BIOCHEMISTRY, MS

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

Face to Face	Evening/ Weekend	Online	Hybrid	Accelerated
Yes	No	No	No	No

Mode of Instruction Definitions

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

Requirement	Detail
Minimum Credit Requirement	48 credits
Minimum Residence Credit Requirement	42 credits
Minimum Graduate Coursework Requirement	48 credits must be graduate-level coursework. Refer to the Graduate School: Minimum Graduate Coursework (50%) Requirement policy: https://policy.wisc.edu/library/UW-1244 (https://policy.wisc.edu/library/UW-1244/).
Overall Graduate GPA Requirement	3.00 GPA required. Refer to the Graduate School: Grade Point Average (GPA) Requirement policy: https://policy.wisc.edu/library/UW-1203 (https://policy.wisc.edu/library/UW-1203/).
Other Grade Requirements	n/a
Assessments and Examinations	Upon completion of the Graduate School and program minimum requirements for a master's degree, the student's thesis committee will determine whether or not to confer the degree.
Language Requirements	n/a

REQUIRED COURSES

Code	Title	Credits
Program Course Requirements		
BIOCHEM 719	From Atoms to Molecules	3
BIOCHEM/ BMOLCHEM 701	Responsible Conduct in Bioscience Research	2
BMOLCHEM 720	Experimental Design and Paradigms in Cellular Biochemistry and Molecular Biology	3
BIOCHEM 721	Biochemical Communication	2
Research Requirements		*30*
BIOCHEM 990	Research	
BMOLCHEM 990	Advanced Biomolecular Chemistry and Research	
Breadth Requirement		*6*
Students must complete a minimum of two additional graduate-level (Grad 50%) courses from the following list of didactic or laboratory courses in order to fulfill their breadth requirements, and a minimum of 6 total credits is required. In consultation with their committee, students must complete courses from at least 2 of the following categories: physical sciences, biological sciences, or quantitative sciences. One-credit seminars do not count toward the breadth requirements.		
NUTR SCI/ BIOCHEM 510	Nutritional Biochemistry and Metabolism	
BIOCHEM 570	Computational Modeling of Biological Systems	
BIOCHEM/ M M & I 575	Biology of Viruses	
BIOCHEM 601	Protein and Enzyme Structure and Function	
BIOCHEM/B M I/ BMOLCHEM/ MATH 609	Mathematical Methods for Systems Biology	
BIOCHEM/ GENETICS/ MICROBIO 612	Prokaryotic Molecular Biology	
BIOCHEM/ NUTR SCI 619	Advanced Nutrition: Intermediary Metabolism of Macronutrients	
BIOCHEM/ GENETICS/ MD GENET 620	Eukaryotic Molecular Biology	
BIOCHEM/ BOTANY 621	Plant Biochemistry	
BIOCHEM 625	Mechanisms of Action of Vitamins and Minerals	
BIOCHEM/ NUTR SCI 645	Molecular Control of Metabolism and Metabolic Disease	
CHEM 665	Biophysical Chemistry	

MICROBIO/ BMOLCHEM 668	Microbiology at Atomic Resolution
BMOLCHEM 675	Advanced or Special Topics in Biomolecular Chemistry
BIOCHEM/ CHEM 704	Chemical Biology
BIOCHEM 729	Advanced Topics (IPiB Seminar, Practicum in Undergraduate Teaching, or Responsible Conduct of Research)
F&W ECOL/ HORT/STAT 571	Statistical Methods for Bioscience I
MICROBIO 607	Advanced Microbial Genetics
NEURODPT/ NTP 610	Cellular and Molecular Neuroscience
MED PHYS/ B M E/PHMCOL-M/PHYSICS/ RADIOL 619	Microscopy of Life
GENETICS/ CHEM 626	Genomic Science
CRB 630	Proteomics Approaches for Biologists
CRB 640	Fundamentals of Stem Cell and Regenerative Biology
ONCOLOGY/ M M & I/ PL PATH 640	General Virology-Multiplication of Viruses
MICROBIO 657	Bioinformatics for Microbiologists
CHEM 668	Biophysical Spectroscopy
NTP 670	Stem Cells and the Central Nervous System
ONCOLOGY 673	Purification and Characterization of Protein and Protein Complexes
NEURODPT 675	Selected Topics in Physiology (Ion Channels Seminar)
ONCOLOGY 703	Carcinogenesis and Tumor Cell Biology
PATH 750	Cellular and Molecular Biology/ Pathology
PATH 751	Biology of Aging
B M I/ COMP SCI 776	Advanced Bioinformatics
ONCOLOGY 778	Bioinformatics for Biologists
B M E 780	Methods in Quantitative Biology
PHMCOL-M 781	Molecular and Cellular Principles in Pharmacology
B M E/CBE 783	Design of Biological Molecules
B M I 826	Special Topics in Biostatistics and Biomedical Informatics
BOTANY 860	Plant Cell Biology
GENETICS 885	Advanced Genomic and Proteomic Analysis
BIOCHEM/ CHEM 872	Selected Topics in Macromolecular and Biophysical Chemistry
LSC 875	Special Topics

Seminars	**2**
MS candidates must successfully complete at least one advanced 1-credit seminar per year of graduate study. Students select 1-credit seminars in consulation with their committee.	
Any numbered 900 BIOCHEM or BMOLCHEM Seminar	
Total Credits	**48**