

BIOCHEMISTRY, PH.D.

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum academic progress and degree requirements (<http://guide.wisc.edu/graduate/#policiesandrequirements>), 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 are able to complete a program with minimal disruptions to careers and other commitments.

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

Requirements Detail

Minimum Credit Requirement 54 credits

Minimum Residence Credit Requirement 42 credits

Minimum Graduate Coursework Requirement All coursework must be completed graduate-level coursework; courses with the Graduate Level Coursework attribute are identified and searchable in the university's Course Guide.

Overall Graduate GPA Requirement 3.00 GPA required.

Other Grade Requirements 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 student unless conditions for probationary status require higher grades. Grades of Incomplete are considered to be unsatisfactory if they are not removed during the next enrolled semester.

Assessments and Examinations Deposit of the doctoral dissertation in the Graduate School is required.

Language Requirements n/a

Doctoral Minor/Breadth Requirements Doctoral students must complete IPIB's required coursework plus a minimum of 6 credits of approved breadth coursework in the physical, biological, and/or quantitative sciences. Students who opt for the Option A (focused) doctoral minor must complete IPIB's required coursework, the minor requirements of the minor program, and a minimum of 6 credits of approved breadth coursework in the physical, biological, and/or quantitative sciences.

REQUIRED COURSES

Code	Title	Credits
<i>Program Course Requirements</i>		
BIOCHEM/ BMOLCHEM 701	Professional Responsibility (taken Fall of first year)	1
BIOCHEM 719	From Atoms to Molecules (taken Fall of first year)	3
BMOLCHEM 720	Experimental Design and Paradigms in Cellular Biochemistry and Molecular Biology (taken Spring of first year)	3
BIOCHEM 721	Biochemical Communication (taken Fall of second year)	2
BIOCHEM 990	Research	1-12

Breadth Requirements

Students must complete a minimum of two additional graduate level (600 or above or that carry the graduate attribute) didactic or laboratory courses in order to fulfill their breadth requirements, and a minimum of 6 total credits is required. Courses must be chosen 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.

BIOCHEM/ NUTR SCI 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 606		
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
BMOLCHEM/ CHEM 627	Methods and Technologies for Protein Characterization
BIOCHEM/ PHMCOL-M/ ZOOLOGY 630	Cellular Signal Transduction Mechanisms
BIOCHEM/ NUTR SCI 645	Molecular Control of Metabolism and Metabolic Disease
BIOCHEM/ CHEM 665	Biophysical Chemistry
BMOLCHEM/ MICROBIO 668	Microbiology at Atomic Resolution
BIOCHEM/ CHEM 704	Chemical Biology
BIOCHEM 729	Advanced Topics (Membrane Protein Structure and Function (Advanced))

Seminar Requirement

PhD students must successfully complete at least five semesters of advanced seminars from the following list:

Any 900-level BIOCHEM or BMOLCHEM Seminar

BIOCHEM 729	Advanced Topics (IPiB Seminar, Practicum in Undergraduate Teaching, or Responsible Conduct of Research))
BIOCHEM/ CHEM 872	Selected Topics in Macromolecular and Biophysical Chemistry
BMOLCHEM 675	Advanced or Special Topics in Biomolecular Chemistry
B M E 780	Methods in Quantitative Biology
BOTANY 950	Seminar-Plant Ecology
LSC 875	Special Topics
NEURODPT 675	Selected Topics in Physiology (Ion Channels Seminar)
NUTR SCI 931	Seminar-Nutrition
PL PATH/ BOTANY 930	Seminar-Mycology