APPLIED BIOTECHNOLOGY, M.S.

Every day, biotechnology is working to solve some of the world's most pressing problems—infected and hereditary disease, food security, and sustainable alternatives to fossil fuels—and moving forward with revolutionary solutions.

Whether your experience is based in healthcare, agriculture, or industry—the 100% online University of Wisconsin Master of Science in Applied Biotechnology program will teach you how to bring the best of biotechnology innovation to the market, where it can do the most good.

- First, gain additional understanding of the principles and techniques of biotechnology, ethical, safety, and privacy concerns, funding, intellectual property and patents, professional and technical communication, experimental design and analysis, and organizational leadership—all within the scope of the global biotechnology industry.
- Then focus your learning within one or more specialization tracks: Quality Assurance and Compliance, Business Management, or Research and Development.
- Finally, upon completing your capstone project, you will earn a degree from the University of Wisconsin, one of the largest and most widely respected public higher education systems in the country.

The multi-campus partnership means you’ll learn from expert faculty from across the UW System with strong connections to the industry, and the online format offers working adults like you a flexible, convenient way to pursue an advanced degree.

The **M.S. in Applied Biotechnology Program** is a FULLY ONLINE graduate degree program. If you are seeking the FACE-TO-FACE program, please see the M.S. in Biotechnology (https://guide.wisc.edu/graduate/cell-regenerative-biology/biotechnology-ms/) Program. You can also apply to both under one application fee.

Not sure which program best fits your needs? Contact us to talk more. Call 608-262-9753 or email Bryan (bthusk@wisc.edu) or Michele (michele.smith@wisc.edu).

ADMISSIONS

Please consult the table below for key information about this degree program's admissions requirements. The program may have more detailed admissions requirements, which can be found below the table or on the program's website.

Graduate admissions is a two-step process between academic programs and the Graduate School. **Applicants must meet** the minimum requirements (https://grad.wisc.edu/apply/requirements/) of the **Graduate School as well as the program(s)**. Once you have researched the graduate program(s) you are interested in, apply online (https://grad.wisc.edu/apply/).

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Deadline</td>
<td>July 15</td>
</tr>
<tr>
<td>Spring Deadline</td>
<td>December 15</td>
</tr>
<tr>
<td>Summer Deadline</td>
<td>April 15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GRE (Graduate Record Examinations)</th>
<th>Not required.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Proficiency Test</td>
<td>Every applicant whose native language is not English or whose undergraduate instruction was not in English must provide an English proficiency test score and meet the Graduate School minimum requirements (<a href="https://grad.wisc.edu/apply/requirements/#english-proficiency">https://grad.wisc.edu/apply/requirements/#english-proficiency</a>).</td>
</tr>
<tr>
<td>Other Test(s) (e.g., GMAT, MCAT)</td>
<td>n/a</td>
</tr>
<tr>
<td>Letters of Recommendation Required</td>
<td>2</td>
</tr>
</tbody>
</table>

APPLY TO THE GRADUATE SCHOOL

Applications are submitted online only; paper copy applications are not available. Apply to the Graduate School online and select the "Applied Biotechnology MS" program. This is the online-only degree program, see "Biotechnology, MS" program for the face-to-face degree.

THE GRADUATE SCHOOL'S ONLINE APPLICATION (HTTPS://APPLY.GRAD.WISC.EDU)

The online application and $75 application fee must be submitted electronically to the Graduate School before you can be considered for admission. You are able to apply for up to three programs for the $75 application fee.

