Program Change Request

New Program Proposal

Date Submitted: 11/28/18 2:44 pm

Viewing: Applied Biotechnology

Last edit: 11/30/18 1:14 pm

Changes proposed by: adpoehli

Name of the school or college academic planner who you consulted with on this proposal.

Name
Andrea Poehling - MED

Proposal Abstract/Summary:
The University of Wisconsin-Madison, as lead campus and on behalf of the defined academic partners (eight UW System universities: Green Bay, Madison, Oshkosh, Parkside, Platteville, Stevens Point, Stout, and Whitewater), proposes to establish a collaborative online Master of Science in Applied Biotechnology (M.S. in Applied Biotechnology). The development of this program responds to the recognized growth of the Biotechnology industry and corresponding increased demand for well-qualified professionals in the field. The program represents a comprehensive, multidisciplinary curriculum that prepares students to advance their careers and pursue their academic ambitions through leadership and management positions within the biotechnology field. The UW Extended Campus provides administrative and financial support.

Basic Information

Type of Program: Degree/Major

MS-ABT Notice of Intent Final Draft.pdf

Upload the Approved Notice of Intent and UW System Approval Memo.

Upload completed draft of the full Board of Regents Authorization Proposal for this program.


Who is the audience?

Graduate or professional

Home Department: Cell and Regenerative Biology (CELL R BIO)

School/College: School of Medicine and Public Health

The program will be governed by the home department/academic unit as specified. Will an additional coordinating or oversight committee be established for the program?

No

Is this in the Graduate School?

Yes

Award: Master of Science

SIS Code:

SIS Description:

Transcript Title: Applied Biotechnology

Named Options:

Will this be offered as an additional major as well?

No

Is this a non-admitting master’s degree?

No
Roles by Responsibility: List one person for each role in the drop down list. Use the green + to create additional boxes.

<table>
<thead>
<tr>
<th>Role Type</th>
<th>Name (Last, First)</th>
<th>Email</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department Chair</td>
<td>Kemnitz, Joseph W</td>
<td><a href="mailto:jkemnitz@wisc.edu">jkemnitz@wisc.edu</a></td>
<td>608/263-3588</td>
</tr>
<tr>
<td>Faculty Director</td>
<td>Moss, Richard L</td>
<td><a href="mailto:rlmoss@wisc.edu">rlmoss@wisc.edu</a></td>
<td>608/265-0523</td>
</tr>
<tr>
<td>Primary Contact</td>
<td>Zimmerman, Kurt J</td>
<td><a href="mailto:kjzimmerman@wisc.edu">kjzimmerman@wisc.edu</a></td>
<td>608/262-0685</td>
</tr>
<tr>
<td>Primary Dean's Office Contact</td>
<td>Poehling, Andrea D</td>
<td><a href="mailto:adpoehli@wisc.edu">adpoehli@wisc.edu</a></td>
<td>608/262-2628</td>
</tr>
<tr>
<td>Primary Contact</td>
<td>Betz, Natalie A</td>
<td><a href="mailto:nabetz@wisc.edu">nabetz@wisc.edu</a></td>
<td>608/262-9753</td>
</tr>
<tr>
<td>Primary Contact</td>
<td>Husk, Bryan T</td>
<td><a href="mailto:bthusk@wisc.edu">bthusk@wisc.edu</a></td>
<td>608/265-0773</td>
</tr>
<tr>
<td>Primary Contact</td>
<td>Smith, Michele A</td>
<td><a href="mailto:msmith27@wisc.edu">msmith27@wisc.edu</a></td>
<td>608/262-9753</td>
</tr>
</tbody>
</table>

List the departments that have a vested interest in this proposal.

- Are all program reviews in the home academic unit up to date? Yes
- Are all assessment plans in the home academic unit up to date? Yes
- Are all assessment reports in the home academic unit up to date? Yes

Mode of Delivery: Distance Education (100% online)

Provide information on how any lab courses required for the degree will be handled.

- There are no lab courses.

Will this program be part of a consortial or collaborative arrangement with another college or university? Yes

Upload proposal: [MS in Applied Biotechnology Authorization Document Final Draft.pdf](#)

Will instruction take place at a location geographically separate from UW-Madison? No

Will this program have outside accreditation? No

Will graduates of this program seek licensure or certification after graduation? No

First term of student enrollment: Fall 2019 (1202)

When will the application for the first term of enrollment open? Spring 2019 (1194)

Which terms will you allow new students to enroll? What are the application deadlines for each term selected?

<table>
<thead>
<tr>
<th>Start Term</th>
<th>Application Deadline MM/DD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>07/15</td>
</tr>
<tr>
<td>Spring</td>
<td>12/15</td>
</tr>
<tr>
<td>Summer</td>
<td>04/15</td>
</tr>
</tbody>
</table>

Year of three year check-in to GFEC (3 years after first student enrollment): 2023

Year of first program review (5 years after first student enrollment): 2025

If this proposal is approved, describe the implementation plan and timeline.

All approvals for the program and courses are expected by Spring 2019. The marketing plan will be implemented as soon as the program receives final approval. Admissions will open as soon as the program receives final approval. Applications will be accepted on a rolling basis. Student services will be provided by the staff of the existing face-to-face MS in Biotechnology program in addition to program coaches provided by UW Extended Campus to support student success. The curriculum will be ready for Fall 2019 enrollment.

**Rationale and Justifications**

Why is the program being proposed? What is its purpose?

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

This is a highly collaborative, interdisciplinary program that follows a home campus model. Students will select and enroll at a home campus from which they will receive academic supports and the degree is conferred. The schools/colleges and departments that will offer courses for this program at each institution are as follows:

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

UW Extended Campus will provide administrative and financial support for the program. UW-Madison will serve as the lead institution representing the proposed collaborative program when seeking authorization from UW System and program accreditation through the Higher Learning Commission (HLC).

What is its relation to the institution’s mission? (Consider the mission broadly as a major research university with missions in teaching, research, service, and the Wisconsin Idea.) How does it contad sponsoring unit(s)?

The online M.S. in Applied Biotechnology degree program contributes directly to the institutional mission of the University of Wisconsin System which clearly defines a commitment to discover and disseminate knowledge, to extend knowledge and its application beyond the boundaries of its institutions. The degree addresses a recognized high-need area as supported by research that included extensive input from employers and industry representatives throughout the state. Students will develop advanced knowledge and skills that will enable them to serve an important function and role within the biotechnology workforce. It is a degree targeted at adult and nontraditional students possessing a bachelor’s degree and thus broadens access for alumni and others to advanced study within the UW System. The M.S. in Applied Biotechnology also supports the institutional missions of the eight academic partner institutions by building upon the undergraduate experience of working adults in the state and region by advancing proficiencies in communication, critical thinking, problem solving, analytical, leadership, teamwork, and collaboration skills. Furthermore, this multidisciplinary degree will serve to build bridges between disciplines and develop students’ abilities to think in terms of systems and interrelationships, and within complex organizations. Strong support for the degree has already been realized through interactions with leaders from over 30 biotechnology companies and professional associations within the state and region. At UW-Madison specifically, the Applied Biotechnology program also provides a way to grow UW-Madison’s commitment to biotechnology education, and serve a new group of students unable to travel to campus for the existing face-to-face program in Biotechnology offered by the Department of Cell and Regenerative Biology in the School of Medicine and Public Health. The M.S in Applied Biotechnology will complement the existing program through its fully online delivery and unique specialization tracts not covered as in depth by the existing lab-based program. The extended reach to address all of the Wisconsin biotechnology related communities fits well with the Wisconsin Idea.

Do current students need or want the program? Provide evidence.

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

There are a number of important current or developing research and development tools and trends in the biotechnology sector, including genomics, personalized medicine, CRISPR, synthetic biology, antibody engineering, gene therapy, neuroscience, artificial intelligence, bioinformatics, cell therapies and regenerative medicine. This program will teach emerging professionals how to apply these new biological and chemical methods to modern biotechnological product development, and assess the risk of biotechnological developments across diverse new biotech sectors including regenerative medicine, agricultural biotechnology and bioremediation. The curriculum includes a number of project-based courses and a capstone experience that will require students research, evaluate, adapt and apply these new approaches to solve a problem in biotechnology.

In what ways will the program prepare students through diverse elements in the curriculum for an integrated and multicultural society (may include diversity issues in the curriculum or other appr

Preparation for work in a diverse and multicultural society was explicitly part of the curriculum planning process for the MS in Applied Biotechnology. One of the program’s core competencies is for students to demonstrate professional and ethical behaviors that foster positive and productive interactions in diverse biotechnology settings, including a learning objective to understand cultural differences that exist in the global marketplace. This outcome is addressed in the curriculum in ABT 725, 745, 750, 789 and 790.

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

List the core program faculty and staff with title and departmental affiliation(s) who are primarily involved and will participate in the delivery and oversight.

<table>
<thead>
<tr>
<th>Name (Last, First)</th>
<th>Department</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moss, Richard L</td>
<td>School of Med &amp; Pub Hlth ADM (SMPH ADM)</td>
<td>Executive Director - MS in Biotechnology</td>
</tr>
<tr>
<td>Zimmerman, Kurt J</td>
<td>School of Med &amp; Pub Hlth ADM (SMPH ADM)</td>
<td>Director - MS in Biotechnology Program</td>
</tr>
<tr>
<td>Betz, Natalie A</td>
<td>School of Med &amp; Pub Hlth ADM (SMPH ADM)</td>
<td>Associate Director and Faculty Instructor</td>
</tr>
</tbody>
</table>

What resources are available to support faculty, staff, labs, equipment, etc.?

The collaborative revenue-sharing UW System degree model provides a number of ongoing direct resources to faculty and staff throughout the planning, development and operational phases of the program. During the initial planning phase each partner campus received funding from UW Extended Campus for an academic director and additional faculty participant in curriculum development. During full program development, additional funds were provided for an academic director, faculty course creation, instructional systems design, course development in the LMS, and all production costs. During ongoing operations aer program launch, funds are provided from UW Extended Campus for admissions and academic services, instructional systems design for course maintenance and updates, faculty pay for instruction and regional marketing.

In addition, a number of specific services are provided by UW Extended Campus at the program level, including management of an online bookstore for course materials, hosting of the program website and learning management system, technical support of the LMS for students 7 days/week between 7:00 am - 11:00 pm, fiscal responsibility for program revenue sharing transfers, program reports on admissions, registration, retention and financial activity, technical support to faculty developing courses and teaching in the program, hosting of an annual Faculty Symposium to engage faculty across the program in professional development through the sharing of new ideas and information in the field and best pracces in online teaching, and management of state and national marketing.

Program advisor(s) with title and departmental affiliation(s).

<table>
<thead>
<tr>
<th>Name (Last, First)</th>
<th>Department</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Husk, Bryan T</td>
<td>School of Med &amp; Pub Hlth ADM (SMPH ADM)</td>
<td>Assistant Director - MS in Biotechnology</td>
</tr>
<tr>
<td>Smith, Michele A</td>
<td>School of Med &amp; Pub Hlth ADM (SMPH ADM)</td>
<td>Program Manager - MS in Biotechnology</td>
</tr>
</tbody>
</table>

Describe how student services and advising will be supported.

As part of the collaborative UW System degree model, UW Extended Campus will provide leadership and administration, working with campus staff to develop mechanisms to enable smooth administration of the program. UW Extended Campus will serve as the main point of contact for student services and advising.
Confirm that the program advisor(s) or coordinator(s) have been consulted and reviewed this proposal.

Select the Graduate Research Scholars Community for this program.

Science and Medicine Graduate Research Scholars Program

Resources, Budget, and Finance

Is this a revenue program? Yes

What is the tuition structure for this program?
Online/Distance per-credit tuition

Select a tuition increment:
$850/credit

What is the rationale for selecting this tuition increment?
Program tuition for the M.S. in Applied Biotechnology program will be set at $850/credit and will be identical at all eight partner institutions. The tuition rate is based on market demand estimates as well as comparisons with other master’s level online programs offered by the University of Wisconsin (UW) System and nationally, and will be charged outside the credit plateau, if approved by the Board of Regents. Students will not be required to pay any additional fees as part of the program, except for the cost of their books. There is no tuition differential for out-of-state students. This tuition pricing approach and structure follows the current UW System pricing guidelines for distance education programs. [University of Wisconsin System (2001). UW System Administrative Policy 130: Programming for the Non-Traditional Market in the University of Wisconsin System. Retrieved from https://www.wisconsin.edu/uw-policies/uw-system-administrative-policies/programming-for-the-non-traditional-market-in-the-uw-system/]

Will segregated fees be charged?
No

If segregated fees will not be charged, please explain.
All fees except books will be included in the per-credit fee.

