Department of Biology Graduation Checklist https://biology.sfsu.edu/advising/undergraduate

LD		Last First	L-IIIali					
UD=			Db					
		Advisor:	Phone					
	BACHELOR (OF SCIENCE IN BIOLOGY: CONCENTRATION IN MARINE SCIENCE						
All courses for the major must	be completed with a letter grade (CR/NC is not	t acceptable).						
Course is 3 units unless otherw	vise noted.							
	ents (35 units) [should be 34 units]			Sn/S	Su 25	hased	on 2	024 offerings
Lower Division Requireme				Jp/3	1 23	Jaseu	OII Z	JZ4 Offerings
	Prerequisites (must be completed with							
	a C- or better, unless otherwise stated;			Fa	Cn.	Su		
Class	however, Chemistry prerequisite	Class Name	Units	24	Sp 25	25	٧	on DPR?
	courses must be completed with a C or			24	25	25		
	better)							
BIOL 230	·	Introductory Biology I (5)	5	voc	VOC	no		
				yes	_	-		
BIOL 231		Advising for Success as a Biology Major (1)	1	yes	yes	no		
BIOL 240	Biol 230	Introductory Biology II (5) [Meets GE Area B2 (Life Science)]	5	yes	yes	no		
CHEM 115	see https://bulletin.sfsu.edu/courses/chem/	General Chemistry 1 (4)	4	yes	yes	yes		
CHEM 130	Chem 115	General Organic Chemistry	3	yes	yes	yes		
MATH 226	see https://bulletin.sfsu.edu/courses/math/	Calculus I (4)	4	yes	yes	yes		
		Calculus I (4)	-	yes	yes	yes		L
Select one physics sequence					-			
PHYS 111/112	see https://bulletin.sfsu.edu/courses/phys/	General Physics I/Laboratory (3/1)		yes	yes	yes		
PHYS 220/222 ¹	see https://bulletin.sfsu.edu/courses/phys/	General Physics with Calculus I and Laboratory (3/1)		yes	yes	yes		
Select 8 units from the follo	owing:							
CHEM 215	Chem 115	General Chemistry II with Lab (4)		yes	yes	yes		
MATH 227 ¹	see http://bulletin.sfsu.edu/courses/math/	Calculus II (4)	†	+ -		-		
			!	yes	yes	yes		
	lecture/lab to complete physics sequence		1	1	!	$\vdash \vdash$		
	see https://bulletin.sfsu.edu/courses/phys/	General Physics II and Laboratory (3/1)	ļ	yes	yes	yes		
PHYS 230/232 ²	see https://bulletin.sfsu.edu/courses/phys/	General Physics with Calculus II and Laboratory (3/1)	<u></u>	yes	yes	yes		
1 If taking PHYS 220/PHYS	222, MATH 227 must be taken concurrer	ntly.						
2 PHYS 111/PHYS 112 are	the prerequisites for PHYS 121/PHYS 122			1	1			
	the prerequisites for PHYS 230/PHYS 232							
	n 215 were revised as of Fall 2024	Total lower division requirements (units):	35	I che	ould h	e 34 u	ınite l	
	<u>-</u>		33	Lanc	Julu L	2341	ınıcəj	
ine courses listed in purple	e bold text are the blology core courses sr	hared across the Biology BS concentrations.		1	1			
Unner Division Requireme	ents (22 - 25 units) [Bulletin states 22-25	5 hut should be 22-27 units!		Fa	Sp	Su	٧	on DPR?
Opper Division Requireme	ents (22 - 25 units) [builetin states 22-25	5, but should be 25-27 units]		24	25	25	٠	OH DEK:
BIOL 337	Biol 230 + Biol 240 + Biol 355	Evolution	3	yes	yes	yes		
BIOL 355	Biol 230 + Biol 240 + Chem 115	Genetics [meets GE UD-B requirement]	3	yes	yes	i i		
				_		yes		
BIOL 458	one college-level Biology course	Biometry (4)	4	yes	yes	no		
Units selected from the fol			1					
BIOL 582	Biol 230 + Biol 240	Biological Oceanography & Limnology (4)		no	yes	no		
CHEM 680	Chem 215	Chemical Oceanography		no	yes	no		
	At least 9 units of coursework in							
ERTH 400	geoscience, earth sciences, chemistry, or	Earth Systems I		yes	no	no		
	physics.	·		'				
			1					
	Upper-division standing; MATH 226 +							
ERTH 434	[PHYS 111 or PHYS 220]; GPA of 3.0 or	Coastal Processes		no	no	no		
	higher							
	Upper-division standing; [ERTH 170 or							
ERTH 470	ERTH 172 or ERTH 270] and PHYS 220;	Physical Oceanography		no	no	no		
EKITI 170	GPA of 3.0 or higher	This occurred about						
	<u>-</u>		1					
	ollowing (GWAR options) (3 - 4 units)		1					
BIOL 475GW	Biol 230 + Biol 240 + GE Area 2	Herpetology - GWAR		no	yes	no		
BIOL 478GW	Biol 230 + Biol 240 + GE Area 2	Ornithology - GWAR (4)		no	yes	no		
BIOL 570GW	Biol 230 + Biol 240 + GE Area 2	Biology of Fishes - GWAR (4)		yes	no	no		
BIOL 586GW	Biol 230 + Biol 240 + GE Area 2	Marine Ecology Laboratory (4)		no	yes	no		
			 	+	,	-		
	GE Area A2 + BIOL 240 + BIOL 458 with			1	1			
BIOL 670GW	grades of C or better; concurrent	Ecology and Evolution of Marine Systems I - GWAR (6)		no	yes	no		
	enrollment in BIOL 671 + [BIOL 699 or	(-)			,			
	BIOL 897]							
Units selected from the fol	llowing (6 - 7 units):							
, , .	311			Fa	Sp	Su		
Courses used to satisfy the	e GWAR above may not be double-counte	ed as electives.		24	25	25		
			1	24	23	23		
BIOL 315	Biol 240 + Biol 458 (with grades C or	Field Methods in Ecology and Evolution (1)		no	no	yes		
	better); GPA 3.0 or better		<u>L</u>			, 03		
BIOL 349	GE Areas A1*, A2*, A3*, and B4*	Bioethics		no	no	no		
BIOL 350	Biol 230 + Biol 240 + Chem 115	Cell Biology		yes	yes	yes		
BIOL 356	Biol 355 with a grade of B or better	Honors Genetics (2)		no	no	no		
BIOL 357	Biol 355	Molecular Genetics		_		no		
			1	yes	yes	_		
BIOL 380	Biol 355 (Biol 337 is recommended)	Evolutionary Developmental Biology		no	no	no		
BIOL 382	Biol 350 + Biol 355, GPA 3.0 or higher	Developmental Biology	ļ	no	yes	no		
BIOL 401	Biol 230 + Biol 240 + Chem 233	General Microbiology		yes	yes	no		
BIOL 460	Biol 230 + Biol 240	General Entomology (4)		yes	no	no		
BIOL 470	Biol 230 + Biol 240	Natural History of Vertebrates (4)		no	no	no		
BIOL 482	Biol 230 + Biol 240	Ecology (4)		yes	yes	no		
BIOL 502	Biol 230 + Biol 240, GPA 3.0 or higher	Biology of the Algae	†	no	yes	no		
			 	_		-		
BIOL 525	Biol 230 + Biol 240 + Chem 130	Plant Physiology	<u> </u>	no	yes	no		
BIOL 526	Biol 230 + Biol 240 + Chem 130	Plant Molecular Physiology Laboratory (2)	<u> </u>	no	no	no		