ADMISSIONS CRITERIA AND PREREQUISITE COURSEWORK

- Bachelor's degree from an accredited university with a minimum grade point average of 3.0.
- Prerequisite coursework: two semesters college-level lab coursework in biological sciences and/or chemistry, all of which must have a lab component. To satisfy the prerequisite you must have completed either two semesters of biological sciences, two semesters of chemistry, or one semester each of biological sciences and chemistry.
- Professional resume or CV
- Unofficial transcripts. Upon acceptance, official transcripts will be required by the Graduate School.
- Two letters of recommendation (can be initiated and processed online via the Graduate School online application)
- A one- or two-page statement of purpose that is specific to the M.S. in Applied Biotechnology online degree (uploaded via the Graduate School online application) that provides the following:
  - **Summary of your professional and academic background**
  - **Concise description of your short- and long-term professional goals**
  - **Clear explanation of how the online M.S. in Applied Biotechnology degree will help you meet your goals.**

Additional Graduate School resources:

- Graduate School Admission Frequently Asked Questions (https://grad.wisc.edu/apply/#FAQ)
Graduate School Admission Requirements (https://grad.wisc.edu/admissions/requirements/)

If you have any questions about how to apply or about the status of your application, you should contact Bryan Husk (https://www.ms-biotech.wisc.edu/admissions.cfm#bryan).

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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, applications should be completed by July 15 for Fall, December 15 for Spring, and April 15 for Summer.

ONLINE VERSUS FACE TO FACE
The “Applied Biotechnology MS” program is a fully online program. The “Biotechnology MS (http://guide.wisc.edu/graduate/cell-regenerative-biology/biotechnology-ms/)” program is face to face. Not sure which Biotechnology program works best for you? Contact the program (608.262.9753) for more information. You can also apply to both for one application fee.

FUNDING
Resources to help you afford graduate study might include assistantships, fellowships, traineeships, and financial aid. Further funding information (https://grad.wisc.edu/funding/) is available from the Graduate School. Be sure to check with your program for individual policies and restrictions related to funding.

GRADUATE SCHOOL RESOURCES
The M.S. in Applied Biotechnology Program does not offer any scholarships or financial aid.

Students enrolled in this program are not eligible to receive tuition remission from graduate assistantship appointments at this institution. However, students may contact the Office of Student Financial Aid (https://financialaid.wisc.edu/) to discuss federal loan programs and other lending opportunities.

PROGRAM INFORMATION

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS
Review the Graduate School minimum academic progress and degree requirements (http://guide.wisc.edu/graduate/#policiesandrequirementstext), in addition to the program requirements listed below.

MAJOR REQUIREMENTS
MODE OF INSTRUCTION

<table>
<thead>
<tr>
<th>Mode of Instruction</th>
<th>Face to Face</th>
<th>Evening/Weekend</th>
<th>Online</th>
<th>Hybrid</th>
<th>Accelerated</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Accelerated: Accelerated programs are offered at a fast pace that condenses the time to completion. Students typically take enough credits aimed at completing the program in a year or two.

Evening/Weekend: Courses meet on the UW–Madison campus only in evenings and/or on weekends to accommodate typical business schedules. Students have the advantages of face-to-face courses with the flexibility to keep work and other life commitments.

Face-to-Face: Courses typically meet during weekdays on the UW–Madison Campus.

Hybrid: These programs combine face-to-face and online learning formats. Contact the program for more specific information.

Online: These programs are offered 100% online. Some programs may require an on-campus orientation or residency experience, but the courses will be facilitated in an online format.

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 Requirement</td>
<td>16 credits must be graduate-level coursework. Details can be found in the Graduate School’s Minimum Graduate Coursework (50%) policy (<a href="https://policy.wisc.edu/library/UW-1244/">https://policy.wisc.edu/library/UW-1244/</a>).</td>
</tr>
<tr>
<td>Overall GPA Requirement</td>
<td>3.00 GPA required</td>
</tr>
<tr>
<td>Graduate GPA Requirement</td>
<td>This program follows the Graduate School’s policy: <a href="https://policy.wisc.edu/library/UW-1203/">https://policy.wisc.edu/library/UW-1203/</a></td>
</tr>
<tr>
<td>Other Grade Requirements</td>
<td>n/a</td>
</tr>
<tr>
<td>Assessments and Examinations</td>
<td>n/a</td>
</tr>
<tr>
<td>Language Requirements</td>
<td>n/a</td>
</tr>
</tbody>
</table>