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

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

UW Extended Campus’s program support expenditures will be funded from a combination of program revenues and GPR and will eventually transition to being funded exclusively from program revenues as the program generates. Partner campuses will transfer all tuition revenue to UW Extended Campus as invoiced at the conclusion of each semester. UW Extended Campus will pool the net tuition revenues and distribute those revenues across the partnership to cover direct program expenses as defined in the MOU. This
revenue disbursement through electronic funds transfer will occur in December and May. Program deficits, expenditures greater than revenues, will be absorbed and funded with UW Extended Campus carryforward funds. Program surpluses, revenues greater then expenditures, will be shared equally among the eight partners with the intent of those funds to be reinvested back into growing the program.

Please see the attached budget narrative and financial model documents for details.

Provide an overview of plans for funding the program including but not limited to program administration, instructional/curricular delivery, technology needs and program assessment.

The M.S. in Applied Biotechnology is a collaborative degree program that benefits from the shared academic and administrative resources of all partnering institutions. Faculty and staff from eight academic partners (UW-Green Bay, UW-Madison, UW-Oshkosh, UW-Parkside, UW-Platteville, UW-Stevens Point, UW-Stout, and UW-Whitewater) collectively developed and approved the program curriculum, program competencies, student learning outcomes, and admission requirements. These partner institutions will be responsible for identifying qualified faculty and instructional staff to deliver coursework and assess student learning and conduct program review. Each partner institution will appoint an academic program director who will be funded at 0.25 FTE to work with their respective academic units to implement the program. Collaboratively, these directors along with a designated campus continuing education representative or designate and the UW Extended Campus program manager will comprise the program workgroup. This team will meet quarterly and will oversee the ongoing growth, development and performance of the M.S. in Applied Biotechnology degree program. In addition to initial funding and ongoing program management, UW Extended Campus will provide state and national marketing, recruitment, instructional design, web development and management, student success coaching, fiscal management and other administrative supports required for program success.

All participating campuses enter into a Memorandum of Understanding with UW System that formalizes their resource commitments, timelines and responsibilities. Once the program becomes fully self-supporting (i.e. program revenues exceeding program expenses for partner campuses and UW Extended Campus), the residual revenues will be shared equally among all campus partners and UW Extended Campus.

A detailed budget narrative, financial model and sample MOU are attached.

What is the marketing plan?

Marketing efforts will be led out of UW Extended Campus that will extend beyond the traditional regions of participating UWs. Given that the reach of the MS-ABT is regional, national and international, the UW Extended Campus Marketing Unit will engage in state, regional and national digital marketing on behalf of the partners utilizing a multi-channel, integrated messaging approach to build awareness of the program and generate leads.

Specific digital marketing tactics employed include paid search (Google & Bing PPC) and paid social (ads on Facebook, or LinkedIn). The website will be optimized for Search Engine Optimization (SEO) by creating content rich with keywords, blog posts and dedicated landing pages. The marketing unit will also engage in email marketing by reaching out to targeted industries and affiliate organizations. Annual funding is also provided to each of the participating academic partners from the program to support their local marketing efforts.

In the pre-launch phase of the program, the marketing team will identify key messages, and target audiences, develop web content, and build a marketing campaign with supporting creative materials. The marketing strategy will be shared with campus partners prior to full launch. In the post-launch phase of the program we will implement the marketing plan, monitor performance and look for ways to improve efforts to drive traffic to become a program lead.

Describe resource and fiscal considerations - A. Provide an overview of plans for funding the program including program administration, instructional/curricular delivery, academic and career advisement (if relevant), financial aid and scholarships (if relevant), capacity for student learning outcomes assessment and program review.

The MOU for program funding, including administration, instruction and advising after program launch is attached. (Note: a separate MOU and funding model was used to support faculty and staff during program planning.) In summary, the UW Extended Campus fiscal model provides between 0.125-0.25 FTE salary plus fringe each year for the following: academic program director or equivalent support, faculty course development, instructional costs per course section, student admissions and services, course updates and specific costs, and marketing. In total in year one these funds coming to UW-Madison are estimated at $79,000 plus fringe to support an estimated enrollment across all eight campuses of 35 students, and are sufficient for the additional staff support the program will engage and to fund the first course delivery (course development and production is funded previously). Funds for instruction will also scale with the increase in student enrollment, and revenue sharing will allow for additional hiring as needed.

Describe resource and fiscal considerations - B. Are the faculty, instructional staff and key personnel existing or new faculty and staff? If they already serve existing programs, how are they able to and staff will be added, how will they be funded?

In year one of the program existing staff in the MS Biotechnology program will be used to administer the program. An increase in FTE for an existing staff member will be funded by UW Extended Campus transfer to handle the additional work load. The initial course offerings provided by UW-Madison will not be scheduled until Summer 2020. These courses will be taught by both existing and new qualified biotechnology professionals in the field, funded through UW Extended Campus.

Describe resource and fiscal considerations - C. What impacts will the program have on staffing needs beyond the immediate program? How are those needs being met?
UW System Administration and the Board of Regents require submission of budget information in a specific format. These forms will be completed in collaboration with APIR after school/college approval and before submission to UWSA for Board consideration. These forms are uploaded here by APIR.

- MS-Applied Biotechnology Budget Narrative.pdf
- MS-Applied Biotechnology Financial Model.pdf
- MS-BT MOU Phase I Final Signed.pdf

Does the program or change require substantial new resources other than those just described? Describe the needs. Confirm that the dean is committed to providing the resources.

- Not applicable with the collaborative funding model.

Are new Library resources needed to support this program?

- No

Describe plans for funding students including but not limited to funding sources and how funding decisions are made.

- Students in this program will not receive funding.

---

**Curriculum and Requirements**

Curriculum and Requirements

Guide Admissions/How to Get In tab

**Step 1: Apply to the Graduate School**

Applications are only submitted online; paper copy applications are not available. Apply to the Graduate School online at the UW-Madison Graduate School website:

**THE GRADUATE SCHOOL’S ONLINE APPLICATION**

The online application and $75 application fee must be submitted electronically to the Graduate School before you can be considered for admission.

Two letters of recommendation can be initiated and processed online via the Graduate School online application.

A one- or two-page statement of purpose (uploaded via the Graduate School online application) that provides the following:

- A brief summary of your professional and academic background, a clear explanation of your short- and long-term professional goals, and a clear explanation of how the online M.S. in Applied Biotechnology degree will help you achieve these goals. (Please be specific to the M.S. in Applied Biotechnology degree.)
- Professional resume

**Important:** Select Applied Biotechnology as your intended major field of study.

Additional Graduate School resources:

- Graduate School Admission Frequently Asked Questions
- Graduate School Admission Requirements
- Information to Send to the Graduate School

**STEP 2: SEND MATERIALS TO OUR PROGRAM OFFICE**

Materials to send directly to the M.S. in Applied Biotechnology Program:

Your official transcripts or academic records from each institution attended must be sent to the M.S. in Applied Biotechnology Program from the issuing university. Applications will not be considered complete until transcripts have been received.

Send the above materials to the following address:

- Master's Degree in Applied Biotechnology
- 505 Rosa Road, Suite 118
- Madison, WI 53719-1262

If you have any questions about how to apply or about the status of your application, you should contact Bryan Husk.

**Application Deadline**

Applications are accepted year round for the online M.S. in Applied Biotechnology Program. Students can begin in Fall, Spring or Summer term. To guarantee consideration for a particular term, apply:

- July 15 for Fall
- December 15 for Spring
- April 15 for Summer

**Graduate School Admissions**

Graduate admissions is a two-step process between academic degree programs and the Graduate School. Applicants must meet requirements of both the program(s) and the Graduate School. Once you have identified the program(s) you are interested in, apply online.

- Describe plans for recruiting students to this program.
  
  Leads generated by the UW Extended Campus marketing team for the Applied Biotechnology program will be recorded in Salesforce. Leads enter a UW Extended Campus-administered recruitment yield campaign that includes both email and phone follow up with prospective students. After a prospect begins an application at UW-Madison, a specific application completion campaign using Eloqua marketing automation tools begins. This recruitment is done through the UW-Madison Biotechnology program, and works with students to support application completion. It includes personal outreach from program staff for qualified students.
What is the recruiting and admissions strategy for underrepresented students?

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

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

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

Projected Annual Enrollment:

<table>
<thead>
<tr>
<th>Year</th>
<th>Projected Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>35</td>
</tr>
<tr>
<td>Year 2</td>
<td>101</td>
</tr>
<tr>
<td>Year 3</td>
<td>158</td>
</tr>
<tr>
<td>Year 4</td>
<td>206</td>
</tr>
<tr>
<td>Year 5</td>
<td>232</td>
</tr>
</tbody>
</table>

Maximum enrollment that can be supported with existing instructional and student services resources:

200

Describe plans for supporting enrollments that are much higher or much lower than the anticipated enrollment.

As enrollment is expected to be spread across all eight participating campuses, the additional funding provided by UW Extended Campus for academic and student services will allow the existing MS Biotechnology program to add new resources dedicated to the additional Applied Biotechnology program. Program revenue sharing expected as enrollment increases will also be used to fund additional support staff. Funding from UW Extended Campus is also provided on a per section basis (per 25 students) to allow for additional instructional staff to be hired as course demand grows.

Those who are not familiar with using the html editor fields may upload a document with information about the curriculum for use by those who will format and edit the content that will appear in the Guide.

Guide Requirements tab

Approved Shared Content from /shared/graduate-minimum-degree-requirements-and-satisfactory-progress/

Minimum Graduate School Requirements

Review the Graduate School minimum academic progress and degree requirements, in addition to the program requirements listed below.

MAJOR Requirements

Mode of instruction
Approved Shared Content from /shared/graduate-school-mode-instruction-definitions/

Evening/Weekend: These programs are offered in an evening and/or weekend format to accommodate working schedules. Enjoy the advantages of on-campus courses and personal connection more information about the meeting schedule of a specific program, contact the program.

Online: These programs are offered primarily online. Many available online programs can be completed almost entirely online with all online programs offering at least 50 percent or more of their online programs have an on-campus component that is often designed to accommodate working schedules. Take advantage of the convenience of online learning while participating in a rich, in

For more information about the online nature of a specific program, contact the program.

Hybrid: These programs have innovative curricula that combine on-campus and online formats. Most hybrid programs are completed on-campus with a partial or completely online semester. For hybrid schedule of a specific program, contact the program.

Accelerated: These on-campus programs are offered in an accelerated format that allows you to complete your program in a condensed time-frame. Enjoy the advantages of on-campus courses career. For more information about the accelerated nature of a specific program, contact the program.

Curricular Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Credit Requirement</td>
<td>31 Credits</td>
</tr>
<tr>
<td>Minimum Residence Credit</td>
<td>31 Credits</td>
</tr>
<tr>
<td>Minimum Graduate Coursework</td>
<td>At least 50% of credits applied toward the graduate degree credit requirement must be completed in graduate-level coursework; courses with the (<a href="http://registrar.wisc.edu/course-guide/">http://registrar.wisc.edu/course-guide/</a>).</td>
</tr>
<tr>
<td>Overall Graduate GPA Requirement</td>
<td>3.00 GPA required.</td>
</tr>
<tr>
<td>Other Grade Requirements</td>
<td>The Graduate School requires an average grade of B or better in all coursework (300 or above, not including research credits) taken as a graduate st probationary status require higher grades. Grades of Incomplete are considered to be unsatisfactory if they are not removed during the next enroll</td>
</tr>
<tr>
<td>Assessments and Examinations</td>
<td>Contact the program for information on required assessments and examinations.</td>
</tr>
<tr>
<td>Language Requirements</td>
<td>Contact the program for information on any language requirements.</td>
</tr>
</tbody>
</table>

The following core courses are required (22 credits):

- ABT 700 Principles of Biotechnology
- ABT 705 Ethics, Safety, and Regulatory Environments in Biotechnology
- ABT 710 Professional and Technical Communication in Biotechnology
- ABT 715 Techniques in Biotechnology
- ABT 720 Experimental Design and Analysis in Biotechnology
- ABT 725 Leadership in Organizations
- ABT 789 Pre-Capstone
- ABT 790 Capstone

Select a minimum of three classes (9 credits) from one or more of the following elective areas:

Area 1: Quality Control and Validation

- ABT 735 Quality Control and Validation
- ABT 740 Regulatory Practice and Compliance
- ABT 745 Industrial Applications in Regulatory Affairs

Area 2: Business and Management

- ABT 750 Biotechnology Marketing and Entrepreneurship
- ABT 755 Global Operations and Supply Chain Management
- ABT 760 Quality and Project Management

Area 3: Research and Development

- ABT 765 Assessing Innovation in Biotechnology
- ABT 770 Product Development
- ABT 775 Tools for Data Analysis

Total credits required:

31

Approved Shared Content from /shared/graduate-school-policies/

Graduate School Policies

The Graduate School's Academic Policies and Procedures provide essential information regarding general university policies. Program authority to set degree policies beyond the minimum requ with the degree program faculty. Policies set by the academic degree program can be found below.

