stakeholders to advocate for programs that address community needs (e.g., access to oral health care for uninsured adults).

## Program Requirements and Curriculum

**Table 2: Program Curriculum**

<b>Courses</b>	<b>Credits</b>	<b>Gen Ed</b>
<b><i>Supporting Courses</i></b>	<b>23</b>	
BIOL 201/202 Principles of Biology: Cellular and Molecular Processes w/lab	4	BS
CHEM 207 Laboratory Safety	1	
COMM 133 Public Address or COMM 166 Interpersonal Communication	3	
COMM SCI 205 Social Science Statistics	4	QL
MATH 101 Advanced Algebra	2	
PSYCH 102 Introduction to Psychology	3	SS1

PSYCH 203 Lifespan Development	3	SS1
WF 105 Research and Rhetoric	3	WE-LL
<b><i>Lower Level Courses in the Major</i></b>	<b>17</b>	
HUM BIOL 215 Personal Health and Wellness	3	SP
HUM BIOL 240/241 Anatomy & Physiology w/lab	5	
NURSING 200 Fundamentals of Healthcare Terminology	3	
NUT SCI 202 Ethnic Influences on Nutrition	3	ES
SOC WORK 275 Foundations of Social Welfare Policy	3	SS2
<b><i>Upper Level Courses in the Major</i></b>	<b>48</b>	
CHE ### Foundations of Community Health Education	3	WE-UL
CHE ### Methods and Strategies for Health Education	3	WE-UL
CHE ### Program Planning in Community Health Education	2	
CHE ### Grant Writing	2	
CHE ### Capstone Seminar	3	
CHE ### Field Practicum	9	
HLTH MGT 301 Healthcare Systems	3	
HLTH MGT 302 Healthcare Management	3	
HLTH MGT 401 Healthcare Economics & Policy	3	
HLTH MGT 402 Population Healthcare Management	3	
HUM BIOL 322 Epidemiology	3	GC, SP
NURSING 340 Quality Improvement	2	
PSYCH 310 Drugs & Behavior	3	
PU EN AF 428 Public and Non-Profit Program Evaluation	3	
SOC WORK 340 Strengths Based Group Facilitation	3	

<b>General Education Courses not met by the Major</b>	<b>15</b>	
First Year Seminar 198	3	WE-LL
Fine Arts general education course	3	FA
Humanities general education courses	6	H1, H2
Natural sciences (e.g., CHEM 108/109)	3	NS
<b>Electives</b>	<b>17</b>	
	<b>Total Credits</b>	<b>120</b>

### Assessment of Outcomes and Objectives

Student learning outcomes will be aligned with the NCHEC areas of responsibilities and competencies for Health Education Specialist Practice.<sup>2</sup> The chair of the program, in collaboration with the program faculty via a curriculum committee, will have responsibility for the assessment of student learning. The assessment plan will identify student learning outcomes covered by each course (and threaded across the curriculum) and how each outcome will be assessed. Both direct and indirect assessments of learning outcomes will be utilized. Direct assessment will include embedded course assignments related to learning outcomes, ePortfolios, and performance evaluation in practicum courses. Indirect assessment methods, including student course evaluations, will also be used. Assessment data will be used to inform program changes and continuous improvement (e.g., revision of course content and teaching methods), and aid in monitoring program quality over time. The assessment plan will be implemented during the first year of the program and compiled annually. The program assessment plan will align with the University Plan for the Continuous Assessment of Student Learning.<sup>3</sup> The Plan requires program-specific assessment of student learning, regular reporting of assessment outcomes and how data are used for program improvement, and alignment of program-specific assessment with the five-year cycle of program review.

---

<sup>2</sup> National Commission for Health Education Credentialing (NCHEC) (n.d.). Responsibilities and Competencies for Health Education Specialists. Retrieved from <https://www.nche.org/responsibilities-and-competencies>

<sup>3</sup> University Plan for the Continuous Assessment of Student Learning (2015). Retrieved from <https://www.uwgb.edu/assessment/university-assessment-plan/>

## Diversity

UW-Green Bay is committed to being an access-oriented university in a diverse urban and rural area across a 16-county footprint with campuses in Green Bay, Marinette, Manitowoc, and Sheboygan. To accomplish this, the University has reshaped its operations to focus both on recruiting and supporting under-represented groups. The results of these efforts speak for themselves – the freshman cohort diversity continues to increase, and the University is attracting more first-generation college students, many of whom are from disadvantaged socioeconomic backgrounds. For example, the Fall 2019 freshman class is 24% non-White compared to the previous year’s 13%, and 53% first generation college students compared to 49% in the prior year.<sup>4</sup> Approximately 34% are Pell-grant eligible students. Yet, the University’s diversity profile remains lower than found in the Green Bay Area Public School District (GBAPSD) District, which is a minority-majority school district, with 54% of its student body non-White.<sup>5</sup>

UW-Green Bay’s strategic plan is focused on creating a diverse university that better reflects the community. Attracting a diverse student population is a desired goal for this program. Robust recruitment from communities in the UW-Green Bay footprint and beyond will be used to attract diverse students. Unique initiatives, such as the Phuture Phoenix Program, are providing opportunities for recruitment of diverse students in the region. An annual Helping Professions event brings hundreds of students from the GBAPSD to learn about careers (e.g., nursing, social work), and many students schedule subsequent individual advising sessions. Professional development for faculty/staff related to diversity, equity and inclusivity is a high priority in the College. Faculty/staff are encouraged to complete the Inclusivity and Equity Certificate Level 1 and set annual goals in this area. Recruitment practices of faculty/staff reflect a commitment to equity in hiring including mandatory implicit bias training required for all individuals who serve on a search committee. All applicants for positions are asked about their commitment to inclusivity and equity during the interview process.

Enrollment in this program will not be limited to a select number of students thru a secondary admission process. University support services (e.g., GPS first year program, tutoring, advising with EAB Navigate) and program advising services, will support retention of students in this program. The proposed program curriculum and learning outcomes will directly prepare students with knowledge and skills related to cultural humility, inclusion, equity, and diversity. Content in didactic and field courses will provide opportunities to engage with diverse individuals in the community, receive

---

<sup>4</sup> UW-Green Bay Fact Sheet (2019). Retrieved from <https://www.uwgb.edu/UWGBCMS/media/ise/files/FactBook-Fall-2019.pdf>

<sup>5</sup> Green Bay Area Public School District (2020). Our District. Retrieved from [https://www.gbaps.org/our\\_district](https://www.gbaps.org/our_district).

feedback on strategies and practices specific to diverse populations, and reflect on learning relative to their own experiences and cultures.

### **Collaborative Nature of the Program**

The Community Health Education major relies heavily on existing courses at UW-Green Bay. Given the multi-disciplinary nature of the field of community health, it makes sense to draw upon relevant courses in the sciences, psychology, health management, nursing, and social work. The inclusion of new courses in foundations, methods and strategies, and program planning that are specific to community health will ensure that graduates meet important outcomes and competencies to begin work in the field upon graduation.

The major culminates in the completion of a semester-long practicum at a community-based agency where students will apply their knowledge and skills in a workplace setting. This practicum will be based upon the four components of learning objectives: specific skills, competencies and activities (that will be fostered during the practicum), place (which can be highly varied given the wide range of settings where community health education is practiced), person (mentors who act as a guide into the beginning phase of the profession), and time (an entire semester with opportunities to experience many different situations). Student activities will involve essential community health education services and allow students to develop community health education core competencies. Such activities could include collection of health data or other surveillance activities, community assessment, policy development, advocacy, program planning, program evaluation, and/or health education activities.

Students will enter this major due to a keen interest in helping others in health-related settings. These students might be new freshmen who come to UW-Green Bay because of this major or transfer students from other post-secondary institutions who find this major appealing. In particular, graduates from the Health Navigator associates degree program at Technical Colleges will find this major to be a natural progression in their career plans.

### **Projected Time to Degree**

Students who declare this major will be able to complete the degree in four years, which could be accelerated by taking summer and J-term courses. With proper planning, all but 15 credits of general education requirements are covered by this major. Students can be enrolled in these general education courses for the first year of their college career without delaying their time to degree. It is not until their junior year that students will need to enroll in core curriculum courses, the capstone, and field practicum courses.

## **Program Review**

UW-Green Bay's Academic Affairs Council (AAC) is charged with oversight of all undergraduate programs, including review and approval of all coursework and academic program development. In compliance with UW-Green Bay's Academic Program Review and Student Learning Outcome Policy and Procedures, the major in Community Health Education will be reviewed on a five-year cycle by the department, Dean, AAC, and the Provost. The AAC forwards recommendations to Faculty Senate and provides advice regarding issues of undergraduate-level education policy and implementation. In addition, program chairs are responsible for coordinating an annual student learning outcome assessment and submitting a report for review to the Academic Program Assessment Subcommittee of the University Accreditation and Assessment Committee. All feedback from this review process will be used in making recommendations for improvements to the major.

## **Accreditation**

The Community Health Education major will not be an accredited program. However, at the completion of the major, students will be prepared to sit for the Certified Health Educator Specialist exam.

## **JUSTIFICATION**

### **Rationale and Relation to the Mission**

This program is consistent with the University's strategic vision of serving as an "access-driven, urban-serving comprehensive university that provides a world-class education and promotes economic growth and sustainability as well as health, wellness and social equity in Green Bay and the surrounding areas".<sup>6</sup> This vision involves significantly increasing access to post-secondary education in an area with one of the lowest degree attainment rates in the country, and reshaping the academic program portfolio to meet current and future workforce needs in the region. Programs in the College of Health, Education, and Social Welfare impact communities through our well-prepared graduates in areas such as nursing, social work, and teacher preparation. There is a need for community health educators in Green Bay, the third largest urban area in the State, and in the region. Unlike nearly every other county in Wisconsin, the Brown County population is growing and getting younger. The Wisconsin Department of Administration predicts Brown County will grow by over 25% between 2010 and 2040 (average state growth is 14%). The percentage of 25-55 years of age is projected to

---

<sup>6</sup> University of Wisconsin – Green Bay [UW-Green Bay] (2020). Strategic Vision. Retrieved from <https://www.uwgb.edu/chancellor/university-mission/strategic-vision/>

grow only 2% statewide. This cohort is expected to grow by more than 10% in only Kenosha and Brown counties.

UW-Green Bay’s Academic Affairs Strategic Plan identifies seven priorities with the following three priorities directly linked to this new degree proposal.<sup>7</sup> These include student success, distinctive programs, and community relationships. This unique program will create new career opportunities for students. Through coursework and field experience, students will have knowledge and relationships with community organizations that create solid employment opportunities in this career field. This program will foster further partnerships with community agencies and supply these agencies with qualified employees.

This new program and its outcomes connect well with elements of the University mission, especially related to problem focused learning, social justice, and educational opportunity. UW-Green Bay “provides a problem focused educational experience that promotes critical thinking and student success”.<sup>8</sup> Through this program, students will be prepared to investigate and respond to complex community health problems. A recent example is the essential work that community health workers are doing as part of contact tracing programs across the country to help reduce the spread of COVID-19.<sup>9</sup> Guided by the mission, the University has a “deep commitment to diversity, inclusion, social justice, civic engagement, and educational opportunity at all levels”.<sup>6</sup> This program will prepare students to communicate and advocate for health in communities through activities such as assessment of needs, planning of health education and designing research to better understand community issues. Students will be prepared to work with a variety of population demographics, cultural perspectives, and service settings.

### **Institutional Program Array**

---

<sup>7</sup> University of Wisconsin – Green Bay [UW-Green Bay] (2020). Academic Affairs Strategic Priorities. Retrieved from <https://www.uwgb.edu/academic-affairs-strategic-priorities/>

<sup>8</sup> University of Wisconsin – Green Bay [UW-Green Bay] (2020a). Mission Statement. Retrieved from <https://www.uwgb.edu/chancellor/university-mission/mission-statement/>

<sup>9</sup> Institute for Healthcare Improvement (IHI) (May 26, 2020). Why States may Fall Short on Contact Tracing. Retrieved from [IHITeam@ihi.org](mailto:IHITeam@ihi.org)

UW-Green Bay has numerous undergraduate and graduate degrees in health related areas.<sup>10</sup> Consistent with the core value of cross-disciplinary collaboration in UW-Green Bay's mission, this major has been developed in collaboration with the academic departments of Nursing & Health Studies and Social Work. Courses from existing majors will be incorporated into this major. This degree will use courses offered from various Colleges and majors including Communications, Human Biology, Nutrition Science, Health Management, Psychology, Nursing, and Social Work. This creates an efficiency in developing and offering this new program and will foster greater collaboration and sharing of perspectives in these courses among students from differing majors. Faculty in Nursing, Social Work, and Nutrition Science, for example, have expertise in areas such as community health, community resources and services, and nutrition and food security in communities.

### **Other Programs in the University of Wisconsin System**

This program falls in CIP code 51 Health Professions and Related Programs, subcode of 51.22 Public Health. In terms of undergraduate programs, UW-La Crosse is the only other UW System school with a similar program, a Bachelor of Science in **Public Health and Community Health Education** (CIP 51.2208). This program has a strong foundation in public health and is accredited by the [Council on Education for Public Health](#), (CEPH). The UW-La Crosse program uses a cohort model for admission and progression through the curriculum. The curriculum is divided into five blocks and students must complete block 1 before they can proceed to block 2, etc .UW-Green Bay's **Community Health Education** program (CIP 51.2207) will not use a cohort model, block requirement plan or seek accreditation. The UW-Green Bay program will have a strong emphasis on understanding the intersection of governmental and non-governmental healthcare organizations and how economics and policy influence health.

Related undergraduate degrees in the UW System include UW-Milwaukee's BS Community Engagement and Education program (CIP 13.0410), which is different from this proposed program in that there is not a focus on health, and UW-Eau Claire's BS in Environmental Public Health (CIP 512208), focused on managing hazards in the environment. Several UW institutions have related graduate degrees (UW-Madison Public Health MPH; UW-Milwaukee Public Health MPH and PhD; UW-La Crosse Community Health Education MPH and MS).

### **Need as Suggested by Current Student Demand**

---

<sup>10</sup> UW-Green Bay Health Related Programs (n.d.). Retrieved from <https://www.uwgb.edu/chesw/>

Three methods were used to evaluate potential student demand: 1) Enrollment patterns in a similar program, 2) Enrollment patterns in related programs, and 3) EAB market research reports. Personal communication with Dan Duquette, a Professor in the Public Health and Community Health Education program at UW-La Crosse (March 2020), provided information that their program has had enrollment growth of 37% since 2018. They admit approximately 35-45 students per term (i.e., fall and spring). Per Dr. Duquette, students interested in health programs are attracted to this major for two reasons: 1) Some students switch after initially planning careers in physical therapy, occupational therapy, physician assistant, or other professional programs, and 2) Some students have interest in this major because it has less science than areas like nursing or pre-med yet involve work with people.

Helping professions majors, such as nursing and social work, have secondary admission processes. Admission is not available to all students who desire these programs given limited program capacity. The 4-year nursing program at UW-Green Bay is new and 147 pre-nursing students enrolled in fall 2019. These pre-nursing students applied for 48 seats in the Nursing major for fall 2020. Across the UW System, baccalaureate nursing programs are currently denying admission to 50-80% of their qualified applicants annually, which is consistent with national trends.<sup>11</sup> The Community Health Education major will be an option for students who are not accepted into the Nursing program or prefer a non-clinical program. Also, an EAB 2019<sup>12</sup> report on bachelor's-level community engagement programs indicated that students interested in an education degree without licensure requirements are often attractive. This finding suggests that there will be some interest from students who want broad opportunities in education.