COURSE REQUIREMENTS

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABT 700</td>
<td>Principles of Biotechnology</td>
<td>3</td>
</tr>
<tr>
<td>ABT 705</td>
<td>Ethics, Safety, and Regulatory Environments in Biotechnology</td>
<td>3</td>
</tr>
<tr>
<td>ABT 710</td>
<td>Professional and Technical Communication in Biotechnology</td>
<td>3</td>
</tr>
<tr>
<td>ABT 715</td>
<td>Techniques in Biotechnology</td>
<td>3</td>
</tr>
<tr>
<td>ABT 720</td>
<td>Experimental Design and Analysis in Biotechnology</td>
<td>3</td>
</tr>
<tr>
<td>ABT 725</td>
<td>Leadership in Organizations</td>
<td>3</td>
</tr>
<tr>
<td>ABT 789</td>
<td>Pre-Capstone</td>
<td>1</td>
</tr>
<tr>
<td>ABT 790</td>
<td>Capstone</td>
<td>3</td>
</tr>
</tbody>
</table>

Select a minimum of three classes (9 credits) from one or more of the following elective areas: 9
Students in this program may not take courses outside the prescribed curriculum without faculty advisor and program director approval. Students in this program cannot enroll concurrently in other undergraduate, graduate or certificate programs.

**Policies**

**Graduate School Policies**
The Graduate School’s Academic Policies and Procedures (https://grad.wisc.edu/acadpolicy/) provide essential information regarding general university policies. Program authority to set degree policies beyond the minimum required by the Graduate School lies with the degree program faculty. Policies set by the academic degree program can be found below.

**Major-Specific Policies**

**Prior Coursework**
No prior coursework from other institutions may be applied toward program requirements.

**UW-Madison Undergraduate**
No prior coursework from UW-Madison undergraduate career may be applied toward program requirements.

**UW-Madison University Special**
The M.S. in Applied Biotechnology Program may approve UW-Madison University Special students to enroll in specific M.S. in Applied Biotechnology courses. Only coursework specific to the M.S. in Applied Biotechnology Program may be applied toward program requirements. Special students must meet Graduate School requirements if they wish to apply to the M.S. in Applied Biotechnology Program and understand that all credits taken as a special student may be subject to a graduate tuition rate increase upon transfer into the graduate school and used toward degree completion.

**Probation**
This program follows the Graduate School’s Probation policy. (https://policy.wisc.edu/library/UW-1217/)

**Advisor / Committee**
Every graduate student is required to have an advisor. To ensure that students are making satisfactory progress toward a degree, the Graduate School expects them to meet with their advisor on a regular basis. Students will be advised by M.S. in Applied Biotechnology Program staff.

**Credits Per Term Allowed**
15 credits

**Time Limits**
This program follows the Graduate School’s Time Limits policy. (https://policy.wisc.edu/library/UW-1221/)

**Grievances and Appeals**
These resources may be helpful in addressing your concerns:

- Bias or Hate Reporting (https://doso.students.wisc.edu/bias-or-hate-reporting/)
- Graduate Assistantship Policies and Procedures (https://hr.wisc.edu/policies/gapp/#grievance-procedure)
- Hostile and Intimidating Behavior Policies and Procedures (https://hr.wisc.edu/hib/)
  - Office of the Provost for Faculty and Staff Affairs (https://facstaff.provost.wisc.edu/)
  - Dean of Students Office (https://doso.students.wisc.edu/) (for all students to seek grievance assistance and support)
  - Employee Assistance (http://www.eao.wisc.edu/) (for personal counseling and workplace consultation around communication and conflict involving graduate assistants and other employees, post-doctoral students, faculty and staff)
  - Employee Disability Resource Office (https://employeedisabilities.wisc.edu/) (for qualified employees or applicants with disabilities to have equal employment opportunities)
  - Graduate School (https://grad.wisc.edu/) (for informal advice at any level of review and for official appeals of program/departmental or school/college grievance decisions)
  - Office of Compliance (https://compliance.wisc.edu/) (for class harassment and discrimination, including sexual harassment and sexual violence)
  - Office of Student Conduct and Community Standards (https://conduct.students.wisc.edu/) (for conflicts involving students)
  - Ombuds Office for Faculty and Staff (http://www.ombuds.wisc.edu/) (for employed graduate students and post-docs, as well as faculty and staff)
  - Title IX (https://compliance.wisc.edu/titleix/) (for concerns about discrimination)