Major-Specific Policies

prior coursework

Graduate Work from Other Institutions

No prior coursework from other institutions may be applied toward program requirements.
**Program Learning Outcomes and Assessment**

**Outcomes – enter one learning outcome per box. Use the green + to create additional boxes.**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Demonstrate professional and scientific communication appropriate for biotechnology settings</td>
</tr>
<tr>
<td>2</td>
<td>Demonstrate comprehensive understanding of organizational processes and product development pipelines</td>
</tr>
<tr>
<td>3</td>
<td>Distinguish among diverse methods and technologies and their applications in biotechnology</td>
</tr>
<tr>
<td>4</td>
<td>Demonstrate strategic leadership and decision-making skills necessary in biotechnology</td>
</tr>
<tr>
<td>5</td>
<td>Appraise the current regulatory, quality control, and legal frameworks that impact biotechnology</td>
</tr>
<tr>
<td>6</td>
<td>Demonstrate professional and ethical behaviors that foster positive and productive interactions in diverse biotechnology settings</td>
</tr>
</tbody>
</table>

**Summarize the assessment plan.**

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

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

All assessment reports will also be uploaded into the UW-Madison Assessment System by November 1 of each year. See the program assessment plan and worksheet attached.
Related Programs

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

Unique features of the proposed collaborative online M.S. in Applied Biotechnology degree program include its fully asynchronous online delivery format, statewide focus consistent with the geographical locations of the eight academic partners, and unique primary target audience to include mid-level managers currently working in diverse biotechnology and related settings who require more flexibility as provided through a fully online academic program. The audience may also include those with a science background who reside in areas distant from Madison that want to expand their knowledge of the biotechnology industry so they can enter the field and expand their career options.

Commitments

Courses in the curriculum are numbered 300 or higher.
Yes

The program faculty/staff will ensure the program website, Advance Your Career materials if applicable, and other presentations are consistent with the Guide information for this program.
Yes

Credential will not be awarded retroactively to students who completed all of the requirements before the credential was approved.
Yes

Supporting Information

List name and department of those who are in support of this proposal.

If those supporting the proposal provided a letter or email of support upload here. A letter is NOT required. Upload any other explanatory information about support from other UW-Madison units.

Additional Information:

Approvals

Department Approval - This proposal has been approved by the faculty at the department/academic unit level. The program faculty confirm that the unit has the capacity and resources (financial, physical, instructional, and administrative) associated with offering the program, including offering the necessary courses, advising students, maintaining accurate information about the program in the Guide and elsewhere, conducting student learning assessment and pr all responsibilities related to offering this program.

Enter any notes about approval here:

Entered by: Date entered:

School/College Approval - This proposal has been approved at the school/college level and it is submitted with the Dean's support. The Dean and program faculty confirm that the unit has the capacity and resources (financial, physical, instructional, and administrative) associated with offering the program, including offering the necessary courses, advising students, maintaining accurate information about the program in the Guide and elsewhere, conducting student learning assessment and pr all responsibilities related to offering this program.

Enter any notes about approval here:

Approval for CRB/MS in Applied Biotech program registered by Bryan Husk on 11/28/18. SMPH APC approval on 10/17/18.

Entered by: Andrea Poehling Date entered: 11/29/18

GFEC Approval - This proposal has been approved by the Graduate Faculty Executive Committee and the Dean of the Graduate School.

Enter any notes about the approval here:
I. Pre-Authorization: Notice of Intent

COLLABORATIVE ONLINE
MASTER OF SCIENCE DEGREE
IN
APPLIED BIOTECHNOLOGY

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

With administrative and financial support from the University of Wisconsin Extended Campus

A. Name of proposed degree, institutional setting, mode of delivery, and institutional contact information.

Name of Proposed Degree: Master of Science in Applied Biotechnology
Institutional Setting: Collaborative program across the UW System
Mode of Delivery: Distance Education (100% Online)
Institutional Contact Information: Dr. Jocelyn Milner
Vice Provost of Academic Affairs, and Director of Academic Planning and Institutional Research
University of Wisconsin-Madison
Email: jocelyn.milner@wisc.edu
Phone: 608-262-5246

B. Program description

The M.S. in Applied Biotechnology responds to the recognized growth of the Biotechnology industry and corresponding increased demand for well-qualified professionals in the field. The program represents a comprehensive, multidisciplinary curriculum that prepares students to advance their careers and pursue their academic ambitions through leadership and management positions within the biotechnology field. The degree represents a fully online, asynchronous curriculum comprised of 31 credits to include six core courses, three concentration or track courses, a Capstone preparation course and a project-based Capstone course. Defined core courses provide students with a solid foundation in biotechnology, leadership, ethics, research, communications, product development, quality control, and regulatory and compliance practices. In addition, the program offers three unique tracks to assist students in tailoring their coursework to meet their career goals: quality assurance and compliance; business management; and research and development. Students will be able to complete more than one program track. UW-Green Bay, UW-Madison, UW-Oshkosh, UW-Parkside, UW-Platteville, UW-Stevens Point, UW-Stout, and UW-Whitewater will offer the program jointly. The required capstone course, which represents the culminating experience in the program, will provide students with the opportunity to apply skills acquired from coursework through a project-based experience in their concentration area.
C. Program Competencies.
Graduates of the M.S in Applied Biotechnology will gain the following core competencies and learning outcomes:

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

Upon completion of the program, students will be able to:
- Select the most appropriate modalities, methodologies, tools, and practices to communicate complex ideas effectively across diverse audiences
- Demonstrate effective listening, written, verbal, and nonverbal communication skills
- Construct and deliver effective professional presentations

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

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

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

Upon completion of the program, students will be able to:
- Compare and contrast emerging with existing technologies
- Exhibit strong technical knowledge to evaluate and choose appropriate technologies
- Demonstrate the ability to read, interpret and apply scientific literature
- Demonstrate competency in data analyses and statistics

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

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

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

Upon completion of the program, students will be able to:
- Demonstrate understanding of relevant domestic and global regulatory agencies, laws, policies and guidances
- Assess intellectual property considerations in biotechnology
- Justify the importance of quality and risk management in biotechnology and explain current good practices

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

Upon completion of the program, students will be able to:
- Recognize, foster and apply principles of ethical and professional conduct
- Identify professional opportunities and personal success by acquiring knowledge, networking, and other career development strategies
- Understand cultural differences that exist in the global marketplace
D. Anticipated or Existing Resources Required to Deliver the Program

The M.S. in Applied Biotechnology is a collaborative degree program that benefits from the shared academic and administrative resources of all partnering institutions. Faculty and staff from eight academic partners (UW-Green Bay, UW-Madison, UW-Oshkosh, UW-Parkside, UW-Platteville, UW-Stevens Point, UW-Stout, and UW-Whitewater) collectively developed and approved the program curriculum, program competencies, student learning outcomes, and admission requirements. These partner institutions will be responsible for identifying qualified faculty and instructional staff to deliver coursework and assess student learning and conduct program review. Each partner institution will appoint an academic program director who will work with their respective academic units to implement the program. Collaboratively, these directors along with a designated campus continuing education representative or designate and the UW Extended Campus program manager will comprise the program workgroup. This team will meet quarterly and will oversee the ongoing growth, development and performance of the M.S. in Applied Biotechnology degree program. In additional to initial funding and ongoing program management, UW Extended Campus will provide state and national marketing, recruitment, instructional design, web development and management, student success coaching, fiscal management and other administrative supports required for program success.

E. Accreditation

The eight academic partners will be securing authorization to offer this program as a consortial online degree from the Higher Learning Commission.

F. Rationale and Relation to Mission

The online M.S. in Applied Biotechnology degree program contributes directly to the institutional mission of the University of Wisconsin System which clearly defines a commitment to discover and disseminate knowledge, to extend knowledge and its application beyond the boundaries of its institutions. The degree addresses a recognized high-need area as supported by research that included extensive input from employers and industry representatives throughout the state and region. Students will develop advanced knowledge and skills that will enable them to serve an important function and role within the biotechnology workforce. It is a degree targeted at adult and nontraditional students possessing a bachelor’s degree and thus broadens access for alumni and others to advanced study within the UW System. The M.S. in Applied Biotechnology also supports the institutional missions of the eight academic partner institutions by adding a viable offering to their graduate program array.

G. Need for Program

The M.S. in Applied Biotechnology represents a need-based program designed to satisfy a recognized workforce gap within the state and broader five-state region. Based on a Feasibility Analysis commissioned by UW Extended Campus and conducted by the University Professional and Continuing Education Association (UPCEA) Center for Research and Marketing Strategy, an industry focus group and interviews with biotechnology professionals, there is a significant need for a master’s in applied biotechnology that prepares working biotechnology professionals to succeed in leadership and management positions within the industry. Key specialization areas identified in the research included business and sales, product development, project management, and quality assurance and compliance. Nationally, biotechnology professionals are projected to experience an annual growth rate of 1.8% over the next 10 years. Forecasted growth rates for all biotech occupations are either equivalent to the national average or higher, ranging from 0.7% to 1.1% annually on the national scale. Additionally, biotech professionals have a low unemployment rate (3.1%), significantly lower than the national average of 4.3% for all occupations. Over the past five years, biotechnology professionals in Wisconsin have experienced an average annual growth rate of 0.8%. This demand is expected to continue to grow throughout 2018 and beyond.
UW-Madison, an academic partner and lead campus in this program, offers the only M.S. in Biotechnology within the UW-System which represents a 32-credit hands-on laboratory curriculum and is delivered evenings and weekends in a face-to-face format. The primary audience for this cohort-based program include working adults, many of whom are employed by local biotechnology companies. Unique features of the proposed collaborative online M.S. in Applied Biotechnology degree program include its fully asynchronous online delivery format, statewide focus consistent with the geographical locations of the eight academic partners, and unique primary target audience to include mid-level managers currently working in diverse regional and national biotechnology and related settings who require more flexibility as provided through a fully online academic program. The audience may also include those with a science background who reside in areas distant from Madison that want to expand their knowledge of the biotechnology industry so they can enter the field and expand their career options.
Memorandum of Understanding

Master of Science in Biotechnology
(Phase 1)

Effective Dates: July 1, 2018 – June 30, 2019

Overview
This Memorandum of Understanding (MOU) pertains to Phase 1 of the planning process in developing a collaborative online Master of Science in Biotechnology (MS-BT). This document represents the first of two (2) MOU’s and is focused on all program planning and development work prior to the formal implementation of the degree in September 2019 (projected). Phase 2 will address the formal implementation and ongoing management of the degree program.

In Phase 1 of the planning process, the academic partners (UW-Green Bay, UW-Madison, UW-Oshkosh, UW-Parkside, UW-Platteville, UW-Stevens Point, UW-Stout, and UW-Whitewater) will work closely with UW-Extension Continuing Education, Outreach and E-Learning (hereafter referred to as UW-Extension) to develop the curriculum; secure all course/degree approvals from their respective campuses, UW System and the Higher Learning Commission (HLC); initiate online course development/conversion; formalize the administrative processes and procedures required to support the degree and the students; and develop and implement a preliminary program marketing plan, to include program branding, once the degree is approved. To assist in this effort, each campus will appoint two members of its faculty to work with their counterparts from the other partner institutions to develop the curriculum for the degree including courses/course descriptions, syllabi, and associated materials. One of these two faculty will be designated by the campus to serve as the Academic Director. UW-Extension will provide leadership and support to the process.

