

9/26/2017

BOARD OF REGENTS OF THE UNIVERSITY OF WISCONSIN SYSTEM

I.1. Education Committee Agenda

Thursday, October 5, 2017  
10:15 a.m.-11:30 a.m.  
UW-Stout  
Memorial Student Center  
Great Hall  
Menomonie, Wisconsin

- a. Approval of the Minutes of the July 6, 2017 meeting of the Education Committee;
- b. Report of the Vice President for Academic and Student Affairs;
  - Student Transfer Policy
  - Low Enrollment Degree Programs
  - Outcomes-Based Funding Model
  - UW System Enrollment for the 2017-18 Academic Year
- c. UW-Parkside: Approval of the Master of Science in Clinical Mental Health Counseling;  
[Resolution I.1.c.]
- d. UW-Stout: Approval of the Bachelor of Science in Applied Biochemistry and Molecular Biology; and  
[Resolution I.1.d.]
- e. UW-Stout Host Presentation: “UW-Stout—Living the Polytechnic Mission” by Provost Patrick Guilfoile.

Program Authorization (Implementation)  
Master of Science in Clinical Mental Health Counseling  
UW-Parkside

EDUCATION COMMITTEE

Resolution I.1.c.:

That, upon the recommendation of the Chancellor of UW-Parkside and the President of the University of Wisconsin System, the Chancellor is authorized to implement the Master of Science in Clinical Mental Health Counseling at UW-Parkside.

**NEW PROGRAM AUTHORIZATION  
MASTER OF SCIENCE IN  
CLINICAL MENTAL HEALTH COUNSELING  
UNIVERSITY OF WISCONSIN-PARKSIDE**

**EXECUTIVE SUMMARY**

**BACKGROUND**

The UW-Parkside submits this request to establish a Master of Science in Clinical Mental Health Counseling. This proposal is presented in accord with the procedures outlined in Academic Planning and Program Review (SYS 102, revised July 2016, available at <https://www.wisconsin.edu/program-planning/>).

**REQUESTED ACTION**

Adoption of Resolution I.1.c., approving the implementation of the Master of Science degree in Clinical Mental Health Counseling (CMHC) proposed by the UW-Parkside.

**DISCUSSION**

**Mission.** The proposed degree aligns with the UW-Parkside mission and strategic plan, as well as the mission of the College of Natural and Health Sciences (CNHS), all of which emphasize enriching students' intellectual experiences through hands-on practica, internships, and original research under the guidance of teacher scholars. Moreover, this degree will advance the UW-Parkside strategic plan because it emphasizes multicultural competency and responsiveness to the needs of diverse clients, and because it incorporates significant student participation in high-impact learning practices through practicum and internship courses.

**Program Description.** Beginning in September 2018, anyone applying for a Licensed Professional Counselor license in the state of Wisconsin must be a graduate from a 60-credit master's degree counseling program. Accordingly, this 60-credit graduate program would equip graduates with the competencies to successfully petition for licensure as Licensed Professional Counselors (LPC) in Wisconsin, as well as other states, following completion of 3,000 hours of post-degree supervised professional counseling practice under a Professional Counselor Training license. The proposed degree is also a natural extension of the psychology department's existing undergraduate Certificate in Mental Health Skills, and is therefore a natural addition to the undergraduate psychology program at UW-Parkside.

The psychology department at UW-Parkside is committed to providing a high-quality program in clinical mental health counseling that prepares graduates for Professional Counselor licensure in Wisconsin. The 60-credit curriculum conforms to the requirements set forth by the State of Wisconsin Marriage and Family Therapy, Professional Counseling, and Social Work Examining Board of the Wisconsin Department of Safety and Professional Services (MPSW). Applicants are required to have a minimum of 18 credits of undergraduate coursework in the social sciences or related areas, and a minimum undergraduate GPA of 3.0. The degree will facilitate development of basic clinical skills through courses in evaluation of clients, building the client-counselor relationship, counseling theory, human development, social and cultural foundations, and research and evaluation.

**Market and Student Demand.** In 2016, there were 2,501 jobs in mental health counseling in Wisconsin with an expected growth of +3.2% in 2017 (nation +3.3%) and median earnings of \$20.58 per hour (Nation \$20.22). The 2026 job trend forecast for the state of Wisconsin is an increase of 18.4% (Nation 19.6%).

Data from the Economic Modeling Specialists International (EMSI) indicate that UW-Parkside will be the only public institution offering this program in the southeastern Wisconsin and northern Illinois region. Moreover, the U.S. Bureau of Labor Statistics (BLS) Occupational Outlook Handbook data for employment of mental health counselors in Illinois in May 2016 indicates that 5,150 were working in this field, with a mean wage of \$43,380 per year, and a mean wage for Kenosha County, WI and Lake County, IL of \$52,850 with 190 job employments (<https://www.bls.gov/ooh/community-and-social-service/mental-health-counselors-and-marriage-and-family-therapists.htm#tab-6>). As such, it is anticipated that students across the state and proximal areas in Illinois would be part of the potential enrollment pool.

**Tuition Structure.** In full capacity, twenty-four (24) students will be admitted into a cohort each year. Courses will be offered in fall, spring, and summer semesters. Students attending full-time will be able to complete the proposed program in 2.5 years. Students enrolled in this program will be charged the standard graduate tuition and fees rates, as follows: (a) Wisconsin residents: \$4,469 (full-time), or \$496.60 per credit (part-time); (b) Midwest exchange: \$6,436 (full-time), or \$715.20 per credit (part-time); and (c) non-residents: \$9,171.80 (full-time), or \$1,019.09 per credit (part-time).

A UW-Parkside Master of Science degree in CMHC will give students in the region and the state the option of a high-quality, lower-cost alternative compared to the private institutions that currently offer graduate programs in this field at a cost for Wisconsin residents of \$29,796. By comparison, the cost of a 60-credit CMHC degree at the Illinois Institute of Technology is \$88,200. The same degree at four other institutions would cost, in descending order: \$50,100 at Roosevelt University; \$49,500 at Marquette University; \$45,000 at Argosy University; and \$32,400 at Viterbo University.

**Program Funding and Management.** Admission into the program will follow established procedures at UW-Parkside. Progression through the curriculum will be based on a cohort model. Students will receive academic and career advising and support through the CNHS Advising Group. A new 50% FTE advisor will be dedicated to students in this program. UW-Parkside is committed to adding to its highly-qualified faculty the necessary expertise to staff the program, as shown in the attached cost and revenue projections sheet.

## **RELATED REGENT AND UW SYSTEM POLICIES**

Regent Policy Document 4-12: Academic Program Planning, Review, and Approval in the University of Wisconsin System.

UW System Administrative Policy 102 (formerly ACIS 1.0): Policy on University of Wisconsin System Array Management: Program Planning, Delivery, Review, and Reporting.

**REQUEST FOR AUTHORIZATION TO IMPLEMENT A  
MASTER OF SCIENCE IN CLINICAL MENTAL HEALTH COUNSELING  
AT UW-PARKSIDE  
PREPARED BY UW-PARKSIDE**

**ABSTRACT**

The University of Wisconsin-Parkside, through its Department of Psychology, proposes the establishment of a Master of Science degree in Clinical Mental Health Counseling (CMHC). The proposed degree is a natural addition to the undergraduate psychology program at UW-Parkside. Furthermore, beginning September 2018 anyone applying for a Licensed Professional Counselor (LPC) license in the State of Wisconsin must be a graduate from a 60-credit master's degree counseling program. The proposed degree would allow students from Wisconsin and around the world who wish to pursue graduate studies in CMHC the opportunity to study in the UW System. This 60-credit graduate program would equip graduates with the competencies to successfully petition for licensure as Licensed Professional Counselors in Wisconsin and potentially other states, following completion of 3,000 hours of post-degree supervised professional counseling practice under a Professional Counselor Training license. Progression through the curriculum will be based on a cohort model delivered partially online.

**PROGRAM IDENTIFICATION**

**Institution Name**

University of Wisconsin-Parkside

**Title of Proposed Program**

Clinical Mental Health Counseling

**Degree/Major Designations**

Master of Science

**Mode of Delivery**

Single institution; face-to-face (48 credits); online (12-credits).

**Projected Enrollment by Year Five of Program**

As noted in Table 1 below, it is anticipated that the proposed degree program, with its cohort structure and an admission cap of 24 students per year, will enroll over 100 new students and graduate 45 students by the end of year five. The expected average attrition rate is 17%.

**Table 1: Five-Year Projected Student Enrollment**

Students/Year	Year 1	Year 2	Year 3	Year 4	Year 5
New Students	12	18	24	24	24
Continuing Students	0	10	25	35	40
Total Headcount	12	28	49	59	64
Graduating Students	0	0	10	15	20

**Tuition Structure**

Students enrolled in this program will be charged the standard graduate tuition and fee rates, as follows (using 2017-18 academic year tuition structure as an example):

- Wisconsin residents: \$4,469 (full-time) or \$496.60 per credit (part-time enrolled in less than nine (9) credits).
- Midwest exchange: \$6,436 (full-time) or \$715.20 per credit (part-time).
- Non-residents: \$9,171.80 (full-time) or \$1,019.09 per credit (part-time).

Tuition includes segregated fees (\$545.58 for full-time students and \$60.58 per credit for part-time students). Students who take online courses will be charged a distance education surcharge of \$65.00 per online credit.

UW-Parkside’s CMHC will be an affordable master’s degree program at \$29,796 (priced at the current per-credit tuition rate without taking the tuition plateau into account). For example, the cost of a 60-credit CMHC degree at the Illinois Institute of Technology is \$88,200. The same degree at four other institutions, in descending order, would cost \$50,100 at Roosevelt University, \$49,500 at Marquette University, \$45,000 at Argosy University, and \$32,400 at Viterbo University.

A UW-Parkside master of science degree in CMHC will give students in the region and the State the option of a high-quality, lower-cost alternative compared to the private institutions that currently offer graduate programs in this field.

**Department or Functional Equivalent**

The proposed program will reside in the Department of Psychology.

**College, School, or Functional Equivalent**

The proposed program will be housed within the College of Natural and Health Sciences.

**Proposed Date of Implementation**

The proposed program will be fully implemented by September 2018.