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BIOL 530	Biol 230 + Biol 240	Conservation Biology		yes r	10	no		
BIOL 532	Biol 230 + Biol 240	Restoration Ecology		no r	10	no		
BIOL 534	Biol 230 + Biol 240	Wetland Ecology (4)		no r	10	no		
BIOL 555	Biol 230 + Biol 240	Marine Invertebrate Zoology (4)		no r	10	no		
BIOL 572	Upper-division standing; GPA of 3.0 or higher	Colloquium in Ecology, Evolution, and Conservation (2)		no	no	no		
_						Su 25	٧	on DPR?
BIOL 580	Biol 230 + Biol 240 + Chem 215 + Chem 216; ecology course recommended	Limnology		no r	10	no		
BIOL 582	Biol 230 + Biol 240	Biological Oceanography and Limnology (4)		no y	es	no		
BIOL 585	Biol 230 + Biol 240	Marine Ecology			_	no		
BIOL 586GW	Biol 230 + Biol 240 + GE Area 2	Marine Ecology Laboratory (4)		no y	es	no		
BIOL 600	Biol 230 + Biol 240	Animal Behavior		no r	10	no		
BIOL 607	Biol 230 + Biol 240 + Biol 355	Conservation and Management of Marine Mammals		no r	10	no		
BIOL 617	Biol 612 or Biol 630	Environmental Physiology		no	no	no		
BIOL 630	Biol 230 + Biol 240 + [Chem 130 or Chem 233]	Animal Physiology	,	yes r	10	no		
BIOL 631GW	GE Area 2 + Biol 612 or Biol 630	Animal Physiology Laboratory - GWAR (4)		no r	10	no		
BIOL 644	Biol 230 + Biol 240 + [Biol 350 or Biol 355 or Biol 357]	LEADerS Service Learning Course: Learners Engaged in Advocating for Diversity in Science (4)		no	no	no		
OR BIOL 654	Biol 230	Peer Assistants for Learning Science (4)		yes y	/es	no		
BIOL 670GW	GE Area A2 + BIOL 240 + BIOL 458 with grades of C or better; concurrent enrollment in BIOL 671 + [BIOL 699 or BIOL 897]	Ecology and Evolution of Marine Systems I - GWAR (6)		no	no	no		
BIOL 671	BIOL 240 + BIOL 458 with grades of C or better; concurrent enrollment in BIOL 670GW + [BIOL 699 or BIOL 897]	Ecology and Evolution of Marine Systems II (6)		no	no	no		
BIOL 699	Restricted to senior Biology majors; consent of the department and instructor.	Independent Study in Biology (1-3 units) requires faculty mentor's approval		yes y	/es	no		
MSCI 306	see http://bulletin.sfsu.edu/courses/msci/	Marine Science Diving and Boating (2)	1 [no	no	no		

Course Title	Units
	Course Title

What course has student taken to meet GWAR?

GWAR course must be completed with a C- or better to meet graduation requirements

	Kequirea
Total upper division unit requirements [should be 23 - 27 units]	22-25
Total units for major. Minimum 57 units	57-69

Completed

Recommendations for targeted post-graduate plans

Health profession Students must take Chem 215 (General Chemistry II with lab) Students generally required to take the full year of organic chemistry with lab: Chem 233/234 and Chem 335/336 (check your target program) Students should take biochemistry: Chem 349 Students generally required to take Phys 121/122 Students should check their target programs to confirm requirements. Graduate programs Students must take Chem 215 (General Chemistry II with lab) Students generally required to take the full year of organic chemistry with lab: Chem

233/234 and Chem 335/336 (check your target program)

Students generally take the full year of biochemistry: Chem 340 and Chem 341

Students generally required to take Phys 121/122.

Student should consult with major advisor to optimize course plan for goals.