By committing to Phase 1 of the planning process, it is assumed that campuses support the degree and intend to proceed to the final phase – Phase 2 – the formal offering and ongoing management of the degree. Because this is a new degree, however, the development process is proceeding cautiously, enabling campuses to evaluate their involvement along the way. Consistent with this approach, the term of this initial agreement is one (1) year, ending June 30, 2019. The final phase of the process – Phase 2 – will begin on July 1, 2019, immediately after the completion of Phase 1. Phase 2 will include the formal launch of the degree to include all required student supports and services. The first set of classes is tentatively scheduled to begin fall semester, 2019. Campuses that commit to Phase 2 will commit to offering classes toward the degree and will receive net revenues generated by the program once the program becomes self-supporting (i.e., program revenues exceed program expenditures). Net revenues will be split equally between all campus partners and UW-Extension.

Details of partner roles and responsibilities have been summarized as follows.

UW-Extension agrees to:
1. Compensate partner campuses through the Continuing Education units for the period defined, and in the amounts and for the uses as stipulated below. Once received by the campus CE office, it is expected that the funds will be used for their intended purpose and that the local approach used in the distribution of these funds will vary by campus.
• $20,000 plus fringe (up to 0.25 FTE) annually will be allocated over the term of this agreement to support salary for the campus-defined Academic Director and other program-related support expenses as deemed necessary and appropriate by each campus. It is expected that the campus outreach/continuing education unit will use these funds to support an Academic Director and no more than one additional staff member to administer the program and support campus involvement. Examples of possible approaches for dividing these funds between two people may include the assignment of co-Academic Directors, an Academic Director and Assistant Director or an Academic Director and CE Program Manager. It is understood that the Academic Director will work year-round (academic year and summer) to lead the continuation of the curriculum development and approval process on campus and oversee the faculty, curriculum and other components of the program. The role of the Academic Director is described in Attachment A.

• Up to $5,000 plus fringe (and 0.125 FTE) will be allocated to support up to one additional faculty member involved in the curriculum development process (summer 2018). It is expected that faculty (academic director and additional faculty) attend and participate in all curriculum planning and development meetings as scheduled for the campus to receive full compensation.

2. Provide leadership and administration to the curriculum development and degree approval process by organizing monthly planning meetings, engaging business and industry leaders, working with UW System Administration, and working with campus staff.

3. Support lodging, meals, and other site costs for all face-to-face meetings/workshops. Transportation costs will be the responsibility of the campuses.

4. Provide online course development support. UW-Extension instructional design and media staff will initiate work on fall 2019 courses following UW Board of Regents approval of the degree and will travel to partner campuses as needed to work with faculty to help them develop their courses. UW-Extension will also hold periodic online course development workshops to inform instructors about emerging technologies and to help them incorporate new technologies into their courses. In addition, UW-Extension will secure copyright for course materials it acquires/produces and, on a limited basis, assist faculty in securing copyright for additional materials as requested.

Campus Partners agree to:

1. Appoint a tenured or tenured-track member(s) of its faculty who is well respected by his/her peers to serve as the Academic Director for the Master of Science in Biotechnology degree program, and to work with the academic directors from partner campuses and UW-Extension to continue the degree development process through the term of this agreement. As part of that process the Academic Director will be the lead supporter of the degree on his/her campus, participate in the curriculum development process and will champion the curriculum approval process. That process will include approval of the curriculum through typical campus channels, the UW System Entitlement to Plan and Authorization to Implement, and Higher Learning Commission approval.

2. Identify up to one additional faculty member to participate as a member of the curriculum planning workgroup who is able to attend all planning meetings. Final compensation will be based on attendance.
3. Identify and formalize agreements with key faculty to develop courses and serve as lead faculty in the formal delivery of the degree.

4. Initiate work to develop and/or formalize all student support services and systems required to effectively and efficiently serve adult students through this program to include, but not limited to, scheduling and offering classes toward the degree; processing student applications; registering students; providing academic, career, and financial aid advising; performing credit audits/evaluations; administering credit for prior learning program (if available); and other administrative and student services as required.

5. Work with UW-Extension staff in the development and implementation of an initial comprehensive marketing plan for the degree program to include national, state, regional and local strategies and approaches.

It is mutually agreed that:

1. Academic Directors will meet by phone or in person at least monthly to discuss progress toward the degree and to identify and solve barriers. Coordination/scheduling of meetings will be the responsibility of UW-Extension.

2. The formal launch of the degree is scheduled for fall 2019 to include initial schedule of courses and all required systems and supports for serving adult students.

3. The online courses developed for the program will belong jointly to the campus, the faculty who produce them, and UW-Extension. Faculty and the participating campus may use the materials they produce in their on-campus face-to-face courses. However, they may not use the online version of the courses without the approval of UW-Extension. If a faculty member leaves the institution or chooses not to teach his/her course for any reason, ownership of the online courses will reside with the campus and UW-Extension. If the campus is unable to identify an instructor for one of the online courses, UW-Extension will work with all of the partner campuses to try to find replacement faculty. Approval of replacement faculty will be the purview of the campuses. All faculty will be required to sign a formal Joint Creation and Ownership Agreement prior to completion of course development (see Attachment B).

4. Campuses will have the opportunity to withdraw from this agreement at any time over the next year. By withdrawing, the campus surrenders its rights to UW-Extension to the online versions of courses that it may have developed up to that time for this program.

5. UW-Extension agrees to bear the financial risk for this degree in the start-up phase, although it is recognized and expected that campuses will invest significant local in-kind support to the program. It is estimated that this program will become self-supporting within 5 years.
Summary and Signatures
This Memorandum of Understanding pertains to UW-Green Bay, UW-Madison, UW-Oshkosh, UW-Parkside, UW-Platteville, UW-Stevens Point, UW-Stout, UW-Whitewater, and UW-Extension regarding the collaborative online Master of Science in Biotechnology degree program. By signing this MOU, the undersigned agree to proceed with Phase 1 of the degree development process as outlined above.

Approved by:

Aaron Brower, Provost and Vice Chancellor for Academic Affairs, UW-Extension

David Schejbal, Dean, Continuing Education, Outreach and E-Learning, UW-Extension

Greg Davis, Provost and Vice Chancellor for Academic Affairs, UW-Green Bay

Joy Ruzek, Executive Director, Continuing Education and Community Engagement, UW-Green Bay

Sarah Mangelsdorf, Provost and Vice Chancellor for Academic Affairs, UW-Madison

Jeffrey Russell, Deputy Provost for Lifelong Learning and Dean of the Division of Continuing Studies, UW-Madison

John Koker, Interim Provost and Vice Chancellor for Academic Affairs, UW-Oshkosh

Susan Adams, Director of Continuing Education, UW-Oshkosh

Robert Ducoffe, Provost and Vice Chancellor for Academic Affairs, UW-Parkside

Emmanuel Otu, Dean, College of Natural and Health Sciences, UW-Parkside

D. Joanne Wilson, Acting Provost and Vice Chancellor for Academic Affairs, UW-Platteville

Michael Gau, Assistant Executive Director, Continuing Education, UW-Platteville

Greg Summers, Provost and Vice Chancellor for Academic Affairs, UW-Stevens Point
Wayne Sorenson, Director of Continuing Education, UW-Stevens Point

Patrick Guilfoile, Provost and Vice Chancellor for Academic and Student Affairs, UW-Stout

Joni Geroux, Director, Professional Education Programs and Services, UW-Stout

Susan L. Elrod, Provost and Executive Vice Chancellor, UW-Whitewater

Seth Meisel, Interim Dean, School of Graduate Studies and Continuing Education, UW-Whitewater
Attachment A

Collaborative Online Master of Science in Biotechnology Degree
Academic Director Job Description

The Academic Director for the Online Master of Science in Biotechnology (MS-BT) degree program is the campus representative to the degree. He/she is the liaison between campus administration, faculty and the degree and works closely and collaboratively with the campus Program Manager assigned to the degree and UW-Extension Division of Continuing Education, Outreach and E-Learning on issues pertaining to the degree.

The Academic Director must be a tenured or tenure-track member of the faculty on campus and have disciplinary expertise in a related field. He/she must be in good standing with senior campus administrators, deans, department heads, and fellow faculty members. He/she should understand faculty governance procedures and be effective in moving curricular and administrative issues through campus channels expeditiously.

This is an annual administrative appointment similar to a shared department chair position. Specific responsibilities include:

- Campus representative to the degree, curriculum oversight, periodic meetings with program faculty and partners
- Oversight and responsibility for ensuring that the campus is adequately staffing courses for the MS-BT program for which it is responsible
- Oversight and monitoring of campus academic supports for program students to include, but not limited to, admissions, registration, financial aid and bursar functions
- Review student admissions decisions for the MS-BT degree as needed
- Provide and/or coordinate and oversee local staff in academic advising
- Review of course evaluations for MS-BT courses, working with instructors who are not performing well, etc.
- Review and approve, as appropriate, credit for prior learning for students requesting credit for the MS-BT degree
- Work with accreditation processes insofar as they pertain to the MS-BT degree as needed
- Review adjunct instructors for the MS-BT degree as needed
- Address students conduct issues in the MS-BT degree
- Develop local articulation agreements to support the growth of the degree program
- Assist with program assessment and UW-System program review
- Other duties as assigned or deemed necessary to support program success
Online Courses in the *Master of Science in Biotechnology degree program*

Agreement Summary

The undersigned author (the “Author”) has agreed to develop course content for a course(s) in the online Master of Science in Biotechnology degree program, as further described in Attachment A to this agreement. The content developed will be owned by the Author(s) of such content. The University may use course content as it wishes under a license from the Author to the Board of Regents of the University of Wisconsin System (the “University”), and the Author may also use the course content consistent with the terms of this agreement. The actual online courses that are developed and based on course content will be the exclusive property of the University.

The Agreement

The Author and the University agree that:

1. Rights Granted
   A. Contributions of original course content will be owned by the Author(s) of such content. The Author grants the University a perpetual, royalty-free, non-exclusive license to use course content for educational or research purposes. The online courses and any and all works based upon, derived from, or incorporating the online courses that are developed from this content for the Master of Science in Biotechnology degree are the exclusive property of the University.

2. Completion of Author's Contribution to the Course(s); Other Obligations
   A. The Author agrees to prepare the course content including collateral material such as syllabi, illustrations, charts, graphs, handouts, references lists, and other related items on the schedule and in the form agreed to in Attachment A.
   B. The Author will make a good faith effort to attend all training sessions relating to this online degree program.
   C. The University, in consultation with the Author, will make all decisions concerning course design.
   D. In the performance of work under this agreement, the Author will make a good faith effort to perform all work with a high degree of professionalism and consistent with prevailing academic standards.
   E. The Author agrees that the University may terminate this agreement if the Author fails to meet the obligations herein including those described in the Attachment A, in which case the University will be entitled recover any sums or other resources advanced to the Author in connection with this agreement.
   F. The University agrees that the Author may terminate this agreement if the University fails to meet any of its obligations herein, in which case the Author may keep any compensation already earned under this agreement.

3. Quoted Material
A. The Author and the University will use copyrighted material in compliance with State and Federal laws and Board of Regents’ Policies.

4. Publication of the Work
   A. The online course(s) will be distributed, transmitted or published by the University as soon as circumstances permit, at the University’s expense, in a manner deemed appropriate by the University.

5. Copyright
   A. The University will decide whether to register copyright for the online courses in the University’s name and at its expense.

6. Author’s Warranty
   A. The Author warrants that he or she is the owner of the course content or has cleared the necessary rights in the course content to enter into this agreement and fulfill its obligations. The Author acknowledges that he or she has made a good faith effort to follow applicable laws and the University of Wisconsin System Policy on Copyrightable Instructional Materials Ownership, Use and Control (GAPP27) and that the course content does not infringe any copyright, violate any property rights, or contain any scandalous, libelous, or unlawful matter.
   B. The Author will defend, indemnify and hold harmless the University against all claims, suits, costs, damages, and expenses arising from any scandalous, libelous, or unlawful matter contained or alleged to be contained in the course content or any infringement or violation by the course content of any copyright or property right.

7. Consideration
   In consideration of this agreement, the University may contribute the following resources to the creation of the online courses for the Master of Science in Biotechnology degree program:
   a) graphics
   b) instructional design
   c) production assistance
   d) course maintenance and backup
   e) marketing to prospective students
   f) hardware
   g) technical assistance
   h) teaching load credit for the first semester of course
   i) funding

   The specific resources to be provided to the Author under this agreement are detailed in Attachment A.

