

Biochemistry & Molecular Biology

Major Requirements

Lower Division Requirements	Pre-Req	Units	Note
BIO146 General Biology I w/Lab	=	4	Fall only
BIO148 General Biology II w/Lab	-	4	Spring only
CHE115 General Chemistry I w/Lab	CHE102 or HS Chem	4	Fall only
CHE125 General Chemistry II w/Lab	CHE115	4	Spring only
CHE230 Introduction to Molecular Modeling	CHE115	1	Spring only
MAT245 Analytical Geometry & Calculus I	MAT135 or 145	4	
MAT255 Analytical Geometry & Calculus II	MAT245	4	
PHY214 Physics for Scientists I w/Lab	MAT145 or 245	4	Fall only (entrance exam)
PHY224 Physics for Scientists II w/Lab	PHY214	4	Spring only

Upper Division Requirements	Pre-Req	Units	Note
BIO330 Cell & Molecular Biology w/Lab	BIO146 & 148	4	Fall only
BIO430 Lab Techniques in Molecular Biology	BIO330 & CHE443	2	Spring only (even years)
BIO435 Proteomics, Genomics, & Bioinfo with Lab	BIO330; Pre or Co: BIO430	4	Spring only (even years)
CHE321 Analytical Chemistry w/Lab	CHE125	4	Fall only (odd years)
CHE351 Organic Chemistry I w/Lab	CHE125	4	Fall only
CHE352 Organic Chemistry II w/Lab	CHE351	4	Spring only
CHE415 Physical Chemistry I	CHE125 & MAT245	3	Fall only (even years)
CHE443 Biochemistry I w/Lab	CHE351	4	Spring only
CHE444 Biochemistry II w/Lab	CHE443	4	Fall only

Upper Division Elective Requirements	Pre-Req	Units	Note
Complete one of the following courses:			•
BIO313 Genetics	BIO146		Spring only
BIO440 Pharmacology w/Lab	BIO330, 344 & CHE352	4	Fall only (even years)
BIO489 Immun. & Mol Patho w/Lab	BIO146 & 148		Spring only (odd years)

Upper Division Research Requirements	Pre-Req	Units	Note
Complete one of the following two-semester sequence	es:		
BIO380 & 490 Bio Seminar & Senior Research	- / BIO148	1/3	Spring only/As offered
CHE480 & 490 Chem Seminar & Senior Research	- / CHE125	1/3	Fall only/As offered

Total Major Units:	74

Upper Division Major Units: 41

About This Plan

- This plan is not a contract. Curriculum can be subject to change.
- · Highlighted courses and fields are major specific.
- Descriptions for all courses can be found in the CBU catalog at www.calbaptist.edu/about/universitycatalogs.aspx.
- To graduate, all students need 124 total units, 39 of which must be upper division.
- Courses numbered in the 300's and 400's are upper division.
- · GST100, ENG103, and MAT095 count as elective units.

General Education Requirements

Competency Requirements	Units	Note
English Competency	3	ENG113 required
Math Competency	3	MAT245 will fulfill. STA144 recommended.
Technology	3	CIS265 recommended
Foreign Language I	3	
Foreign Language II	3	

If you are exempt from a Competency Requirement, add those units to Additional Elective Units Needed.

Core Curriculum	Units	Note
Behavioral Science	6	
English Composition	3	ENG123 required
English or Film	3	
Communication Arts	3	
Art or Music	3	
Philosophy	3	
US History	3	
Non-US History	3	
Political Science	3	
Lab Science	4	BIO330 will fulfill. BIO101 or CHE101 recommended.
Science or Kinesiology	4	BIO430 will fulfill
Christian Studies	9	

*Course is interdisciplinary

Additional Elective Units Needed: 0

Upper Division Elective Units Needed: 0

Upper Division Requirements	12	BIO330 & 430 will fulfill 8 units
Interdisciplinary Requirements	9	
Multicultural Requirements	9	ENG123 will fulfill 3 units

Total Required GE units:	51

Upper Division Required GE Units: 4

Contract	Traforma	ation
Contact	INIOTI	auor

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Cbu Biochemistry & Molecular Biology