## **INTRODUCTION**

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

The proposed degree aligns with UW-Parkside's mission and several goals on its strategic plan (see [http://www.uwp.edu/explore/aboutuwp/mission\\_vision.cfm](http://www.uwp.edu/explore/aboutuwp/mission_vision.cfm)). The CMHC program will be a high-quality educational experience that prepares students to contribute to health care as Licensed Professional Counselors. Faculty and academic staff will engage in creative and scholarly activities in mental health and counseling and encourage student participation in these activities. The program relates to the strategic plan as it will emphasize multicultural competency and responsiveness to the needs of diverse clients, and will incorporate significant student participation in high-impact learning practices through practicum and internship courses. Existing and new partnerships with organizations in the region will be maintained and developed as source for student internships and practica. These will provide students with excellent educational experiences and opportunities to contribute to the community as LPCs in training while completing post-degree supervised professional counseling practice, and eventually as LPCs.

These aims are consistent with the mission and strategic plan of UW-Parkside as well as the mission and plans of the College of Natural and Health Sciences (CNHS) that emphasize enriching students' intellectual experiences through hands-on practica, internships, and original research under the guidance of teacher scholars.

The CMHC program fits well within the current program array at UW-Parkside. It is a natural extension of the psychology department's undergraduate Certificate in Mental Health Skills, which facilitates development of basic clinical skills through courses in two areas (12 credits) that professional counseling master's programs need to address: appraisal of individuals and the helping relationship. Additionally, many of the other undergraduate psychology courses (18 credits) address content that courses in a professional counseling master's program must cover at a deeper level, including counseling theory, human development, social and cultural foundations, and research and evaluation. Additionally, beginning September 2018 anyone applying for a Licensed Professional Counselor license in the state of Wisconsin must be a graduate from a 60-credit master's degree counseling program.

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

A survey was conducted of students enrolled in UW-Parkside's Mental Health Skills certificate program to determine demand for the CMHC degree. The results indicate a strong interest in a master's degree program located on the UW-Parkside campus that would provide a seamless transition for students. Of 88 students enrolled in that certificate program who were surveyed, 25 (28.4%) indicated a strong interest in a master's degree program. Illinois residents constitute 15 of the 88 and are unlikely to travel greater distances to Milwaukee or Whitewater. This demand from northern Illinois is sustainable as the Certificate in Mental Health Skills is the largest at UW-Parkside. There are over 200 undergraduate majors in psychology at UW-Parkside.

UW-Parkside believes the potential student demand for the proposed program extends beyond UW-Parkside's traditional recruiting corridor. The reason is that the undergraduate

psychology program at UW-Parkside has been successful in recruiting students from many areas of Wisconsin as well as northern Illinois. The Economic Modeling Specialists International (EMSI) data below indicates UW-Parkside will be the only public institution offering this program in the southeastern Wisconsin and northern Illinois region. Moreover, the U.S. Bureau of Labor Statistics (BLS) Occupational Outlook Handbook data for employment of mental health counselors in Illinois in May 2016 reflected 5,150 job opportunities (not including self-employed workers), with a mean wage of \$43,380 per year; the mean wage for Kenosha County, WI and Lake County, IL was \$52,850 with 190 job employments (<https://www.bls.gov/ooh/community-and-social-service/mental-health-counselors-and-marriage-and-family-therapists.htm#tab-6>). As such, it is likely that students across the state and proximal areas in Illinois would be part of the potential enrollment pool.

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

EMSI data shows that a total of 169 master's degrees in mental health counseling were awarded within the state in 2015 by four institutions (an increase of 57.9% from 2014); 147 from the three private institutions – 87.0% of the total degree completions in 2015.

According to EMSI, in the state of Wisconsin, four institutions offer clinical mental health counseling master's degree programs. UW-Parkside would be the fifth and only public institution in southeastern Wisconsin (two additional UW System universities in the region offer counseling-focused programs). Implementation of the proposed program will serve to meet emerging workforce needs.

In 2016, there were 2,501 jobs in mental health counseling in the state with an expected growth of +3.2% in 2017 (nation +3.3%); and median earnings of \$20.58 per hour (Nation \$20.22). The 2026 job trend forecast for the state of Wisconsin is an increase of 18.4% (Nation 19.6%). In Wisconsin and Illinois there are a total of twelve institutions offering CMHC master's degree programs. UW-Parkside will make it thirteen, with two public universities in the group. A total of 254 master's degrees were awarded in 2015 by these institutions; 223 (88%) of the master's degrees were awarded by private institutions. In Wisconsin and Illinois there were 7,880 jobs with an expected growth of +2.2% in 2017 (Nation +3.3%), with median earnings of \$19.00 per hour (Nation \$20.22). Given the maturity of UW-Parkside's undergraduate psychology program, the proposed master's degree in CMHC is a logical offering (see [www.economicmodeling.com](http://www.economicmodeling.com)).

According to the December 17, 2015 BLS Occupational Outlook Handbook, *“Employment of mental health counselors is projected to grow 20 percent from 2014 to 2024, much faster than the average for all occupations. The number of individuals who have access to health insurance is expected to continue to increase because of federal health insurance reform. The law requires insurance plans to cover treatment for mental health issues in the same way as other chronic diseases. This will increase access to prevention and treatment services to more people who were previously uninsured, did not have these services covered, or found treatment to be cost-prohibitive. Mental health centers and other treatment and counseling facilities will need to hire more mental health counselors and marriage and family therapists to meet this increased demand. In addition, the number of military veterans needing and seeking mental health treatment is expected to increase over the next decade. The federal government,*



*community clinics, and local hospitals will need to expand their mental health counseling staff to provide timely and effective treatment for veterans and active duty personnel nationally. Employment will increase from 134,500 jobs in 2014 to 160,900 jobs in 2024 nationally.”* The BLS went on to add, *“Job prospects are expected to be good for mental health counselors and marriage and family therapists, particularly in rural areas or other communities that are underserved by mental health practitioners.”* According to the BLS, in 2014, the entry-level education attainment for mental health counselors is a master’s degree with a median pay of \$44,170 per year. According to the BLS, for Wisconsin, employment of mental health counselors for May 2016 was 2,550 (not including self-employed workers), with a mean wage of \$44,890 per year. The above data is corroborated in the Wisconsin Occupation profile (see [www.worknet.wisconsin.gov](http://www.worknet.wisconsin.gov)).

## **DESCRIPTION OF PROGRAM**

The proposed master’s degree in CMHC is a 60-credit hour program:

- 54 credit hours are indicated by state requirements for professional counselor education programs, including
  - Supervised Counseling Practicum (which requires 100 hours of placement, of which a minimum of 40 hours are direct client contact), and
  - Supervised Counseling Internship (which requires 600 hours of placement, of which a minimum of 240 hours are direct client contact); and
- 6 credit hours are elective courses.

Admission into the program will follow established procedures at UW-Parkside. Progression through the curriculum will be based on a cohort model. Students will receive academic and career advising and support through the CNHS Advising Group. A new 50% FTE advisor will be dedicated to students in this program. The proposed program would satisfy many of the stated goals in the UW-Parkside Academic Plan (An Academic Plan to Lead UW-Parkside Toward 2020, <https://www.uwp.edu/explore/offices/academicaffairs/upload/Academic-Plan-Final.pdf>). For example, Goal 2.3 – Identify and respond to the current and future demands for professions and occupations in the region, and Goal 2.5 – Add new master’s level programs to provide our surrounding communities with both trained professionals and post-graduate opportunities. This degree fits well in the growth plans in CNHS at UW-Parkside, specifically, to offer master’s degree programs in critical areas of need and emerging workforce development in the region. It would be a valuable complement to the undergraduate psychology degree.

## **Competitive/Duplicative Programs in UW System**

The proposed degree would not be competing with any other graduate program at UW-Parkside. UW-Milwaukee offers a related program, the Community Counseling program in the Department of Educational Psychology. The position at UW-Parkside is that, while similar in some respects, the proposed Master of Science in Clinical Mental Health Counseling will not overlap significantly with this program as it will serve students who wish a clinical program. The UW-Parkside program will not compete with the UW-Milwaukee School Counseling track. Further, UW-Whitewater has informed UW-Parkside that the proposed CMHC program would not compete with its counselor education program. UW-Stout’s concerns reflected on resources required to produce highly qualified counselors to “support an especially vulnerable population.”

UW-Parkside is committed to adding to its highly qualified faculty the necessary expertise to staff the program, as shown in the cost and revenue projections sheet.

While students from the UW-Parkside service area could attend UW-Milwaukee or UW-Whitewater, UW-Parkside's experience is that students will not, in fact, do so. While the campuses are fairly close geographically, UW-Parkside serves a unique group of students. About 63% of its students live in Racine and Kenosha counties. Most of the rest of its students are from Walworth County and northern Illinois. Many of the students work half- to full-time and have family responsibilities and other commitments. The commute to Milwaukee or Whitewater appears to be something students from this area are unwilling or unable to do. UW-Whitewater acknowledges this fact and states that its program does not enroll many students from Racine or Kenosha counties in Wisconsin or Lake County in Illinois. The UW-Parkside market area is simply not the same as the UW-Milwaukee or UW-Whitewater market areas. In sum, UW-Parkside does not believe that the proposed degree would cause significant duplication or competition for its colleagues in the UW System.

### **Collaborative Nature of Proposed Program**

The proposed program will be a single institution effort contained in one department/college. Once established, efforts will be made, where appropriate both internally and externally, to discuss ways to expand the program and create additional educational options to meet the needs of students and mental health counseling in the State. UW-Parkside will partner with health facilities in the community to provide practicum and internship opportunities for the students in this program.

### **Diversity**

Consistent with UW-Parkside core values, this program will deliver on the promise of diversity and inclusiveness. UW-Parkside consistently ranks as the most diverse campus in the UW System in terms of underrepresented populations and first-generation college students. According to UW-Parkside RDS Data (on 4/29/17), 37.1% of students in its undergraduate psychology program identified as non-White/Caucasian. The initiatives currently in place at UW-Parkside to recruit and retain the most diverse student body in the UW System will also be available to this program. As previously noted, it is anticipated that a significant number of students for the proposed degree would come from existing student and alumni populations. Competency D of the Student Learning Outcomes for the program explicitly addresses the development of multiculturally competent counseling practices. Section 2.f.2 (Social and Cultural Diversity) of the Council for Accreditation of Counseling and Related Educational Program (CACREP) Standards addresses multicultural counseling competence, the role of social justice and advocacy in professional counseling, and awareness of diversity of both the counselor and client. Most students will complete practicum and internship placements in Racine and Kenosha counties, which both consist of diverse populations. These counties are diverse in terms of rural/urban, socioeconomic status, race, and ethnicity. Thus, students would have opportunity to work with a diverse client population, and diverse supervisors and professional counselors at placement sites. Faculty recruitment practices at UW-Parkside, through their outreach efforts to a wide-range of diverse graduate programs, will encourage a diverse applicant pool.

