

Molecular Biophysics Degree Plan

First year DBS students take 12 credit hours in fall and spring, and 6 credit hours in the summer semesters. In subsequent years they are enrolled in 9 credit hours in fall and spring, and 6 credit hours in the summer. Typically, didactic coursework is completed in the first year. In subsequent years, students are enrolled in dissertation research and a combined work-in-progress seminar (WIP)/journal club totaling full-time enrollment equivalency, and they are encouraged to take additional elective courses that expand their skills in specific areas and/or broaden their knowledge on Molecular Biophysics. Advancement of the student to Ph.D. candidacy is dependent upon successful completion of all mandatory coursework and the qualifying examination, which takes place in the second year.

Year	Term	Half/ Full	Title	Credit Hour	Total Credit Hrs/Term
First Year	Fall	1 st Half	Core Curriculum - Genes	2	
			Core Curriculum - Proteins	2	
		2 nd Half	Macromolecules I: Structural Foundations (previously titled: Protein Structure and Folding)	2	
			Elective Coursework*	2	
		Full	Professionalism, Responsible Conduct of Research, and Ethics I	1	
	Full	Laboratory Rotations	3	Semester Total: 12	
	Spring	1 st Half	Macromolecules II: Energetic Foundations (previously titled: Physical Chemistry of Macromolecules)	1.5	
			Advanced Elective Coursework**	1.5	
		2 nd Half	Advanced Elective Coursework**	1.5	
			Advanced Elective Coursework**	1.5	
		Full	Introduction to Biostatistics and Bioinformatics	2.0	
		Full	Professionalism, Responsible Conduct of Research, and Ethics II	1	
	Full	Laboratory Rotations	3	Semester Total: 12	
	Summer		Research	6	Semester Total: 6
Second Year	Fall	Full	Research	7.5	
			WIP Seminar / Journal Club	1.5	Semester Total: 9
	Spring	Full	Research	7.5	
			WIP Seminar / Journal Club	1.5	Semester Total: 9
Summer		Dissertation Research	6	Semester Total: 6	
Third Year	Fall	Full	Dissertation Research	7.5	
			WIP Seminar / Journal Club	1.5	Semester Total: 9
	Spring	Full	Dissertation Research	7.5	
			WIP Seminar / Journal Club	1.5	Semester Total: 9
	Summer		Dissertation Research	6	Semester Total: 6
Fourth Year & Beyond	Fall	Full	Dissertation Research	7.5	
			WIP Seminar / Journal Club	1.5	Semester Total: 9
	Spring	Full	Dissertation Research	7.5	
			WIP Seminar / Journal Club	1.5	Semester Total: 9
Summer		Dissertation Research	6	Semester Total: 6	
Minimum Credit Hours for PhD					102

() Students are required to complete a total of 6.5 credit hours of elective and advanced elective coursework with specific requirements for 3.0 of the credit hours that are outlined below. The remaining can be chosen from any course within the Division of Basic Science, although students are strongly encouraged to take the Core Curriculum - Cells course in the second half of the fall.

* Elective Coursework Recommended Course	Credit Hour	Term Offered	
Core Curriculum - Cells	2	Fall	2 nd half

**Advanced Elective Coursework must choose 2 of the following:	Credit Hour	Term Offered	
Quantitative Biology ¹	1.5	Spring	1 st half
Modern Methods in Structural Biology	1.5	Spring	2 nd half
Using Light in Biology (previously titled: Spectroscopy)	1.5	Spring	2 nd half

Additional Advanced Elective Courses	Credit Hour	Term Offered	
Experimental Biophysics ²	1.5	Fall	1 st half
Advanced NMR Spectroscopy ²	1.5	Fall	1 st half
Practical X-Ray Crystallography ²	1.5	Fall	2 nd half

¹ Students are strongly encouraged to complete Mathematical Foundations of Quantitative Biology (Fall, 2nd half, 2.0 credit hours) prior to taking Quantitative Biology.

²Requires a prerequisite of Modern Methods in Structural Biology

For additional listings of elective and advanced elective courses available, see each program's course descriptions webpage.