Fall Semester	Freshman Year Spring Semester	Summer Semester	Fall Semester	Sophomore Year Spring Semester	Summer Semester
BIO146 General Biology I	RIO148 Canaral Riology II		BIO330 Cell & Molecular	CHE252 Organia Chamistry	Summer Semester
w/Lab	w/Lab	1 1	Biology w/Lab	II w/Lab	
CHE115 General Chemistry I w/Lab 4	CHE125 General Chemistry II w/Lab		CHE351 Organic Chemistry I w/Lab	CHE443 Biochemistry I w/Lab	
ENG113 Composition 3	CHE230 Introduction to Molecular Modeling		MAT245 Analytical Geometry & Calculus I 4	MAT255 Analytical Geometry & Calculus II 4	
GST100 Focus 1	ENG123 Composition 3		General Education Course 3	General Education Course 3	
General Education Course (or Math Course if needed)	General Education Course 3				
Caution: If additional Math is					
taken, an additional GE must be added to this plan.					
Total Units: 15	Total Units: 15	Total Units:	Total Units: 15	Total Units: 15	Total Units:
~	Junior Year			Senior Year	
Fall Semester	Junior Year Spring Semester	Summer Semester	Fall Semester	Senior Year Spring Semester	Summer Semester
Fall Semester CHE321 or CHE415 (depending on year) 4/3		Summer Semester	Fall Semester BIO380 or CHE480 (depending on choice)		Summer Semester
CHE321 or CHE415 (depending on year) CHE444 Biochemistry II w/Lab 4/3	Spring Semester PHY224 Physics for	Summer Semester	BIO380 or CHE480 (depending on choice) CHE415 or CHE321 (depending on year) 3/4	Spring Semester BIO490 or CHE490	Summer Semester
CHE321 or CHE415 (depending on year) CHE444 Biochemistry II 4	Spring Semester PHY224 Physics for Scientists II w/Lab Upper Division Elective 4 BIO430 or Up Div GE Course (depending on year) 2/3	Summer Semester	BIO380 or CHE480 (depending on choice) CHE415 or CHE321 3/4	Spring Semester BIO490 or CHE490 (depending on choice) Up Div GE Course or BIO430 3/2	Summer Semester
CHE321 or CHE415 (depending on year) CHE444 Biochemistry II w/Lab PHY214 Physics for 4/3	Spring Semester PHY224 Physics for Scientists II w/Lab Upper Division Elective 4 BIO430 or Up Div GE Course 2/3	Summer Semester	BIO380 or CHE480 (depending on choice) CHE415 or CHE321 (depending on year) Upper Division General 3	Spring Semester BIO490 or CHE490 (depending on choice) Up Div GE Course or BIO430 (depending on year) GE Course or BIO435 3/4	Summer Semester
CHE321 or CHE415 (depending on year) CHE444 Biochemistry II w/Lab PHY214 Physics for Scientists I w/Lab 4/3 4 4	Spring Semester PHY224 Physics for Scientists II w/Lab Upper Division Elective 4 BIO430 or Up Div GE Course (depending on year) BIO435 or GE Course 4/3	Summer Semester	BIO380 or CHE480 (depending on choice) CHE415 or CHE321 (depending on year) Upper Division General Education Course 1 3/4	Spring Semester BIO490 or CHE490 (depending on choice) Up Div GE Course or BIO430 (depending on year) GE Course or BIO435 (depending on year) 3/2	Summer Semester
CHE321 or CHE415 (depending on year) CHE444 Biochemistry II w/Lab PHY214 Physics for Scientists I w/Lab General Education Course 3	Spring Semester PHY224 Physics for Scientists II w/Lab Upper Division Elective 4 BIO430 or Up Div GE Course (depending on year) BIO435 or GE Course (depending on year) 4/3	Summer Semester	BIO380 or CHE480 (depending on choice) CHE415 or CHE321 (depending on year) Upper Division General Education Course General Education Course 3	Spring Semester BIO490 or CHE490 (depending on choice) Up Div GE Course or BIO430 (depending on year) GE Course or BIO435 (depending on year) General Education Course 3	Summer Semester
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Total Units: <u>126</u> (124 units required to graduate)