EAB<sup>13</sup> evaluated demand for a bachelor's-level public health program in the northeast area of the U.S. and reported growing enrollments (more than doubling in the past five years at 3 of 4 profiled institutions) and strong student interest in bachelor's-level public health programs. Qualitative

---

<sup>11</sup> Young, L. K., Alasagheirin, M., Aschenbrenner, A., Marcyjanik, D., Hanson Brenner, G., Sohn, K., & Adams J. L. (2020). 2018 Wisconsin nursing education and nurse faculty survey report. Milwaukee, WI: Wisconsin Center for Nursing, Inc. Retrieved from <https://drive.google.com/file/d/1DF8Jpt9Du5OJND8RLjfhOUFK1dV99Z/view>

<sup>12</sup> EAB (2019). Market Viability of a bachelor's-level community engagement program [customized research report completed by EAB]. Link: [file:///C:/Users/Owner/Downloads/Market%20Viability%20of%20a%20Bachelor's-Level%20Community%20Engagement%20Program.EAB%20\(2\).pdf](file:///C:/Users/Owner/Downloads/Market%20Viability%20of%20a%20Bachelor's-Level%20Community%20Engagement%20Program.EAB%20(2).pdf)

<sup>13</sup> EAB (2017). Market Viability of a bachelor's-level public health program [customized research report completed by EAB]. Link: [file:///C:/Users/Owner/Downloads/Market%20Viability%20of%20a%20Bachelor's-Level%20Public%20Health%20Program\\_EAB.pdf](file:///C:/Users/Owner/Downloads/Market%20Viability%20of%20a%20Bachelor's-Level%20Public%20Health%20Program_EAB.pdf)

interviews by EAB with university administrators attributed growing enrollments, in part, to increased awareness of public health jobs. In 2020, EAB<sup>14</sup> reported student demand for a bachelor's-level public health program in the southeast area of the U.S. and reported that program completions grew 10-13% per year on average between the 2013-2014 and 2017-2018 academic years. These findings show growing student demand for a Community Health Education program. Student demand is currently being captured by only a few undergraduate programs in Wisconsin and surrounding states. Existing student recruitment and advising processes at UW-Green Bay, combined with targeted marketing of this program, will be used to grow and sustain program enrollment.

### **Need as Suggested by Market Demand**

As more organizations and communities focus on wellness and prevention, and with growth in the health industry, community health educators are sought after and in high demand. Graduates with a major in community health education find jobs in the health care industry (e.g., hospitals, public health departments, health insurance), non-profit organizations, government agencies, and private businesses. According to the Bureau of Labor Statistics,<sup>15</sup> overall employment of community health educators is projected to grow 11% from 2018 to 2028, which is much faster than the average for all occupations. Employment (number of jobs) for this occupation nationally in 2018 was 123,800.<sup>16</sup> Wisconsin employment volume (number of jobs) is rated as fair for health education specialists and moderate for community health workers.<sup>17</sup> Border states, such as Minnesota and Illinois for health educators and Illinois and Michigan for community health workers, have high employment volume. The annual mean wage in Wisconsin is \$55,130 for Health Education Specialists and \$47,440 for

---

<sup>14</sup> EAB (2020). Market Pulsecheck [customized research report completed by EAB]. Link: <file:///C:/Users/Owner/Downloads/Feasibility%20of%20a%20Bachelor's%20in%20Public%20Health.pdf>

<sup>15</sup> Bureau of Labor Statistics, [BLS], U.S. Department of Labor (2020a). Occupational Outlook Handbook, Health Educators and Community Health Workers, retrieved from <https://www.bls.gov/ooh/community-and-social-service/health-educators.htm>

<sup>16</sup> Bureau of Labor Statistics, [BLS], U.S. Department of Labor (2020a). Occupational Outlook Handbook, Health Educators and Community Health Workers, retrieved from <https://www.bls.gov/ooh/community-and-social-service/health-educators.htm>

<sup>17</sup> Bureau of Labor Statistics [BLS], US Department of Labor (2020b). Occupational Outlook Handbook, Occupational employment statistics, May 2019, Employment of health educators by State: <https://www.bls.gov/oes/current/oes211091.htm#st>; Employment of community health workers by State: <https://www.bls.gov/oes/current/oes211094.htm#st>

community health workers.<sup>18</sup> A review of jobs posted monthly at the Wisconsin Public Health Association Job Center during the period of August 2019-January 2020 averaged 9 jobs per month.<sup>19</sup> Graduates of a Community Health Education program qualify for many of the posted positions. Examples of job titles include public health educator, health educator, prevention specialist, community health educator, HIV outreach specialist, and community health navigator. Several examples of specific jobs with an educational requirement of a community health education or health education degree preferred or required include public health educator (Green County Public Health), health educator (Rock County), and public health supervisor (Winnebago County). Through personal communication with Professor Duquette, UW-La Crosse Public Health and Community Health Education (March 2020), the employment outlook for students is very good. Of their 34 students in the program capstone course in spring 2020, seven students plan to attend graduate school and 19 have already been hired in positions two months before their graduation. Locally, the Brown County Health Department employs 40 people of various disciplines. Of the 40, 11 (27%) staff members occupy positions that can be filled with a community health education degree or previous experience in community health education. Two of the four (50%) management team members have a background in community health education (A. Steinberger, personal communication, June 18, 2020).

---

<sup>18</sup> Bureau of Labor Statistics [BLS], US Department of Labor (2020b). Occupational Outlook Handbook, Occupational employment statistics, May 2019, Employment of health educators by State: <https://www.bls.gov/oes/current/oes211091.htm#st>; Employment of community health workers by State: <https://www.bls.gov/oes/current/oes211094.htm#st>

<sup>19</sup> Wisconsin Public Health Association [WPHA] (2020). WPHA Career Center. Retrieved from [https://www.wpha.org/page/Career\\_center](https://www.wpha.org/page/Career_center)

**UNIVERSITY OF WISCONSIN-GREEN BAY**  
**COST AND REVENUE PROJECTIONS NARRATIVE**  
**BACHELOR OF SCIENCE IN COMMUNITY HEALTH EDUCATION**

*One table accompanies this narrative: Table 1- Cost & Revenue Projections for Newly Proposed UW-Green Bay Program in Community Health Education (below)*

**Introduction**

The Community Health Education major relies heavily on existing courses at UWGB, drawing upon relevant courses in the sciences, psychology, health management, nursing and social work. Given this, the infrastructure and budget are relatively low to begin this new program.

**Section I – Enrollment**

Table 1 (I.a-e) depicts an expected enrollment pattern for Community Health Education based on the nature of this major and job demand, interest in professional programs at UW-Green Bay, and enrollment from similar programs at other Universities. In this projection, the initial enrollment of 18 new and transfer students (headcount) in fall 2021 gradually increases with resultant total student enrollment of approximately 85 in year 5. Student FTE (I. c-d) is calculated based on 15 credits per semester/30 credits per year. An average of 25 credits per year was used to calculate FTE for this program. Total student FTE is 71 in year 5.

**Section II – Credit Hours**

The proposed curriculum for Community Health Education includes 65 credits in the major, 38 credits of support courses and general education courses, and 17 credits of electives. Of the 65 major credits, 22 credits are new Community Health Education (CHE) that need to be developed and 43 credits exist (courses such as Epidemiology, Healthcare Systems, etc).

New credit hours (courses or sections not previously offered by University attributable to the major) and existing credit hours (existing courses attributable to major) are shown in Table 1 (II.a-c). Credit hours were calculated from a table of new courses/course sections and existing courses/course sections in the major based on available course capacity and student projected enrollment.

**Section III – Faculty and Staff Appointments**

Instructional FTE required for this program is shown in Table 1 (III.a-b). A 24-credit load was used to calculate instructional FTE although a combination of lecturers and tenure-track faculty will be used in this major (27 credit and 24 credit loads, respectively). In Year 1, the proposed cohort size is small, and students take few courses in the major, so little faculty FTE will be needed for the Community Health Education program. In Year 2, 0.67 FTE (16 credits) will be needed for new

courses/sections in Community Health Education course (e.g., Human Biology and Nutrition Science courses). In subsequent years, new FTE of 0.46 (year 3) and 0.63 (year 4) will be required and will reflect expertise from various disciplines. A 3-credit reassignment is included each year for program management by a faculty member. Total FTE for the program at Year 5 is 2.9 FTE.

Administrative staff FTE is shown in Table 1 (III.c-d). Day-to-day coordination of the program (.10 FTE) will come from existing staff, so no new administrative FTE is required in year 1 and 2 of the program. In Year 3, 0.25 FTE (advisor and program coordination) will be needed due to growing student enrollment.

#### **Section IV – Program Revenues**

Students enrolled in the program will pay the standard UW-Green Bay undergraduate tuition rate, which for the 2020-2021 Academic Year is \$262.43 per credit or \$3,149.16 per semester for students within the plateau (12-18 credits). In addition to tuition, student segregated fees are \$65.83 per credit or \$790.00 per semester for full-time students; these funds are not directly available to the program (so not reflected on budget). Students who opt to take a course via distance education pay an additional \$25 per credit; these funds are not directly available to the program and are used to support distance education infrastructure at UW-Green Bay. Revenue projections assume institutional revenue of 24 credits times \$262.43 per credit multiplied by FTE student enrollment. For this calculation, revenue for 24 credits is used given the tuition plateau for full-time students. No other revenue sources apply (e.g., program/course fee, extramural funding).

#### **Section V – Program Expenses**

Instructional salary lines assumes \$60,000 plus fringe (43% of salary) which is based on the lower end of salary for the CIP code for Public Health at Carnegie Masters-Granting Medium/Large (all ranks) and consistent with salaries at UW-Green Bay for faculty/lecturers in related areas (e.g., Human Services, Human Biology). Administrative staff (advisor) FTE used an FTE salary of \$44,000 with fringe of 43%, based on current hiring for this position title in the College of Health, Education, and Social Welfare. An increase of 2% in salary was included in years 2 and 4.

Other program costs include supplies & expenses, marketing, professional development, and indirect costs. S & E costs include \$6000 in the first two years and \$12,000 in subsequent years to cover general expenses (e.g., phone, printing, consumables) and technology (e.g., computer/computer replacement). Program marketing includes \$7,000 per year in years 1 and 2, and a lower amount (\$4000) in subsequent years given that marketing materials and efforts will be established. Professional Development provides \$2000 in year 1 and \$4,000 in subsequent years. Indirect costs reflect 25% of gross tuition revenue to cover indirect institutional costs (e.g., library subscriptions, facilities, administration, systems support).

#### **Section VI – Net Revenue**

Net revenues will be directed to support continued growth within the College of Health, Education and Social Welfare and cover any unexpected program costs.

University of Wisconsin - Green Bay							
Table 1: Cost and Revenue Projections For Community Health Education							
		Items	Projections				
			Academic Year				
			2021/22	2022/23	2023/24	2024/25	2025/26
			Year 1	Year 2	Year 3	Year 4	Year 5
<b>I</b>	<b>a</b>	<b>Enrollment (New Student) Headcount</b>	12	24	28	32	34
	<b>b</b>	<b>Enrollment (Continuing Student) Headcount</b>	6	14	29	43	51
		<i>Enrollment (total student) headcount</i>	18	38	57	75	85
	<b>c</b>	<b>Enrollment (New Student) FTE</b>	10	20	23	27	28
	<b>d</b>	<b>Enrollment (Continuing Student) FTE</b>	5	12	24	36	43
	<b>e</b>	<b>TOTAL FTE</b>	15	32	47	63	71
<b>II</b>	<b>a</b>	<b>Total New Credit Hours</b>	18	264	121	144	0
	<b>b</b>	<b>Existing Credit Hours</b>	72	66	564	873	1184
	<b>c</b>	<b>Total Credit Hours</b>	90	330	685	1017	1184
<b>III</b>	<b>a</b>	<b>FTE of New Faculty/Instructional Staff</b>	0.17	0.67	0.46	0.63	0
	<b>b</b>	<b>FTE of Current Fac/IAS</b>	0.17	0.29	1.54	2.25	2.9
	<b>c</b>	<b>FTE of New Admin Staff</b>	0	0	0.25	0	0
	<b>d</b>	<b>FTE Current Admin Staff</b>	0.1	0.1	0	0.25	0.25
<b>IV</b>		<b>Revenues</b>					
	<b>a</b>	<i>From Tuition - (\$262.43/cr @24 cr per FTE X Total FTE)</i>	\$94,475	\$201,546	\$296,021	\$396,794	\$447,181
	<b>b</b>	<i>From Fees</i>					
	<b>c</b>	<i>Program Revenue (Grants)</i>					
	<b>d</b>	<i>Program Revenue - Other</i>					
	<b>e</b>	<i>GPR (re)allocation</i>					
	<b>f</b>	<b>Total New Revenue</b>	\$94,475	\$201,546	\$296,021	\$396,794	\$447,181
<b>V</b>		<b>Expenses</b>					
		<b>Salaries plus Fringes</b>					
	<b>a</b>	<i>Faculty/Instructional Staff (w/fringe at 43%)</i>	\$29,172	\$84,015	\$175,032	\$258,872	\$258,872
	<b>b</b>	<i>Other Staff</i>	\$6,292	\$6,418	\$16,045	\$16,365	\$16,365
		<b>Other Expenses</b>					
	<b>c</b>	<i>Facilities</i>					
	<b>d</b>	<i>Equipment</i>					
	<b>e</b>	<i>S &amp; E</i>	\$6,000	\$6,000	\$12,000	\$12,000	\$12,000
	<b>f</b>	<i>Marketing</i>	\$7,000	\$7,000	\$4,000	\$4,000	\$4,000
	<b>g</b>	<i>Professional development</i>	\$2,000	\$4,000	\$4,000	\$4,000	\$4,000
<b>h</b>	<i>Indirect expenses (25%)</i>	\$23,619	\$50,387	\$74,005	\$99,199	\$111,795	
		<b>Total Expenses</b>	\$74,083	\$157,820	\$285,082	\$394,436	\$407,033
<b>VI</b>	<b>a</b>	<b>Net Revenue</b>	\$20,392	\$43,726	\$10,939	\$2,358	\$40,148

Faculty Senate Old Business 4a 12/9/2020

**Faculty Senate Document #20-05 – Approved 12/9/2020**

**UW Extended Campus Proposal for New Collaborative Online Certificate**

**Name of Proposed Program:** Graduate Certificate in Applied Bioinformatics (offered through the established collaborative online M.S. in Applied Biotechnology Program)

**Collaborative Partners:** UW-Green Bay, UW-Madison, UW-Oshkosh, UW-Parkside, UW-Platteville, UW-Stevens Point, UW-Whitewater

**Mode of Delivery:** Distance Education (100% Online)

**Department or Functional Equivalent:** Department of Natural and Applied Sciences

**Desired Implementation Term and Year:** Fall 2021

**CIP Code:** 26.1201 - Biotechnology

**Program Description:**

The Graduate Certificate in Applied Bioinformatics is being offered through the established collaborative online MS in Applied Biotechnology and will include both existing and new courses. The degree represents a fully online, asynchronous curriculum comprised of 12 credits to include four courses. As is the case with the MS in Applied Biotechnology degree, UW-Green Bay, UW-Madison, UW-Oshkosh, UW-Parkside, UW-Platteville, UW-Stevens Point, and UW-Whitewater will offer the certificate jointly. The program will serve as both an in-program learning opportunity and additional credential for MS-ABT degree-seeking students as well as a freestanding certificate program for non-degree (certificate-only) seeking students who may or may not elect to continue to the MS degree program. Students will select and enroll at a home campus from which they will receive academic supports and the certificate is conferred.

**Background and Rationale:**

Based on a study by the University Professional and Continuing Education Association Center for Research and Strategy Studies commissioned by UW Extended Campus in 2019, occupations related to bioinformatics are predicted to show strong growth over the next 10 years. The average annual salary for related occupations within the state and region was approximately \$80,000. In addition, a focus group conducted during the curriculum development process comprised of bioinformatics industry professionals confirmed the current need for more scientists with bioinformatics skills and their support for the certificate as designed. The Graduate Certificate in Applied Bioinformatics will be targeted toward working biotechnology professionals who wish to work in the area of bioinformatics but do not possess the required skillset. Completion of the certificate will provide the core competencies needed to gain entry into bioinformatics positions.

### Program Requirements and Curriculum:

Admission requirements for the Graduate Certificate in Applied Bioinformatics program will include a Bachelor's degree and a 3.0 undergraduate GPA. Program prerequisite will include General Biology with lab.

Table 1 outlines the 12-credit curriculum for the proposed certificate. Students must successfully complete all four courses to earn the certificate. Course syllabi have been included for informational purposes (see Attachment A). NOTE: Syllabi provided contain the basic information of the courses/course content.