## Student Learning Outcomes

Professional Counseling is defined by the American Counseling Association as “a professional relationship that empowers diverse individuals, families, and groups to accomplish mental health, wellness, education, and career goals” (ACA vision 20/20

<https://www.counseling.org/aca-community/learn-about-counseling/what-is-counseling/overview>). There are five core competencies and associated learning outcomes that students will demonstrate as a result of completing the proposed degree program.

### *Competency A:*

Understand the history and foundation of the counseling profession, and the roles of Professional Counselors.

Upon completion of the program students will be able to demonstrate this competency through the following outcomes:

- Describe professional roles and functions of Professional Counselors in treatment settings, community organizations, and private practices.
- Demonstrate awareness of professional organizations, license and certification requirements of the profession, and knowledge of public policy implications for professional counselors.
- Articulate the foundational theories and strategies of professional counseling practice, including the roles and responsibilities of professional counselors in a variety of work settings.

### *Competency B:*

Engage in professional and ethical counseling practices.

Upon completion of the program students will be able to demonstrate this competency through the following outcomes:

- Describe the ethical standards and practices of the standards of the American Counseling Association.
- Act professionally and ethically according to the standards of the American Counseling Association.

### *Competency C:*

Understand the lifespan human development of diverse individuals, families, and communities.

Upon completion of the program students will be able to demonstrate this competency through the following outcomes:

- Articulate an understanding of theories, principles, and research of human development, including those addressing development of the individual personality, learning, and systems theories; trauma and impact of crisis; and theories providing an understanding of wellness and resilience.
- Describe career development and models of career counseling interventions.
- Understand theories and application of addictions and trauma on the development of the individual, family, and community systems.

### *Competency D:*

Demonstrate multi-culturally competent and essential skills of a Professional Counselor, in individual, couples, family and group counseling settings.

Upon completion of the program students will be able to demonstrate multicultural competence of essential skills through the following outcomes:

- Demonstrate ability to establish and maintain a professional counseling relationship with clients.

- Identify therapeutic goals.
- Demonstrate ability to conduct psychosocial assessments, and diagnosis of mental illness.
- Create and implement treatment plans based upon clinical setting.
- Apply counseling theories strategies and knowledge of the helping relationship in a counseling setting.
- Demonstrate appropriate use of assessments for clinical use.

*Competency E:*

Understand program planning, evaluation, and research skills relevant to professional counseling.

Upon completion of the program students will demonstrate this competency through the following outcomes:

- Describe research and evaluation methods in the development of evidence-based clinical skills and theories of practice.
- Describe theories of program development and evaluation.

**Assessment of Student Learning Outcomes**

Students’ knowledge and skills will be assessed at four developmental stages throughout their program of study: first semester of program, pre-practicum, post-practicum, and pre-graduation. Various assessments and outcome measures will be utilized to determine the preparedness of counselor-in-training. These various forms of assessment will be utilized in measuring program effectiveness and outcome measures.

Additionally, students are required to (a) maintain a minimum GPA of 3.0 in the program, and (b) earn a minimum grade of B in all required courses. Students who do not meet these requirements will be given the opportunity to remediate the particular course(s). Remediation may include that students are dropped from their cohort and join a different cohort. Students are required to maintain high levels of professional and ethical behavior. Students who demonstrate problematic behaviors, ethical violations, incompetence, or impairment, as defined by the American Counseling Association Code of Ethics and WI State Statute, will be given an opportunity for remediation, if remediation is possible, or dismissed from the program. Remediation may include that students are dropped from their cohort and join a different cohort.

Program faculty will utilize formative and summative evaluation tools throughout the program. Within each course students will demonstrate content knowledge by completing exams, writing reflective papers and completing research projects to ensure goals are met. Demonstration of therapeutic counseling skills will be measured through site supervisor and faculty evaluations, direct observation, as well as audio and video recordings. In addition, students will complete the Counselor Preparation Comprehensive Exam administered by the National Board of Certified Counselors, prior to graduation from the program ensuring that students are prepared for the state licensing exam. Results of formative and summative evaluations will be utilized to inform ongoing program development.

**Program Curriculum**

The Department of Psychology at UW-Parkside is committed to providing a high-quality program in clinical mental health counseling that prepares graduates for Professional Counselor licensure in Wisconsin. The 60-credit curriculum conforms to the requirements set forth by the

State of Wisconsin Marriage and Family Therapy, Professional Counseling, and Social Work Examining Board of the Wisconsin Department of Safety and Professional Services (MPSW). Table 2 shares the required 54 credits of the program’s curriculum. Students’ options for the six (6) credits of electives are noted after Table 2.

Applicants are required to have a minimum of 18 credits of undergraduate coursework in the social sciences or related areas, and a minimum undergraduate GPA of 3.0. No graduate exam scores will be required, but students who do not meet the minimum undergraduate GPA requirement may submit GRE or MAT scores. Depending on the applicant pool, some applicants may be admitted who do not meet the minimum undergraduate GPA requirement.

**Table 2: Alignment of Program Courses with State of Wisconsin section MPSW 14.01**

<b>MPSW 14 CONTENT AREAS (effective 9-1-18)</b>	<b>UW-Parkside Course Code/Title</b>	<b>Credits</b>
Counseling Theory – at least 3 cr.	CMHC 704 - Counseling Theories	3
Supervised Counseling Practicum (includes min: 100 hrs. with at least 40 hrs. face-to-face client contact)	CMHC 794 - Counseling Practicum	3
Supervised Counseling Internship (includes min: 600 hrs. with at least 240 hrs. face-to-face client contact)	CMHC 795 - Counseling Internship I CMHC 796 - Counseling Internship II	3 3
Human Growth and Development	CMHC 714 - Lifespan Development in Counseling	3
Social and Cultural Foundations	CMHC 716 - Social & Cultural Foundations of Counseling	3
Helping Relationship	CMHC 702 – Counseling Skills & Strategies	3
Group Dynamics Process and Counseling	CMHC 706 - Group Counseling	3
Lifestyle and Career Development	CMHC 758 – Counseling for Work & Career	3
Assessment and Testing	CMHC 720 – Assessment Procedures in Counseling	3
Research and Evaluation	CMHC 722 - Research & Evaluation in Counseling	3
Professional Counseling Orientation	CMHC 700 - Professional Counseling Orientation & Ethics	3
Foundations of Clinical Mental Health Counseling	CMHC 740 - Foundations of Clinical Mental Health Counseling	3
Clinical Mental Health Counseling Diagnosis and Treatment Planning	CMHC 750 - Diagnosis & Treatment Planning	3
Crisis and Trauma Counseling	CMHC 752 - Crisis and Trauma Counseling	3
Abnormal Behavior and Psychopathology	CMHC 742 - Abnormal Behavior & Psychopathology	3
Addictions Counseling	CMHC 754 – Addictions Counseling	3
Family, Partnership, and Couples Counseling	CMHC 756 - Family & Couples Counseling	3

**Electives (6 credits)**

CMHC 770	Advanced Counseling for Work & Career	3 credits
CMHC 771	Supervision & Consultation	3 credits
CMHC 772	Advanced Crisis & Trauma Counseling	3 credits
CMHC 773	Clinical Health Counseling I	3 credits
CMHC 774	Clinical Health Counseling II	3 credits
CMHC 790	Special Topics in Clinical Mental Health Counseling	3 credits
CMHC 798	Independent Reading	3 credits
CMHC 799	Research or Thesis	3 credits

**Projected Time to Degree**

As previously noted, the proposed 60-credit program will be offered in a cohort model. In full capacity, twenty-four (24) students will be admitted into a cohort each year. Courses will be offered in fall, spring, and summer semesters. Students attending full-time will be able to complete the proposed program in 2.5 years.

**Program Review Process**

New programs are reviewed approximately five years after initial implementation. All continuing programs are reviewed on a seven-year cycle. The review process includes preparation of a self-study by program faculty, followed by evaluation by an external reviewer, the college dean, and UW-Parkside's Committee on Academic Planning. The product of these reviews is a recommendation to the Provost to continue the program in its present form, change or redirect the program, consolidate with another program, or suspend or eliminate the program. The program will work with internal and external partners to ensure a high-quality graduate learning experience is being delivered to students. Such efforts will include periodic review of learning outcomes and levels of success of graduates in their chosen field. The program will also work with internal and external partners to ensure equity and inclusive excellence are achieved. This will include review of the course array, review of student and graduate demographics, along with meetings with health care industry partners and executives to ensure the program is providing the graduates needed by the industry. Program faculty will review formative and summative evaluation results annually to inform ongoing program development. The Council for Accreditation of Counseling and Related Educational Program (CACREP) accreditation involves comprehensive program review including a self-study and site visit. Section 4 (Evaluation in the Program) of the CACREP Standards outlines the regular, on-going, and data-driven process of program review. A CACREP-accredited program is reaccredited every eight years.

**Accreditation**

Graduation from a program accredited by CACREP is not required for Professional Counselor licensure in the state of Wisconsin. However, UW-Parkside will seek CACREP accreditation for this master's degree in clinical mental health counseling program in fall 2020, the last term of its first group of graduates, consistent with CACREP new applicants' eligibility requirements. Beginning 2022, the National Board for Certified Counselors will require a master's degree from a CACREP-accredited counseling program to apply for certification as a National Certified Counselor (NCC). The NCC is not required for licensure in Wisconsin. The

proposed program is designed to provide the academic and pre-graduate supervised practical experiences needed to prepare to be a Licensed Professional Counselor in the state of Wisconsin. Upon graduation from the program, students would be eligible for the Professional Counselor Training license. Following graduation students need to complete 3,000 hours of post-degree supervised professional counseling practice (at least 1,000 hours of face-to-face client contact), and pass the National Counselor Exam or the National Clinical Mental Health Counseling Examination, and the Wisconsin Statutes and Rules examination to become a LPC in Wisconsin. Examples of work settings for professional counselors include hospitals, outpatient social services and mental health agencies, residential treatment centers, and educational settings. By meeting the curricular requirements set forth by the Wisconsin MPSW, the proposed program will meet the educational requirements set forth in the latest CACREP standards for master's programs in clinical mental health counseling.

