BIOLOGY BS Requirements				Cou	ırse	offerings are subject to change.					
Lower Division Requirements											
Calculus:		MATH 11A (FWS) or MATH 19A (FWS)	&			MATH 11B (FWS) or MATH 19B (FWS)					
General Chem:		CHEM 3A : General Chemistry (FW)	&			CHEM 3B&3BL: General Chemistry (WS)	&		CHEM 3C&3CL: General Chemistry (FS)		
General Chem:		CHEM SA: General Chemistry (FVV)	a			CHEM 3B&3BL: General Chemistry (WS)	α		CHEM 3CX3CL: General Chemistry (FS)		
Biology:		BIOL 20A: Cell and Molecular Bio (FWS)	&			BIOE 20B: Development and Physiology (FWS)	&		BIOE 20C: Ecology & Evolution (FWS)	&	BIOL 20L: Experimental Bio Lab (FWS)
Organic Chem:	F	CHEM 8A: Organic Chemistry (FW) CHEM 8L: Organic Chemistry Lab (FW)	&			CHEM 8B: Organic Chemistry (WS)					
Statistics:	L	STAT 5: Statistics (FWS)	OR			STAT 7: Stats for the Biological, Environmental, STAT 7L: Stats Lab (FWS)	and Healt	h Scie	ences & (FWS)		
Physics:				&		PHYS 6B: Introductory Physics II (FWS)	&		PHYS 6C: Introductory Physics III (FW)		
		PHYS 6L: Introductory Physics 1 Lab (FWS)				PHYS 6M: Introductory Physics II Lab (FWS)			PHYS 6N: Introductory Physics III Lab (F	W)	
	ificat	ove qualification courses shaded green vion courses must be completed by the end of Declared									
Upper Division	n Per	uuirements									
Opper Division	rec	quirements	-								
	CC	RE COURSES:									
		BIOL 105: Genetics (FWS)									
	-	PIOL 100: Pioch (AVC)				PIOL 101 Malon to Distance (FC)				· Not	e that you must must apply to enroll in BIOC
	-	BIOL 100: Biochemistry (WS)	&		ш	BIOL 101: Molecular Biology (FS) OR				100A	and complete ntire series of one or the other -
		BIOC 100A: Biochemistry & Molecular Bio (F)	&			BIOC 100B: Biochemistry & MB (W)	&				ixing and matching
	T	BIOL 101L: Molecular Biology Lab (FWS)	OR	:		CUREs Lab: BIOL 102L: Toxic RNA Lab II /BIOL	107L: Syn	thetic	Gene Regulation Lab/BIOL 122K:		
	1				_	Phage Biology Lab (W)					
	E										
		BIOL 110: Cell Biology (FWS)									
UF		DIVISION ELECTIVES: CHOOSE A MINI		м оғ	3 (Classes shaded below count toward BC	OTH the	Upp	per Div Elective and the DC)		
		BIOC 100C: Biochemistry and Molecular Biolog BIOE 108: Marine Ecology	y (S)								
		BIOE 112/L: Ornithology/Lab									
		BIOE 114/L: Herpetology/Lab BIOE 117/L: Systematic Botany/Lab *	H								
	1										
	Ē										
		BIOE 131/L: Animal Physiology (lab optional)									
			Lab								
		BIOE 135/L: Plant Physiology/Lab									
				J- C		and Evelotion					
	-		lence	III Ecc	itogy i	ind Evolution					
		BIOE 147: Community Ecology BIOE 149: Disease Ecology									
		BIOE 155: Freshwater Ecology									
		BIOE 161: Kelp Forest Ecology									
		BIOE 163/L: Ecology of Reefs, Mangroves & Sea BIOE 165: Marine Conservation Biology	agras	ses/La	b						
		BIOE 172 Population Genetics									
		BIOL 111A: Immunology BIOL 112: Principles of Virology									
		BIOL 114: Cancer Cell Biology									
		BIOL 115: Eukaryotic Molecular Biology									
		BIOL 118: Principles of Human Genetics BIOL 120: Developmental Biology									
		BIOL 125: Intro to Neuroscience									
		BIOL 130: Human Physiology									
		METX 100: Introduction to Microbiology METX 133: Medical Microbiology									
		METX 135/L: Anatomy of the Human Body/Lab									
		METX 140: Molecular Biology and Microbial Ge	netic								
	-	METX 150: Applied and Enviornmental Microbio	ology	-							
DC Requirement: 2 OF THE FOLLOWING BIOE COURSES:			OR	1	1 OF	THE FOLLOWING 5-UNIT LABS:	OR		CUREs Lab (SPRING QUARTER O	NLY)	
		BIOE 108: Marine Ecology*				BIOL 105L: Eukaryotic Genetics Lab			BIOL 103L: Toxic RNA Lab II		
		BIOE 114/L: Herpetology/Lab^*	H			BIOL 106L: Eukaryotic Genetic Engineering Lab			BIOL 108L: Synthetic Gene Regulat	ion L	ab III
		BIOE 117: Systematic Botany^* BIOE 120/L: Marine Botany/Lab^*				BIOL 109L: Yeast Molecular Genetics Lab BIOL 115L: Eukaryotic Molecular Biology Lab			BIOL 122L: Phage Biology Lab III		
		BIOE 122/L: Invertebrate Zoology/Lab^*				BIOL 120L: Developmental Biology Lab					
		BIOE 127/L: Ichthyology/Lab^* BIOE 128L: Large Marine Vertebrates Field Cou	rec.			BIOL 121L: Environmental Phage Biology Lab BIOL 186L: Undergraduate Research in MCD Bio	olom:				
		J DIOC 120L. Large Marine vertebrates Field Cou	ırse		\Box	DIOL 100L. Ondergraduate Résearch in MCD Bio	υιυάλ				

☐ BIOE 129 Marine Mammals*										
☐ BIOE 137: Molecular Ecology^*										
☐ BIOE 141L: Behavioral Ecology Field Course										
☐ BIOE 145: Plant Ecology										
☐ BIOE 145L: Field Methods in Plant Ecology										
☐ BIOE 150L: Ecological Field Methods										
BIOE 151B/ENVS 109B: Ecology and Conservation in Practice Supercourse: Ecological Field Methods Lab										
■ BIOE 153C: Disciplinary Communication for Biologists										
☐ BIOE 158L: Marine Ecology Lab										
☐ BIOE 159A: Marine Ecology Field Quarter: Marine Ecology with Lab										
☐ BIOE 161L: Kelp Forest Ecology Lab										
■ BIOE 171: Disciplinary Communication for Biologists										
BIOE 172: Population Genetics*										
^For 2-credit BIOE lab courses listed above that are taken concurrently with 5-credit lectures, both co	ourses must be passed to receive one half of the DC									
requirement. BIOE 117 and BIOE 137 require concurrent enrollment in 2-credit labs, BIOE 117L and BIOE 137L, but these are not part of the DC requirement.										
*Shaded courses below count for both the DC and Upper Div Elective requirements										
COMPREHENSIVE REQUIREMENT IS SATISFIED BY COMPLETING TWO UPPER-DIVISION LAB OR FIELD COURSES (BIOL or BIOE course identified with an "L").										
BIOL 101L OR BIOL 102L OR BIOL 107L OR BIOL 122K										
One upper-division lab/field course (from above lists only)										
Please refer to your 2023-24 UCSC General Catalog for more information or clarification										