**Table 1: Graduate Certificate in Applied Bioinformatics Program Curriculum**

<b>Course Number &amp; Title</b>	<b>Description</b>	<b>Course Status &amp; Campus</b>	<b>Credits</b>
ABT 720: Experimental Design and Analysis in Biotechnology	Principles of descriptive and inferential statistics with applications in biotechnology including experimental design, quantitative data analysis, and bioinformatic evaluation of complex molecular and biological data sets.	Existing - Whitewater	3
ABT 730: Python for Bioinformatics	Introduce diverse strategies for computational analysis of macromolecular data using Python including sequence alignment, genome annotation, data retrieval from databases, phylogenetic analysis, and molecular evolution. Experiential learning is emphasized; confidence in practical skills is developed through persistent application of course content to projects focused on current problems in bioinformatic research.	New - Whitewater	3
ABT 780: Bioinformatic Inquiry	Advances the development of competencies promoting efficient analysis of biological data. Emphasizes matching a research problem with the most effective tools for its completion, balancing use of existing software and de novo software development. Advanced aspects of Python and R, algorithmics, machine learning, simulations, and effective communication of results are emphasized. <i>Prerequisites: ABT 720, 730</i>	New - Platteville	3
ABT 785: Applications of Bioinformatics	Exploration and application of existing bioinformatic tools. Implementation of pre-coded solutions to data acquisition, wrangling, analysis, visualization, and structural modeling problems. Students will complete a project that generates a multi-system workflow to solve bioinformatic problems. <i>Prerequisites: ABT 720, 730</i>	New - Parkside	3

### **Program Competencies and Learning Outcomes:**

Students completing the Graduate Certificate in Applied Bioinformatics will gain the following core competencies and learning outcomes:

#### ABT 720: Experimental Design and Analysis in Biotechnology

- Competency A: Demonstrate professional and scientific communication appropriate for biotechnology settings
  - Program Outcome 1: Select the most appropriate modalities, methodologies, tools, and practices to communicate complex ideas effectively across diverse audiences.
- Competency C: Distinguish among diverse methods and technologies and their applications in biotechnology
  - Program Outcome 9: Exhibit strong technical knowledge to evaluate and choose appropriate technologies
  - Program Outcome 10: Demonstrate the ability to read, interpret and apply scientific literature
  - Program Outcome 11: Demonstrate competency in data analyses and statistics used in biotechnology

#### ABT 730: Python for Bioinformatics

- Competency C: Distinguish among diverse methods and technologies and their applications in biotechnology
  - Program Outcome 9: Exhibit strong technical knowledge to evaluate and choose appropriate technologies
  - Program Outcome 10: Demonstrate the ability to read, interpret and apply scientific literature
  - Program Outcome 11: Demonstrate competency in data analyses and statistics used in biotechnology
- Additional Outcomes:
  - Demonstrate competency in use of python programming strategies to solve problems in bioinformatics
  - Demonstrate the ability to integrate python programming strategies with complementary resources, especially UNIX, GitHub, and libraries.

#### ABT 780: Bioinformatic Inquiry

- Competency A: Demonstrate professional and scientific communication appropriate for biotechnology settings
  - Program Outcome 1: Select the most appropriate modalities, methodologies, tools, and practices to communicate complex ideas effectively across diverse audiences
  - Program Outcome 3: Construct and deliver effective, professional presentations
- Competency C: Distinguish among diverse methods and technologies and their applications in biotechnology
  - Program Outcome 8: Compare and contrast emerging with existing technologies
  - Program Outcome 11: Demonstrate competency in data analysis and statistics

### ABT 785: Applications of Bioinformatics

- Competency B: Demonstrate comprehensive understanding of organizational processes and product development pipelines
  - Program Outcome 4: Evaluate and describe systems of product research, development, and production
- Competency C: Distinguish among diverse methods and technologies and their applications in biotechnology
  - Program Outcome 8: Compare and contrast emerging with existing technologies
  - Program Outcome 9: Exhibit strong technical knowledge to evaluate and choose appropriate technologies
  - Program Outcome 11: Demonstrate competency in data analyses and statistics

#### **Plan for Program Assessment:**

The MS in Applied Biotechnology program assessment team, comprised of academic program directors from each partner institution as well as the UW Extended Campus program manager, will manage the assessment of student learning outcomes for the Certificate in Applied Bioinformatics. This assessment team will identify and define measures and establish a rubric to evaluate how well students are demonstrating attainment of program learning outcomes. The team will also identify and collect data needed to complete the assessment. As a part of the course development and review 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 UW Extended Campus each semester. UW Extended Campus 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 findings, 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.

#### **Tuition Structure:**

Consistent with the MS in Applied Biotechnology program, tuition for the Certificate in Applied Bioinformatics will be set at \$850/credit for 2021-2022 and will be identical at all seven 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. The pricing structure will follow the UW System pricing guidelines for distance education programs provided in UW System Administrative Policy (SYS) 130. Segregated fees for students enrolled in this program would be waived by all of the partner institutions. 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.

#### **Enrollment Projections and Funding:**

The Graduate Certificate in Applied Bioinformatics and related courses represent an in-program offering and enhancement of the MS in Applied Biotechnology program. Funding levels for new courses (i.e. course development, revision and instruction) will be supported by UWEX following the

current Memorandum of Understanding for the MS-ABT degree program. Consistent with standard UWEX practice, the MS-ABT Financial Model will be updated annually to reflect previous year actual data and will include certificate activity.

As defined, we are anticipating two primary audiences will access the certificate program – current MS-ABT students and certificate-only (non-degree seeking) students. It is estimated that 15% of degree-seeking students will choose to complete the optional certificate program and the program will attract at least 10 new certificate-only students per year. The certificate is designed to be completed within two to four semesters. Similar to the MS-ABT program, it is assumed that most of certificate-only students will enroll part-time.

Table 2 represents enrollment and completion projections for both audiences over the next five years. As shown, we are anticipating strong enrollments with approximately 100 students completing 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 certificate program.

**Table 2: Five-Year Certificate Program Student Enrollment Projections**

Students/Year	2021-22	2022-23	2023-24	2024-25	2025-26
New Certificate-only Students	10	15	20	25	30
MS-ABT Degree-seeking Students Enrolling in Certificate	9	11	11	11	11
Continuing Students	19	35	42	43	43
Total Course Enrollments	48	86	104	107	106
Certificate Completions	0	9	21	31	36

## **Attachment A: Graduate Certificate in Applied Bioinformatics Course Syllabi**

### **ABT 720: Experimental Design and Analysis in Biotechnology**

**INSTRUCTOR:** Robert Kuzoff

**PHONE(s):** (262) 472-5142

**EMAIL:** [kuzoffr@uww.edu](mailto:kuzoffr@uww.edu)

**EMAIL COMMUNICATION:** During the week, expect a response from me within 24 hours. Please expect that my response time on weekends may be up 48 hours.

**COURSE DELIVERY MODE:** Online

**COURSE DESCRIPTION:** Principles of descriptive and inferential statistics with applications in biotechnology including experimental design, quantitative data analysis, and bioinformatic evaluation of complex molecular and biological data sets.

**COURSE CREDITS:** 3

**COURSE ALIGNMENT WITH PROGRAM OUTCOMES:** This course addresses the following competencies and program outcomes of the Master of Science in Applied Biotechnology:

1. Competency A: Demonstrate professional and scientific communication appropriate for biotechnology settings
  - a. Program Outcome 1: Select the most appropriate modalities, methodologies, tools, and practices to communicate complex ideas effectively across diverse audiences.
2. Competency C: Distinguish among diverse methods and technologies and their applications in biotechnology
  - a. Program Outcome 9: Exhibit strong technical knowledge to evaluate and choose appropriate technologies
  - b. Program Outcome 10: Demonstrate the ability to read, interpret and apply scientific literature
  - c. Program Outcome 11: Demonstrate competency in data analyses and statistics used in biotechnology

**COURSE LEARNING OBJECTIVES:** In general, we will learn to apply methods of exploratory data analysis, experimental design, and statistical inference that are applicable to problems in biotechnology and suitable for rigorous evaluation of molecular and biological data. At the end of this course, students will be able to:

1. Evaluate and apply experimental and statistical methods that are commonly used in biotechnology research;
2. Explain the rationale behind experimental and statistical procedures used in biotechnology research;
3. Select an appropriate experimental and statistical method for a given research question;
4. Implement statistical procedures using software, especially R and RStudio;
5. Implement bioinformatic methods using a set of software tools; and
6. Communicate statistical findings in biotechnology research to stakeholders.

**TEXTS:**

- Baldi, B. and D. S. Moore. 2018. *The Practice of Statistics in the Life Sciences*, 4<sup>th</sup> Ed. W. H. Freeman and Co., New York, NY, USA.
- Wickham, H. and G. Grolemund. 2017. *R for Data Science: Import, Tidy, Transform, Visualize, and Model Data*. O’Reilly Media, Inc., Sebastopol, CA, USA.

**COURSE GRADING:**

List of assessments, exercises, and assignments (*1050 points possible*)

Online topical discussions ( <i>10 x 6</i> )	60 pts
Exercise Sets ( <i>16 x 10</i> )	160 pts
Short Essay Responses ( <i>2 x 40</i> )	80 pts
Critical Commentaries ( <i>4 x 40</i> )	160 pts
Software Practicals ( <i>6 x 40</i> )	240 pts
Unit I to V Multiple-choice In-home Exams ( <i>5 x 50</i> )	250 pts
Unit VI In-home Essay Exam	100 pts

- All assessments, exercises, and assignments will be posted to the course webpage, in CANVAS, and will be accompanied by due dates and times.
- Assignments will be completed either individually or in small groups (this will be clarified when each in class assignment is posted to the course webpage).
- Completed assessments, exercises, and assignments will be turned in to the appropriate drop-boxes on CANVAS.
- It is expected that work will be completed prior to the posted deadlines.
- A late penalty will be assessed for work completed after the due date (*initially 20%, but increasing by 20% per day from the due date and time*).
- Make-up assignments will be given only with proper written justification and prior consent of the instructor.
- Careful review of all assigned videos is required.
- Thoughtful completion of all assigned reading is required.

**GRADE SCALE:**

Letter grades will be based on the following scale:

ABT720 Syllabus Revised for Fall 2020

**A:** 93-100      **B-:** 80-82.9  
**A-:** 90-92.9    **C+:** 76-79.9  
**B+:** 86-89.9    **C:** 73-75.9  
**B:** 83-85.9      **C-:** 70-72.9      **F:** <70

**FINAL EXAM:** Yes– A comprehensive final learning evaluation will be completed online.

**CREDIT STANDARD:** The credit standard for this course is met by an expectation of a total of 135 hours of student engagement with the course learning activities (*at least 45 hours per credit*), which include:

- Careful review of assigned (1) video lectures, (2) chapters in course texts, (3) review articles, and (4) research articles;
- Completion of assigned (5) writing, (6) problem sets, and (7) software practicals;
- Reflective participation in (8) online discussions; and
- Additional work as described in the syllabus.

**COURSE OUTLINE:**

Unit [Course objectives]	Readings in Baldi & Moore	Topics	Videos & r4ds Chs
Primer	Review article	Introduction to RStudio and the tidyverse	
Unit 1 - Exploratory Data Analysis (Weeks 1-3; 9/8 – 9/26) [Obj. 1, 3, 4, 6]	Ch 1, 5 – 30	Visualizing data	5, Ch 1
	Ch 2, 39 – 60	Summarizing data	10, Ch 3
	Ch 3, 65 – 80,	Data wrangling and exploratory data analysis	7, Ch. 9
	Learning Evaluation & Software Practical I		
Unit 2 - Designing Observational and Experimental Studies (Weeks 4-5; 9/27 – 10/10) [Obj. 1, 2, 3, 6]	Ch 4, 89 – 111	Regression	9, Ch. 5
	Ch 7, 155 – 72,	Design strategies for observational studies	3
	Ch 8, 177 – 201	Design strategies for experimental studies	5
	Learning Evaluation & Software Practical II		
Unit 3 - Probability and Diagnostic Test Evaluation (Weeks 6-7; 10/11 – 10/24) [Obj. 2, 4]	Ch 9, 207 – 258	General rules of probability	2, Ch. 18
	Ch 10, 235 – 258	Conditional probabilities and diagnostic test evaluation	3
	Ch 11, 263 – 283	Normal and discrete probability distributions	5
	Ch 13, 313 – 387	Sampling distributions and the central limit theorem	6
	Learning Evaluation & Software Practical III		

<b>Unit [Course objectives]</b>	<b>Readings in Baldi &amp; Moore</b>	<b>Topics</b>	<b>Videos &amp; r4ds Chs</b>
Unit 4 - Statistical Inference (Weeks 8-9; 10/25 – 11/7) [Obj. 1, 2, 3, 4, 6 ]	Ch 15, 363 – 387	Statistical inference	6, Ch. 19
	Ch 17, 411 – 430	Inference about a population mean	5
	Ch 18, 437 – 455	Comparing two means	5
	Learning Evaluation & Software Practical IV		
Unit 5 - Chi Square, ANOVA and Nonparametric Tests (Weeks 10-11; 11/8 – 11/21) [Obj. 1, 2, 3, 4, 6 ]	Ch 21, 511 – 526	Chi square tests	4, Ch. 22
	Ch 24, 597 – 622	Analysis of variance	4
	Ch 27, 27-1	Nonparametric tests	13
	Learning Evaluation & Software Practical V		
Unit 6 - Introducing Bioinformatic Strategies (Weeks 12-15; 11/22 – 12/18) [Obj. 2, 3, 5 ]	Review article, Research article	Genome sequencing	10
	Review article, Research article	Genome assembly and annotation	8
	Review article, Research article	Comparative genomics	4
	Review articles, Research article	Applied genomics	8
	Learning Evaluation & Software Practical VI		

Final Learning Evaluation (date and time TBD)

## **ABT 730: Python for Bioinformatics**

**PROFESSOR:** Robert Kuzoff

**PHONE:** (262) 472 - 5142

**EMAIL:** [kuzoffr@uww.edu](mailto:kuzoffr@uww.edu)

**EMAIL COMMUNICATION:** During the week, expect a response from me within 24 hours. Please expect that my response time on weekends may be up 48 hours.

**COURSE DELIVERY MODE:** Online

**COURSE DESCRIPTION:** Introduce diverse strategies for computational analysis of macromolecular data using Python including sequence alignment, genome annotation, data retrieval from databases, phylogenetic analysis, and molecular evolution. Experiential learning is emphasized; confidence in practical skills is developed through persistent application of course content to projects focused on current problems in bioinformatic research.

**COURSE CREDITS:** 3

**COURSE ALIGNMENT WITH PROGRAM OUTCOMES:** This course addresses the following competencies and program outcomes of the Master of Science in Applied Biotechnology:

- Competency C: Distinguish among diverse methods and technologies and their applications in biotechnology
  - Program Outcome 9: Exhibit strong technical knowledge to evaluate and choose appropriate technologies
  - Program Outcome 10: Demonstrate the ability to read, interpret and apply scientific literature
  - Program Outcome 11: Demonstrate competency in data analyses and statistics used in biotechnology
- Additional Outcomes:
  - Demonstrate competency in use of python programming strategies to solve problems in bioinformatics
  - Demonstrate the ability to integrate python programming strategies with complementary resources, especially UNIX, GitHub, and libraries.

**COURSE LEARNING OBJECTIVES:** Contemporary research in biotechnology frequently employs computers for a variety of tasks including storing, managing, formatting, mining, and analyzing data sets, some of astonishing size.

In this course you will be introduced to computational strategies that are used in the analysis of genomic, transcriptomic, proteomic, and metabolomic data. The course entails lectures, discussions, readings, and programming assignments intended to help you develop an understanding of algorithms commonly used in bioinformatics. Through hands-on experience you will have an opportunity to acquire a working knowledge of an array of computational strategies used in contemporary research in biotechnology.

You will learn to implement analyses of large datasets and model relationships among elements of very complex systems (*e.g., genes in a genome, proteins in a cell, individuals in a population, or interacting populations in an ecosystem*). Because bioinformatics analyses now permeate contemporary literature in a broad range of disciplines, it's especially strategic for contemporary students of biology and computer science to understand the strategies used and opportunities inherent in this field.