**Grievance Policy for Graduate Programs in the School of Medicine and Public Health**
Any student in a School of Medicine and Public Health graduate program who feels that they have been treated unfairly in regards to educational decisions and/or outcomes or issues specific to the graduate program, including academic standing, progress to degree, professional activities, appropriate advising, and a program’s community standards by a faculty member, staff member, postdoc, or student has the right to complain about the treatment and to receive a prompt hearing of the grievance following these grievance procedures. Any student who discusses, inquires about, or participates in the grievance procedure may do so openly and shall not be subject to intimidation, discipline, or retaliation.
because of such activity. Each program’s grievance advisor is listed on the
“Research” tab of the SMPH intranet (https://intranet.med.wisc.edu/).

Exclusions

This policy does not apply to employment-related issues for Graduate
Assistants in TA, PA and/or RA appointments. Graduate Assistants will
utilize the Graduate Assistantship Policies and Procedures (https://
hr.wisc.edu/policies/gapp/) (GAPP) grievance process to resolve
employment-related issues.

This policy does not apply to instances when a graduate student wishes
to report research misconduct. For such reports refer to the UW-Madison
Policy for Reporting Research Misconduct for Graduate Students and
Postdoctoral Research Associates (https://research.wisc.edu/kb-article/?
id=84924).

Requirements for Programs

The School of Medicine and Public Health Office of Basic Research,
Biotechnology and Graduate Studies requires that each graduate program
designate a grievance advisor, who should be a tenured faculty member,
and will request the name of the grievance advisor annually. The program
director will serve as the alternate grievance advisor in the event that
the grievance advisor is named in the grievance. The program must
notify students of the grievance advisor, including posting the grievance
advisor’s name on the program’s Guide page and handbook.

The grievance advisor or program director may be approached for possible
grievances of all types. They will spearhead the grievance response
process described below for issues specific to the graduate program,
including but not limited to academic standing, progress to degree,
professional activities, appropriate advising, and a program’s community
standards. They will ensure students are advised on reporting procedures
for other types of possible grievances and are supported throughout the
reporting process. Resources (https://grad.wisc.edu/current-students/
#reporting-incidents) on identifying and reporting other issues have been
compiled by the Graduate School.