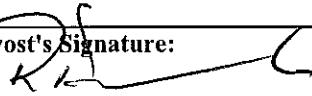
**University of Wisconsin - Parkside**  
**Cost and Revenue Projections For Newly Proposed Program: MS in Clinical Mental Health Counseling**

	Items	Projections				
		2018-19	2019-20	2020-21	2021-22	2022-23
		Year 1	Year 2	Year 3	Year 4	Year 5
<b>I</b>	<b>Enrollment (New Student) Headcount</b>	12	18	24	24	24
	<b>Enrollment (Continuing Student) Headcount</b>	0	10	25	35	40
	<b>Enrollment (New Student) FTE</b>	12	18	24	24	24
	<b>Enrollment (Continuing Student) FTE</b>	0	10	25	35	40
<b>II</b>	<b>Total New Credit Hours (# new sections x credits per section)</b>	27	24	9	0	0
	<b>Existing Credit Hours</b>	0	27	24	60	60
<b>III</b>	<b>FTE of New Faculty/Instructional Staff</b>	1	1	0	0	0
	<b>FTE of Current Fac/IAS</b>	2.25	3.25	4.25	4.25	4.25
	<b>FTE of New Admin Staff</b>	0	0	0	0	0
	<b>FTE Current Admin Staff</b>	0.25	0.25	0.25	0.25	0.25
<b>IV</b>	<b>New Revenues*</b>					
	<i>From Tuition (new credit hours x FTE)</i>	\$143,106	\$318,980	\$487,388	\$561,895	\$584,242
	<i>From Fees</i>	\$4,680	\$10,920	\$15,210	\$17,160	\$17,160
	<i>Program Revenue - Grants</i>					
	<i>Program Revenue - Other</i>					
	<i>Reallocation</i>					
	<b>Total New Revenue</b>	\$147,786	\$329,900	\$502,598	\$579,055	\$601,402
<b>V</b>	<b>New Expenses</b>					
	<b>Salaries plus Fringes</b>					
	<i>Faculty/Instructional Staff</i>	\$85,500	\$256,500	\$256,500	\$256,500	\$256,500
	<i>Other Staff (0.5 FTE Advisor)</i>	\$33,750	\$33,750	\$33,750	\$33,750	\$33,750
	<i>Summer teaching (\$1,000 /cr + 50% fringe)</i>	\$15,390	\$23,085	\$23,085	\$23,085	\$23,085
	<b>Other Expenses</b>					
	<i>Facilities</i>					
	<i>Equipment</i>					
	<i>Other: Marketing</i>	\$12,000	\$15,000	\$20,000	\$20,000	\$25,000
	<b>Total Expenses</b>	\$146,640	\$328,335	\$333,335	\$333,335	\$338,335
<b>VI</b>	<b>Net Revenue</b>	\$1,146	\$1,565	\$169,263	\$245,720	\$263,067

**Narrative: Explanation of the Numbers and Other Ongoing Commitments that will Benefit the Proposed Program**

- 41 Lines 6-9: Retaining 83% of each year entering cohort. Assumes 100% students will be full time (taking 9-12 credits) in fall and spring semesters.
- 43 Line 14: One new faculty added prior to Year 1; one faculty in each of Year 1 & 2; Y2 within the Dept. as current faculty moves fully to program.
- 44 Line 15: Non-core faculty member will teach 25% (six (6) credits of their time) in the proposed graduate program per year.
- 45 Line 17: Current staff will be allocating 25% of their time to the proposed graduate program.
- 46 Line 19: Revenue projection based wholly on resident student tuition. More revenue will accrue with non-resident and Midwest Exchange students.
- 47 Line 20: Per credit tuition revenue is \$496.60 per credit, or \$4,469.40 per semester for full-time students.
- 48 Line 20: Anticipate full-time students taking 9-12 credits Fall and Spring semesters; 6 credits first summer and 3 credits second summer.
- 49 Line 21: includes UW-P's \$65/credit distance education fee.
- 50 Line 28: New faculty added prior year and in Year 1 @ average \$57,000
- 52 Line 28: Assumes a fringe rate of 50%.
- 53 Line 29: New 50% FTE Advisor salary of \$22,500 plus 50% fringe rate.
- 54 Line 30: Average faculty salary of \$57,000 @ 2.5% per credit x 1.2 for graduate class; 6 credits Year1 and 9 credits thereafter
- 55 Line 34: Marketing will include fliers, posters, advertisement in trade discipline publications, digital and radio clips to be in the arena of regional private institution competitors.

Provost's Signature:



Date:

9.7.17



**University of Wisconsin-Parkside**  
**Master's Degree in Clinical Mental Health Counseling**  
**Budget Explanation**

The 2017-18 academic year fees have been used for revenue illustration. A student taking 9-12 credits any semester is considered full-time. Full-time tuition, per-credit tuition, and per-credit online fees are \$4,469.40, \$497.78, and \$65.00, respectively (tuition includes segregated fees).

**Revenue**

**In Year I**

UW-Parkside anticipates Cohort I will enroll 12 students in fall, spring and summer semesters. The students will be full-time in fall 2018 and spring 2019 semesters, taking 3 credits online in each semester. Each student will generate \$4,469.40 and \$195.00 in tuition revenue and the online fee, respectively, in each semester. Revenue each semester for the 12 students will be \$55,972.80. In summer 2019 each student will take 6 credits; tuition revenue per student will be \$2,986.68. Revenue for the 12 students will be \$35,840.16. ***Year I total revenue = \$147,786.***

**In Year II**

UW-Parkside anticipates Cohort II will enroll 18 students in fall, spring and summer semesters. The students will be full-time in fall 2019 and spring 2020 semesters, taking 3 credits online in each semester. Revenue each semester for the 18 students will be \$83,959.20. In summer 2020 each student will take 6 credits. Revenue generated for the 18 students will be \$53,760.24. ***Cohort II revenue subtotal = \$221,678.64.***

At 83% retention of Cohort I, the ten continuing students in Cohort I will also be taking courses in fall, spring and summer semesters. The students will be full-time in fall 2019 and spring 2020 semesters, taking 3 credits online in each semester. Revenue each semester for the ten students will be \$46,644.00. In summer 2020 each Cohort I student will take 3 credits. Revenue generated for the ten students will be \$14,933.40. ***Cohort I revenue in Year II subtotal = \$108,221.40. Year II total revenue = \$329,900.***

**In Year III**

UW-Parkside anticipates Cohort III will enroll 24 students in fall, spring and summer semesters. The students will be full-time in fall 2020 and spring 2021 semesters, taking 3 credits online in each semester. Revenue generated each semester for the 24 students will be \$111,945.60. In summer 2021 each student will take 6 credits. Revenue generated for the 24 students will be \$71,680.32. ***Cohort III revenue subtotal = \$295,571.52.***

At 83% retention of Cohort II, 15 continuing students in this cohort will be full-time in fall 2020 and spring 2021 semesters, taking 3 credits online in each semester. Revenue generated each semester for the 15 students will be \$69,966.00. In summer 2021 each student will take 3 credits; revenue generated for the 15 students will be \$22,400.10. ***Cohort II revenue in Year III subtotal = \$162,332.10.***

UW-Parkside anticipates all ten Cohort I students retained in Year II will finish the program in fall 2020, taking 9 credits (no credit online). Revenue generated for the 10 students

will be \$44,694.00. *Cohort I revenue in Year III subtotal = \$44,694.00. Year III total revenue = \$502,598.*

#### **In Year IV**

UW-Parkside anticipates Cohort IV will enroll 24 students in fall, spring and summer semesters. The students will be full-time in fall 2021 and spring 2022 semesters, taking 3 credits online in each semester. Revenue generated each semester for the 24 students will be \$111,945.60. In summer 2022 each student will take 6 credits. Revenue generated for the 24 students will be \$71,680.32. *Cohort IV revenue subtotal = \$295,571.52.*

At 83% retention of Cohort III, 20 continuing students in this cohort will be full-time in fall 2021 and spring 2022 semesters, taking 3 credits online in each semester. Revenue generated each semester for the 20 students will be \$93,288.00. In summer 2022 each student will take 3 credits; revenue generated for the 20 students will be \$29,866.80. *Cohort III revenue in Year IV subtotal = \$216,442.80.*

UW-Parkside anticipates all 15 Cohort II students retained in Year III will finish the program in fall 2021, taking 9 credits (no credit online). Revenue generated for the 15 students will be \$67,041.00. *Cohort II revenue in Year IV subtotal = \$67,041.00. Year IV total revenue = \$579,055.*

#### **In Year V**

UW-Parkside anticipates Cohort V will enroll 24 students in fall, spring and summer semesters. The students will be full-time in fall 2022 and spring 2023 semesters, taking 3 credits online in each semester. Revenue generated each semester for the 24 students will be \$111,945.60. In summer 2023 each student will take 6 credits. Revenue generated for the 24 students will be \$71,680.32. *Cohort V revenue subtotal = \$295,571.52.*

At 83% retention of Cohort IV, 20 continuing students in this cohort will be full-time in fall 2022 and spring 2023 semesters, taking 3 credits online in each semester. Revenue generated each semester for the 20 students will be \$93,288.00. In summer 2023 each student will take 3 credits; revenue generated for the 20 students will be \$29,866.80. *Cohort IV revenue in Year V subtotal = \$216,442.80.*

UW-Parkside anticipates all 20 Cohort III students retained in Year IV will finish the program in fall 2022, taking 9 credits (no credit online). Revenue generated for the 20 students will be \$89,388.00. *Cohort III revenue in Year V subtotal = \$100,080. Year V total revenue = \$601,402.*

#### **Expenditure**

Prior to Year I, a new faculty has been added for the program. One faculty will be added in each of Years I and II. At a \$57,000 average salary and 50% fringe, total salary expense in Year II will be \$256,500. A 50% FTE graduate advisor at a salary of \$22,500 and 50% fringe will be hired for the program. Summer stipends: average faculty salary 2.5% per credit multiplied by factor of 1.2 (for graduate class) for 6 credits in Year I plus 50% fringe will be \$15,390, and 9 credits thereafter plus 50% fringe will be \$23,085.



**Office of the Provost**

P.O. Box 2000 | 900 Wood Road  
Kenosha, WI 53141-2000

Phone: 262-595-2261

Fax: 262-595-2630

[www.uwp.edu](http://www.uwp.edu) Keyword: Provost

September 19, 2017

Dear President Cross,

The University of Wisconsin-Parkside has submitted a request for authorization to implement a new Master of Science degree program in Clinical Mental Health Counseling. All program materials have been approved by our Course and Curriculum Committee and Committee on Academic Planning and finally by the Faculty Senate at its September 19, 2017 meeting. This master's degree program is an important addition to our growing array of graduate programs, and is aligned with both our strategic plan and our strategic enrollment management plan. Financial and human resources to support the program are either in place or committed. The quality of the program will be ensured by our regular program review process. As Provost, I fully support this new master's degree program.