Subject we will explore include:

- Strategies for sequencing a genome
- UNIX commands and Bash shell scripting
- Version Control using Git and GitHub
- Characteristics of human genomes
- Mining genomic and proteomic databases
- Managing and manipulating biological data
- Effective programming strategies
- Using regular expressions to dissect genomes
- Methods for aligning homologous sequences
- Methods of phylogenetic inference
- Scientific computing using NumPy, SciPy, and Pandas
- Medically significant variation among human genomes
- Public health genomics
- Pharmacogenomics and drug design

**INTERNAL PREREQUISITES:** None

**TEXTS:**

- Libeskind-Hadas, R. and E. Bush. 2014. *Computing for Biologists; Python Programming and Principles*, Cambridge Univ. Pr., Cambridge, U.K. (ISBN-10: 1107642183)
- Allesina, S., and M. Wilmes. 2019. *Computing Skills for Biologists*. Princeton Univ. Pr., Princeton, NJ, USA. (ISBN-10: 0691182752)

**COURSE GRADING:**

List of assessments, exercises, and assignments (*830 points possible*)

Online topical discussions ( <i>10 x 5</i> )	50 pts
Online Programming Quizzes ( <i>13 x 10</i> )	130 pts
Coding Exercise Sets ( <i>11 x 10</i> )	110 pts
Larger Coding Problems ( <i>3 x 40</i> )	120 pts
Critical Commentaries ( <i>3 x 40</i> )	120 pts

Take-home Midterm 100 pts  
 Take-home Final 200 pts

- All assessments, exercises, and assignments will be posted to the course webpage, in CANVAS, and will be accompanied by due dates and times.
- Assignments will be completed either individually or in small groups (this will be clarified when each in class assignment is posted to the course webpage).
- Completed assessments, exercises, and assignments will be turned in to the appropriate drop-boxes on CANVAS.
- It is expected that work will be completed prior to the posted deadlines.
- A late penalty will be assessed for work completed after the due date (*initially 20%, but increasing by 20% per day from the due date and time*).
- Make-up assignments will be given only with proper written justification and prior consent of the instructor.
- Careful review of all assigned videos is required.
- Thoughtful completion of all assigned reading is required.

**GRADE SCALE:**

Letter grades will be based on the following scale:

<b>A:</b> 93-100	<b>B-:</b> 80-82.9	<b>D+:</b> 66-69.9
<b>A-:</b> 90-92.9	<b>C+:</b> 76-79.9	<b>D:</b> 63-65.9
<b>B+:</b> 86-89.9	<b>C:</b> 73-75.9	<b>D-:</b> 60-62.9
<b>B:</b> 83-85.9	<b>C-:</b> 70-72.9	<b>F:</b> <60

**FINAL EXAM:** Yes– A comprehensive final learning evaluation will be completed online.

**CREDIT STANDARD:** The credit standard for this course is met by an expectation of a total of 135 hours of student engagement with the course learning activities (*at least 45 hours per credit*), which include:

- Careful review of assigned (1) video lectures, (2) chapters in course texts, (3) review articles, and (4) research articles;
- Completion of assigned (5) writing, (6) problem sets, and (7) software practicals;
- Reflective participation in (8) online discussions; and
- Additional work as described in the syllabus.

**COURSE OUTLINE:**

<b>Week</b>	<b><i>Conceptual Topics in Bioinformatics</i></b>	<b><i>Applied Programming Topics</i></b>
<b>Wk_1</b> (x/xx – x/xx)	<b>Course Introduction &amp; The Diversity of Macromolecular Data</b> <b>The UNIX OS – CSB Ch. 1</b>	<b>Meet Python</b> <b>Quiz over CFB Ch. 0</b> <b>HW for Ch. 0 due (x/xx)</b>
<b>Wk_2</b> (x/xx – x/xx)	<b>Principles of Whole Genome Sequencing</b> <b>Green (2003)</b>	<b>Quiz over CFB Ch. 1</b> <b>Computing GC Content</b> <b>HW for Ch. 1 due (x/xx)</b>

<b>Wk_3</b> (x/xx – x/xx)	<b>Next-Generation Sequencing Version Control, Git, &amp; GitHub – CSB Ch. 2</b>	<b>Quiz over CFB Ch. 2 Pathogenicity Islands HW for Ch. 2 due (x/xx)</b>
<b>Wk_4</b> (x/xx – x/xx)	<b>Finding Genes in Sequenced Genomes I Harrow (2009)</b>	<b>Quiz over CFB Ch. 3 ORFs &amp; Genes HW for Ch. 3 due (x/xx)</b>
<b>Wk_5</b> (x/xx – x/xx)	<b>Finding Genes in Sequenced Genomes II Basic Programming – CSB Ch. 3</b>	<b>Quiz over CFB Ch. 4 Finding Genes</b>
<b>Wk_6</b> (x/xx – x/xx)	<b>Landscape of the Human Genome I Lander (2011)</b>	<b>CFB Ch. 4 Finding Genes Prog. for Ch. 4 due (x/xx)</b>
<b>Wk_7</b> (x/xx – x/xx)	<b>Landscape of the Human Genome II Writing Good Code – CSB Ch. 4</b>	<b>Quiz over CFB Ch. 5 Recursion HW for Ch. 5 due (x/xx)</b>
<b>Wk_8</b> (x/xx – x/xx)	<b>Take Home Exam I due (x/xx) ENCODE I ENCODE Overview (2014)</b>	<b>Quiz over CFB Ch. 6 Use-It-Or-Lose-It Principle HW for Ch. 6 due (x/xx)</b>
<b>Wk_9</b> (x/xx – x/xx)	<b>ENCODE II Regular Expressions – CSB Ch. 5</b>	<b>Quiz over CFB Ch. 7 Dictionaries, Memoization &amp; Algorithmic Speed HW for Ch. 7 due (x/xx)</b>
<b>Wk_10</b> (x/xx – x/xx)	<b>Medical Genomics I Rehm (2017)</b>	<b>Quiz over Bauldauf (2003) Phylogenetic Inference Whale Phylogeny due (x/xx)</b>
<b>Wk_11</b> (x/xx – x/xx)	<b>Medical Genomics II Scientific Computing – CSB Ch. 6</b>	<b>Quiz over CFB Ch. 8 Sequence Alignment</b>
<b>Wk_12</b> (x/xx – x/xx)	<b>Public Health Genomics I Khoury et al. (2017)</b>	<b>Ch. 8 - Continued Sequence Alignment Prog. for Ch. 8 due (x/xx)</b>
<b>Wk_13</b> (x/xx – x/xx)	<b>Public Health Genomics II Green et al. (2018)</b>	<b>Quiz over CFB Ch. 9 Working with Trees HW for Ch. 9 due (x/xx)</b>
<b>Wk_14</b> (x/xx – x/xx)	<b>Pharmacogenomics I Dugger et al. (2017)</b>	<b>Quiz over CFB Ch. 10 Drawing Trees HW for Ch. 10 due (x/xx)</b>
<b>Wk_15</b> (x/xx – x/xx)	<b>Pharmacogenomics II Ekins et al. (2019)</b>	<b>Quiz over CFB Ch. 11 The UPGMA Algorithm</b>

**Take Home FINAL (including Ch. 11 program) due (x/xx)**

## **ABT 780: Bioinformatic Inquiry**

**PROFESSOR(s):** Ryan J. Haasl

**PHONE(s):** (608) 342-7330

**E-MAIL(s):** haaslr@uwplatt.edu

**COURSE DELIVERY MODE:** Online

**COURSE DESCRIPTION:** Advances the development of competencies promoting efficient analysis of biological data. Emphasizes matching a research problem with the most effective tools for its completion, balancing use of existing software and de novo software development. Advanced aspects of Python and R, algorithmics, machine learning, simulations, and effective communication of results are emphasized.

**COURSE CREDITS:** 3

**COURSE ALIGNMENT WITH PROGRAM OUTCOMES:** This course addresses the following competencies and program outcomes of the Masters of Applied Biotechnology:

- Competency A: Demonstrate professional and scientific communication appropriate for biotechnology settings
  - Program Outcome 1: Select the most appropriate modalities, methodologies, tools, and practices to communicate complex ideas effectively across diverse audiences
  - Program Outcome 3: Construct and deliver effective, professional presentations
- Competency C: Distinguish among diverse methods and technologies and their applications in biotechnology
  - Program Outcome 8: Compare and contrast emerging with existing technologies
  - Program Outcome 11: Demonstrate competency in data analysis and statistics

**COURSE OBJECTIVES:** At the end of this course, students will be able to:

- Implement successful solutions to tasks in bioinformatics using existing software and newly developed code.
- Write R scripts and packages, including formulation of new R classes
- Create helpful, user-defined classes in Python.
- Implement knowledge of algorithmics to write elegant solutions to bioinformatics tasks.
- Interface with a MySQL database in Python.
- Simulate biological data to use as a null distribution for novel test statistics.
- Decide when machine learning methods are appropriate to a task in bioinformatics.
- Use GitHub to effectively share new software and manage version control.
- Communicate complicated methodology and results to a variety of stakeholders.

**INTERNAL PREREQUISITES:** ABT 720 and ABT 730

**TEXTS/LEARNING RESOURCES** (software, web-based resources, other required resources/materials)

- Open-source software
  - Python interpreter
  - RStudio
  - MrBayes
  - OrthoFinder
  - Atom or other IDE
  - Cygwin (if not using a Linux operating system)
- Personal computer
  - 4GB RAM or greater
  - If Windows machine, dual boot Linux operating system (preferred) or installed Cygwin software
- Web-based resources
  - Free account at UW-Madison Center for High Throughput Computing for access to cluster computing (arranged by instructor).
- Textual resources
  - Journal articles provided by instructor
  - Readings from:
    - *Bioinformatics Algorithms: An Active Learning Approach, 3<sup>rd</sup> Edition*  
Phillip Compeau and Pavel Pevzner  
2018, Active Learning Publishers
    - *Machine Learning with R, the tidyverse, and mlr.*  
Hefin I. Rhys  
2020, Manning Publications

**COURSE GRADING:**

<b>Component</b>	<b>Description</b>	<b>Points</b>
Homework assignments	Coding exercises; content questions	100 (10 @ 10 each)
Final project proposal	Details research problem and proposes solutions.	25
Coding examinations	Open book exams that require you to submit code as your answers.	200 (2 @ 100 each)
Primary literature presentation	Half-hour presentation delivered live or recorded for the class. Focus on three-four papers from the primary literature on a specific topic not related directly to the topic of your final project.	50
Final Project	A scientific paper in the format of a Discovery Note to <i>Bioinformatics</i> as well	200

as underlying software component  
published on GitHub.

**GRADE SCALE:**

<b>Grade*</b>	<b>Threshold percentage (points of 575)</b>
A	90 (518)
B	80 (460)
C	70 (403)
D	60 (345)

\* “Minus” and “Plus” grades will follow the standard grading scheme of, for example, [80, 83) = B-, [83, 87) = B, [87, 90) = B+.

**FINAL EXAM:** No

The final project is the culmination of the course and replaces the need for a final exam. Because this course emphasizes experiential learning, the final project provides each student with his or her main opportunity to showcase skills learned during the class. The main deliverable related to the final project is a scientific paper. Students will also share their project with fellow students in a 15-minute presentation.

**COURSE OUTLINE (Create as Modules not as Weeks)**

- I. Planning data analysis (1 week)
  - a. The diversity of research problems in bioinformatics
  - b. Computational efficiency; intractable problems and heuristic methods
  - c. Case studies: Different problems require different degrees of unique solutions
- II. Writing R packages and classes (2 weeks)
  - a. Review of standard R objects (Week 2)
  - b. Motivations for writing an R package (Week 2)
  - c. How to write a class in R and create a package (Weeks 2,3)
- III. Object-oriented Python (2 weeks)
  - a. Writing efficient classes in Python (Week 4)
  - b. Using standard and user-defined classes in a Python program (Weeks 4,5)
  - c. Data integration and interfacing with a MySQL database in Python (Week 5)
- IV. Bioinformatics algorithms (Weeks 6-10)
  - a. Algorithmic thinking and pseudocode (Weeks 6, 7)
  - b. A general problem: Pattern recognition (Weeks 7, 8, 9, 10)
- IV. Machine learning methods (Weeks 11-15)
  - a. Supervised machine learning methods (Weeks 11,12)
  - b. Unsupervised machine learning (Week 13)
  - c. Representation machine learning (Weeks 14,15)

**ABT 785: Applications of Bioinformatics**

**PROFESSOR(s):**

Francis M. Mann, Ph.D. (UW-Parkside)  
Maryam Sayadi, Ph.D. (Iowa State University)  
Andrew Severin, Ph.D. (Iowa State University)

**PHONE(s):** 262-595-3459

**E-MAIL(s):** [mannf@uwp.edu](mailto:mannf@uwp.edu)

**COURSE DELIVERY MODE:** Online

**COURSE DESCRIPTION:** Exploration and application of existing bioinformatic tools. Implementation of pre-coded solutions to data acquisition, wrangling, analysis, visualization, and structural modeling problems. Students will complete a project that generates a multi-system workflow to solve bioinformatic problems.

**COURSE CREDITS:** 3

**COURSE ALIGNMENT WITH PROGRAM OUTCOMES:** This course addresses the following competencies and program outcomes of the Masters of Applied Biotechnology: *(Note: if you feel there are new competencies outside the ABT competencies that should also be included, please include them here.)*

- Competency B – Demonstrate comprehensive understanding of organizational processes and product development pipelines
  1. Evaluate and describe systems of product research, development, and production
- Competency C - Distinguish among diverse methods and technologies and their applications in biotechnology
  1. Compare and contrast emerging with existing technologies
  2. Exhibit strong technical knowledge to evaluate and choose appropriate technologies
  3. Demonstrate competency in data analyses and statistics

**COURSE OBJECTIVES:** At the end of this course, students will be able to:

- Identify existing databases for genomic, transcriptomic, proteomic, and metabolomics analysis
- Describe construction and limitations for existing databases
- Identify existing tools for sequence analysis
- Identify and critique methods and tools for annotation of genomes
- Identify and critique methods and tools for phylogenetic analysis
- Identify and critique methods for assigning protein structure and function
- Identify and critique methods for identifying and assembling metabolite profiles
- Describe best practices in adapting and editing existing tools
- Identify methods for developing multi-tool workflows
- Build, analyze, and critique functional workflows

**INTERNAL PREREQUISITES:** ABT720, ABT730

**TEXTS/LEARNING RESOURCES** (software, web-based resources, other required resources/materials)

- Github
- Slack
- zenhub
- Twitter
- <http://www.bio-itworld.com/>
- <https://www.nature.com/subjects/computational-biology-and-bioinformatics>
- <https://journals.plos.org/ploscompbiol/>
- <https://rna-seqblog.com/>
- <https://bioinformaticsworkbook.org>

**COURSE GRADING:** Grades will be assessed using a variety of methods including:

10% Quizzes

20% Tutorials and Exploratory Assignments

20% Discussions

20% Small projects

30% Final projects

**GRADE SCALE:**

A 92-100

A- 89-91

B+ 84-88

B 80-83

B- 76-79

C+ 72-75

C 68-71

C- 64-67

F <64

**FINAL EXAM:** No

If NO, what will take the place of a final exam? Project

**COURSE OUTLINE (Create as Modules not as Weeks...Courses need to fit into 15 or 11 week formats):**

I. Project management

- a. slack
- b. github
- c. zenhub

## II. Existing databases for analysis

- a. Examples for genome analysis (UCSC genome browser, EMBL, NCBI, SRA, GEO, etc)
- b. Examples for transcriptome analysis (ENSEMBL, Biosmart, etc)
- c. Examples for protein analysis (NCBI, Uniprot, ExPASy, etc)
- d. Examples for metabolic analysis (KEGG, BiGG, Metacyc, etc)
- e. Construction and limitations of existing databases

## III. Current and available tools for genome and transcriptome analysis

- a. QC
- b. alignment
- c. assembly
- d. annotation
- e. DGE
- f. variant calling
- g. limitations

## IV. Tools for phylogenetic analysis and mapping

- a. origins
- b. construction and limitations

## V. Tools for protein structure and function prediction

- a. origins
- b. construction and limitations

## VI. Editing and adapting existing tools

- a. bioinformatics workbook
- b. github
- c. version control

## VII. Workflow management tools

- a. Examples of tools
- b. Multi-omic integration

**Faculty Senate Old Business 4b 12/9/2020**

**Memorial Resolution for Tian You Hu, Professor Emeritus**

Professor Emeritus Tian You Hu at the age of 71 passed on 22 May 2020 due to COVID-19. He is survived by his wife of 37 years, Bao Qin He, daughter Lori Hu, and son Alex Hu.

