BIOPHYSICS, PHD

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

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Minimum Credit Requirement	51 credits
Minimum Residence Credit Requirement	32 credits
Minimum Graduate Coursework Requirement	26 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	Degree requirements are not satisfied from courses in which a grade of BC or below is obtained for the Biophysics core courses. In the event of an unsatisfactory grade, the

		better if they want to count the class towards their degree course requirements.
	Assessments and Examinations	Students are required to complete an oral preliminary exam. The oral exam should be completed no later than the end of the student's third fall semester in the program. This exam consists of an oral defense of a written research proposal. The format of the research proposal is based on the format for an NIH F31 predoctoral grant application. If the student feels they need more time to complete the oral exam, they must request an extension from the Biophysics Office.
	Language Requirements	No language requirements.
	Graduate School	No doctoral minor or graduate/professional certificate

student must repeat the course and obtain a grade of B or

School required. Breadth Requirement

REQUIRED COURSES

Code	Title	Credits
Required by the tim	e oral prelim is taken:	
CHEM 665	Biophysical Chemistry	3
CHEM 668	Biophysical Spectroscopy	3
Biophysics Advance	d Electives	6
Students must take at from at least two diffe list of classes (alterna- with approval from the Committee):	e least 6 credits of advanced electives erent categories using the following tive classes may be substituted e Biophysics Program Curriculum	
Structure		
BIOCHEM 601	Protein and Enzyme Structure and Function	
BIOCHEM 625	Mechanisms of Action of Vitamins and Minerals	
CHEM 622	Organic Analysis	
CHEM 675	Introductory Quantum Chemistry	
MICROBIO/ BMOLCHEM 668	Microbiology at Atomic Resolution	
ONCOLOGY 673	Purification and Characterization of Protein and Protein Complexes	
Modeling		
BIOCHEM 570	Computational Modeling of Biological Systems	
CHEM 661	Chemical and Statistical Thermodynamics	
MATH/B M I/ BIOCHEM/ BMOLCHEM 609	Mathematical Methods for Systems Biology	
Molecular Biology		
BIOCHEM/ GENETICS/ MICROBIO 612	Prokaryotic Molecular Biology	
BIOCHEM/ GENETICS/ MD GENET 620	Eukaryotic Molecular Biology	
Neuroscience		

NTP/	Cellular and Molecular Neuroscience
NEURODPT 610	

Spectroscopy/Microscopy

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	B M E/ MED PHYS/ PHMCOL- M/PHYSICS/ RADIOL 619	Microscopy of Life	
	B M E 751	Biomedical Optics and Biophotonics	
	CHEM 636	Topics in Chemical Instrumentation: Introduction to NMR	
	CHEM 860	Selected Topics in Physical Chemistry (Topic: Spectroscopy of Individual Molecules and Particles)	
	BIOCHEM 729	Advanced Topics (Topic: Advanced Topics in NMR)	
B	ioinformatics and Co	omputational Biology	
	BIOCHEM 570	Computational Modeling of Biological Systems	
	B M I/ COMP SCI 776	Advanced Bioinformatics	
	ONCOLOGY 778	Bioinformatics for Biologists	
E	thics Course		1-3
	BIOCHEM 729	Advanced Topics (Resp Conduct of Research)	
S	eminar Courses		
	Students are requi for the duration of	red to participate in seminar courses their studies. Initially, all students	

for the duration of their studies. Initially, all students are required to enroll in CHEM/BIOCHEM 872 (Topic: Macromolecular and Biophysical Chemistry) for both fall and spring semesters. Once a student has successfully achieved dissertator status, they are eligible to enroll in alternative seminars with permission from the program.

CHEM/ Selected Topics in Macromolecular BIOCHEM 872 and Biophysical Chemistry

Specialty Courses

To fulfill the remainder of required credits, students can take specialty courses. It is recommended to take courses in areas such as biotechnology, computer science, electrical and computer engineering, molecular biology, or physics. Students should consult with their Thesis Advisor and thesis committee members about appropriate specialty courses to take pertaining to individual training goals.

Research Credits

Students are expected to register for 990 research credits every semester. These are the courses in which students will be conducting their independent research. First semester students will register for 990 research credits in the department of the Biophysics Program Director. Once a thesis lab is chosen, these credits will be conducted in the thesis advisor's home department.

Total Credits

Advanced Electives Requirement

To meet the 6-credit minimum, all elective courses must be at least 2 credits. That means that students can, for example, take two 3-credit courses, three 2-credit courses, or one 2-credit and one 4-credit course

to satisfy this requirement. The above list of courses were approved as elective course options by the Biophysics Steering Committee. If you are interested in a different course to count as an elective course towards your Biophysics graduate degree, the course needs to be approved by the Curriculum Committee. To request a course approval, please use this form (https://biophysics.wisc.edu/advanced-elective-approval-form/) (you will need a syllabus from the course and a short paragraph detailing why the class is relevant to your research).

Ethics Requirement

Students are required to take an ethics course that covers all of the items considered necessary by the NIH for ethical and professional scientific training. It is strongly recommended that students take the ethics course during their first year. The recommended ethics course is: BIOCHEM 729 Advanced Topics (Responsible Conduct of Research). The Biophysics Program also conducts a mandatory ethics refresher seminar for all students that is held at the end of every spring semester.

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