

2018-2019 BIOCHEMISTRY AND MOLECULAR BIOLOGY MAJOR (Bachelor of Science Only)

		Prep Coursework		
	Courses	Units	Units/Quarter	Prerequisite/recommendation
General Chemistry Series	CHE 2ABC (Honors chemistry optional)	15	Quarters vary	Various
Calculus for Bio/Med Series	MAT 17ABC or MAT 21AB (C recommended, but not required)	8-12	F W S Su	Various
Biological Sciences Series	BIS 2ABC (must pass all courses with C- or better to advance)	15	F W S Su	NA
Physics Series	PHY 7ABC or 9ABC (D optional)	12	F W S Su	NA
		Depth Coursework		
	Courses	Units	Quarter	Prerequisite
Organic Chemistry Series	CHE 118ABC or 128ABC and 129AB (129C = restricted elective)	12-13	F W S Su Qs vary	CHE 2C (C- or better)
Statistics	STA 100 or STA 130AB	4-8	F W S Su (100) F W (130A/B)	NA
Biological Sciences Series	BIS 101 – Genes and Expression	4	F W S Su	C- or better in BIS 2A & 2B, CHE 118A or 128A, <u>and</u> STA 100
	BIS 102 – Structure and Function of Biomolecules	3	F W S Su	Completion of BIS 2 series <u>and</u> CHE 118B or 128B
	BIS 103 – Bioenergetics and Metabolism	3	F W S Su	BIS 102
	BIS 104 – Cell Biology	3	F W S Su	BIS 101, 102 (take 103 first)
Physical Chemistry Series	CHE 107AB or 110ABC	6-8	F W Su (107A); W S Su (107B)	Completion of Calculus and Physics Series above
Molecular and Cellular Biology	MCB 120/120L – Molecular Biology & Biochemistry Lab W 2018 TBTC	3/3	F W S Su	BIS 102 (103 recommended)
	MCB 121-Advanced Molecular Biology	3	F W S	BIS 101 (102 recommended)
	MCB 123-Behavior & Analysis of Enzyme S	3	F S	BIS 103
	MCB -124 Macromolecular Structure & Func or 143 - Cell Biophysics	4-3	F 124 S 143	BIS 103, CHE 118C BIS 104 MBTC
Restricted Electives (RE)		Six (6) units of upper division courses in biological sciences (except BIS 101D, BIS 105, EXB 102) or chemistry other than major those listed above: NPB, MIC, EVE, PLB, MCB. Upper division BIT are acceptable. A small selection of other courses may work for RE upon consultation with the BMB major advisor, including courses which have BIS 101, 102, 103, or 104 as prerequisite. Upper division lab experience is encouraged; however, no more than 3 units of 192, 193 or 199 research counted toward restricted elective units.		

ALL COURSES MUST BE TAKEN FOR A LETTER GRADE!

Typical Four Year at a Glance– may vary depending on progress in prep coursework or use of summer sessions

Year	Main series to complete	Tips
First Year Prep	Workload Chem; CHE 2ABC MATH 12; MAT 17ABC or 21AB(C) BIS 2ABC in Winter or Spring	<ul style="list-style-type: none"> Take only two major courses plus GE for balance Use UCD Summer Sessions to “catch up” to finish or start a major prep series
Second Year Prep	CHE 118ABC BIS 2 series (complete in Fall and/or Winter) PHY 7ABC	<ul style="list-style-type: none"> Use UCD Summer Sessions to “catch up” to finish or start a major prep series Consider Study Aboard for BIS 101 or 102 in Summer
Third Year Prep/Depth	BIS 101, 102, 103, 104 CHE 107AB (can take in third or fourth year)	<ul style="list-style-type: none"> Take STA 100 before or concurrent with BIS 101 Take BIS series in order
Fourth Year Depth	MCB 120L, 121, 123, 124 UD restricted electives (can take in third year)	<ul style="list-style-type: none"> Finish BIS 103 before starting MCB classes