Tian was born on 23 January 1949 in Enping, China. Following the Cultural Revolution in China, he studied at Zhongshan University in southern China where he earned a master's degree in Statistics. He and his family came to the United States in 1985 when he enrolled in the Mathematics doctoral program at the University of Pittsburgh. Tian was a Professor of Mathematics at the University of Wisconsin-Green Bay for over 25 years, from 1990 to his retirement in 2016. He was a lifelong scholar, read widely, and continued writing research papers throughout his retirement.

In a correspondence dated 9 December 1989, Tian made his application to be considered for an open position of Assistant Professor, in Natural and Applied Sciences (Mathematics). His application material was ranked high by the search and screen committee and he was offered an on-campus interview near the start of March 1990. Members of the committee unanimously recommended that he be hired. Multiple administrative levels later an offer was extended.

On 26 March 1990 Tian accepted the position of Assistant Professor. Starting in the fall semester of 1990, with research interests in fractals, functional analysis, probability, and harmonic analysis, he would join UW-Green Bay with a PhD from the University of Pittsburgh fresh in his hand.

A few years later, with much confidence and support from his colleagues in NAS, he would begin the Fall 1996 semester at the rank of Associate Professor with Tenure.

With the blessing of the Board of Regents of the University of Wisconsin System, Tian started the 2006-2007 academic year in the well-deserved rank of (Full) Professor of Natural and Applied Sciences (Mathematics). This promotion, perhaps the most honorable in academia was granted based on an exceptional record of teaching, scholarship, and service.

As instructor of nearly 20 different courses throughout his career, no teaching assignment was frowned on. Tian taught sections of our most basic mathematics courses to our most advanced. His fluidity between the different levels was amazing. Tian was not concerned with the level he taught as much as building interest of these beautiful subjects in his student's eyes. He often drew students to his office to provide additional instruction and to ensure understanding of material. He took this to the highest undergraduate educational level by providing numerous research opportunities for interested students. Early in his teaching career, Tian was very 'traditional' in his classroom interactions. As time went on, a true metamorphosis took place, and

he became one of our most interactive and sought-after instructors. Tian taught more than 150 sections of mathematics courses and thousands of students at UW-Green Bay.

Tian achieved a scholarly record that was well beyond what has traditionally been expected at UW-Green Bay. Pure and simple, he was a very talented mathematician. Tian earned a strong reputation within the greater mathematics community. His publication record was significant in number and quality. He was sought after as a professional reviewer and was often invited to provide presentations nationally and internationally.

He provided an immense amount of service to the University during a time-period when there were few to do so. He led the Mathematics Program for six years during which he introduced an ongoing seminar sequence focusing on mathematics and its applications, as well as resurrecting a student-based mathematics club. Tian would chair the Committee on Rights and Responsibility, serve on the Instructional Development Council, the Faculty Senate, the Institutional Assessment Committee, the Student Affairs Committee, the General Education Council, the University Leadership Awards Selection Committee, and the New Faculty Hospitality Committee to name a few. His willingness to contribute was unlimited. Within the local community, Tian took on prominent roles with the Green Bay Chinese School. He also wrote mathematics questions for, and judged, the local high school academic competition.

In early December of 2015, Tian announced his resignation as Professor of Mathematics in the Department of Natural and Applied Sciences. He had taken part in a voluntary separation agreement that had been offered the previous June due to severe budgetary reductions at the University. Tian was excited about his impending retirement, and was able to leave the University during the summer of 2015; however, in his typical way he did not want to leave the Mathematics Program in a lurch and thereby made sure he taught one more semester so that both he and the program could make a smooth transition into his retirement.

On 11 February 2016, a reception was held in the University Union, it was at this time Tian received his final University title – that of Professor Emeritus.

Without a doubt Tian's contributions had made UW-Green Bay, especially the Mathematics Program stronger throughout his tenure. But most importantly a very significant part of his legacy is embedded in his students, colleagues, and friends – not only in what they gained academically, but what they learned culturally by interacting with him. These interactions have ultimately resulted in a positive change in our community and beyond. For this, he deserves our respect and admiration.

Submitted by Gregory Davis, Professor of Mathematics

**Faculty Senate New Business 5a 12/9/2020**

**Faculty Senate Document #20-07 – Approved 12/9/2020**

**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 Interim 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 2020 Commencement.

**Faculty Senate New Business 5b 12/9/2020**

## Faculty Senate Document #20-08 – Approved 2/24/2021

### NOMINEES FOR 2021-2022 FACULTY ELECTIVE COMMITTEES

The Committee on Committees and Nominations, the University Committee, and the Personnel Council have prepared the following slate of candidates for open 2021-2022 faculty elective committee positions. Further nominations can be made by a petition of three voting faculty members. These nominations must have consent of the nominee and must be received by the Secretary of the Faculty and Staff no later than 7 March 2021.

#### UNIVERSITY COMMITTEE

Seven tenured members: one from each of the four voting districts, two at-large, and one from the Additional Locations; no more than two from a single voting district (unless the third is from the one of the Additional Locations). Members are elected by voting districts; at-large members who are elected by the faculty as a whole; the Additional Locations member is elected by the Additional Locations faculty.

*Continuing members are:*

*Devin Bickner, at-large, NS; Jon Shelton, at-large, SS; Heidi Sherman, AH; Aaron Weinschenk, SS*

#### ***Nominees for two tenured faculty slots (2021-24)***

One from NS: Mohammad (Upal) Mahfuz and Patricia Terry

One from PS: Gaurav Bansal and Joan Groessl

#### COMMITTEE OF SIX FULL PROFESSORS

Six full professors: one from each voting district plus two at-large; no more than two from a single voting district. Members are elected by voting districts; at-large members are elected by the faculty as a whole.

*Continuing members are:*

*Gaurav Bansal, PS; Berel Lutsky, at-large, AH; Patricia Terry, NS; Christine Vandenhouten, at-large, PS*

#### ***Nominees for two full-professor faculty slots (2021-24)***

One from AH: Mark Karau and Kaoime Malloy

One from SS: Illene Cupit and Aaron Weinschenk

#### ACADEMIC AFFAIRS COUNCIL

Five tenured members: one from each of the four voting districts and one at-large member. Members are elected by voting districts; the at-large member is elected by the faculty as a whole.

*Continuing members are:*

*Woo Jeon at-large, NS; David Voelker, AH*

#### ***Nominees for three tenured faculty slots (2021-24)***

One from NS: Rebecca Abler and Daniel Meinhardt

One from PS: Tohoro (Francis) Akakpo and Heather Clarke

One from SS: Jason Cowell and Sawa Senzaki (two-year replacement term)

#### PERSONNEL COUNCIL

Five tenured members: one from each of the four voting districts and one at-large member. Members are elected by voting districts; the at-large member is elected by the faculty as a whole. *Continuing members are:*

*Michelle McQuade Dewhirst, AH; Eric Morgan, SS; Dana Atwood, at-large, SS*

***Nominees for two tenured faculty slots (2021-24)***

One from NS: Mandeep Bakshi and Maruf Hossain

One from PS: Myunghee Jun and Jolanda Sallmann

**GENERAL EDUCATION COUNCIL**

Six tenured members: one from each of the four voting districts, plus two at-large members; no more than two from a single voting district. Members are elected by voting districts; at-large members are elected by the faculty as a whole.

*Continuing members are:*

*Alison Gates, AH; David Helpap, SS; Tetyana Malysheva, at-large, NS; Matt Raunio, PS*

***Nominees for two tenured faculty slots (2021-24)***

One from at-large: Sarah Meredith (AH) and Dean VonDras (SS)

One from NS: Jared Dalberg and Breyawn Lybbert

**GRADUATE ACADEMIC AFFAIRS COUNCIL**

Five tenured members of the graduate faculty, one from each college housing a graduate program and one at-large.

*Continuing members:*

*Allen Huffcutt, AECSOB; Megan Olson Hunt, CSET; Gail Trimmerger, CHESW*

***Nominees for two tenured graduate faculty slots (2021-24)***

One from at-large: Jeremy Intemann (CSET) and John Stoll (AECSOB)

One from CAHSS: Jenell Holstead and Kris Vespia

**COMMITTEE ON COMMITTEES AND NOMINATIONS**

Five faculty: one from each voting district and one at-large. Members are elected by voting districts; the at-large member is elected by the faculty as a whole.

*Continuing members are:*

*Kerry Kuenzi, SS; Courtney Sherman, at-large, AH; Dinesh Yadav, AH*

***Nominees for two faculty slots (2021-24)***

One from NS: William Dirienzo and Amy Kabrhel and Karen Stahlheber

One from PS: Tohoro (Francis) Akakpo and Myunghee Jun and Tim Kaufman

**COMMITTEE ON RIGHTS AND RESPONSIBILITIES**

Five tenured faculty: one from each voting district, plus one at-large. Members are elected by voting districts; the at-large member is elected by the faculty as a whole.

*Continuing members are:*

*Rebecca Abler, NS; J.P. Leary, at-large, AH; Jolanda Sallmann, PS; Christine Smith, SS*

***Nominees for two tenured faculty slots (2021-24)***

One from AH: Thomas Campbell and William Sallak

**Faculty Senate New Business 5a 2/24/2021**

**Faculty Senate Document #20-09 – Proposal Amended, then Tabled 4/7/2021**

**Proposed Changes to the Faculty Handbook: 52.02 and 52.07**

52.02 Membership of the Faculty Senate

- A. Ex Officio Members. The Chancellor and Provost/Vice Chancellor for Academic Affairs shall be *ex officio* (non-voting) members.
- B. At Large Members. Members of the University Committee shall be senators at-large.
- C. District Representation
  - 1. Each academic budgetary unit shall comprise a Faculty Senate voting district.
  - 2. One senator shall be elected for each ten voting faculty, or fraction thereof, for each voting district. Faculty on full-time administrative appointments shall not be counted in determining the size of a Senate voting district. The size of the Senate voting district will be determined by the records of the Secretary of the Faculty and Staff at the time of the election.
  - 3. One senator from each Additional Location shall be elected by the faculty members of each respective collegium. Additional Location senators shall have three-year terms.

52.07 Organization of the Faculty Senate

- D. The University Committee serves as the executive committee of the Faculty Senate, as well as of the Faculty.
  - 1. The University Committee comprises ~~six~~ seven tenured members of professorial rank. Six University Committee members shall be selected through the election process, with two elected each year for three-year terms. There shall be one member from each domain voting district and two members at large, with not more than two from a single domain voting district. The seventh University Committee member shall be selected from among the three senators elected from the respective Additional Locations and shall serve a three-year term. A faculty member shall not serve on the UC and the PC, AAC, GAAC, GEC or CRR at the same time.

**Faculty Senate Old Business 4a 4/7/2021**

**Faculty Senate Document #20-10 – Approved 4/7/2021**

**Resolution to Continue Faculty Senate and University Committee Representation for the Additional Locations through the 2023-24 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 three years of the “four campus, one university” model, those campuses have expressed their desire for continued representation in shared governance on the Faculty Senate and on the University Committee,

**THEREFORE, be it resolved** that each of the three Additional Locations shall elect one faculty member to represent their respective campus on the Faculty Senate through the 2023-2024 academic year, and

**Be it resolved** that one of those three Additional Location faculty members elected to serve on Faculty Senate shall also be selected to serve on the University Committee through the 2023-2024 academic year.

**Faculty Senate Document #20-11 – Approved 4/7/2021**

**Proposed Changes to the Faculty Handbook: Committee Vacancies**

54.02. Membership and Election of Members for each Council (p. 31 of the Faculty Handbook)  
J. When a vacancy occurs, the person with the next highest vote in the district will be appointed. If there are no available candidates, ~~or the next person down has received, in the opinion of the University Committee, too few votes,~~ there will be an election for the vacant position.

Types of Committees

1. Faculty Elective Committees (p. 72 of the Faculty Handbook)  
Elected committee vacancies are filled for the remainder of the ~~academic year in which the vacancy occurs~~ term by the candidate who has the next highest number of votes. If there is no such candidate, the position is filled by an election.

**Faculty Senate Old Business 4b 4/7/2021**

## Faculty Senate Document #20-12 – Approved 4/7/2021

### UW Green Bay Institutional Guidance for Lecturers and Teaching Professors

The University of Wisconsin-Green Bay shall prioritize tenure-track appointments to replace existing tenure lines and new faculty hires to the maximum amount feasible. Though the University of Wisconsin-Green Bay recognizes the importance of investing in as many tenure-track faculty lines as possible, the necessity to ensure that curriculum is met in a shifting higher education landscape means that our institution sometimes needs to employ Instructional Academic Staff who are not eligible for tenure. Under revised titling structures as part of the Title & Total Compensation Project (T&TC), these employees shall be titled lecturers or teaching professors as defined below. For the good of our students and for the purposes of meaningful shared governance, our institution must treat instructional academic staff as the professionals they are by maximizing their academic freedom, professional development, promotion, job security, and regular compensation increases.

#### **Lecturer:**

A lecturer is defined as any instructor who teaches courses for credit at UW-Green Bay and does not have a fixed renewable contract, as defined in the [employee handbook](#).

UW-Green Bay recognizes that from time to time, opportunities will arise for members of the community with special expertise to teach courses on an ad hoc basis (generally less than fourteen credits a year). A Dean of a College shall appoint this employee and have the discretion to determine the appropriate compensation in accordance with the [Compensation Guidelines and Payroll Procedures Adjunct Instructors & Associate Lecturers](#). Semester-long fixed-term terminal lecturer appointments are for the term of the course only and provide no guarantee of future appointment.

The title of Lecturer shall also be used to represent a fixed-term terminal one-year appointment which consists of 14 or more credits over a single academic year. This appointment is terminal at the completion of the year. Lecturers may agree to a new one-year temporary appointment at the end of that year if offered by the Dean (and approved by [Position and Compensation Review Committee](#) (PRC)).

At the end of the second appointment period, the Dean, with consultation from the appropriate unit chair, is expected to assess the long-term need for that unit. Should a continued need exist, the Dean may request funding and FTE allocation for an ongoing Assistant Teaching Professor or a tenure-track faculty line through the Provost Office and PRC. If available funding and allocation of positions warrant the ability to search for a fixed-term renewable AS or tenure track position, the lecturer may apply through competitive recruitment for an ongoing position. No waivers will be approved to appoint a person in a yearly position to the rank of Assistant Teaching Professor.

The PRC should make the maximum feasible effort to invest in either a faculty line or a fixed-renewable contract instead of furthering the exploitative practice of continuing to employ lecturers on multiple consecutive fixed-term terminal one-year appointments.

### **Assistant Teaching Professor:**

The title of Assistant Teaching Professor shall be used to represent a fixed renewable Instructional Academic Staff appointment which consists of 14 or more credits over a single academic year. An Assistant Teaching Professor is not obligated to seek a promotion to Associate Teaching Professor. It is not an “out or up” position.

Job responsibilities, as outlined in the UW System [standard job description](#) for this title, include:

- Develops and designs curriculum and instructional material relevant to a course of instruction
- Advises students on academic and career direction within a specific field of study
- Facilitates classroom, online and/or laboratory instruction, including assessment of student performance
- Supervises student employees involved in development or delivery of instruction
- Collaborates with department faculty and staff to develop teaching strategies relevant to the discipline
- Contributes to the development of teaching and learning scholarly work including publications and presentations
- Contributes to the strategic development of curriculum and academic content through various mediums to ensure the integrity of the educational mission of the work unit

### **Associate Teaching Professor:**

At any time, an Assistant Teaching Professors can seek to be promoted to Associate Teaching Professor. An Associate Teaching Professor is a title used as a promotion to designate excellent teaching and contribution to an academic unit’s curriculum at UWGB, as well as the likely potential for continued excellent teaching and curricular contribution.

Specific criteria needed to move into this title will be aligned with the [standard job description](#) for this title, and determined by and tracked within the Academic Unit (complexity of work, teaching evaluation, integration into the curriculum of the discipline). Promotion will occur following the recommendation of the academic unit, the Personnel Committee, the Dean, and all other appropriate institutional approvals as outlined in the [Title Review Policy](#), using the following criteria:

- An impressive, sustained record of excellent teaching, as evidenced by student and peer evaluation, or other marks of achievement.
- Demonstrated instructional contributions to the department and college, and/or campus, and/or broader discipline.