Sincerely,

A handwritten signature in black ink, appearing to read "RD" followed by a horizontal line and a flourish.

Rob Ducoffe, Ph.D.  
Provost & Vice Chancellor  
Office of Academic Affairs

Program Authorization (Implementation)  
Bachelor of Science in Applied Biochemistry and Molecular Biology  
UW-Stout

EDUCATION COMMITTEE

Resolution I.1.d.:

That, upon the recommendation of the Chancellor of UW-Stout and the President of the University of Wisconsin System, the Chancellor is authorized to implement the Bachelor of Science in Applied Biochemistry and Molecular Biology at UW-Stout.

**NEW PROGRAM AUTHORIZATION  
BACHELOR OF SCIENCE IN  
APPLIED BIOCHEMISTRY AND MOLECULAR BIOLOGY  
UNIVERSITY OF WISCONSIN-STOUT**

**EXECUTIVE SUMMARY**

**BACKGROUND**

The University of Wisconsin-Stout submits this request to establish a Bachelor of Science in Applied Biochemistry and Molecular Biology. This proposal is presented in accord with the procedures outlined in Academic Planning and Program Review (SYS 102, revised May 2016, available at <https://www.wisconsin.edu/program-planning/>).

**REQUESTED ACTION**

Adoption of Resolution I.1.d., approving the implementation of the Bachelor of Science degree in Applied Biochemistry and Molecular Biology proposed by the University of Wisconsin-Stout.

**DISCUSSION**

**Mission.** As a polytechnic institution, UW-Stout's mission is to prepare students for professional careers in industry, commerce, education, and human services by integrating scientific theory, humanistic understanding, creativity, research, and applied learning opportunities. This way, its students will be prepared to solve real-world problems, grow the economy, and serve a global society. UW-Stout can better align its mission as a polytechnic university with its obligation to serve the best interest of its students by expanding its array of science programs. The reason is that scientific advances during the second half of the 20<sup>th</sup> century have significantly changed the industrial landscape by creating new professional fields in which even entry-level positions require fundamental scientific knowledge and skills. Moreover, burgeoning scientific subspecialties, such as bioinformatics, genomics, proteomics, and transcriptomics, are fundamentally rooted in a combination of biochemistry and molecular biology disciplines. As such, a truly polytechnic approach of combining biochemistry and molecular biology is a strategy that is not only well-positioned to fulfill the polytechnic mission of UW-Stout, but also to advance workforce development in the state of Wisconsin.

**Program Description.** This program will elevate the existing concentration in Biochemistry and Molecular Biology (BMB) within the B.S. in Applied Science program at UW-Stout to a major that is better recognized by both prospective students and potential employers. This program will be housed jointly within the Department of Biology and the Department of Chemistry/Physics, and will reside within the College of Science, Technology, Engineering, Mathematics, and Management. The degree will comprise 120 credits, of which 45 will be general education requirements and 75 will be in major studies. Currently, all but ten credits of the major studies curriculum content exist and are being taught as part of the BMB concentration. The program will continue to offer students rigorous fundamental knowledge in molecular biology, biochemistry, mathematics, physics, and statistics, and will ensure that each

student acquires a wide variety of practical skills and knowledge. Furthermore, each graduate will have assembled a research portfolio through participation in classroom-based applied research projects. In this way, the new program will not only fulfill the university's polytechnic mission, but also continue to place graduates in rewarding careers.

**Market and Student Demand.** The development of the program responds to program industry advisory board recommendations, faculty and student interest, and the continued need for graduates with training in the molecular biosciences in the state of Wisconsin. Program graduates will be well-prepared for work in genomic, diagnostic, medical, and forensic laboratories. Graduates of the ABMB program also will work in the industrial production of biological drugs, biofuels, and other commodities from bio-renewable sources.

For several years, the existing BMB concentration has had strong student interest, with 72 students in the program for fall 2017. UW-Stout currently has 79 students in the Applied Science in BMB concentration, with an additional 18 students who are in the B.S. in Applied Science major but who have not declared a concentration. Consequently, strong enrollment is expected from the initiation of the proposed new major.

Data collected by the B.S. in Applied Science program director provide a strong indicator of successful placement in the field. UW-Stout has 112 recent graduates from the existing BMB concentration, including students who graduated with the previously titled Biotechnology concentration. Of those, 57% are employed in the field utilizing their B.S. degree, 23% went directly into graduate programs, 1% returned to an educational institution for non-graduate level studies, 5% were employed outside the field, and 14% did not have a documented outcome.

**Tuition Structure.** For students enrolled in the ABMB program, the standard tuition and fee rates will apply. For the 2017-18 academic year, the residential tuition and segregated fees are \$271.04 per credit per semester for a full-time Wisconsin undergraduate resident student who is enrolled in 12-18 credits per term. Of this amount, \$37.23 is attributable to segregated fees and \$233.81 is attributable to tuition. No special course fees are planned for students in the ABMB program.

**Program Funding and Management.** By elevating an existing concentration, the program is structured to make efficient use of curricular offerings and available resources. To support the program, including advisement and advisory board coordination, additional administrative costs have been added and result in modest revenue projections. Once tuition revenues are sufficient to support additional course sections, additional instructional staff and/or faculty will be added, as needed. Any modest revenue profits will be used to support the ABMB instructional learning environment.

## **RELATED REGENT AND UW SYSTEM POLICIES**

Regent Policy Document 4-12: Academic Program Planning, Review, and Approval in the University of Wisconsin System.

UW System Administrative Policy 102 (formerly ACIS 1.0): Policy on University of Wisconsin System Array Management: Program Planning, Delivery, Review, and Reporting.

**REQUEST FOR AUTHORIZATION TO IMPLEMENT A  
BACHELOR OF SCIENCE IN  
APPLIED BIOCHEMISTRY AND MOLECULAR BIOLOGY  
AT UW-STOUT  
PREPARED BY UW-STOUT**

**ABSTRACT**

The University of Wisconsin-Stout proposes to establish a Bachelor of Science (B.S.) degree in Applied Biochemistry and Molecular Biology (ABMB). The development of the program responds to program industry advisory board recommendations, faculty and student interest, and the continued need for graduates with training in the molecular biosciences in the state of Wisconsin. This proposed program will elevate the existing Biochemistry and Molecular Biology (BMB) concentration within the B.S. in Applied Science program at UW-Stout to a major that is better recognized by both prospective students and potential employers. For several years, the existing BMB concentration has had strong student interest, with 72 students in the program for fall 2017. Consequently, strong enrollment is expected from the initiation of the proposed new major. The program will be comprised of 120 credits, of which 45 will be general education requirements and 75 will be in major studies. Currently, all but ten credits of the major studies curriculum content exist and are being taught as part of the BMB concentration.

**PROGRAM IDENTIFICATION**

**Institution Name**

University of Wisconsin-Stout

**Title of Proposed Program**

Applied Biochemistry and Molecular Biology

**Degree/Major Designations**

Bachelor of Science

**Mode of Delivery**

Single institution; face-to-face instruction

**Projected Enrollments by Year Five**

Table 1 represents enrollment and graduation projections for students entering the program over the next five years. By the end of year five, it is expected that 126 students will have enrolled in the program, and a minimum of 51 existing students will have graduated from the program. Enrollment retention is estimated to be 73% from the first to second fall, and then 94% from year to year, similar to retention rates for all undergraduates at UW-Stout.

**Table 1. ABMB Projected Enrollments**

<b>Yr.</b>	<b>New Students</b>	<b>Continuing Students</b>	<b>Total Enrollment</b>	<b>Graduating Students</b>
<b>1</b>	<b>15</b>	<b>70</b>	<b>85</b>	<b>8</b>
<b>2</b>	<b>20</b>	<b>62</b>	<b>82</b>	<b>12</b>
<b>3</b>	<b>25</b>	<b>77</b>	<b>102</b>	<b>8</b>
<b>4</b>	<b>30</b>	<b>96</b>	<b>126</b>	<b>11</b>
<b>5</b>	<b>30</b>	<b>96</b>	<b>126</b>	<b>12</b>

### **Tuition Structure**

For students enrolled in the ABMB program, the standard tuition and fee rates will apply. For the 2017-18 academic year, the residential tuition and segregated fees are \$271.04 per credit per semester for a full-time Wisconsin undergraduate resident student who is enrolled in 12-18 credits per term. Of this amount, \$37.23 is attributable to segregated fees and \$233.81 is attributable to tuition. No special course fees are planned for students in the ABMB program.

### **Department or Functional Equivalent**

The proposed program will be housed jointly within the Department of Biology and the Department of Chemistry/Physics.

### **College, School, or Functional Equivalent**

The proposed program will reside within the College of Science, Technology, Engineering, Mathematics, and Management.

### **Proposed Date of Implementation**

August 2018

## **INTRODUCTION**

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

As a polytechnic institution, UW-Stout's mission is to prepare students for professional careers in industry, commerce, education, and human services. Scientific advances during the second half of the 20<sup>th</sup> century have significantly changed the industrial landscape by creating new professional fields in which even entry-level positions require fundamental scientific knowledge and skills. UW-Stout can better serve its students by expanding its array of science programs, while remaining aligned with its mission as a polytechnic university. Recent burgeoning subspecialties, such as bioinformatics, and the multitude of "omics" techniques, such as genomics, proteomics, and transcriptomics, are fundamentally rooted in a combination of biochemistry and molecular biology disciplines. As such, a truly polytechnic approach of combining biochemistry and molecular biology is a strategy that is well-positioned for further development in the state of Wisconsin.

UW-Stout already trains students for work in the wide variety of professional careers available in the ABMB field. The existing BMB concentration, which includes students who graduated with the Biotechnology concentration that was the predecessor to the BMB



concentration, has had 112 graduates to date. These graduates are qualified to work in industry, academia, and the government.

Current students in the BMB concentration create a tightly knit community of learners who participate in applied research projects inside and outside the classroom, starting in their freshman year. The recent creation of a Student Chapter of the American Society of Biochemistry and Molecular Biology at UW-Stout is an example of their desire to further immerse themselves in the fields of biochemistry and molecular biology and to become a part of a larger scientific community. A stand-alone ABMB major will increase the visibility and marketability of students in the program. With Applied Biochemistry and Molecular Biology appearing as their degree and on their resume, the focus of their studies will be apparent to prospective employers and graduate programs. Program management, marketing, and student advising will also become streamlined.