8. Subsidiary Rights
   A. The Author will seek prior written consent of the University to publish any abridged or other version of the course content, any derivative work, or any content of similar character that might interfere with enrollment in the online courses covered by this Agreement. The University's consent will not unreasonably be withheld. Nothing in this agreement shall prohibit the Author from using the course content or derivative works for non-commercial educational or research purposes.

9. Revisions
A. The Author will update and revise the course content at the University’s request during the term of this agreement. The Author agrees to update the content within one hundred twenty (120) days of receipt of a written request from the Dean of Continuing Education, Outreach and E-Learning or his/her designees. If the Author is unable or unwilling to make any requested revisions, the University may have revisions made by an author approved by the appropriate department.

10. Term and Termination
   A. This agreement will remain in effect until further notice and can be terminated by either party with 120 days’ written notice. Upon termination, the rights granted to the University and Author relating to the course content will remain in effect. The rights to the online courses in the Master of Science in Biotechnology degree will remain the exclusive property of the University.

11. Amendments
   A. The written provisions contained in this agreement are the entire agreement made between the author and the University concerning this course content, and any amendments to this agreement will not be valid unless made in writing and signed by all the parties.

12. Construction, Binding Effect, and Assignment
   A. This agreement will be construed and interpreted according to the laws of the State of Wisconsin and will be binding upon the parties hereto.

In Witness Whereof, the parties have duly executed this agreement as of the date below

_________________________________     _________________________
Author                           Date

_________________________________     _________________________
By Authorized Officer      Date
The University of Wisconsin Extension

Reviewed and approved by UW System Legal Affairs, June 2016.
Memorandum of Understanding
for the
Ongoing Development, Implementation and Management of the
Master of Science in Applied Biotechnology
(Phase 2)

Effective Period: July 1, 2019 – June 30, 2022

Overview
This Memorandum of Understanding (MOU) pertains to Phase 2 of the degree planning process to include the ongoing development, implementation and management of the collaborative online Master of Science in Applied Biotechnology (MS-ABT) degree program. In Phase 1 of the project, the academic partners (UW-Green Bay, UW-Madison, UW-Oshkosh, UW-Parkside, UW-Platteville, UW-Stevens Point, UW-Stout, and UW-Whitewater) determined market demand, developed curriculum, secured required degree/course approvals on their respective campuses and secured UW System and Higher Learning Commission (HLC) approval with the support of UW System, Division of Continuing Education, Outreach and E-Learning (hereafter referred to as CEOEL).

By committing to Phase 2 of the process, campuses agree to proceed to the continued development of online courses; formalize the administrative processes to support the degree; implement a regional marketing plan; and, deliver and provide ongoing management of the MS-ABT degree program.

This MOU serves to clarify the responsibilities of all partners, formalize resource commitments, and establish consensus regarding timelines. The term of this agreement will begin on July 1, 2019 and will extend three (3) years. Six (6) months prior to conclusion of this MOU, the program and partnership will be formally reviewed and recommendations made related to the continuation of the program. Campuses that commit to Phase 2 will commit to offering classes toward the degree, with a limited schedule of courses offered beginning fall 2019.

Partner campuses will transfer all tuition revenue to CEOEL as invoiced at the conclusion of each semester. CEOEL will pool the net tuition revenues and distribute those revenues across the partnership to cover direct program expenses as defined in the Partner Roles and Responsibilities section of this MOU. This revenue disbursement through electronic funds transfer will occur in December and May. Once the program becomes fully self-supporting (i.e. program revenues exceeding program expenses for partner campuses and CEOEL), the residual revenues will be shared equally amongst all campus partners and CEOEL. The Financial Model for the MS-ABT degree has been attached (see Attachment A).

By signing this MOU, each participating campus commits to work toward the continued development, implementation, and management of the degree through the term of this agreement as defined above.
Partner Roles and Responsibilities
Details of partner roles and responsibilities have been summarized as follows.

**CEOEL agrees to:**
1. Compensate partner campuses through the Continuing Education (CE) units for the period defined, and in the amounts and for the uses as stipulated below. Once received by the campus CE office, it is expected that the funds will be used for their intended purpose and that the approach used in the *distribution* of these funds will vary by campus.
   - $20,000 plus fringe (up to 0.25 FTE) per year will be allocated over the term of this agreement to support salary for the campus-defined academic director and other program-related expenses as deemed necessary and appropriate by each campus. It is expected that the campus CE unit will use these funds to support an academic director and no more than one additional staff member to administer the program and support campus involvement. Examples of some possible approaches for dividing these funds between two people may include an academic director and CE program manager, the assignment of co-academic directors, or an academic director and assistant director. It is understood that the academic director will work up to 25% time (academic year and summer) to lead the continuation of the curriculum review and assessment on campus and oversee the faculty, curriculum, academic supports and other components of the program. The role of the academic director is described in Attachment B.
   - $5,000 plus fringe (and 0.125 FTE) will be allocated to support the development and/or conversion of each course for online delivery that fits the approved degree curriculum and other program-related expenses as deemed necessary and appropriate by each campus. The number of courses that each campus develops has been determined by a committee composed of the academic directors from each campus. The technical aspects of course conversion will be supported by CEOEL staff.
   - $9,000 plus fringe (and 0.125 FTE) will be allocated to support instructional costs of each online course section and other program-related expenses as deemed necessary and appropriate by the campus partner (up to 20 enrollments). For enrollments from 21-25, faculty will receive an additional $1000. Faculty will receive an additional $1000 for enrollments from 26-30 (with faculty approval). Faculty compensation is based on enrollments as defined in the Collaborative Program Report generated and shared with partners following the 20th business day of each academic semester. Consistent with the intent of these funds, additional compensation will be provided to faculty as salary with no local indirect costs assigned.
   - $5,000 in salary plus fringe (and 0.125 FTE) per year will be allocated for distribution to campus academic services units to support unique academic functions for the degree such as student admissions, registration, financial aid, tuition payment/processing, etc., as necessary and deemed appropriate by the campus/CE unit.
   - $3,000 in salary plus fringe per course will be allocated to the CE units for course updates and other program-related expenses as deemed necessary and appropriate by each campus. It is assumed that courses will be updated or revised every 2-3 years. An
annual schedule of course updates will be established and approved by the Academic directors, campus CE units and the MS-ABT program manager/CEOEL.

- In addition, campus CE units will receive $500 per course section taught (in S&E dollars) to cover course-specific costs of administrative functions provided by that office.
- $7,000 in lump sum (S&E) funds will be allocated for local advertising and promotion to each partner campus. Note: CEOEL will provide marketing design materials as well as a marketing plan and will market this program throughout Wisconsin and beyond via multiple channels. Local funds are intended to be used by the campus CE units to offset costs associated with direct program marketing (e.g. community newspaper ads, flyers, direct mail, educational fairs, etc.). These funds are not to be used for staff salaries. Campuses are strongly encouraged to provide local matching funds to expand regional marketing activities and share their local/regional marketing plans with CEOEL for inclusion in the comprehensive program marketing plan. CEOEL will share its comprehensive marketing and recruiting plans with the CE units.

Additional Compensation Items:
- Salaries will be General Program Revenue (GPR) funded until sufficient program revenue (PR) is available to fund these positions. While positions are funded by GPR dollars, fringe in the amount determined by UW System will be transferred to partner campuses at the end of each fiscal year. Once the program becomes self-supporting, salaries will be moved to PR funds, and fringe will be transferred to campuses at the UW System published budget rate.
- CEOEL will transfer funds to participating campuses’ Continuing Education/Outreach offices as an addendum to the ongoing Inter Institutional Agreement. Fund transfers will occur in December and May each fiscal year. How campuses distribute these funds internally is the purview of the individual campuses. However, the funds need to be protected by the campus for exclusive use in the program.
- Increases and decreases in appropriations will be considered annually by CEOEL based on available funds and the economic conditions of the State and the University. As a collaborative program, any adjustment in campus appropriations for this program will be reviewed and discussed with the partners prior to implementation.
- As part of the comprehensive program review process initiated six (6) months prior to the conclusion of this MOU, a review of the financial model will be conducted and any inequities in enrollments or possible changes in financial distributions addressed at that time.

2. Provide ongoing leadership for the program to include organizing scheduled meetings, engaging business and industry leaders, working with UW System Administration, and working with campus staff.
3. Support lodging, meals, and other site costs for all face-to-face meetings/workshops. 
   Transportation costs will be the responsibility of the campuses.
4. Provide online course development and revision support. Course designers will travel to partner campuses as needed to work with faculty to help them develop and/or revise their courses. CEOEL will also hold periodic online course development workshops to inform
instructors about emerging technologies and to help them incorporate new technologies into their courses. CEOEL will also secure copyright for course materials it acquires/produces and, on a limited basis, assist faculty in securing copyright for additional materials as requested.

5. Coordinate quarterly meetings of the academic directors, CE directors/program managers, CEOEL staff, and others to review degree activity and discuss possible adjustments and/or improvements based, in part, on experience, student input, and program activity. Program financial models will also be annually revised and reviewed at the fourth quarter meeting each fiscal year. The quarterly meetings may be held in-person or through teleconference.

6. Provide leadership and administration to the curriculum development process by organizing meetings, engaging business and industry leaders, working with UW System Administration, and working with campus staff to develop mechanisms to enable smooth administration of the program.

7. Provide program advising by assigning a program adviser to support students in the MS-ABT program. The role of the adviser will be to coach students from program admission through graduation, understanding that admissions, academic advising, communication of degree requirements and related formal academic responsibilities are the purview of academic partners.

8. Serve as the main point of entry for students interested in this degree. In that capacity, CEOEL will provide general information about the program, the campus admissions process, and other related issues through a program web site developed and hosted by CEOEL. CEOEL will also manage course registration permission numbers.

9. Develop, host and manage the program website.

10. Manage the bookstore through a unique agreement with an external vendor.

11. Refer applicants to their selected home campus with questions or concerns regarding the application and admission process.

12. Serve as the fiscal agent for the degree and manage payments and revenue sharing transfers, and provide semester-based program reports to include admissions, registration, retention, and financial activity.

13. Initially set course enrollments at 25 students per course with the option of increasing limits based on need and with faculty approval for enrollments that exceed 25 students. The Capstone Course will be limited to 15 students.

14. Host the D2L instance for this program, manage the D2L server, and manage security and technical support for program students and faculty.

15. Provide technical support for students 7 days per week between 7:00 a.m. and 11:00 p.m. via email or a toll-free call by CEOEL and by Learn@UW.

16. Provide technical support to faculty developing courses and teaching in the program.

17. Host an annual Faculty Symposium to engage faculty across the program in professional development through the sharing of new ideas and information in the field and best practices in online teaching.

18. Manage state and national marketing, promotion, and public relations for this degree and provide financial support and advice on local and regional marketing coordinated by the
academic partners. CEOEL will continue to share its comprehensive marketing and recruiting plans with the CE units.