- Demonstrated experience – beyond that of assistant teaching professor – in supporting student success
- Excellence in collaboration with faculty and staff in the development of teaching strategies, including participation in department, unit, or campus-level faculty/staff instructional development activities/programs
- Demonstrated experience in creating courses and contribute to the overall curricular mission of the unit
- Demonstrated record of consuming, implementing and/or producing creative activity or scholarship in teaching and learning

### **Teaching Professor:**

At any time after reaching the rank of Associate Teaching Professor, the ATP can seek promotion to Teaching Professor. This title recognizes meritorious service, departmental contribution or other factors which calls for recognition of the work of the employee and the potential for future exemplary work.

Specific criteria needed to move into this title will be aligned with the [standard job description](#) for this title, and will be determined by and tracked within the Academic Unit (complexity of work, teaching evaluation, integration into the curriculum of the discipline). Promotion will occur following the recommendation of the academic unit, the Personnel Committee, and the Dean, and institutional approvals as outlined in the [Title Review Policy](#), using the following criteria:

- An impressive and sustained record of outstanding teaching, as evidenced by student and peer evaluation; departmental, school/college, and national/international recognition through awards and other marks of achievement such as producing scholarship/creative activity in teaching and learning
- Demonstrated instructional contributions to the department, college, campus, and/or broader discipline
- Demonstrated and recognized outstanding achievement in supporting student success
- Leadership in collaboration with faculty and staff in the development of teaching strategies, including designing, organizing, and/or leading department, unit, or campus-level faculty/staff instructional development programs
- Leadership in the creation of courses and in contributions to the overall curricular mission of the unit
- Representation of the unit on college or campus committees in support of the university's instructional mission

For any teaching professor, the following shall apply:

- A full-time workload shall consist of 27 credits per academic year.

- Teaching professors at any rank shall automatically have faculty status in their department.
- Teaching professors at any rank are considered fixed-term, renewable academic staff. Therefore, the UW-Green Bay Academic Staff job security provisions, contract schedule, and non-renewal notice rights as outlined in the [Employee Handbook - Academic and University Staff](#) apply to these appointments.
- Teaching professors at any rank shall be entitled to access to professional development funds through their academic unit.
- Upon recommendation from the unit's Executive Committee and subject to the approval by the Dean of the College, a teaching professor with an on-going appointment shall be eligible for a three-credit service reassignment for exceptional service to their unit, the University, and/or the community. If the Dean declines to offer the three-credit reassignment, the Executive Committee of the department can appeal this decision to the Provost for the final decision.
- Compensation increases based upon promotion between Teaching Assistant ranks will be determined in accordance with the UW-Green Bay [Title Review Policy](#) and [Compensation and Pay Plan Policy](#).
- Processes to appeal decisions related to promotion through Teaching Professor ranks are outlined in the UW-Green Bay [Title Review Policy](#).
- Lecturers on fixed-term renewable contracts hired before the Total Title and Compensation project made the Teaching Professor title available will be mapped into the Teaching Professor series based on a process defined by Human Resources. HR shall seek input on this decision from unit chairs and the college dean. Employees in this category can appeal this decision consistent with the appeal process outlined within the [Title Review Policy](#).

Other:

Though the UW-Green Bay [Compensation and Pay Plan Policy](#) prevents pay plan compensation increases for fixed-term terminal, temporary lecturers, administration shall make the maximum feasible effort to consider them for merit-based salary increases when the state legislature approves pay plan increases for state employees.

- As trained professionals who are experts in their field of study, all lecturers and teaching professors are entitled to the full expectation of academic freedom, as defined by the American Association of University Professors, in their classrooms, in their research, and both in their intramural and extramural speech. At no time should the academic speech of any lecturer or teaching professor factor into the decision not to renew contracts or to any kind of disciplinary action.

- Consistent with AAUP standards for the professional development of non-tenure track faculty, any lecturer or teaching professor who teaches at least six credits in a semester shall receive an annual formative review by the Executive Committee of the unit with which the lecturer or teaching professor is associated. The Executive Committee can designate the Chair to perform this review. The review shall include a professional activities report, teaching observation, and review of student evaluations.

**Faculty Senate Old Business 4c 4/7/2021**

## Faculty Senate Document #20-13 – Amended Proposal not removed from Table 5/5/2021

### Proposed Changes to the Faculty Handbook: 52.02 and 52.07

Greg Davis's amended changes to 52.02 and 52.07 that were Tabled at the 7 April 2021 Faculty Senate meeting:

I. The three collegiums of faculty at UW-Green Bay Marinette, UW-Green Bay Manitowoc, and UW-Green Bay Sheboygan are considered 'other units' and are subject to 53.06.

II. For voting purposes, a faculty member cannot be a member of more than one collegium. Typically, membership will be based on the location of a faculty members instructional load, as well as the members assigned office space.

### 52.02 Membership of the Faculty Senate

A. *Ex Officio* Members. The Chancellor and Provost/Vice Chancellor for Academic Affairs shall be ex officio (non-voting) members.

B. At Large Members. Members of the University Committee shall be senators at-large.

C. District Representation

1. Each academic budgetary unit shall comprise a Faculty Senate voting district.
2. One senator shall be elected for each ten voting faculty, or fraction thereof, for each voting district. Faculty on full-time administrative appointments shall not be counted in determining the size of a Senate voting district. The size of the Senate voting district will be determined by the records of the Secretary of the Faculty and Staff at the time of the election.
3. One senator from each Additional Location shall be elected by the faculty members of each respective collegium. ~~Additional Location senators shall have three-year terms.~~

### 52.07 Organization of the Faculty Senate

D. The University Committee serves as the executive committee of the Faculty Senate, as well as of the Faculty.

1. The University Committee comprises ~~six~~ seven tenured members of professorial rank. ~~Six~~ Seven University Committee members shall be selected through the election process, with a minimum of two elected each year for three-year terms. There shall be one member from

each domain voting district, **one from the Additional Locations**, and two members at large, with not more than two from a single domain voting district. ~~The seventh University Committee member shall be selected from among the three senators elected from the respective Additional Locations and shall serve a three-year term.~~ A faculty member shall not serve on the UC and the PC, AAC, GAAC, GEC or CRR at the same time.

#### **54.02 Membership and Election of Members for each Council**

B. For the Academic Affairs Council, Personnel Council, and General Education Council, the ~~four~~ **five** domain voting districts shall be as follows: Natural Sciences, Social Sciences, Arts and Humanities, **Additional Locations**, and Professional Studies. The representatives from these domain voting districts shall each be elected by members of the appropriate faculty group. At-large members shall be elected by the faculty as a whole.

C. For the Academic Affairs Council, Personnel Council, and General Education Council there shall be one member from each domain voting district. The Academic Affairs Council and the Personnel Council shall additionally each have one member at-large for a total membership of ~~five~~ **six**. The General Education Council shall have two members at-large for a total membership of ~~six~~ **seven**.

#### **Rationale**

I. To operationalize changes in the proposal (original or modifies), the three collegiums need to be formally recognized as part of our faculty governance system.

II. Membership of the collegiums need to be defined – like how each faculty member is assigned to a single budgetary voting home.

III. Length of membership should be the same for all senators and all UC members. Senators and UC members should be elected in a similar manner. Hence, it is reasonable for each collegium to elect their own senator. However, members of the UC should be elected by the Faculty as a whole – this vote should be a university-wide investment.

IV. While the original motion considered membership in the Faculty Senate and UC, listening to colleagues from the Additional Locations and having some understanding of the workings of the locations, I believe that the University would be enhanced by modifications to certain Council memberships.

a. The Academic Affairs Council – this council approves (disapproves) courses and programs at the undergraduate level. While there is a single University curriculum, that what programs and courses are offered at any of the four locations is not uniform. A member from the Additional Locations will be able to provide relevant perspective and guidance decisions

that affect the locations. They will also be able to provide the main campus with insight on potential program enhancement.

b. The Personnel Council – this council is responsible for making recommendations for promotion to the associate professor level and for granting tenure. While the general guidelines for promotion and tenure are to be applied to all faculty members, the PC has University-wide membership to provide perspective and guidance from several domains. The PC would greatly benefit to have a member from the Additional Locations to provide additional perspective and serve as a conduit to Additional Location tenure-track faculty members.

c. The General Education Council – this council is responsible for our General Education Program. Without question, Additional Location faculty members have made great investment in curriculum at this level – I am sure they can make many positive contributions by having a seat on this council.

**Faculty Senate Old Business 4a 5/5/2021**

**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): Water Science, Natural and Applied Sciences

Proposer: John Luczaj

Form Prepared By: John Luczaj

Action(s) Requested:

1. Create new official interdisciplinary academic unit to reflect the new major “Water Science” that began during Fall 2019.

New Unit Information:

1. Water Science will be composed of faculty from multiple disciplines in CSET, including both Natural and Applied Sciences and Engineering Technology.

Rationale:

The new Bachelor of Science degree in Water Science began accepting students in Fall 2019. Faculty who have been responsible for creating the program and discussing curriculum changes appear on the Natural & Applied Sciences website and have agreed to participate in the unit’s meetings. In addition, a new assistant professor (Dr. Kelly Deuerling) began in August 2020 as a water science faculty member in the Department of Natural & Applied Sciences. The creation of this new major was in response to a call from former Chancellor Gary Miller to offer new competitive programs at the university. The University will benefit from the continued growth of these programs, which will likely be enhanced by an official designation. All tenure and appointment assignments will remain unchanged (CSET/NAS or CSET/ENG), and the additional assignment to Water Science not replace the faculty members’ standing in other academic units (e.g., Geoscience, Engineering Technology, Biology, etc.).

Personnel:

Tenure and Appointment Assignments:

Rebecca Abler – Associate Professor – CSET/NAS [current assignment]  
Kelly Deuerling – Assistant Professor – CSET/NAS [current assignment]  
Kevin Fermanich – Professor – CSET/NAS [current assignment]  
Patrick Forsythe – Professor – CSET/NAS [current assignment]  
Kpoti (Stefan) Gunn – Assistant Professor – CSET/ENG [current assignment]  
Richard Hein – Professor – CSET/NAS [current assignment]  
Michael Holly – Assistant Professor – CSET/ENG [current assignment]  
Christopher Houghton – Lecturer – CSET/NAS [current assignment]  
John Luczaj – Professor – CSET/NAS [current assignment]  
Steven Meyer – Associate Professor – CSET/NAS [current assignment]  
Patricia Terry – Professor – CSET/ENG [current assignment]  
Kenneth Webb – Associate Researcher – CSET/NAS [current assignment]  
Michael Zorn – Associate Dean/Professor – CSET/NAS [current assignments]

Program Assignments:

Natural & Applied Sciences

Water Science

Rebecca Abler (Associate Professor)  
Kelly Deuerling (Assistant Professor)  
Kevin Fermanich (Professor)  
Patrick Forsythe (Professor)  
Kpoti (Stefan) Gunn (Assistant Professor)  
Richard Hein (Professor)  
Michael Holly (Assistant Professor)  
Christopher Houghton (Lecturer)  
John Luczaj (Professor)  
Steven Meyer (Associate Professor)  
Patricia Terry (Professor)  
Kenneth Webb (Associate Researcher)  
Michael Zorn (Professor)

Governance Unit Chair Assignments:

NAS: Mike Draney

Reviews and Recommendations:

Natural and Applied Sciences

Date: 2/26/2021  
Chair: Mike Draney  
Recommendation: NAS votes 28 yes/0 no/0 abstentions to support this.

Richard J. Resch School of Engineering

Date: 3/5/2021  
Chair: Patricia Terry  
Recommendation: Engineering votes 21 yes/0 no/0 abstentions to support this.

Academic Affairs Council

Date: 3/25/2021  
Chair: Woo Jeon  
Recommendation: Unanimous support for the proposal.

Personnel Council

Date: 3/25/2021  
Chair: Timothy Kaufman  
Recommendation: Unanimous support for the proposal.

University Committee

Date: 3/24/2021  
Chair: Julie Wondergem  
Approved: X

Authorizations:

Dean CSET – John Katers

Date: 3.26/2021  
Approved: X  
Denied: \_\_\_\_\_

Faculty Senate

Date:  
Speaker:  
Approved:    --  
Denied:       \_\_\_\_\_

Provost – Kathleen Burns

Date:  
Approved:    --  
Denied:       \_\_\_\_\_

Chancellor – Michael Alexander

Date:  
Approved:    --  
Denied:       \_\_\_\_\_

---

---

## **DRAFT MINUTES of the NAS Faculty Meeting**

Friday, 26 February 2021, 3:00-4:00 p.m.

Present: Abler, Bakshi, Brotske, Dirienzo, Draney (Chair), Fencel, Fermanich, Forsythe, Grubisha, Hein, Houghton, Howe, Intemann, A. Kabrhel, J. Kabrhel, Kanzenbach, Klemp, Luczaj, Lybbert, Malone, S. Meyer, Nikolakakis, Richer, Smith-Leiker, Stahlheber, Warwick, Webb, Wefferling, Welsch, West, Wolf, Wondergem, Zorn

Excused: Deuerling, McIntire

### Minutes

- Approval of minutes from 29 January 2021 meeting – approved via consensus
- Updates (from Chair, unless otherwise noted)
  - Good news: Promotion hearing
    - Renee Richer’s progress toward promotion with tenure is going smoothly
  - Physics search(es) (Dirienzo)
    - The search and screen committee has been established (Dirienzo, Welsch, Malone, Ahmed, Heyrman, Kanzenbach, Schoenebeck, Cioni – student)
    - A timeline is being created – finalists will interview the first week of April and give teaching and research presentations (all are encouraged to attend)
  - Distance Education Grant Subcommittee update (J. Kabrhel)
    - James Kabrhel, Becky Abler, and Rick Hein served as PIs and developed the DE proposal
    - Proposal has two parts; a technology part for DE carts for each campus; a curriculum part – support letters from Katers, Draney, Meyer, Wolf, and Houghton were received
  - Equity and Inclusion Subcommittee update (Fencel)
    - Feedback from our Inclusive Teaching seminar (19 Feb.)
    - NAS Inclusivity Committee approached CATL regarding an Inclusivity in the Classroom Teaching Seminar
    - CATL sought an outside vendor focusing on science examples
    - Feedback from the group was overwhelmingly positive
    - Future workshops should be held on an annual basis, January would be best
  - Pandemic talk: How’s it going?
    - Vaccinations were recently opened up to educators
    - Appointments are difficult to come by
  - Upcoming
    - Feedback review for Shawn Malone and Keir Wefferling immediately follow this NAS meeting
    - Post-tenure reviews for Mike McIntire and Julie Wondergem will take place after spring break
  - Other

- Committee Updates
  - Faculty Senate/UC (Wondergem, Klemp)
    - Proposal on lecturers and teaching professors?
      - A lecturer policy is before Faculty Senate
      - Policy is in conjunction with HR's Title and Total Compensation (TTC) work
      - Permanent lecturers will be slotted into Assistant Teaching Professor, Associate Teaching Professor, or Full Teaching Professor positions
      - Renewable lecturers should be treated fairly (not strung out on one-year or one-semester contracts); after two years the Unit and the Dean should reevaluate their needs and consider hiring the renewable lecturer to permanent lecturer status
    - Handbook Changes to give permanent Faculty Senator representation for the three Additional Locations (ALs)
      - The ALs still have their unique differences
      - It's still valuable to have AL campus representation
      - It's necessary to have a strong voice in shared governance
      - Without representation, the campus perspective could be missed
      - Representation ensures participation by ALs faculty
  - Other

#### New Business

- Form K: Water Sciences (Luczaj)
  - Water Sciences was passed by the Regents as a major
  - A Form K is needed to establish Water Sciences as an academic governance unit
  - **Meyer moved, J. Kabrhel seconded (passed 28-0-0)**

cc: John Katers, Dean of Sciences, Engineering, and Technology  
 Secretary of the Faculty and Staff  
 NAS Staff

---

---

# UNIVERSITY of WISCONSIN GREEN BAY

Resch School of Engineering  
Agenda 3-5-2021  
3:30 PM Zoom

## Agenda

1. Approval of 12-4-2020 minutes
2. Announcements
3. Approval of Form K for Water Science program (see attached)
4. Discussion of the number of Senate and UC reps from Manitowoc, Marinette, Sheboygan (Devin)
5. Discussion of merit review process and scoring

## Minutes:

Present: Iftexhar Anam, Nazim Choudhary, Tanim Ahsan, Ali AlQhatani, Upal Mahfuz, Michael Holly, Jagadeep Thota, Jian Zhang, Maruf Hossain, Stephan Gunn, Rasedul Islam, Patricia Terry, Mai Moua, Greg Davis, Tetyana Malysheva, Devin Bicker, Woo Jeon, Mark Norfleet, Meg Onoda, Megan Olson Hunt, Dhanamelee Bandara, Yongjun Yang, Mary Guy

1. Minutes from 12-4-2020 were unanimously approved
2. It was shared that  
Tetyana Malysheva was the recipient of the RSE 2021-2022 3 contact hour release  
Jagadeep Thota is now RSE vice-chair  
Upal Mahfuz and Patricia Terry are the NS candidates for the 2021-2024 UC term
3. Form K for water Science was approved by a vote of 21 for, 0 against, 0 abstentions
4. A spirited discussion was held of the UC proposal before faculty senate to change Faculty Code to include one senate representative from each of Manitowoc/Marinette/Sheboygan and have one of these represent the “additional” campuses on the UC. RSE will meet on

Friday, March 26, after everyone has had some time to think about the proposal, to advise our Senators on how RSE would like us to vote.