Program graduates will be well-prepared for work in genomic, diagnostic, medical, and forensic laboratories. Graduates of the ABMB program will also work in the industrial production of biological drugs, biofuels, and other commodities from bio-renewable sources. The program will continue to offer students rigorous fundamental knowledge in molecular biology, biochemistry, mathematics, physics, and statistics, and will also ensure that each student acquires a wide variety of practical skills and knowledge. Furthermore, each graduate will have assembled a research portfolio through participation in classroom-based applied research projects. In this way, the new program will fulfill the university's mission of integrating "applied learning, scientific theory, humanistic understanding, creativity, and research to solve real-world problems, grow the economy and serve a global society" and continue to place graduates in rewarding careers.

Since the spring of 2010, UW-Stout has continuously utilized an Institutional Animal Care and Use Committee, a research animal program, and in-house rodent and aquatic research animal facilities. This capability directly serves the existing BMB concentration and will serve the proposed ABMB degree program. The National Institutes of Health Office of Laboratory Animal Welfare (OLAW) have authorized UW-Stout's animal use program and facilities since 2010 (<http://www.uwstout.edu/admin/colleges/cstemm/upload/OLAW-APPROVAL-LETTER-DATED-7-8-14.pdf>). These resources have provided fresh animal cells and tissue for classroom teaching and research projects, and fostered the instruction of crucial animal ethics to students. Additionally, seven new monoclonal antibodies and hybridoma cell lines, which are currently utilized in teaching laboratories and in student-centered research projects, have been developed at UW-Stout. A new major in ABMB will enable greater connection of UW-Stout's student training capacity with industry standards in the use of live animals and tissue and cell research, while expanding opportunities in hands-on laboratory activities for students, staff, and researchers. A 2014 review of the animal use program by the University of Wisconsin System Administration Internal Animal Research Compliance Audit Program resulted in a final report status of "Excellent" (<http://www.uwstout.edu/admin/colleges/cstemm/upload/Stout-Animal-Research-Report.pdf>).

The proposed ABMB degree program at UW-Stout will directly contribute to the UW System mission by addressing each of the mission statement's overarching themes

(<https://www.wisconsin.edu/regents/policies/the-university-of-wisconsin-system-mission/>). A new ABMB major at UW-Stout will satisfy specific objectives of Wisconsin's educational charge by:

1. **Developing human resources, as well as by discovering and disseminating knowledge.** An ABMB program at UW-Stout will help meet the expanding market for a scientific workforce with strong research aptitude and quantitative skills in biomolecular methods to elevate Wisconsin's life science infrastructure.
2. **Extending knowledge and its application beyond UW-Stout's classrooms and laboratories.** Students in UW-Stout's ABMB program will be engaged in hands-on research projects to prepare them to work effectively with industry partners.
3. **Serving and stimulating society by developing students with industry-ready skills and new approaches to solving research problems.** The ABMB program will utilize a career-focused curriculum that guides training and activity to produce quality results by students, while developing critical thinking skills for continual improvement.
4. **Heightening the sense of purpose in students.** Training in the ABMB program will enable students to realize their own technical expertise through deliberate, coordinated instruction and research opportunities. This experience will provide students with an ability to self-identify with jobs that require scientific and technical expertise.
5. **Addressing a basic UW System goal to search for truth.** By embedding original, authentic research experiences into classroom experiences, students will be taught to critically use scientific data to draw conclusions. Graduates will be thoughtful decision makers, especially when decisions involve new ways of addressing societal needs. In addition, students will be able to contribute to international peer-reviewed publications, as they have done in the past.

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

UW-Stout currently has 79 students in the Applied Science in BMB concentration, with an additional 18 students who are in the B.S. in Applied Science major but who have not declared a concentration. UW-Stout has 112 recent graduates from the existing BMB concentration, including students who graduated with the previously titled Biotechnology concentration. Of those, 57% are employed in the field utilizing their B.S. degree, 23% went directly into graduate programs, 1% returned to an educational institution for non-graduate level studies, 5% were employed outside the field, and 14% did not have a documented outcome. These data, collected by the B.S. in Applied Science program director, provide a strong indicator of successful placement in the field.

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

An analysis was completed in 2016 by the Educational Advisory Board (EAB) regarding employer demand for students with bachelor's-level training in ABMB ([http://www.uwstout.edu/admin/colleges/cstemm/upload/EAB\\_ABMB\\_Analysis.pdf](http://www.uwstout.edu/admin/colleges/cstemm/upload/EAB_ABMB_Analysis.pdf)). The study indicates that national employer demand for individuals with degrees in biochemistry and

molecular biology skills increased every six-month period from the end of 2013 to the end of 2015, for a total of a 75% increase during that period. In regional states (i.e., Wisconsin, Minnesota, South Dakota, and North Dakota), comparable employer demand increased 64%. According to the EAB report, national and regional employers most commonly seek bachelor's-level biochemistry and molecular biology-trained individuals with chemistry, biochemistry, biology, and molecular biology skills. National and regional employers also seek bachelor's-level biochemistry and molecular biology-trained individuals with laboratory skills, such as high performance liquid chromatography and cell culturing. High employer demand for individuals with laboratory-related skills indicates the need for laboratory-based coursework in biochemistry and molecular biology bachelor's degree programs. Regionally, metropolitan statistical areas in Wisconsin indicate the highest demand for biochemistry and molecular biology-trained individuals. (The EAB report showed 1,709 positions in 2015-2016.) Wisconsin metropolitan statistical areas with the highest employer demand are located in Madison, Milwaukee, and Sheboygan. Locally, employers in Eau Claire and Chippewa counties indicate the highest demand for biochemistry and molecular biology-trained individuals. (The EAB report showed 11 positions in 2015-2016.) Wisconsin metropolitan statistical areas and counties with high employer demand for biochemistry and molecular biology-trained individuals indicate potential in-state recruitment locations. Demand for the new ABMB program has been echoed by the current advisory board for the Applied Science program at UW-Stout.

According to the United States Bureau of Labor Statistics website, the median annual wage for life, physical, and social science occupations was \$63,340 in May 2016, which was higher than the median wage of \$37,040 for all occupations (<https://www.bls.gov/ooh/life-physical-and-social-science/>). This demand is also illuminated in the 2014-2024 job outlook for BMB scientists by the United States Bureau of Labor Statistics, which forecasts a 7% annual increase in demand, resulting in about 97,600 new jobs nationally.

In Wisconsin, biotechnology and healthcare are leading startup industries in the state, and are responsible for 23% of venture capital funds, as cited in a 2016 WisBusiness.com article (<http://wisbusiness.com/index.iml?Article=380062/>). In St. Croix county (the adjacent county west of Dunn County and UW-Stout), the Wisconsin WorkNet agency website indicates that yearly wages for biological technicians and chemical technicians with associate's degrees are \$46,700 and \$55,260, respectively, while chemists with a bachelor's degree earn \$68,200 ([http://worknet.wisconsin.gov/worknet/jsoccsrch\\_results.aspx?menuselection=%3C%=%20me.menuselection%%3E&area=109&areaname=St.+Croix+County&occ=194021](http://worknet.wisconsin.gov/worknet/jsoccsrch_results.aspx?menuselection=%3C%=%20me.menuselection%%3E&area=109&areaname=St.+Croix+County&occ=194021), <http://worknet.wisconsin.gov/worknet/wagecomparison.aspx?menuselection=ce%2f%2f>, and [http://worknet.wisconsin.gov/worknet/jsoccsrch\\_results.aspx?menuselection=ce/&area=SW&occ=192031](http://worknet.wisconsin.gov/worknet/jsoccsrch_results.aspx?menuselection=ce/&area=SW&occ=192031)).

Healthcare occupations are supported by BMB research. These jobs are projected by the Wisconsin WorkNet to increase 18% over the same timeframe of 2014-2024. The ABMB curriculum, research experiences, service opportunities, field experiences, cooperative education, and internships will provide students with a vast array of skills in various subfields of BMB. Technical writing, data analysis, and experimental design will be stressed across the curriculum in a collaborative approach.

## **DESCRIPTION OF PROGRAM**

### **General Structure**

The program will be comprised of 120 credits, of which 45 will be general education requirements and 75 will be in major studies. The proposed ABMB is an interdisciplinary program between the Department of Biology and the Department of Chemistry/Physics. All facets, including curriculum development, student advisement, lab spaces, and student research opportunities will be shared responsibilities between these two departments, and they will both provide broad support for the technical infrastructure needed for the major. The program will have a strong emphasis on the application of research to practice by offering opportunities for undergraduate research and/or internships.

### **Institutional Program Array**

As Wisconsin's polytechnic university, UW-Stout is working to develop a full complement of available degree and/or concentration options in the life and physical sciences. For example, the Industrial Chemistry concentration became available in spring 2017, and an Applied Physics concentration has been approved for implementation in fall 2018. The proposed ABMB program will be the second program positioned to emerge from the B.S. in Applied Science program, following the implementation of the B.S. in Environmental Science in 2015.

A new ABMB program will synergize with existing B.S. programs. The major integrates with the Applied Science, Applied Mathematics and Computer Science, Science Education, and Environmental Science programs, as well as with the field of engineering technologies. New curricula resulting from these combined programs will increase coverage of instructional topics, while avoiding redundancies. These programs will collectively expand opportunities for students, faculty, and staff at UW-Stout. The long-term impact of this approach is to strengthen combined disciplines, while better addressing the needs, opportunities, and eventual career trajectory of students well beyond the university.

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

A major in Biochemistry/Molecular Biology is currently offered at UW-Eau Claire. Outside of UW-Stout and UW-Eau Claire, specializations or concentrations in BMB are offered at UW-Oshkosh and UW-Green Bay. A major in Biotechnology is offered at UW-River Falls, and UW-Madison, UW-Milwaukee, UW-Stevens Point, and UW-La Crosse offer a B.S. degree in Biochemistry, while UW-Madison offers a B.S. in Molecular Biology, and UW-Parkside offers a major in Molecular Biology and Bioinformatics. The BMB degree is offered by fewer than half of the UW System institutions and does not constitute an unnecessary duplication as defined in UW System Policy 102.