19. Provide regular (semester) program reporting to all campus partners.

**Campus Partners agree to:**

1. Annually formalize the appointment (academic year and summer) of a tenured, tenured track or emeritus member(s) of its faculty who is well respected by his/her peers to serve as academic director for the program and lead supporter of the degree on his/her campus (see Attachment B for the Academic Director Position Description).
2. Provide campus support and advocacy for the degree to ensure that the degree is viewed as a valuable asset by campus.
3. Identify and formalize agreements with key faculty to develop and revise courses and serve as lead faculty in the formal delivery of the degree.
4. Establish and/or formalize all local academic support services and systems required to effectively and efficiently serve adult students through this program to include, but not limited to, scheduling and offering classes toward the degree; processing student applications; registering students; providing academic, career, and financial aid advising; performing credit audits/evaluations; administering credit for prior learning program (if available); providing library supports and veterans services; and other administrative and academic support services as required.
5. Develop, implement, monitor, and adjust the annual local/regional marketing plan for the degree, as deemed necessary, and share that plan with CEOEL for inclusion in the comprehensive marketing plan managed by CEOEL marketing staff.
6. Launch program; monitor campus processes (registrations, administrative support functions, course delivery) and students comments/experiences and make adjustments where necessary in response to information secured.
7. Ensure that courses/course sections are well staffed and that qualified faculty teach in the program.
8. Offer scheduled courses and additional course sections as required based on demand.
9. Work collaboratively and collegially with partners to resolve differences and to eliminate identified barriers as much as possible for the benefit of students.
10. Apply the agreed upon and UW System approved fixed-rate tuition rate (regardless of residency) for all degree courses consistent with UW System tuition policies for distance education courses/programs and designate a person to communicate annual increases in tuition, as determined by CEOEL, to appropriate campus academic support offices.
11. Offer all program courses outside of plateau, and not charge program students any segregated fees (unless students are dually enrolled in other campus programs).
12. Waive requirements for registration deposits.
13. Collect tuition and transfer all tuition revenues to CEOEL on a semester basis.
14. Satisfy agreed upon standardized data reporting to CEOEL to include, but not limited to, student data, admission and registration information, and demographic data.
15. Ensure that the dedicated funds provided by CEOEL to cover designated program expenses are being used for their intended purpose.
16. Host local campus stakeholder meetings twice per year to provide updates on collaborative programs, identify and address concerns or issues, review and revise policies and procedures, and other topics as deemed necessary and valuable.
It is mutually agreed that:
1. Academic directors will meet by phone or in person monthly to discuss progress toward the degree and to identify and solve barriers. Coordination/scheduling of meetings will be the responsibility of CEOEL.
2. The formal launch of the degree is scheduled for fall 2019 to include initial schedule of courses and all required systems and supports for serving adult students.
3. The online courses developed for the program will belong jointly to the campus, the faculty who produce them, and CEOEL. Faculty and the participating campus may use the materials they produce in their on-campus face-to-face courses. However, they may not use the online version of the courses without the approval of CEOEL. If a faculty member leaves the institution or chooses not to teach his/her course for any reason, ownership of the online courses will reside with the campus and CEOEL. If the campus is unable to identify an instructor for one of the online courses it hosts, CEOEL will work with all of the partner campuses to try to find replacement faculty. Approval of replacement faculty will be the purview of the campuses. All faculty will be required to sign a formal Joint Creation and Ownership Agreement prior to completion of course development (see Appendix C).
4. CEOEL will direct-bill campuses in September for summer tuition, December for fall tuition, and May for spring tuition based on course enrollments as of the 20th business day of the semester. The campuses will transfer the full tuition amount as calculated and noted on the billing statement within 10 days of receipt. Because the campus collects tuition and is responsible for collecting unpaid tuition, the campus will satisfy all shortfalls in collaborative degree program tuition at the time of billing. If the campus is unable to collect unpaid tuition after 2 years of the semester in which the tuition was billed to the student, CEOEL will reimburse the campus for the unpaid student tuition balance. Reimbursement excludes any partial tuition collected, late fees, collection fees, accumulated interest, and other fees. To request reimbursement for unpaid tuition from CEOEL, the campus will submit documentation that outlines the effort made to collect the outstanding tuition, i.e. student account balance, past due notices sent to student, form used to refer student to collection agency, and agency collection status report. Reimbursement will be funded from program revenues in the year in which the unpaid tuition reimbursement is requested and will be reflected as an expense to the program.
5. Campuses will have the opportunity to withdraw from this agreement at any time with one-year notice. By withdrawing, the campus surrenders its rights to CEOEL to the online versions of courses that it may have developed up to that time for this program.
6. CEOEL agrees to bear the financial risk for this degree in the start-up phase, although it is recognized and expected that campuses will invest significant local in-kind support to the program. It is estimated that this program will become self-supporting within 5 years of launch.
Summary and Signatures
This Memorandum of Understanding pertains to UW-La Crosse, UW-Parkside, UW-Platteville, UW-Stevens Point, UW-Stout, and CEOEL regarding the collaborative online Master of Science in Applied Biotechnology program. By signing this MOU, the undersigned agree to proceed with Phase 2 of the degree development and implementation process as outlined above.

Approved by:

_______________________________________
Aaron Brower, Executive Director, Continuing Education, Outreach, and E-Learning and Senior Associate Vice President, UW System

_______________________________________
Greg Davis, Provost and Vice Chancellor for Academic Affairs, UW-Green Bay

_______________________________________
Joy Ruzek, Executive Director, Continuing Education and Community Engagement, UW-Green Bay

_______________________________________
Sarah Mangelsdorf, Provost and Vice Chancellor for Academic Affairs, UW-Madison

_______________________________________
Jeffrey Russell, Vice Provost for Lifelong Learning and Dean of the Division of Continuing Studies, UW-Madison

_______________________________________
John Koker, Interim Provost and Vice Chancellor for Academic Affairs, UW-Oshkosh

_______________________________________
Susan Adams, Director of Continuing Education, UW-Oshkosh

_______________________________________
Robert Ducoffe, Provost and Vice Chancellor for Academic Affairs, UW-Parkside

_______________________________________
Emmanuel Otu, Dean, College of Natural and Health Sciences, UW-Parkside

_______________________________________
D. Joanne Wilson, Acting Provost and Vice Chancellor for Academic Affairs, UW-Platteville

_______________________________________
Michael Gau, Assistant Executive Director, Continuing Education, UW-Platteville

_______________________________________
Greg Summers, Provost and Vice Chancellor for Academic Affairs, UW-Stevens Point

_______________________________________
Wayne Sorenson, Director of Continuing Education, UW-Stevens Point
Patrick Guilfoile, Provost and Vice Chancellor for Academic and Student Affairs, UW-Stout

Joni Geroux, Director, Professional Education Programs and Services, UW-Stout

Susan L. Elrod, Provost and Executive Vice Chancellor, UW-Whitewater

Seth Meisel, Interim Dean, School of Graduate Studies and Continuing Education, UW-Whitewater
Attachment B

Collaborative Online Master of Science in Applied Biotechnology
Academic Director Job Description

The Academic director for the Online Master of Science in Applied Biotechnology (MS-ABT) program is the campus representative to the degree. He/she is the liaison between campus administration, faculty and the degree and works closely and collaboratively with the campus continuing education (CE) program manager assigned to the degree and Division of Continuing Education, Outreach and E-Learning on issues pertaining to the degree.

The Academic director must be a tenured or tenure-track member of the faculty on campus and have disciplinary expertise in a related field. He/she must be in good standing with senior campus administrators, deans, department heads, and fellow faculty members. He/she should understand faculty governance procedures and be effective in moving curricular and administrative issues through campus channels expeditiously.

This is a (up to) 0.25 time annual administrative appointment similar to a shared department chair position. Specific responsibilities include:

- Campus representative to the degree, curriculum oversight, periodic meetings with program faculty and partners
- Oversight and responsibility for ensuring that the campus is adequately staffing courses/course sections for the MS-ABT program for which it is responsible
- Review of course evaluations for MS-ABT courses, working with instructors who are not performing well, etc.
- Provide academic advising
- Review and approve as appropriate credit for prior learning for students requesting credit for the MS-ABT degree
- Work with accreditation processes insofar as they pertain to the MS-ABT degree as needed
- Review adjunct instructors for the MS-ABT degree as needed
- Review student admissions decisions for the MS-ABT degree as needed
- Address students conduct issues in the MS-ABT degree
- Lead program assessment and assist with program reviews
- Other duties as assigned
Attachment C

Continuing Education, Outreach and E-Learning (CEOEL)

Joint Creation and Ownership Agreement

Online Courses in the *Master of Science in Applied Biotechnology degree program*

**Agreement Summary**

The undersigned author (the “Author”) has agreed to develop course content for a course(s) in the online *Master of Science in Applied Biotechnology degree program*, as further described in Attachment A to this agreement. The content developed will be owned by the Author(s) of such content. The University may use course content as it wishes under a license from the Author to the Board of Regents of the University of Wisconsin System (the “University”), and the Author may also use the course content consistent with the terms of this agreement. The actual online courses that are developed and based on course content will be the exclusive property of the University.

**The Agreement**

The Author and the University agree that:

1. **Rights Granted**
   A. Contributions of original course content will be owned by the Author(s) of such content. The Author grants the University a perpetual, royalty-free, non-exclusive license to use course content for educational or research purposes. The online courses and any and all works based upon, derived from, or incorporating the online courses that are developed from this content for the Master of Science in Applied Biotechnology degree are the exclusive property of the University.

2. **Completion of Author’s Contribution to the Course(s); Other Obligations**
   A. The Author agrees to prepare the course content including collateral material such as syllabi, illustrations, charts, graphs, handouts, references lists, and other related items on the schedule and in the form agreed to in Attachment A (i.e. Deliverables and associated timeline for completion of course development work).
   B. The Author will make a good faith effort to attend all training sessions relating to this online degree program.
   C. The University, in consultation with the Author, will make all decisions concerning course design.
   D. In the performance of work under this agreement, the Author will make a good faith effort to perform all work with a high degree of professionalism and consistent with prevailing academic standards.
   E. The Author agrees that the University may terminate this agreement if the Author fails to meet the obligations herein including those described in the Attachment A, in which case the University will be entitled recover any sums or other resources advanced to the Author in connection with this agreement.
   F. The University agrees that the Author may terminate this agreement if the University fails to meet any of its obligations herein, in which case the Author may keep any compensation already earned under this agreement.
3. Quoted Material
   A. The Author and the University will use copyrighted material in compliance with State and Federal laws and Board of Regents’ Policies.

4. Publication of the Work
   A. The online course(s) will be distributed, transmitted or published by the University as soon as circumstances permit, at the University’s expense, in a manner deemed appropriate by the University.

5. Copyright
   A. The University will decide whether to register copyright for the online courses in the University’s name and at its expense.

6. Author's Warranty
   A. The Author warrants that he or she is the owner of the course content or has cleared the necessary rights in the course content to enter into this agreement and fulfill its obligations. The Author acknowledges that he or she has made a good faith effort to follow applicable laws and the University of Wisconsin System Policy on Copyrightable Instructional Materials Ownership, Use and Control (GAPP27) and that the course content does not infringe any copyright, violate any property rights, or contain any scandalous, libelous, or unlawful matter.
   B. The Author will defend, indemnify and hold harmless the University against all claims, suits, costs, damages, and expenses arising from any scandalous, libelous, or unlawful matter contained or alleged to be contained in the course content or any infringement or violation by the course content of any copyright or property right.

7. Consideration
   In consideration of this agreement, the University may contribute the following resources to the creation of the online courses for the Master of Science in Applied Biotechnology degree program:
   a) graphics
   b) instructional design
   c) production assistance
   d) course maintenance and backup
   e) marketing to prospective students
   f) hardware
   g) technical assistance
   h) teaching load credit for the first semester of course
   i) funding

   The specific resources to be provided to the Author under this agreement are detailed in Attachment A.

8. Subsidiary Rights
   A. The Author will seek prior written consent of the University to publish any abridged or other version of the course content, any derivative work, or any content of similar character that might interfere with enrollment in the online courses covered by this Agreement. The University's consent will not unreasonably be withheld. Nothing in this agreement shall prohibit the Author from using the course content or derivative works for non-commercial educational or research purposes.
9. Revisions
   A. The Author will update and revise the course content at the University’s request during the term of this agreement. The Author agrees to update the content within one hundred twenty (120) days of receipt of a written request from the Dean of Continuing Education, Outreach and E-Learning or his/her designees. If the Author is unable or unwilling to make any requested revisions, the University may have revisions made by an author approved by the appropriate department.

10. Term and Termination
   A. This agreement will remain in effect until further notice and can be terminated by either party with 120 days’ written notice. Upon termination, the rights granted to the University and Author relating to the course content will remain in effect. The rights to the online courses in the Master of Science in Applied Biotechnology degree will remain the exclusive property of the University.

11. Amendments
   A. The written provisions contained in this agreement are the entire agreement made between the author and the University concerning this course content, and any amendments to this agreement will not be valid unless made in writing and signed by all the parties.

12. Construction, Binding Effect, and Assignment
   A. This agreement will be construed and interpreted according to the laws of the State of Wisconsin and will be binding upon the parties hereto.

