Four-Year Degree Plan for Major in Biochemistry, B.S., ASBMB-Accredited

Note that this is a sample four-year plan. There are other course sequences that will allow a student to graduate within four years as long as prerequisite courses are taken in the proper sequence. This sample plan does not guarantee course availability, and adjustments to students' plans may be necessary if they are unable to take specific courses during specific semesters. Students who are placed into lower level AWR, MAT or other prerequisite courses will need to adjust their four-year plans accordingly. Similarly, students who bring in Advanced Placement, Dual Enrollment or transfer credit for courses will need to adjust their four-year plans. A minimum of a 2.0 GPA both overall and in the major is required for graduation. In addition to major requirements, all components of the Baccalaureate Experience must be completed in order to graduate. A student must earn a minimum of 124 credit hours to qualify for the Bachelor of Science degree in Biochemistry, ASBMB-Accredited.

First (Freshman) Year - Fall Semester

CHE 152	General Chemistry I	3
CHE 153L	General Chemistry I Laboratory	1
MAT 260	Calculus I	4
BIO 198	General Biology I	4
BIO 198L	General Biology I Laboratory	
AWR101	Writing and Inquiry	4
BAC 101	First-Year Seminar I	1
	or	
HON 101	Pathways to Honors 1	1
	Subtotal:	**17**

BIO 198, CHE 152, CHE 153L, MAT 260: Grade "C" or better

First (Freshman) Year - Spring Semester

CHE 154	General Chemistry II	3
CHE 155L	General Chemistry II Laboratory	1
BIO 199	General Biology II	4
BIO 199L	General Biology II Laboratory	
	Social Science (Bacc. Exp.)	4
BAC 102	First-Year Seminar II	1
	or	
HON 102	Pathways to Honors 2	1
	Humanities/Fine Arts (Bacc. Exp.)	4
	Subtotal:	**17**

BIO 199, CHE 154, CHE 155L: Grade "C" or better
Social Science: (IG) (NW)

Second (Sophomore) Year - Fall Semester

CHE 232	Organic Chemistry I	3
CHE 233L	Organic Chemistry I Laboratory	1
CHE 310	Analytical Chemistry	4
CHE 310L	Analytical Chemistry Laboratory	
PHY 200	General Physics I	4
PHY 200L	General Physics I Laboratory	
	Humanities/Fine Arts (Bacc. Exp.)	4
	Subtotal:	**16**

Humanities/Fine Arts: (A)
CHE 232, CHE 233L (W): Grade "C" or better

Second (Sophomore) Year - Spring Semester

CHE 234	Organic Chemistry II	3
CHE 235L	Organic Chemistry II Laboratory	1
PHY 201	General Physics II	4
PHY 201L	General Physics II Laboratory	
AWR 201	Writing and Research	4
	Humanities/Fine Arts (Bacc. Exp.)	4
	Subtotal:	**16**

Humanities/Fine Arts: (W)
CHE 234, CHE 235L (W): Grade "C" or better

Third (Junior) Year - Fall Semester

CHE 305	Applied Physical Chemistry	3
CHE 320	Biochemistry	3
CHE 320L	Biochemistry Laboratory	1
BIO 201	Molecular Genetics	4
	Social Science (Bacc. Exp.)	4
	Subtotal:	**15**

CHE 320, CHE 320L: Grade "C" or better
Social Science: (IG) (NW)

Third (Junior) Year - Spring Semester

CHE 325	Biochemistry of Metabolism	3
CHE 451	Introduction to Research	1
	General Elective	4
	General Elective	4
	Social Science (Bacc. Exp.)	4
	Subtotal:	**16**

Social Science: (IG) (NW)

Fourth (Senior) Year - Fall Semester

CHE 451	Introduction to Research	2
CHE 470	Tissue Culture	4
	General Elective	4
	General Elective	4
	Or one of the following lecture/lab pairs:	
BIO 307	Microbiology	4
BIO 307L	Microbiology Laboratory	0
	Or	
BIO 315	Virology	4
BIO 315L	Virology Laboratory	0
	Or	
BIO 330	General Physiology	4
BIO 330L	General Physiology Laboratory	0
	Or	
BIO 390	Essentials of Electron Microscopy	4
BIO 390L	Essentials of Electron Microscopy Laboratory	0
	Or	
BIO 408	Bioinformatics and Genomics	4
BIO 408L	Bioinformatics and Genomics Laboratory	0
	Subtotal:	**14**

Fourth (Senior) Year - Spring Semester

CHE 420	Advanced Biochemistry	4
CHE 451	Introduction to Research	1
CHE 490	Molecular Basis of Cancer	4
	General Elective	4
	Or one of the following lecture/lab pairs:	
BIO 307	Microbiology	4
BIO 307L	Microbiology Laboratory	0
	Or	
BIO 310	Developmental Biology	4
BIO 310L	Developmental Biology Laboratory	0
	Or	
BIO 350	Cell Biology	4
BIO 350L	Cell Biology Laboratory	0
	Or	
BIO 360	Immunology	4
BIO 360L	Immunology Laboratory	0
	Or	
BIO 370	Molecular Biology	4
BIO 370L	Molecular Biology Laboratory	0

Subtotal: 13

CHE 420: (W)

Subtotal: 124

Note: BIO 360/BIO 360L (Immunology/Immunology Lab) fulfills the (W) requirement. If it is taken as the upper-level BIO elective, the writing-intensive portion of the Baccalaureate Experience can be fulfilled by classes within the major (CHE 233L, CHE 235L, CHE 420, BIO 360).