

Missouri State University -- College of Health and Human Services
Department of Biomedical Sciences

Cell and Molecular Biology (comprehensive)

Bachelor of Science

Updated April 2009

This is a model four year graduation plan. Variations are possible. Your path to graduation may vary slightly based on factors such as college credit you earned while in high school, your choice of general education electives, and placement in English and Mathematics.

This degree program can be completed in eight semesters.

First Semester (Fall)		Second Semester (Spring)	
Concepts in the Biomedical Sciences - BMS 110	4	Human Genetics (with lab) - BMS 231	4
General Chemistry I - CHM 160	4	General Chemistry II - CHM 170	3
Writing I - ENG 110	3	General Chemistry Lab - CHM 175	2
Introduction to University Life - IDS 110	1	Culture and Society/Social Science	3
Culture and Society/Humanities	3	Computers for Learning - CIS/CSC101*	2
		Fitness for Living - PED 100	2
Total Hours	15	Total Hours	16
Third Semester (Fall)		Fourth Semester (Spring)	
Bimolecular Interactions - BMS 321	4	Organic Chemistry II - CHM 344	3-5
Organic Chemistry I - CHM 342	5	or Organic Chemistry II - CHM 343	
Fundamentals of Public Speaking - COM 115	3	US History - HST 121 or 122	3
Computational Calculus - MTH 287	3-5	BMS Elective	3
or Analytic Geometry/Calculus I - MTH 261		Writing II - ENG 221 or 321 recommended	3
		Self-Understanding/Social-Behavioral	3
Total Hours	15-17	Total Hours	15-17
Fifth Semester (Fall)		Sixth Semester (Spring)	
Molecular Cell Biology - BMS 521	4	Molecular Biology - BMS 525	4
BMS Elective	3	BMS Elective	4
Introduction to Physics I - PHY 123	4-5	Introduction to Physics II -- PHY 124	4-5
or Foundations of Physics I - PHY 203		or Foundations of Physics II - PHY 204	
American Democracy and Citizenship - PLS 101	3	Self-Understanding/Humanities	3
Total Hours	14-15	Total Hours	15-16
Seventh Semester (Fall)		Eighth Semester (Spring)	
BMS Elective	4	BMS Elective	2
Senior Seminar - BMS 494	1	BMS Elective	4
Self-Understanding/Creativity and Vision	3	General Elective	3
General Elective	3	General Elective	3
General Elective	3	General Elective	4
General Elective (if needed to total 125 hours)	3	General Elective (if needed to total 125 hours)	2
Total Hours	15-17	Total Hours	15-18

Formal admission to this major requires completion of at least 25 hrs of course work, including BMS 110, 231, and CHM 160, and a cumulative and science GPA of 2.5 or higher.

In the terminal semester, each CMB major is required to take a comprehensive examination in Cell and Molecular Biology.

The eight-semester plan above is one example of course sequencing; variations are possible.

Significant divergence from the sequence above may require an additional one or two summers for major completion in four years.

*Course may be waived by proficiency exam (no credit). CIS 101 and CSC 101 are identical. Can not receive credit for both CIS 101 and CSC 101.