5. Greg Davis gave us a review of the many contradictions in faculty code concerning the merit review process. A general discussion was held on the topic with a recommendation that we modify the NAS document to meet RSE needs. We will start to do this at our next RSE meeting.

**Faculty Senate Old Business 4b 5/5/2021**

**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): Economics

Proposer: Mathew Dornbush, Chuck Rybak

Form Prepared By: Clif Ganyard

Action(s) Requested:

Moved the Economics Program and its Faculty be moved from UW Green Bay's College of Arts, Humanities, and Social Sciences to the Austin E. Cofrin School of Business within its Accounting and Finance Department, effective at the start of the 2021-22 academic year.

New Unit Information:

Economics will be housed in the Accounting and Finance Department within CSOB. Economics will continue to deliver a BS in Economics as well as provide appropriate supporting courses to Accounting and Finance Department and other programs in CSOB.

Rationale:

Given the current decline in numbers of faculty and consequent enrollment within the Economics Program, the Faculty of the Economics Program believes it is time for program restructuring and realignment. There is a natural alignment of economics courses with the interests of students in CSB, as expressed not just by student enrollment but by a requirement that all CSB students take, at a minimum, the two introductory courses in the field of economics (ECON 202 and ECON 203). Over the years, a large portion of enrollment in Economics Program courses, as well as students choosing both minors and double majors, has been from students having a major housed within CSB. While restructuring of the academic program has been occurring over the past few years due to stress of reduced faculty numbers, this restructuring should be continued in ways which further align the program with majors in business, especially Finance, while retaining its role as a supportive field for students having majors in other colleges of the university, especially other social sciences having a public policy interest.

Personnel:

Tenure and Appointment Assignments:

Cofrin School of Business

**John R Stoll;** Professor

**Thomas S Nesslein;** Associate Professor

Department Assignments:

Accounting and Finance Department

**John R Stoll;** Professor

**Thomas S Nesslein;** Associate Professor

Program Chair Assignments:

Economics

**Thomas S Nesslein;** Associate Professor

Reviews and Recommendations:

Economics

Date: February 4, 2021

Chair: Thomas Nesslein

Recommendation: Unanimous support.

Public and Environmental Affairs

Date: February 5, 2021

Chair: David Helpap

Recommendation: Unanimous support.

Accounting and Finance

Date: February 8, 2021  
Chair: Karl Schindl  
Recommendation: The motion was supported 6-0-1.

Academic Affairs Council

Date: 3/25/2021  
Chair: Woo Jeon  
Recommendation: Unanimous support.

Personnel Council

Date: 3/25/2021  
Chair: Timothy Kaufman  
Recommendation: Unanimous support.

University Committee

Date: 3/24/2021  
Chair: Julie Wondergem  
Approved: X

Authorizations:

Dean CAHSS – Chuck Rybak

Date: 3/25/2021  
Approved: X  
Denied: \_\_\_\_\_

Dean CSOB – Mathew Dornbush

Date: 3/25/2021  
Approved: X  
Denied: \_\_\_\_\_

Faculty Senate

Date:  
Speaker: Mark Klemp  
Approved: \_\_\_\_\_  
Denied: \_\_\_\_\_

Provost – Kathleen Burns

Date:  
Approved: \_\_\_\_\_  
Denied: \_\_\_\_\_

Chancellor – Michael Alexander

Date:  
Approved: \_\_\_\_\_  
Denied: \_\_\_\_\_

---

---

Attachments:

1. Economics Reorganization Memo (4/28/2020)
  2. Program moving to Business – Next Steps (10/8/2020)
  3. Resolution to Move Economics Program (2/4/2021)
  4. Economics Department Executive Committee Meeting Minutes (2/4/2021)
  5. Public and Environmental Affairs Department (2/5/2021)
  6. Email: John Stoll to Karl Schindl (2/5/2021)
- 
- 

1. Economics Reorganization Memo

Date: April 28, 2020

To: Provost Michael Alexander

From: Mathew Dornbush, Dean, Cofrin School of Business, Chuck Rybak, Dean, College of Arts, Humanities, and Social Sciences

CC: Mussie Teclezion, Chair, Accounting & Finance; David Helpap, Chair, Public and Environmental Affairs, Kate Burn, Interim Provost Elect

Subject: Proposal to relocate Economics faculty and programs to the Department of Accounting and Finance in the Cofrin School of Business

**This memo is drafted in response to persistent requests to the Deans of the College of Arts, Humanities, and Social Sciences and the Cofrin School of Business, and at least one Council of Trustee’s member from the economics faculty requesting the transfer of all economics faculty lines and program offerings to the Cofrin School of Business. This move is supported by the Deans of both of these Colleges, and this memo seeks to initiate the appropriate shared governance steps to advance this request.**

The Faculty Handbook indicates the following process (pg. 24, 53.06):

1. The change can be initiated by the faculty, dean, or provost. – this memo represents this step
2. Review by the faculty involved
3. Review by the AAC and Personnel Council in a joint meeting
4. Review by the UC
5. Then approval by Dean(s), Senate, Provost, and Chancellor

Our intention is initiate the process this fall, so that the “transferring” and “receiving” faculty bodies can review and finalize a proposed plan with the resumption of contracts in fall 2020.

### Background:

The University of Wisconsin-Green Bay Economics program is currently seated within the College of Arts, Humanities, and Social Sciences within the Department of Public and Environmental Affairs. The program offers a general major and minor in Economics, with no specific sub-emphases, concentrations, or certificates. The program has and continues to experience significant enrollment challenges, with declared majors declining from 49 students in fall 2011 to 20 students in fall 2019. Similar changes have occurred to declared minors, with declared minors dropping from 31 students in fall 2015 to 11 students in fall 2019; these drops coincide with the elimination of the required minor within the Business program. These enrollment trends have coincided with decreases in faculty staffing, to the current level of two tenure-track faculty at the UWGB main campus location, and two part-time lecturers among the three branch locations. Despite the small staffing, the program retains 23 distinct courses in the catalog.

Economics programs are commonly found within both business schools and colleges of letters and sciences. For economics programs, the host college is often based on the nature of the economic program offered, and the ability, or inability, of an economics program to meet scaling requirements for self-sufficiency. Specifically, the location of the Economics program is often of less significance when the department is large enough to support a broad selection of economics faculty expertise along the narrative- to quantitative-focused continuum. In general, as the demand for and emphasis on specialization, particularly with a focus on quantitative economics, has grown, so too has the movement of economics departments into business schools. This shift has been particularly strong among medium sized institutions. In part, this shift also reflects the market forces placed upon faculty salaries, as private sector demand for quantitative economics has grown, so too have faculty salaries for quantitative economists. This has created a salary gap, and thus social tension, within colleges of letters and science that generates retention and recruitment issues. Today, salaries for economists are more equitable to salaries found within schools of business. These same forces have also created a more natural alignment between economics and finance professors.

Finally, business schools are facing increased demand for programmatic focus on corporate and social responsibility (CSR). Many areas of economics are natural fits for CSR efforts, benefiting the evolution of business schools. Economists also provide an opportunity to facilitate business schools with ongoing efforts in regional economic development, providing an important and often missing link between business schools and their communities; a partnership that exists between businesses and the region outside of universities.

For these basic reasons, and others, the most sensible and synergistic home for UWGB's economics program is the Cofrin School of Business.

Critical Issues to Address:

1. The top strategic priority for the Cofrin School of Business is to obtain AACSB accreditation. Accreditation carries clearly defined faculty expectations for teaching, service, and scholarship. It is of the utmost importance that both Accounting and Finance and Economics faculty have a shared understanding of faculty expectations. Attached is the current faculty expectations document for the Cofrin School of Business. If current faculty expectations differ between the existing Economics program and the existing Cofrin School of Business, faculty will need to agree upon a plan for alignment. This plan may include performance improvement plans, or a modification to existing CSB faculty expectations, provided they still meet AACSB standards.
2. The faculty must collectively review the existing curriculum to determine:
  - a. A review of existing courses and programs to identify a) a sustainable program and course array at current staffing levels, and b) the mid- and longer-term plan for strengthening enrollment, which may include increased staffing.
  - b. If the economic program will be included, or excluded from AACSB accreditation. This decision will depend largely on the content of the program, and will require consultation with AACSB representatives for guidance.
3. The Provost Office must agree upon a reasonable timeline for program revitalization. It is the opinion of both Deans that this proposal is strategically the best option for revitalization of the UWGB Economics program. However, the Cofrin School of Business is already a lean organization, and a shared commitment from the Provost Office to support this transition must be evident to the recipient faculty and staff.

Timeline:

1. Spring 2020 – reorganization request is formally initiated
2. Faculty met jointly on October 8<sup>th</sup>, 2020 to discuss:
  - a. Existing programs were reviewed jointly by faculty with the following conclusions. The Economics degree would be housed within the Accounting and Finance Department along with the existing degree(s) of the department. Restructuring of the degree would occur over time (not necessarily long) by coordinated discussion with all faculty of the department. It does not make sense to restructure the degree prior to joining the department as this would not involve faculty of the Accounting and Finance Department in any formal way due to university governance structures that specify Executive Committees and approval lines for change. Once the move of the Economics Program and its faculty into the Accounting and Finance Department occurs, any subsequent restructuring of the program by Economics faculty would include consultation and have to pass through the Accounting and Finance Department for approval before moving forward to subsequent approval steps.

- b. Existing courses were reviewed and the following conclusion were drawn:
- **Managerial Economics (ECON 485), Mathematics for Economists (ECON 210), and Cost-Benefit Analysis (ECON 453)** might be useful for inclusion in the finance degree in some manner.
  - **Money and Banking (ECON 330)** covers much material that is useful to finance students, and overlaps to some extent with **Financial Markets and Institutions (FIN 347)**. For this reason, there was discussion of restructuring this area to better serve students and preserve faculty resources. Economics Faculty may also provide an additional instructional resource for FIN 347 class.
  - At present there are also four courses in finance (**FIN 445, 446, 447, and 450**) that can be utilized as electives in the Economics major and one additional one that can be used in the required core (choice of **ECON 330 or FIN 347**).
  - The Economics program has already been altered to some extent by deactivating several courses from the past (e.g., **History of Economic Thought, Economics of Gender**), reducing course periodicity, and changing degree requirements to have fewer elective choices and a more solid core (e.g, **ECON 330 or ECON 347** is one of the new requirements). This process will continue, assuming the motion successfully passes through the campus administrative structure, but now with coordination and approval in the Cofrin School of Business (CSB) rather than the College of Arts, Humanities, and Social Science (CAHSS).
  - Courses that are utilized by other program degrees will be continued so as not to negatively affect other campus programs by the move to CSB. These courses include **Natural Resources Economic Policy (ECON 305), Environmental and Resource Economics (ECON 402), and Cost-Benefit Analysis (ECON 453**, discussed above), but this is pending faculty resources to do so. Depending on required pre-requisites these course may also provide an alternative option for BUS ADM 201: Principles of Sustainability in Business; which is currently a meta-major course required by all majors. **ECON 305** is annual, **ECON 402** alternate years, and **ECON 453** has been offered most frequently in the summer, but was offered this past fall semester for the first time in about two decades. The latter two courses also have cross listings with the graduate program in Environmental Science and Policy.
- c. Expectations for faculty qualifications were discussed on October 8<sup>th</sup>, and details of expectations can be found in the CSB Faculty Qualifications document, and DRAFT Cofrin School of Business College Handbook.
3. Faculty Department Votes:
- On February XX, 2021, the Department of Accounting & Finance voted unanimously on the following motion, “It is moved that the Economics Program and its Faculty be moved from UW Green Bay’s College of Arts, Humanities, and Social Sciences to the Austin E. Cofrin School of Business and be housed within its Accounting and Finance Department, effective at the start of the 2021-22 academic year.”
  - On February 4, 2021, the Economics Executive Committee unanimously approved the following motion, “Motion to move the Economic Program and its Faculty from the

UW Green Bay’s College of Arts, Humanities, and Social Sciences to the Austin E. Cofrin School of Business and be housed within its Accounting and Finance Department, effective at the start of the 2021 – 22 academic year.”

- On February 5, 2021, the Department of Public and Environmental Affairs unanimously approved a “Motion to move the Economic Program and its Faculty from the UW Green Bay’s College of Arts, Humanities, and Social Sciences to the Austin E. Cofrin School of Business and be housed within its Accounting and Finance Department, effective at the start of the 2021 – 22 academic year.”

4. Hearing of the joint AAC and Personnel Council in a joint meeting - **TENTATIVELY SCHEDULED FOR 3/11 or 3/25**
  5. Hearing of the UC – LATE MARCH
  6. Dean(s) approval – LATE MARCH
  7. Senate – FIRST READING IN APRIL, SECOND READING IN MAY
  8. Provost approval - MAY
  9. Chancellor approval - MAY
- 

## 2. Program moving to Business – Next Steps

October 8, 2020 Meeting

Attended by: John Stoll (Econ) and Mussie Teclezion(CSB Finance Chair) and Rasoul Rezvaniyan (CSB Associate Dean and in charge of gaining AACSB accreditation) and Tom Nesselin (ECON program Chair)

### *Alignment with Finance and use more economics courses*

ECON 210 might be a useful course for Finance students. Mussie stated that a course that provided solid background in mathematics a bit higher than algebra as a stepping to Calculus might be good for finance students

Managerial Economics is definitely an option for Finance program

International economics may be useful and a bit different than International Finance but could also fit more with Management and general business degrees

We need to consider how the curriculum can be more aligned with Business Economics (similar to Eau Claire program)

What about Money and Banking would fit as well? Mussie and Rasoul thought it would.

Separate Economics Department is a long-term goal but not viable now. Possibly quite a while into the future after numbers of students and faculty in the areas of Economics and Finance grow.

Current proposal is for Economics to be part of the Finance department offering a Finance major and an Economics major.

### *Next Steps*

Create a list of courses, major description, and student degree planning timeline.

Talk to Eau Claire and Whitewater economics programs (any other programs that are housed in a business college/department)

- Curriculum structure
  - Is there a business economics emphasis or degree
  - Is there a separable Economics degree
  - How much course overlap exists between the business degrees and economics degree
- Student numbers in majors and minors
- Faculty numbers
  - Business program/college faculty numbers
  - Economics program faculty numbers
  - Proportion of Economics faculty in relation to overall faculty

### *Issues to consider for AACSB accreditation of CSB (will be going by the new 2020 guidelines)*

- Faculty sufficiency and qualifications
  - Sufficiency – enough numbers to offer a degree (contribution of faculty to program)
    - Current Economics program staffing
      - Two full-time professors in Economics currently
      - Adjunct one Sheboygan (doctoral) and one Marinette (MS)
      - Matt Raunio (CSB Accounting faculty but also treasurer for Wisconsin Economics Association (WEA))
    - Types of classification for AACSB
      - SA – Phd and published (40% at least SA) (60% AS, IP and SP) (90% all but Participating)
      - PA – Phd and consulting in area of degree
      - SP and IP – not Phd with masters
      - Participating faculty – adjunct who teach sometimes and don't participate in curriculum design or management
  - Qualifications – for any faculty teaching courses in CSB, certain criteria must be met.