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

Collaborative opportunities for UW-Stout faculty and staff working to develop a new ABMB major have been investigated. To ensure compatibility between programs at UW-Eau Claire and UW-Stout (especially given the geographic proximity of these two institutions), two meetings were held in 2016 that included UW-Stout and UW-Eau Claire Biology and Chemistry faculty members. Both meetings included UW-Stout Biology and Chemistry/Physics department chairs and UW-Eau Claire Biology and Chemistry department chairs. The second meeting also

included Associate Vice Chancellor Glendali Rodriguez and Associate Vice Chancellor Michael Carney from UW-Stout and UW-Eau Claire, respectively. The collective group agreed to support a new ABMB major at UW-Stout for the following reasons: (1) UW-Stout's existing BMB concentration (including the former Biotechnology concentration) and student population are complementary with UW-Eau Claire's established BMB program, as both have been operating for over ten years, (2) UW-Stout benefits from marketing success as a polytechnic institution, (3) UW-Stout has a strong history of working with industry partners, and (4) UW-Stout realizes the potential to cooperate with UW-Eau Claire through distance education and course-sharing arrangements. As a result of the discussion, the program name for UW-Stout's major (i.e., Applied Biochemistry and Molecular Biology) was agreed upon by representatives of both universities. A major in biotechnology offered at nearby UW-River Falls provides additional opportunity for shared resources, expertise, and methodology for programs at both UW-Stout and UW-River Falls.

### **Diversity**

In both the general education and required program courses, students are exposed to learning that prepares them to work with persons representing diverse beliefs, ethnicities, genders, and socio-economic backgrounds, as well as with persons living with disabilities. As part of the general education requirements, students take courses in Social and Behavioral Sciences, Cross-disciplinary Issues, and Social Responsibility and Ethical Reasoning. A majority of the courses offered in these categories cover topics related to diversity and multiculturalism. Students must also satisfy six credits in each of the Racial and Ethnic Studies and Global Perspectives categories. In addition, students in the ABMB program will be encouraged to take advantage of numerous study abroad and student exchange opportunities.

The faculty and staff implementing a new ABMB program will continue to work with counselors in UW-Stout's Offices of Admissions and International Education to utilize a spectrum of efforts to ensure a diverse and multicultural campus society in three ways (<http://www.uwstout.edu/diversity/> and <http://www.uwstout.edu/services/multicultural/>). First, UW-Stout personnel will infuse program curriculum with a wide variety of perspectives, including, but not limited to, race, sex, gender identity, sexual orientation, religion, socioeconomic status, and age. Specific efforts include the Diversity Bridge Team, the Intercultural Development Ambassador, and the Stout Inclusive Leadership Coalition. Second, faculty in the ABMB program will recruit and support (for example, through the English as a Second Language Institute) a diverse and intercultural student population, as they work toward institutional internationalization. Finally, the faculty will expand diversity within the program by implementing a new Acquiring Talent Workshop (beginning fall 2017) aimed at increasing the level of diversity in the hiring of faculty and staff.

The College of Science, Technology, Engineering, Math, and Management (STEMM) makes a concerted effort to be inclusive of individuals from diverse populations and backgrounds. For example, current faculty and staff work in partnership with student organizations as faculty advisors, provide lectures on topics such as HIV/AIDS, and participate in workshops as needed. They also guide student service programs, such as Disability Services, pre-college programs, and Multicultural Student Services, to provide outreach, advising, and organization of academic programs and events as needed.

## Student Learning Outcomes

Students graduating with a B.S. in ABMB will be able to:

1. Apply chemical principles and energy transfer to molecular life processes,
2. Summarize fundamental concepts across the biological sciences with focus on flow of information and molecular structure/function relationships,
3. Demonstrate proficiency in experimental design, laboratory methodology, and data analysis,
4. Implement modes of communication relevant to life-science professions, and
5. Create effective team-based work groups.

## Assessment of Objectives

1. **Core Concepts and Learning Objectives.** Student concept mastery will be assessed through traditional classroom assessment techniques, such as oral and written examinations, as well as through participation in classroom discussions and the assessment of learning artifacts, such as concept maps, flow diagrams, and written assignments. Periodic learning assessments will be analyzed for student mastery and used to construct annual and program reports.
2. **Laboratory Skills.** Student mastery of laboratory skills will be assessed through laboratory practical examinations, written evidence of instrument mastery through laboratory reports, comparison of student findings with known standards, and completion of individual research projects. Artifacts of student learning include patent-friendly laboratory notebooks, written laboratory reports, original data generated as part of the course, and comparison of student data to controls included as part of the experimental design. Student experimental design, data analysis, and data presentation abilities will be assessed during completion of original research projects. A rubric developed from the Research Skill Development Framework will be applied in research-intensive courses ([https://research.usp.ac.fj/?page\\_id=135/](https://research.usp.ac.fj/?page_id=135/)). Results will be compiled from key courses, and annual program assessments will be created using these data.
3. **Communication Skills.** Student progress toward improved communication skills will be assessed throughout the four-year program. Oral communication will be assessed in lecture and laboratory settings, and students will be informed of their progress through the use of oral communication feedback tools. Student-generated laboratory notebooks, posters, proposals, oral reports, participation in team projects, and research manuscripts will be analyzed for progress in development, using communication and professionalism rubrics. Student learning examples collected from writing-intensive (e.g., ABMB 470, *ABMB Senior Capstone*) and other courses will be compared to assess student development. Results of these assessments will be shared through annual program reporting.
4. **Teamwork Skills.** Student progress toward developing strong teamwork skills will be assessed several times during the program in different class settings. Peer and instructor review of student participation in group work will be periodically assessed, using student review tools, and results will be reported annually.



**Program Curriculum.** The American Society of Biochemistry and Molecular Biology ([ASBMB http://www.asbmb.org/](http://www.asbmb.org/)) was consulted for curriculum concepts and content coverage.

### **120 Credit Total**

#### **General Education and Diversity courses required for graduation (\*45 credits)**

Racial and Ethnic Studies	6 credits*
Global Perspectives	6 credits*
Communication Skills	9 credits
Analytical Reasoning and Natural Science	18 credits
Arts and Humanities	6 credits
Social and Behavioral Sciences	6 credits
Cross-disciplinary Issues	3 credits
Social Responsibility and Ethical Reasoning	3 credits

\*Students can select courses that count for more than one requirement within General Education (GE), Racial and Ethnic Studies (RES), and Global Perspectives (GLP).

#### **Major Studies (required 65 credits)**

ABMB 101 Intro to ABMB Careers	1 credit
ABMB 201 Intro to Research in ABMB	1 credit
ABMB 470 Advanced ABMB Experience	1 credit
BIO 136 College Molecular Cell Biology I	5 credits
BIO 235 Molecular Cell Biology II	4 credits
BIO 332 Genetics	4 credits
BIO 370 Biotechnology	4 credits
BIO 386 Introduction to Biostatistical Analysis	3 credits
BIO 425 Proteomics	3 credits
CHEM 201 Organic Chemistry I	4 credits
CHEM 204/206 Organic Chemistry II Lecture/Lab	4 credits
CHEM 301/303 Physical Chemistry Lecture/Lab	4 credits
CHEM 311 Biochemistry	4 credits
CHEM 331 Quantitative Analysis	4 credits
CHEM 412 Advanced Biochemistry	3 credits
CHEM 414 Protein Chemistry Lab	2 credits
CHEM 435 Instrumental Methods of Analysis	4 credits
PHYS 241/281 College or University Physics I	5 credits
PHYS 242/282 College or University Physics II	5 credits

#### **ABMB Selectives (10 credits)**

Courses must be any 200 level or higher from Biology, Chemistry, or Physics, or additional Co-op credit.

#### **Projected Time to Degree**

The ABMB major steering committee has constructed a block plan that enables students matriculating full-time into this program to complete the curriculum in four years, spanning eight

semesters. The program does not specifically require involvement of any summer or winter session (with the possible exception of co-op or field experiences), although options are available during both sessions for students to expedite their timeline, enable course repeats, or regain placement in the timeline.

In addition to students matriculating directly into UW-Stout's ABMB program, it is expected that some students attending other UW institutions (and outside the UW System) will find this major desirable for their educational goals. Faculty and staff will work to meet the needs of transfer students who are interested in completing their education at UW-Stout.

### **Program Review Process**

Because the discipline of ABMB is dynamic, involved faculty recognize the need to network with others to remain current with advancements and progress in the field. Therefore, the ABMB faculty will use planning tools that involve peer-based classroom observation, actively participate in national organizations, monitor student retention in the program, and observe placement rates for UW-Stout graduates.

At UW-Stout, a university-wide policy is in place whereby biannual reports, called Assessment in the Major (AIM) reports, summarize the primary methods used to assess student learning and progress throughout programs. The program evaluation form can be obtained from the UW-Stout Provost's Office (<http://www.uwstout.edu/admin/provost/assessment.cfm>).

This evaluation will include a summary of the program objectives, indirect and direct assessment methods of student learning, and an interpretation and dissemination of the evaluation results. Review outcomes will enable biyearly improvements to the program and plans for future improvement, and provide program indices and facts. Methods used to assess student learning are correlated with program objectives and will include standardized tests, portfolios, course-embedded assessments or other direct measures of student learning and performance. Plans for improvement may include proposed modifications in course content, course sequencing, changes in teaching methods or other proposed changes designed to improve student performance.

In coordination with the program faculty, the program director of the proposed B.S. in ABMB program will use the results of the assessment review to continually improve the program. As students begin to graduate with a degree in ABMB, the program director will analyze results data from surveys of the alumni and employers in conjunction with UW-Stout's Planning, Assessment, Research and Quality Office survey of graduates, as is typical for most UW-Stout programs, for the purpose of continuous improvement.

UW-Stout's Planning and Review Committee (PRC) also conducts formal reviews of degree programs in accordance with UW System policy and the UW-Stout four-year required cycle. As part of this review, present and past students, faculty, and program advisory committee members are surveyed. The program director develops a self-study report that is reviewed by the PRC, with final results presented to the Faculty Senate and the Provost.



**Institutional Review**

UW-Stout will review the ABMB program in alignment with UW System Policy 102, section 6.1. This includes first reviews and recurring institutional reviews on a four-year cycle.

**Accreditation**

UW-Stout is accredited by the Higher Learning Commission of the North Central Association of Colleges & Schools. Current advisory board consensus and graduate placement suggest accreditation does not impact employment opportunities, and, therefore, the ABMB program is not seeking program-level accreditation at this time. However, the ABMB advisory committee will utilize annual program assessment data to evaluate future need for accreditation through the American Society of Biochemistry and Molecular Biology.