In Witness Whereof, the parties have duly executed this agreement as of the date below

____________________________________   ______________________
Author   Date

____________________________________   ______________________
By Authorized Officer   Date
The University of Wisconsin Extension

Reviewed and approved by UW System Legal Affairs, June 2016.
REQUEST FOR AUTHORIZATION TO IMPLEMENT A
COLLABORATIVE ONLINE
MASTER OF SCIENCE DEGREE IN
APPLIED BIOTECHNOLOGY

ABSTRACT

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

PROGRAM IDENTIFICATION

Institution Name
University of Wisconsin-Green Bay
University of Wisconsin-Madison
University of Wisconsin-Oshkosh
University of Wisconsin-Parkside
University of Wisconsin-Platteville
University of Wisconsin-Stevens Point
University of Wisconsin-Stout
University of Wisconsin-Whitewater
With administrative and financial support from the University of Wisconsin System – Division of Continuing Education, Outreach and E-Learning (referred hereafter as CEOEL)

Title of Proposed Program
Master of Science in Applied Biotechnology

Degree/Major Designations
Master of Science

Mode of Delivery
Collaborative and Distance Education (100% Online)
Projected Enrollments and Graduates by Year Five

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

<table>
<thead>
<tr>
<th>Students/Year</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Students</td>
<td>35</td>
<td>70</td>
<td>75</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Continuing Students</td>
<td>31</td>
<td>83</td>
<td>126</td>
<td>152</td>
<td></td>
</tr>
<tr>
<td>Total Enrollment</td>
<td>35</td>
<td>101</td>
<td>158</td>
<td>206</td>
<td>232</td>
</tr>
<tr>
<td>Graduating Students</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>16</td>
<td>28</td>
</tr>
</tbody>
</table>

Tuition Structure

Program tuition for the M.S. in Applied Biotechnology program will be set at $850/credit for 2019–2020 and will be identical at all eight partner institutions. The tuition rate is based on market demand estimates as well as comparisons with other master’s level online programs offered by the University of Wisconsin (UW) System and nationally, and will be charged outside the credit plateau, if approved by the Board of Regents. Students will not be required to pay any additional fees as part of the program, except for the cost of their books. There is no tuition differential for out-of-state students. This tuition pricing approach and structure follows the current UW System pricing guidelines for distance education programs.¹

Department or Functional Equivalent

This is a highly collaborative, interdisciplinary program that follows a home campus model. Students will select and enroll at a home campus from which they will receive academic supports and the degree is conferred. The schools/colleges and departments that will offer courses for this program at each institution are as follows:

- UW-Green Bay, College of Science, Engineering and Technology, Biological Science Department
- UW-Madison, School of Medicine and Public Health, Department of Cell and Regenerative Biology
- UW-Oshkosh, College of Business, Management and Human Resources Department
- UW-Parkside, College of Natural and Health Sciences, Chemistry Department

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

**Proposed Date of Implementation**
September 2019 pending approval of the Higher Learning Commission (HLC)

**DESCRIPTION OF PROGRAM**

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

**Student Learning Outcomes and Program Objectives**
Students completing the M.S. in Applied Biotechnology degree will gain the following core competencies and learning outcomes:

**Competency A – Demonstrate professional and scientific communication appropriate for biotechnology settings**
Upon completion of the program, students will be able to:
- Select the most appropriate modalities, methodologies, tools, and practices to communicate complex ideas effectively across diverse audiences
- Demonstrate effective listening, written, verbal, and nonverbal communication skills
- Construct and deliver effective professional presentations

**Competency B – Demonstrate comprehensive understanding of organizational processes and product development pipelines**
Upon completion of the program, students will be able to:
- Evaluate and describe systems of product research, development, and production
• Analyze the potential for commercialization for innovations within the biotechnology industry
• Critique and integrate changes to an existing product development pipeline
• Compare organizational processes employed by biotech firms

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

Upon completion of the program, students will be able to:
• Compare and contrast emerging with existing technologies
• Exhibit strong technical knowledge to evaluate and choose appropriate technologies
• Demonstrate the ability to read, interpret and apply scientific literature
• Demonstrate competency in data analyses and statistics

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

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

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

Upon completion of the program, students will be able to:
• Demonstrate understanding of relevant domestic and global regulatory agencies, laws, policies and guidances
• Assess intellectual property considerations in biotechnology
• Justify the importance of quality and risk management in biotechnology and explain current good practices

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

Upon completion of the program, students will be able to:
• Recognize, foster and apply principles of ethical and professional conduct
• Identify professional opportunities and personal success by acquiring knowledge, networking, and other career development strategies
• Understand cultural differences that exist in the global marketplace
Program Requirements and Curriculum

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

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

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

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Number of Credits</th>
<th>Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Core Courses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABT 700</td>
<td>Principles of Biotechnology</td>
<td>3</td>
<td>Platteville</td>
</tr>
<tr>
<td>ABT 705</td>
<td>Ethics, Safety, and Regulatory Environments in Biotechnology</td>
<td>3</td>
<td>Green Bay</td>
</tr>
<tr>
<td>ABT 710</td>
<td>Professional and Technical Communication in Biotechnology</td>
<td>3</td>
<td>Stout</td>
</tr>
<tr>
<td>ABT 715</td>
<td>Techniques in Biotechnology</td>
<td>3</td>
<td>Parkside</td>
</tr>
<tr>
<td>ABT 720</td>
<td>Experimental Design and Analysis in Biotechnology</td>
<td>3</td>
<td>Whitewater</td>
</tr>
<tr>
<td>ABT 725</td>
<td>Leadership in Organizations</td>
<td>3</td>
<td>Oshkosh</td>
</tr>
<tr>
<td></td>
<td><strong>Track 1 – Quality Assurance and Compliance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABT 735</td>
<td>Quality Control and Validation</td>
<td>3</td>
<td>Madison</td>
</tr>
<tr>
<td>ABT 740</td>
<td>Regulatory Practice and Compliance</td>
<td>3</td>
<td>Madison</td>
</tr>
<tr>
<td>ABT 745</td>
<td>Industrial Applications in Regulatory Affairs</td>
<td>3</td>
<td>Green Bay</td>
</tr>
<tr>
<td></td>
<td><strong>Track 2 – Business Management</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABT 750</td>
<td>Biotechnology Marketing and Entrepreneurship</td>
<td>3</td>
<td>Parkside</td>
</tr>
<tr>
<td>ABT 755</td>
<td>Global Operations and Supply Chain Management</td>
<td>3</td>
<td>Whitewater</td>
</tr>
</tbody>
</table>
Assessment of Outcomes and Objectives

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

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

Diversity

The collaborative online program model was established, in part, to increase access to higher education for primarily nontraditional students and to maximize the educational benefits of diversity. Many students from underrepresented minority groups, first-generation Americans, first-generation college students, and low-income students are included in the definition of nontraditional students. Nontraditional students may have family or work responsibilities that prevent them from attending school in traditional formats. The online delivery format will provide opportunities to those students who are time and place bound, and do not reside within close proximity to an existing UW institution. The program design recognizes that non-

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABT 760</td>
<td>Quality and Project Management</td>
<td>3</td>
<td>Stout</td>
</tr>
<tr>
<td></td>
<td><strong>Track 3 - Research and Development</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABT 765</td>
<td>Assessing Innovation in Biotechnology</td>
<td>3</td>
<td>Platteville</td>
</tr>
<tr>
<td>ABT 770</td>
<td>Product Development</td>
<td>3</td>
<td>Stevens Point</td>
</tr>
<tr>
<td>ABT 775</td>
<td>Tools for Data Analysis</td>
<td>3</td>
<td>Oshkosh</td>
</tr>
<tr>
<td></td>
<td><strong>Capstone Courses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABT 789</td>
<td>Pre-Capstone</td>
<td>1</td>
<td>Stevens Point</td>
</tr>
<tr>
<td>ABT 790</td>
<td>Capstone</td>
<td>3</td>
<td>Stevens Point</td>
</tr>
</tbody>
</table>
traditional students come to the learning environment from diverse backgrounds, with unique knowledge and experiences, and looking for opportunities to share that knowledge with others. The strength of this program and the success of our students is, in large part, based on our ability to attract and retain a diverse adult student audience.

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

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

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

Collaborative Nature of the Program

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

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

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

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

CEOEL will coordinate external engagement, input, and advice through a Program Advisory Board consisting of 12 to 15 representatives from industry who will also serve as advisors, ambassadors and referral agents to the program. The academic directors from each of the eight partner institutions will also hold seats on the Board. The M.S. in Applied Biotechnology Advisory Board will meet biannually. The board members will be asked to help host students working on capstone projects, and to help create school-to-work transitions so that as students graduate from the program, they will move to gainful employment. The program manager will provide assistance to the board, coordinate meetings, and so on. The academic directors of the program and program manager will engage with board members and ensure that the board is connected to the program in constructive and positive ways. Board meetings will provide opportunities to present program progress and successes, and to gather feedback regarding changes in the industry and how those changes may affect program graduates. The meetings will also help to ensure that the program and curriculum stays relevant to trends in the field.

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

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

**Projected Time to Degree**

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

**Program Review**

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

**Accreditation**

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

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

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

At UW-Green Bay, the proposed online MS in Applied Biotechnology Degree Program complements and integrates well with programs within the College of Science, Engineering, and Technology, including Human Biology and Natural and Applied Sciences. UW–Green Bay has a strong record of academic success in preparing individuals for careers in biotechnology-related fields such as biology, chemistry, engineering, business, and pre-professional human and veterinary medicine. Graduates from UW–Green Bay are highly competitive for careers in industry or government, as well as graduate or professional education programs. Presently our institution does not offer a graduate level program in Biotechnology; however, students would benefit from this program for placement or advancement in biotechnology careers.

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

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

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

At UW-Platteville, a graduate degree-awarding program in the biological sciences does not currently exist. Both an emphasis in molecular/genetics biology as well as a minor in biotechnology are popular educational tracts, with many alumni currently employed in the biotech sector. The M.S. in Applied Biotechnology degree will complement our existing program by continuing to support Platteville alumni as they advance their careers.

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

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

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

Other Programs in the University of Wisconsin System

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

Unique features of the proposed collaborative online M.S. in Applied Biotechnology degree program include its fully asynchronous online delivery format, statewide focus consistent with the geographical locations of the eight academic partners, and unique primary target audience to include mid-level managers currently working in diverse biotechnology and related settings who require more flexibility as provided through a fully online academic program. The audience may also include those with a science background who reside in areas distant from Madison that want to expand their knowledge of the biotechnology industry so they can enter the field and expand their career options.

Need as Suggested by Current Student Demand

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

**Need as Suggested by Market Demand**

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

- The demand for talented biotechnology professionals is at an all-time high. This demand is expected to continue to grow throughout 2018 and beyond.
- There is consensus among the opinion leaders interviewed that there is a significant need for a master’s in biotechnology that prepares working biotechnology professionals to succeed in leadership and management positions within the industry.
- Opinion leaders identified support for an online program based, in part, on its accessibility and flexibility for working professionals.
- The current master’s in biotechnology marketplace is competitive throughout the United States. Nationally, there are at least five competing institutions that offer their master’s level biotechnology program through a hybrid or online delivery.
- Within the region contiguous to the University of Wisconsin there are at least five competing programs that offer a master’s level degree in biotechnology. However, none of these programs are offered through online delivery. In addition, there are no competing online programs located in Wisconsin.
- Nationally, biotechnology professionals highlighted in the occupational analysis are projected to experience an annual growth rate of 1.8% over the next 10 years.
- A favorable environment exists for launching the online graduate degree program in Applied Biotechnology.2

A more extensive occupational and demographic analysis revealed that over the past five years, biotechnology professionals in Wisconsin have experienced an average annual growth rate of 0.8%, less than the national average for biotechnology professions (1.2%). Forecasted growth rates for all biotech occupations are either equivalent to the national average or higher, ranging from 0.7% to 1.1% annually on the national scale. Additionally, biotech professionals have a low unemployment rate (3.1%), significantly lower than the national average of 4.3% for all occupations.3

---

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

3 https://data.bls.gov/timeseries/LNS14000000
UNIVERSITY OF WISCONSIN COLLABORATIVE DEGREE
COST AND REVENUE PROJECTION NARRATIVE
MASTER OF SCIENCE (M.S.) IN APPLIED BIOTECHNOLOGY

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

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

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

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

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

It is difficult to estimate the student FTE enrollments, given the anticipated course enrollment patterns of the non-traditional students. Based on enrollment data for other collaborative online programs, the vast majority of students will enroll part-time. Further, tuition revenues will be based on projected credit and course enrollment, and charged outside of the credit plateau.

Based on this formula, the mean conversion quotient calculated over five years is 0.36.
Section II – Credit Hours
Nine courses will be offered/taught in the first academic year. Beginning in year two, each of the 16 courses will be offered and taught at least once during the academic year, and offerings will increase as enrollment grows as reflected in the Cost and Revenue Projection Spreadsheet. It is anticipated that each student will enroll in 3-5 courses each year. Projected total credit hours represent projected student course enrollments multiplied by 3 credit hours per course.