Procedures

1. The student is advised to initiate a written record containing
dates, times, persons, and description of activities, and to update
this record while completing the procedures described below.
2. If the student is comfortable doing so, efforts should be made
to resolve complaints informally between individuals before
pursuing a formal grievance.
3. Should a satisfactory resolution not be achieved, the student
should contact the program’s grievance advisor or program
director to discuss the complaint. The student may approach
the grievance advisor or program director alone or with a UW-
Madison faculty or staff member. The grievance advisor or
program director should keep a record of contacts with regards
to possible grievances. The first attempt is to help the student
informally address the complaint prior to pursuing a formal
grievance. The student is also encouraged to talk with their
faculty advisor regarding concerns or difficulties.
4. If the issue is not resolved to the student’s satisfaction, the
student may submit a formal grievance to the grievance advisor
or program director in writing, within 60 calendar days from the
date the grievant first became aware of, or should have become
aware of with the exercise of reasonable diligence, the cause
of the grievance. To the fullest extent possible, a grievance
shall contain a clear and concise statement of the grievance and
indicate the issue(s) involved, the relief sought, the date(s) the
incident or violation took place, and any specific policy involved.
5. On receipt of a written grievance, the following steps will occur.
The final step must be completed within 30 business days from
the date the grievance was received. The program must store
documentation of the grievance for seven years. Significant
grievances that set a precedent may be stored indefinitely.
   a. The grievance advisor or program director will convene
      a faculty committee composed of at least three
      members to manage the grievance. Any faculty
      member involved in the grievance or who feels that
      they cannot be impartial may not participate in the
      committee. Committee composition should reflect
      diverse viewpoints within the program.
   b. The faculty committee, through the grievance advisor
      or program director, will obtain a written response from
      the person or persons toward whom the grievance is
      directed. The grievance advisor or program director will
      inform this person that their response will be shared
      with the student filing the grievance.
   c. The grievance advisor or program director will share
      the response with the student filing the grievance.
   d. The faculty committee will make a decision regarding
      the grievance. The committee’s review shall be
      fair, impartial, and timely. The grievance advisor or
      program director will report on the action taken by
      the committee in writing to both the student and the
      person toward whom the grievance was directed.
6. If either party (the student or the person or persons toward
   whom the grievance is directed) is unsatisfied with the decision
   of the program’s faculty committee, the party may file a written
   appeal to the SMPH senior associate dean for basic research,
   biotechnology and graduate studies within 10 business days from
   the date of notification of the program’s faculty committee. The
   following steps will occur:
      a. The grievant will be notified in writing, within 5 business
         days of the written appeal, acknowledging receipt of
         the formal appeal and establishing a timeline for the
         review to be completed.
      b. The senior associate dean or their designee may
         request additional materials and/or arrange meetings
         with the grievant and/or others. If meetings occur, the
         senior associate dean or their designee will meet with
         both the grievant and the person or persons toward
         whom the grievance is directed.
      c. The senior associate dean or their designee will
         assemble an ad hoc committee of faculty from outside
         of the student’s graduate program and ask them to
         prepare a written recommendation on whether to
         uphold or reverse the decision of the program on
         the student’s initial grievance. The committee may
         request additional materials and/or arrange meetings
         with the grievant and/or others. If meetings occur,
         the committee will meet with both the grievant and
         the person or persons toward whom the grievance is
         directed.
      d. The senior associate dean or their designee will make a
         final decision within 20 business days of receipt of the
         committee’s recommendation.
e. The SMPH Office of Basic Research, Biotechnology, and Graduate Studies must store documentation of the grievance for seven years. Grievances that set a precedent may be stored indefinitely.

7. The student may file an appeal of the School of Medicine and Public Health decision with the Graduate School. See the Grievances and Appeals section of the Graduate School’s Academic Policies and Procedures (https://grad.wisc.edu/documents/grievances-and-appeals/).

Time Limits

Steps in the grievance procedures must be initiated and completed within the designated time periods except when modified by mutual consent. If the student fails to initiate the next step in the grievance procedure within the designated time period, the grievance will be considered resolved by the decision at the last completed step.

OTHER

n/a

PROFESSIONAL DEVELOPMENT

GRADUATE SCHOOL RESOURCES

Take advantage of the Graduate School’s professional development resources (https://grad.wisc.edu/pd/) to build skills, thrive academically, and launch your career.

LEARNING OUTCOMES

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

PEOPLE

The UW Applied Biotechnology curriculum is designed and taught in collaboration by faculty from seven University of Wisconsin campuses: UW–Green Bay, UW–Madison, UW–Oshkosh, UW–Parkside, UW–Platteville, UW–Stevens Point, and UW–Whitewater. However, by selecting UW–Madison as your campus, your degree will come from UW–Madison.

Anjon (Jon) Audhya, Ph.D.

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• Professor, School of Medicine and Public Health

Natalie Betz, Ph.D.

• Academic Director for the M.S. in Biotechnology Program
• Academic Director for the UW-Madison online M.S. in Applied Biotechnology
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