Graduation Requirements

120 Total Hours	
42 Senior Hours	
Global Study	
Foreign language	

General Education

	English 101	EN	
	Communication 101	CO	
	Mathematics	MA	
	Natural Sciences	NS	
	U.S Traditions	US	
	Individual and Civic Life	IC	
	Fine Arts	FA	
	Humanities	HU	
	Language in Humanities	LH	
	Quantitative Reasoning	QR	
	Science, Math, Technology	ST	Exempt
	Social Sciences	SS	

Molecular and Cellular Biology Major CHECKLIST

Note: S = Senior standing required, M = Major in Biology required 37 hours in Biology courses required; additional hours in Chemistry, Physics, and Math

Courses outside of Biology	Prerequisites
□ Math 145 Calculus 1	Vary by course
□ Math 146 Calculus II or Psy or Eco 138	Vary by course
CHE 140 Gen Chem I CHE 141 Gen Chem II	Vary by course
CHE 230/231 Organic Chemistry	C or better in CHE 141
□CHE 232 Organic Chemistry II □CHE 233 lab	C or better in CHE 230
CHE 342 or CHE 242 Biochemistry I	CHE 232 for 342; 230 for 242
□ PHY 108 or 110 □ PHY 109 or 111	Vary by course

Required Biology Courses	Prerequisites
196 Biological Diversity (4)*	Μ
\Box 197 Molecular and Cellular Basis of Life (4)*	Μ
□ 203 Cell Biology (3)	BSC 196, 197; CHE 110 and 112 or 141
□ 219 Genetics (3)	BSC 196 and 197
204 Biological Investigations (1)	M; BSC 196 and 197
□ 350 Molecular Biology (3)	BSC 203, 219, CHE 230/231, 342 or 242 rec
260 Microbiology (4)*	BSC 196, 197; CHE 230/231 or concurrent

MCB electives to total 15 hours: @least two lab courses; no more than 4 hours of bsc 290/299	Prerequisites
Biology elective Courses: 2 courses from	BSC 203 and 219
329 Human Genetics (3)	BSC 196 and 197
\Box 343 Introduction to Neurobiology (3)	BSC 203
□ 345 Introduction to Endocrinology (3)	BSC 203; BSC 219 recommended
□ 346 Developmental Biology (3)	BSC 197 and 203
□ 351 Cell Signaling and Regulation (3)	BSC 219; CHE 220 or CHE 230-232
□ 353 Biotechnology Lab 1: DNA (3)*	BSC 203; CHE 220 or 230-232 recommended
□ 354 Biotechnology Lab II: Cell Biology (3)*	BSC 203 and 219
□ 355 Genomics and Bioinformatics (3)	BSC 203 and 260
□ 361 Microbial Pathogens (4)*	One from: BSC 201, 203, 212, 219, 260
□ 365 Bioenergy Plant/Microbe Biology and Environment	BSC 203
□ 367 Immunology (4)*	BSC 197, 203, 219
□ 370 Topics in Molecular and Cellular Biology(3)	
Additional Biology elective Courses:	Prerequisites
□ 201 Ecology (4)*	BSC 196 and 197
211 Economic Botany (4)*	BSC 196 or AGR 150, and BSC 197
□ 212 Principles of Botany (4)*	BSC 196 and 197
220 Laboratory in Molecular Genetics and Cell Biology (3)	BSC 203 and either BSC 219 or HSC 260
□ 280 Conservation of Animal and Plant Biodiversity (3)	BSC 196 and 197
283 Animal Physiology (4)*	M; BSC 196/197; CHE 110/112, or CHE 141
286 Animal Behavior (3)	BSC 196 and 197
\square 290 Research in Biological Sciences or 299 (variable hours)	Consent of instructor
292 Invertebrate Zoology (4)*	BSC 196 and 197
295 Comparative Vertebrate Anatomy (4)*	BSC 196 and 197
🗌 296 Mammalian Biology (3)	BSC 196 and 197
□ 301 Entomology (4)*	BSC 196 and 197; 201
□ 311 Rainforest Ecology (3)*	BSC 201; consent instructor
□ 319 Genetics of Behavior (4)*	BSC 197, 203, 219
□ 325 Ecological Physiology of Animals (3)	BSC 196 and 197; 45 hours completed
□ 327 Hormones, Brain and Behavior (3)	BSC 283 or 286
□ 333 Plant Diversity (4)*	One from: BSC 211, 212, 223
□ 370A02 Human Pathophysiology	BSC 196/197, BSC 203, 219 or 283 recommended
□ 375 Stream Ecology Lecture (3)	BSC 196, 197; min 45 hours completed
□ 376 Stream Ecology Laboratory (1)	Concurrent registration in BSC 375
□ 396 Avian Biology (4)*	BSC 196 and 197

*Must take 2 lab courses from elective list in addition to BSC 196, 197, and 260.