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

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

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

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

Academic and Student Support (UW Partner campuses):
Each partner institution will receive $20,000 per year, plus fringe at $6,130, to support the assignment of an academic director to coordinate the program at their respective campus. Faculty and instructional staff salary and fringe costs will be attributable to course development, revision, and instruction, and paid to faculty and staff as an ad hoc sum on a per course rate. The 16 online courses will be developed over 2-year period at a cost of $5,000 per course developed, plus fringe. Courses will be reviewed and revised every 2-3 years, with 4 course revisions.

See UW System Administration Accountability Dashboard technical notes available at https://www.wisconsin.edu/accountability/access/.
occurring each year at a cost of $3,000 per revision, plus fringe. Online instructional salary costs are anticipated to be $9,000 per course, plus fringe. Finally, each partner institution will receive $5,000, plus fringe to cover the cost of student support services. All figures represent salary and fringe costs calculated at the rate of 30.65% of salary.

Administrative Support (CEOEL):

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

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

Other Direct Expenses

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

Section VI – Net Revenue

As part of the Adult Student Initiative, General Purpose Revenues (GPR) allocated to CEOEL will be used as temporary start-up funding to cover the expenses associated with the development and initial delivery of the proposed M.S. in Applied Biotechnology program. The projected contribution from these revenue sources will offset program losses reflected in section VI. It is expected the program will become self-supporting from its tuition program revenues within five years of enrolling students.

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

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

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

**Cost and Revenue Projection For M.S. in Applied Biotechnology**

<table>
<thead>
<tr>
<th>Items</th>
<th>FY 19-20</th>
<th>FY 20-21</th>
<th>FY 21-22</th>
<th>FY 21-23</th>
<th>FY 23-24</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year 1</td>
<td>Year 2</td>
<td>Year 3</td>
<td>Year 4</td>
<td>Year 5</td>
</tr>
<tr>
<td>I</td>
<td>Enrollment (New Student) Headcount</td>
<td>35</td>
<td>70</td>
<td>75</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Enrollment (Continuing Student Headcount</td>
<td>-</td>
<td>31</td>
<td>83</td>
<td>126</td>
</tr>
<tr>
<td></td>
<td>Enrollment (New Student) FTE</td>
<td>13</td>
<td>25</td>
<td>27</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Enrollment (Continuing Student) FTE</td>
<td>-</td>
<td>11</td>
<td>30</td>
<td>45</td>
</tr>
<tr>
<td>II</td>
<td>Total New Credit Hours Enrolled</td>
<td>276</td>
<td>837</td>
<td>1,398</td>
<td>1,761</td>
</tr>
<tr>
<td></td>
<td>Courses Offered/Taught</td>
<td>9</td>
<td>18</td>
<td>23</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Course Student Enrollments</td>
<td>92</td>
<td>279</td>
<td>466</td>
<td>587</td>
</tr>
<tr>
<td></td>
<td>Existing Student Credit Hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>FTE of Faculty/Instructional Staff</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>FTE of Admin Staff</td>
<td>3</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>IV</td>
<td>New Revenues</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>From Tuition ($850 per credit)</td>
<td>234,600</td>
<td>711,450</td>
<td>1,188,300</td>
<td>1,496,850</td>
</tr>
<tr>
<td></td>
<td>From Fees</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Program Revenue - Grants</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Program Revenue - Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reallocation of GPR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total New Revenue</td>
<td>234,600</td>
<td>711,450</td>
<td>1,188,300</td>
<td>1,496,850</td>
</tr>
<tr>
<td>V</td>
<td>New Expenses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Salaries plus Fringes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>UW Partner Institution Academic and Student Support Activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Academic Director / Program Support</td>
<td>160,000</td>
<td>160,000</td>
<td>209,040</td>
<td>209,040</td>
</tr>
<tr>
<td></td>
<td>Faculty Course/Content Development</td>
<td>40,000</td>
<td>40,000</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Faculty Course/Content Revisions</td>
<td>0</td>
<td>0</td>
<td>26,130</td>
<td>26,130</td>
</tr>
<tr>
<td></td>
<td>Faculty Course Instruction</td>
<td>81,000</td>
<td>162,000</td>
<td>270,446</td>
<td>340,997</td>
</tr>
<tr>
<td></td>
<td>Student Services</td>
<td>40,000</td>
<td>40,000</td>
<td>52,260</td>
<td>52,260</td>
</tr>
<tr>
<td></td>
<td>UW-Ext CEOEL Administrative Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Program Management</td>
<td>107,114</td>
<td>107,114</td>
<td>107,114</td>
<td>107,114</td>
</tr>
<tr>
<td></td>
<td>Instructional Design &amp; Media</td>
<td>177,962</td>
<td>177,962</td>
<td>86,956</td>
<td>86,956</td>
</tr>
<tr>
<td></td>
<td>Student Tech Suport</td>
<td>10,599</td>
<td>10,599</td>
<td>10,599</td>
<td>10,599</td>
</tr>
<tr>
<td></td>
<td>Marketing &amp; Recruitment</td>
<td>41,456</td>
<td>41,456</td>
<td>41,456</td>
<td>41,456</td>
</tr>
<tr>
<td></td>
<td>Other Expenses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Instructional Supplies and Expenses</td>
<td>4,500</td>
<td>9,000</td>
<td>11,500</td>
<td>14,500</td>
</tr>
<tr>
<td></td>
<td>Marketing Supplies and Expenses</td>
<td>136,000</td>
<td>136,000</td>
<td>136,000</td>
<td>136,000</td>
</tr>
<tr>
<td></td>
<td>Other:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Expenses</td>
<td>798,631</td>
<td>884,131</td>
<td>951,501</td>
<td>1,025,052</td>
</tr>
<tr>
<td>VI</td>
<td>Net Revenue</td>
<td>(564,031)</td>
<td>(172,681)</td>
<td>236,800</td>
<td>471,799</td>
</tr>
</tbody>
</table>

**Narrative:** Attached

*Provost's Signature:*

*Please see Provost joint letter of commitment*
General Assumptions/Guidelines

- The assessment process for collaborative programs is led by an assessment team made up of academic directors for each program with administrative supports provided by the CEOEL program manager.
- The process involves *continuous data collection* by academic semester.
- Aggregate program assessment data (raw data) for each academic semester will be collected from the Academic Directors and distributed to the assessment team two weeks prior to scheduled Quarterly Program Workgroup meetings.
- The first 60-90 minutes of each quarterly meeting will be dedicated to academic program assessment. The discussion will include the following:
  - A review of action item results from the previous quarterly meeting/assessment discussion and plan
  - Discussion/decision regarding items for continued attention/carryover into the next discussion/action plan
  - Review of new (current semester) data, identification/documentation of concerns, identification of priority concerns and development of an action plan
  - Develop, finalize and approve action plan (including specific action steps/interventions, person(s) responsible, resources required, timeline for completion, other)
  - Distribute action plan to Assessment Workgroup

- In this process, the CEOEL program manager is responsible for the following:
  - Collecting and organizing assessment data each semester, and distributing all assessment data two weeks prior to the meeting
  - Scheduling dedicated time on each quarterly meeting agenda for these discussions with the assessment workgroup (AD’s only)
  - Presenting data, facilitating discussions regarding the data (analyzing, interpreting, applying), identifying issues, establishing consensus around priorities and an intervention plan, documenting discussions, and completing/distributing action steps document (*Form to be developed*)
  - Monitoring and communicating progress around action steps

- The fourth Quarterly meeting could be used to summarize the full academic year (including summer) for the program and reconcile outstanding action items before restarting the cycle. The annual schedule could be consistent between programs such as:
  - Summer Semester Review (Fall meeting/September)
  - Fall semester review (Spring meeting/March)
  - Spring Semester and Annual Review (Summer meeting/June)

Academic Program Review and Assessment Plan Components (Semester-based)

- **Primary (direct)**
  - Program Learning Outcomes/Competencies Assessment
    - Specific activities/assignments attached to specific Learning Outcomes (PSLO’s, other) Metric with rubrics (no more than one metric per learning outcome/competency)
  - Capstone Course Reports…Culminating Experience?
Note: In this process, ADs will work with respective instructor before the term to verify rubrics, scale and awareness. At end of term, AD’s will collect, organize and share review data with program manager.

- **Secondary**
  - *Program Activity/Student Performance* (Review of Program-Specific Collaborative Program Report)
    - **Program Efficiency/Performance**
      - Enrollment Goals
        - Student Headcount* (Total, Distribution by campus)
        - Course Enrollments* (Total, Distribution by campus)
        - Average enrollments per student*
      - Program Retention Report/Rate
      - Graduations
      - Average enrollments per course section*
    *Comparison to previous primary academic semester(s) for fall and spring....Summer comparisons to same semester previous year
  - **Student Satisfaction**
    - End of Course Evaluations (CEOEL-administered)

**Annual Reporting**
- Summer Semester Review (Fall meeting/September)
- Fall semester review (Spring meeting/March)
- Spring Semester and Annual Review (Summer meeting/June)
Collaborative Program Assessment Report Form

Name of Program: MS in Applied Biotechnology
Assessment Period: _____Summer 20___  _____Fall 20___  _____Spring 20___  _____Annual FY 20___ - 20___

Review and Summarize Status of Actions from Previous Assessment Report(s):

Primary Assessment – Program Student Learning Outcomes (Direct Measures – % of students earning xx% or more on PSLO assignment)
- Academic Directors (ADs) should work with respective instructor before the term to verify rubrics, scale and awareness. At end of term, ADs should secure data from instructors and transfer to CEOEL program manager to aggregate, organize and share with partners prior to the quarterly meeting where data will be reviewed and interpreted for action.

<table>
<thead>
<tr>
<th>Program Outcome</th>
<th>Course/Setting</th>
<th>Assessment (Assignment or Activity)...Means of collecting evidence</th>
<th>Interpretation/Results</th>
<th>Action Required (Goal Statement)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Fall 2019</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Spring 2020</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Summer 2020</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary Assessment – All other sources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------</td>
<td>-----------------</td>
<td>-----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td></td>
<td>Component</td>
<td>Owner</td>
<td>Source</td>
<td>Summary/Comments</td>
</tr>
<tr>
<td>End of Course Evaluations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fall</td>
<td>CEOEL Program Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>CEOEL Program Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Summer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>End of Program Evaluations (If utilized)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fall</td>
<td>CEOEL Program Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>CEOEL Program Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Summer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capstone Employer Survey (If utilized)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fall</td>
<td>CEOEL Program Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>CEOEL Program Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Summer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enrollment, Retention and other Program Performance Statistics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student Enrollments (Headcount) – Previous Semester</td>
<td>CEOEL Program Manager/IT</td>
<td>Collaborative Program Report</td>
<td>Fall 2019</td>
</tr>
<tr>
<td></td>
<td>Course Enrollments Previous Semester</td>
<td>CEOEL Program Manager/IT</td>
<td>Collaborative Program Report</td>
<td></td>
</tr>
<tr>
<td></td>
<td>YTD Course Enrollments</td>
<td>CEOEL Program Manager</td>
<td>Collaborative Program Report</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3-Year Enrollment Trend</td>
<td>CEOEL Program Manager</td>
<td>Collaborative Program Report</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Program Graduates - Previous Semester</td>
<td>CEOEL Program Manager</td>
<td>Campuses</td>
<td></td>
</tr>
<tr>
<td>Program Graduates to date</td>
<td>CEOEL Program Manager</td>
<td>Campuses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
<td>-----------------------</td>
<td>----------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retention Rate – Previous Semester</td>
<td>CEOEL Program Manager</td>
<td>Retention Report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retention Rate – past three years</td>
<td>CEOEL Program Manager</td>
<td>Retention Reports</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Age of Students Enrolled – Previous Semester</td>
<td>CEOEL Program Manager</td>
<td>Collaborative Program Report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender Distribution – Previous Semester</td>
<td>CEOEL Program Manager</td>
<td>Collaborative Program Report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of unique courses offered – Previous Term</td>
<td>CEOEL Program Manager</td>
<td>Collaborative Program Report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of courses Sections taught – Previous Term</td>
<td>CEOEL Program Manager</td>
<td>Collaborative Program Report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Enrollments per Course Section – Previous Term</td>
<td>CEOEL Program Manager</td>
<td>Collaborative Program Report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Enrollments per Course Section – 3-year trend</td>
<td>CEOEL Program Manager</td>
<td>Collaborative Program Reports</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-month Post Graduate Interview (if utilized)</td>
<td>CEOEL Program Manager</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Summary Comments** (from discussion with ADs/PM):