**University of Wisconsin - Stout**

**Cost and Revenue Projections For Newly Proposed Program- B.S. in Applied Biochemistry and Molecular Biology**

	Items	Projections				
		2018	2019	2020	2021	2022
		Year 1	Year 2	Year 3	Year 4	Year 5
<b>I</b>	<b>Enrollment (New Student) Headcount</b>	15.00	20.00	25.00	30.00	30.00
	<b>Enrollment (Continuing Student) Headcount</b>	70.00	62.05	77.13	96.00	96.00
	<b>Enrollment (New Student) FTE</b>	15.00	20.00	25.00	30.00	30.00
	<b>Enrollment (Continuing Student) FTE</b>	70.00	62	77	96.00	96.00
<b>II</b>	<b>Total New Credit Hours (# new credit hours x student FTE)</b>	15.00	52.85	109.97	159.00	190.12
	<b>Existing Credit Hours</b>	1400	1241	1543	1920.0	1920.0
<b>III</b>	<b>FTE of New Faculty/Instructional Staff</b>	0.09	0.09	0.23	0.34	0.45
	<b>FTE of Current Fac/IAS</b>	1.35	1.35	1.48	1.48	1.48
	<b>FTE of New Admin Staff</b>	-	-	-	-	-
	<b>FTE Current Admin Staff</b>	0.025	0.025	0.063	0.094	0.125
<b>IV</b>	<b>New Revenues</b>					
	<i>From Tuition (new credit hours x FTE)</i>	\$3,507	\$12,357	\$25,710	\$37,169	\$44,457
	<i>From Fees</i>	\$0	\$0	\$0	\$0	\$0
	<i>Program Revenue - Grants</i>	\$0	\$0	\$0	\$0	\$0
	<i>Program Revenue - Other</i>	\$0	\$0	\$0	\$0	\$0
	<i>Reallocation</i>	\$0	\$0	\$0	\$0	\$0
	<b>Total New Revenue</b>	\$3,507	\$12,357	\$25,710	\$37,169	\$44,457
<b>V</b>	<b>New Expenses</b>					
	<b>Salaries plus Fringes</b>					
	<i>Faculty/Instructional Staff</i>	\$2,552	\$2,590	\$6,573	\$10,007	\$13,542
	<i>Other Staff</i>	\$7,460	\$7,541	\$15,936	\$23,176	\$30,629
	<b>Other Expenses</b>					
	<i>Facilities</i>	\$0	\$0	\$0	\$0	\$0
	<i>Equipment</i>	\$257	\$387	\$389	\$375	\$375
	<i>Other:</i>	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500
	<b>Total Expenses</b>	\$11,769	\$12,018	\$24,398	\$35,057	\$46,047
<b>VI</b>	<b>Net Revenue</b>	-\$8,262	\$339	\$1,312	\$2,112	-\$1,590

**Narrative: Explanation of the Numbers and Other Ongoing Commitments that will Benefit the Proposed Program**

Please reference the financial narrative document.

*a* - Number of students enrolled

*b* - To be based on 12 credits at the undergraduate level and 7 credits at the graduate level

*c* - Number of faculty/instructional staff providing significant teaching and advising for the program

*d* - Number of other staff providing significant services for the program

**Provost's Signature:**



**Date:**

9/6/2017

UNIVERSITY OF WISCONSIN - STOUT  
COST AND REVENUE PROJECTIONS NARRATIVE  
BACHELOR OF SCIENCE IN APPLIED BIOCHEMISTRY AND MOLECULAR  
BIOLOGY

The proposed Bachelor of Science (B.S.) degree in Applied Biochemistry and Molecular Biology (ABMB) will build on the popular undergraduate B.S. in Applied Science-Biochemistry and Molecular Biology (BMB) concentration. The Biotechnology concentration was the predecessor to the BMB concentration and began in 2003. The new B.S. in ABMB will be comprised of 75 major credits and 45 general education credits, for a total of 120 degree credits. All but ten credits of the course content required to support the proposed B.S. in ABMB are currently being offered at UW-Stout as part of the BMB concentration. The financial template projects the anticipated costs and revenues associated with the ten new credits of course content and new student FTE.

**Section I – Enrollment**

Anticipated enrollments are both from continuing and new student FTE in the Regent format budget. Continuing student enrollments in the major will draw from the existing BMB concentration within the B.S. in Applied Science degree. Undergraduates who are enrolled at UW-Stout will elect to pursue the proposed B.S. in ABMB as a choice among UW-Stout's 49 undergraduate programs. Enrollment retention is estimated to be 73% from the first to second fall, and then 94% from year to year, similar to retention rates for all undergraduates at UW-Stout. By the end of year five, program enrollment is expected to stabilize at approximately 126 student enrollments.

**Section II – Credit Hours**

All but ten credits of course content required to support the proposed B.S. in ABMB are currently being offered at UW-Stout. The new course content will be covered by a combination of new and revised courses. To launch the major without any additional staffing resources, current course offering electives will be reduced by ten credits through less frequent offerings, without compromising timely degree completion.

The first row of Section II reflects the estimated number of new credit hour content per new student FTE. In year one, one new credit of content will be implemented; in year two, an additional two new credits of content (for a total of three); in year three, an additional four new credits of content (for a total of seven) and in year four, the remaining three new credits of content (for the total of ten). Beginning year five, the projections reflect the ten new credits of content associated with the proposal.

The second row of Section II incorporates the overall projected total student credit hours for only the ABMB-related coursework. ABMB coursework in the Department of Biology and the Department of Chemistry/Physics is projected at 20 credit hours per year. The "Existing Credit Hours" cell reflects the Continuing Student Headcount (rounded to four decimal places) x the 20-credit hours per year. It is anticipated that ABMB students will take 30 credits overall per year, with the remaining ten credit hours in general education coursework taken from departments spread across the institution.

### **Section III – Faculty and Staff Appointments**

Once the degree is approved, an existing faculty member will be provided a quarter reassignment (.25 FTE) and a ten-day summer session contract (.0625 FTE) to serve as the program director. An instructional staff member will be hired to backfill the program director (.20 FTE). No additional new faculty or staff appointments are anticipated until enrollments drive additional course section offerings.

### **Section IV – Program Revenues**

The projected program revenue has been calculated by multiplying the new student FTE times the projected new credit content, times the tuition.

- Year one projected revenue has been calculated by taking the new student FTE times the projected new credit content, times the tuition (15 x 1 credit x \$233.81).
- Year two projected revenue has been calculated by adding the new students returning from year one (times the projected first-year retention rate of 73%= 10.95), plus the new students in year two, times the projected new credit content, times the tuition (10.95 x 3 credits x \$233.81) + (20 x 1 credit x \$233.81).
- Year three projected revenue has been calculated by adding the new students returning from year two (times the projected first-year retention rate of 73%= 14.6), plus the new students returning from year one (times the projected year to year retention rate of 94%= 10.29), plus the new students in year three, times the projected new credit content, times the tuition (10.29 x 4 credits) + (14.6 x 3 credits) + (25 x 1 credit) x \$233.81.
- Year four projected revenue has been calculated by adding the new students returning from year three (times the projected first-year retention rate of 73%= 18.25), plus the new students returning from year one (times the projected year to year retention rate of 94%= 9.67), plus the new students returning from year two (times the projected year to year retention rate of 94%= 13.72), plus the new students in year four, times the projected new credit content, times the tuition (18.25 x 3) + (13.72 x 4) + (9.67 x 2) + (30 x 1) x \$233.81.
- Year five projected revenue has been calculated by adding the new students returning from year four (times the projected first-year retention rate of 73%= 21.9), plus the new students returning from year three (times the projected year to year retention rate of 94%= 17.16), plus the new students returning from year two (times the projected year to year retention rate of 94%= 12.9), plus the new students in year five, times the projected new credit content, times the tuition (21.9 x 3) + (17.16 x 4) + (12.9 x 2) + (30 x 1) x \$233.81.

By elevating an existing concentration, the program is structured to make efficient use of curricular offerings and available resources. To support the program (including advisement and advisory board coordination), additional administrative costs have been added and result in modest revenue projections. Adding instructional staff and/or faculty is planned, once tuition revenues are sufficient to support additional course sections. Any

modest revenue profits will be used to support the ABMB instructional learning environment.

**Section V – Program Expenses**

Expense lines reflect salary attributable to the faculty and staff appointments described in Section III, and project a 1.5% annual salary increase. Fringe expenses attributable to these current positions are included in the projections. Additional expenses projected include equipment and other (Marketing \$1,500 and Campus Overhead of 35.27% of direct expenses to account for indirect institutional costs of supporting the program).



Office of the Provost and Vice Chancellor  
for Academic and Student Affairs

UNIVERSITY OF WISCONSIN  
**STOUT**

University of Wisconsin-Stout  
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WISCONSIN POLYTECHNIC UNIVERSITY

715/232-2421  
715/232-1699 fax  
provost@uwstout.edu

August 1, 2017 (via electronic mail)

Ray Cross, President  
University of Wisconsin System Administration  
1720 Van Hise Hall, 1220 Linden Drive  
Madison, WI 53706

Dear President Cross:

I am writing to provide you with this Letter of Commitment in support of the University of Wisconsin-Stout's proposed B.S. degree in Applied Biochemistry and Molecular Biology.

This proposed program will elevate the existing Biochemistry and Molecular Biology (BMB) concentration within the B.S. Applied Science program at UW-Stout, leveraging and building upon existing student enrollment, curriculum, facilities, and faculty and staff expertise in the College of Science, Technology, Engineering, Mathematics and Management.

As the life sciences have expanded into bioinformatics, genomics and other "omics" areas, the need for individuals with a background in both biochemistry and molecular biology has grown. As such, a truly polytechnic approach of combining biochemistry and molecular biology is a strategy that UW-Stout is well-positioned to implement. The proposed degree has been developed in response to stakeholder demand, in consultation with UW-Eau Claire, and aligns with UW-Stout's designation as Wisconsin's Polytechnic University. It complements Stout's program array due to its focus on developing students for careers through applied curriculum.

The proposed degree has been approved through the on-campus curriculum approval process. All programs at UW-Stout participate in the biannual Assessment in the Major and the four-year Planning and Review Committee review. Assessment of the student learning objectives will be coordinated by the program director in collaboration with the faculty and the program industry advisory board.



Thank you for consideration of this new program.

Sincerely,

A handwritten signature in cursive script that reads "Pate Guilfoile".

Patrick Guilfoile  
Provost and Vice Chancellor for Academic and Student Affairs

attachment

PG:tb  
Letters 2017