- Appropriate degree
- Intellectual publications in area of the faculty member's teaching
  - Be in journal on CABELL list and having an acceptance rate <30%
  - Be in AACSB listing as approved journal
  - Other journals as long as quality of journal is high enough to meet faculty and school approval
- Program assessment
  - This should not be an issue as procedures are already in place for CSB
- Current Finance Dept Faculty Size
  - 3 faculty (one resigned) so now 2 faculty because the position was redefined elsewhere in CSB
  - One lecturer
  - Couple adjuncts
  - Instructors for remote locations teaching personal finance (small percent ~11%)
    - Matt Raunio
    - Karl Schindl
- Other Finance Department issues/possibilities
  - Stoll and Nessler could teach Financial Markets and Institutions (Stoll did once in past)
  - Rasoul noted that these three courses could possibly be merged into a single course on something like Money, Banking, and Financial Markets
    - Financial Market and Institutions (CSB course where the faculty member resigned, no current instructor)
    - Bank Management (CSB course)
    - Money and Banking (ECON course)

*Wrap up*

Stoll and Nessler get curriculum revision, catalog courses, teaching schedule, and student degree planning (course sequence) to Mussie for distribution and discussion among the Finance faculty to provide feedback and move forward. This should, if possible, integrate some current Finance courses into the Economics degree plan. Also, might not hurt to look at how some Economics courses could be added into the Finance curriculum. We will need to work quickly to get this through the administrative processes in time for Fall 2021-22 catalog implementation (deadline is sometime in February, although sometimes the Provost can make exceptions).

3. Resolution to Move Economics Program

Economics Program Move Rationale and Motion

Subsequent to a variety of informal discussions over the years, Economics faculty met with faculty of the Accounting and Finance Department in the Austin E. Cofrin School of Business (CSB) on October 8<sup>th</sup>, 2020.. The Economics Faculty finds their colleagues in CSB to be no less supportive of the Economics Program than colleagues in the Public and Environmental Affairs Department of the College of Arts Humanities and Social Sciences (CAHSS). More so, there is a natural alignment of economics courses with the interests of students in CSB, as expressed not just by student enrollment but by a requirement that all CSB students take, at a minimum, the two introductory courses in the field of economics (ECON 202 and ECON 203). Over the years, a large portion of enrollment in Economics Program courses, as well as students choosing both minors and double majors, has been from students having a major housed within CSB. Some academic programs within CAHSS as well as the two other colleges (CHES and CSET) of our university utilize topical courses in economics, most notably those within the purview of the Public and Environmental Affairs Department, but none is a greater source of current enrollment or potential growth than from academic programs within CSB.

Given the current decline in numbers of faculty and consequent enrollment within the Economics Program, the Faculty of the Economics Program believes it is time for program restructuring and realignment. We believe the Economics Program and Faculty should be moved from being a part of the Public and Environmental Affairs program in CAHSS to being a part of the Accounting and Finance Department in CSB. While restructuring of the academic program has been occurring over the past few years due to stress of reduced faculty numbers, this restructuring should be continued in ways which further align the program with majors in business, especially Finance, while retaining its role as a supportive field for students having majors in other colleges of the university, especially other social sciences having a public policy interest.

Given the above, we provide the following motion to be passed through the appropriate administrative channels.

Motion

It is moved that the Economics Program and its Faculty be moved from UW Green Bay's College of Arts, Humanities, and Social Sciences to the Austin E. Cofrin School of Business and be housed within its Accounting and Finance Department, effective at the start of the 2021-22 academic year.

Thursday, February 4, 2021 11:00 – 11:30 am (Microsoft Teams)

Present: John Stoll, David Helpap, Tom Nessler

1. The Economics Department Executive Committee met to discuss the potential move of the Economics Program and its Faculty to the Cofrin School of Business at the start of the 2021-22 academic year.

### **Motion**

Motion to move the Economic Program and its Faculty from the UW Green Bay's College of Arts, Humanities, and Social Sciences to the Austin E. Cofrin School of Business and be housed within its Accounting and Finance Department, effective at the start of the 2021 – 22 academic year.

Motion made by John Stoll, Second: David Helpap.

Motion carried unanimously.

Meeting adjourned at 11: 25

Cc: Chuck Rybak, Dean of the College of Arts, Humanities, and Social Sciences; Secretary of the Faculty and Academic Staff; Lorri Kornowski, Academic Department Associate

---

### 5. Public and Environmental Affairs Department

### **Meeting Minutes**

Friday February 5, 2021 1:00 -2:30 (Microsoft Teams)

**Present:** Dana Atwood, Alise Coen, Marcelo Cruz, David Helpap (chair), Pat Hicks, Mel Johnson, Kerry Kuenzi, Tom Nessler, Laurel Phoenix, John Stoll, Lora Warner, Aaron Weinschenk, Elizabeth Wheat

**Absent:** Ray Hutchison (sabbatical)

1. Approval of the minutes from the December 4, 2020 meeting.

**Motion to approve the minutes of December 4, 2020.**

Moved: John Stoll, Second: Mel Johnson

Motion carried unanimously.

2. Department updates/reminders

- a. Kudos. David provided kudos to a number of faculty members for accomplishments over the last several months. Kerry, for example, was recently named the university HIPs coordinator. Kerry also received a unanimous vote by the Personnel Council to move her tenure process forward. Liz has been working to develop a speaker series “All Rise: A UW-Green Bay Civil Liberties Lecture Series,” Lora successfully coordinated a nonprofit certificate program focused on working professionals, and Alise recently appeared on WPR’s Central Time to discuss national immigration policy.
- b. Spring 2021 courses. David noted that spring courses seem to be going well.
- c. Fall 2021 timetable. David indicated that the university is planning for a more “typical” semester in the fall. This will likely include a return to in-person classes. Though, the university has an interest in offering classes in a wider range of modalities than what was occurring prior to the COVID-19 pandemic. The first draft of the fall timetable has been submitted and, while a few changes will be needed, it went smoothly overall. David asked that program chairs/coordinators submit overload and ad hoc instructor needs with the next draft of the timetable. Advanced notice makes the planning process much easier.
- d. PEA freshman seminars. David noted that there will again be a need for additional freshman seminars. It is very likely that the department will be offering less freshman seminar courses than normal, so anyone who is interested should reach out to Vince with questions or a course proposal. There may be opportunities for overload payments.
- e. Comprehensive program reviews. David thanked department faculty for their work on the comprehensive program reviews. Despite the challenges of the semester and the timing of the deadline, the process went well overall. At this point, feedback from the individuals reviewing the documents has been positive.
- f. PEA involvement with a Civic Engagement Certificate. David mentioned that Alison Staudinger has left the university and, as such, there is some uncertainty about the certificate proposal. Katia Levintova will be replacing Alison as Co-director of the Center for Civic Engagement. David indicated that he will update the department if there are any new developments or proposals regarding a civic

engagement certificate, and the role PEA might play in its development or implementation.

- g. Other faculty announcements/updates. None.
3. Chairs meeting updates. David, as well as others who attended the meeting, provided updates from the most recent CAHSS chairs meeting. First, it was noted that “high needs” courses will no longer have reserved seats. Instead, new sections will be added as needed. Second, the CAHSS academic symposium and the AES will be held virtually again this year. Faculty should encourage their students to apply, as this provides great exposure for student work and the department more broadly. Third, the availability of new faculty positions and teaching contracts within CAHSS is limited—much more than normal. Fourth, the Dean will propose that additional faculty in PEA be “on contract” during the summer to support any needs that might arise. Program chairs and coordinators would be compensated for summer service. Finally, the university is working to develop consistency across course caps. There has been a significant imbalance across a variety of courses in PEA, and in the college more broadly.
  4. University updates
    - a. Related questions or concerns. David reminded everyone that COVID-19 testing is required (every two weeks) for anyone who enters a campus building at least once a week. Vaccinations also are available in the Kress Center on campus though, at present, specific requirements must be met to get the vaccine.
  5. Faculty Senate updates. Marcelo noted that the January Faculty Senate meeting was canceled.
  6. MPA planning update. David and Kerry indicated that the university has approved the planning document and it has been distributed to UW-System and other campuses in the system for their review. The campuses have a two-week window to provide feedback. If the program is approved, it is likely that it would not begin until Fall 2022. David noted that the feedback should be available to discuss at the March faculty meeting. He also reiterated that a successful launch of the degree will be dependent on at least one or two new faculty hires to support the program.
  7. Potential spring PEA events/Celebrating Students. David indicated that he would like the department to offer some type of Celebrating Students event. The “event” was held over social media last spring and it seemed to receive a lot of positive feedback from students and their families and friends. He indicated that he will talk with Ashley to get her feedback and get additional information on the status of a student engagement intern for the semester. Mel noted that the additional locations have had a student research symposium, but the status is unclear at this point. Alise responded by saying that the Dean hopes that the virtual CAHSS event will have a similar purpose. Aaron noted that he is a

member of the UC and it appears that commencement will be a “drive-thru” event again this semester—similar to spring 2020.

8. Discussion and potential approval of a motion to support the Economics program moving to the Cofrin School of Business. David provided an overview of the proposal and referred faculty to the document and motion that were attached with the meeting agenda. David also indicated that he had mixed feeling about the proposal—he wanted the program to have the best chance possible to rebuild and grow but, that the same time, losing John and Tom as members of the department would be a significant loss. Marcelo and Lora expressed similar support for the move, but both also noted that it will be unfortunate to lose John and Tom as colleagues in PEA. Marcelo asked about the availability of ECON courses for PEA students if the proposal is approved. John indicated that courses definitely would still be available to PEA programs, particularly since they are cross listed. The change would be effective next fall if all deadlines are met.

**It is moved that the Economics Program and its Faculty be moved from UW Green Bay’s College of Arts, Humanities, and Social Sciences to the Austin E. Cofrin School of Business and be housed within its Accounting and Finance Department, effective at the start of the 2021-22 academic year.**

Moved: John Stoll, Second: Marcelo Cruz

Motion carried unanimously.

9. Discussion and potential approval of unit support for a criminal justice minor to be housed within PEA. David and Dana provided an overview of a recent meeting with Dean Rybak and Associated Dean Martin. In short, there has been a long-standing interest in having a criminal justice program at UWGB among university administrators. The most recent proposal is to develop a criminal justice minor and attach it to the Public Administration major housed in PEA. Creating the program in this way would not require a system-wide approval process. If approved, the unit would be able hire a tenure-track faculty member to support the program. The new faculty member would be a sociologist that focuses on criminal justice issues and policies. Kerry noted that criminal justice programs often are connected to public administration programs at other universities. Concerns were raised about the possibility of competing with other programs, particular Democracy and Justice Studies (DJS), which has a criminal justice emphasis. The Dean indicated, however, that DJS did not have an interest in the program. Several faculty members expressed support for the program, indicating that it would be a strong compliments to other, existing programs in the unit (e.g., Political Science, Public Administration, Sociology). There was also a consensus that students have an interest in criminal justice. Currently, courses related to criminal justice are quite popular among students in a variety of majors.

**Motion to support the creation of a criminal justice minor within the Department of Public and Environmental Affairs, specifically linked to the public administration major.**

Moved: Dana Atwood, Second: Mel Johnson  
Motion carried 10-2, no abstentions

10. Election of PEA chair. David reminder faculty that his second, one-year term as PEA chair will be ending in August. He also indicated that he will be on sabbatical for the spring 2022 semester. As such, this would be a good opportunity for a new PEA chair so he would be available to advise and assist the individual until his sabbatical starts. He opened the floor for nominations and discussion. There was discussion of a variety of issues, including the complexity of the unit and overall faculty interest. Ultimately, it was clear that no one was interested in the position as it is currently structured. David suggested further decentralization of responsibilities and workload to program chairs and coordinators. There was support for this proposal and David indicated that he would develop a formal list of responsibilities for each position in the unit. As a result, the vote was delayed until the March faculty meeting.

11. Other business. None.

Next meeting: March 5, 2021

cc: Chuck Rybak, Dean of the College of Arts, Humanities, and Social Sciences; Secretary of the Faculty and Academic Staff; Lorri Kornowski, Academic Department Associate; Ashley Health, Associate Lecturer.

---

6. Email: John Stoll to Karl Schindl, February 5, 2021

Karl,

The Economics degree would be within the Accounting and Finance Department along with the existing degree(s) of the department. Restructuring of the degree would occur over time (not necessarily long) by coordinated discussion with all faculty of the department. It does not make sense to restructure the degree prior to joining the department as this would not involve faculty of the Accounting and Finance Department in any formal way due to university governance structures that specify Executive Committees and approval lines for change. Once the move of the Economics Program and its faculty into the Accounting and Finance Department occurs, any subsequent restructuring of the program by Economics faculty would include consultation and have to pass through the Accounting and Finance Department for approval before moving forward to subsequent approval steps.

That said, the discussion that was held on October 8<sup>th</sup> covered a variety of areas. One was that the Managerial Economics course (ECON 485), Mathematics for Economists (ECON 210) and Cost-Benefit Analysis (ECON 453) might be useful for inclusion in the finance degree in some

manner. Another was that Money and Banking (ECON 330) covers much material that is useful to finance students. The material covered in this latter course overlaps to some extent with Financial Markets and Institutions (BUS ADM 347). For this reason, there was discussion, that should be continued, of restructuring this area to better serve students and preserve faculty resources. It was also felt that it is possible, pending faculty resources, to use Economics Faculty as an instructional resource for the BUS ADM 347 class. At present there are also four courses in finance (FIN 445, 446, 447, and 450) that can be utilized as electives in the Economics major and one additional one that can be used in the required core (choice of ECON 330 or FIN 347).

The Economics program has already been altered to some extent by deactivating several courses from the past (e.g., History of Economic Thought, Economics of Gender), reducing course periodicity, and changing degree requirements to have fewer elective choices and a more solid core (e.g, ECON 330 or ECON 347 is one of the new requirements). This process will continue, assuming the motion successfully passes through the campus administrative structure, but now with coordination and approval in the Cofrin School of Business (CSB) rather than the College of Arts, Humanities, and Social Science (CAHSS). Courses that are utilized by other program degrees will be continued so as not to negatively affect other campus programs by the move to CSB. These courses include Natural Resources Economic Policy (ECON 305), Environmental and Resource Economics (ECON 402), and Cost-Benefit Analysis (ECON 453, discussed above), but this is pending faculty resources to do so. ECON 305 is annual, ECON 402 alternate years, and ECON 453 has been offered most frequently in the summer but was offered this past fall semester for the first time in about two decades. The latter two courses also have cross listings with the graduate program in Environmental Science and Policy.

Let me know if any additional information is needed for faculty in the Accounting and Finance Department. The Executive Committee of Economics had a meeting today and formally passed the motion that I forwarded to you for your agenda next week. The Public and Environmental Affairs Department has the motion on its agenda for a faculty meeting tomorrow.

I hope the above is useful in allaying any concerns. I have copied Dean Dornbush and Tom Nessler, in case they feel any additional clarification is necessary. If you would like Dr. Nessler and/or I to attend your faculty meeting, let me know. And, certainly feel free to share the above with your faculty.

JOHN

---

**Faculty Senate Old Business 4c 5/5/2021**

**Faculty Senate Document #20-16 – Approved 5/5/2021**

**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 Interim 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 2021 Commencement.

**Faculty Senate New Business 5a 5/5/2021**

**Faculty Senate Document #20-17 – Approved 5/5/2021**

**“Surprise” Resolution of Thanks to Clifton Ganyard**

**Whereas**, Clifton Ganyard concludes his six-year, impressive tenure as Associate Provost for Academic Affairs at the end of the 2020-21 academic year, and

**Whereas**, amongst his important contributions, Clif’s leadership of Project Coastal and multiple HLC accreditations for UW-Green Bay standout, and

**Whereas**, pervasive in Clif’s service has been complete dedication to the faculty and students of UW-Green Bay as well as his commitment to the importance of liberal education.

**Therefore, be it resolved** that Clif’s contributions as Associate Provost are not forgotten and that he is able to spend many enjoyable future years as part of UW-Green Bay, and

**Be it further resolved** that members of the Faculty Senate wish to thank Clif for his many contributions in this role.