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

LD=	-
UD=	

Student: ______ Last First E-mail

Advisor:

Phone

BACHELOR OF SCIENCE IN BIOLOGY: CONCENTRATION IN MICROBIOLOGY

Lower Division Require	ements (34-37 units)		Units				V	DPR?
Class	Prerequisites (must be completed with a C- or better, unless otherwise stated; however, Chemistry prerequisite courses must be completed with a C or better)	Class Name	Units	Fa 21	Sp 22	Su 22	7	on DPR?
BIOL 230		Introductory Biology I	5	yes	yes	no		
BIOL 231		Advising for Success as a Biology Major	1	yes	yes			
BIOL 240	Biol 230	Introductory Biology II [Meets GE Areas B2 (Life Science) & B3 (Lab Science)]	5	yes	yes	no		
CHEM 115	see http://bulletin.sfsu.edu/courses/chem/	General Chemistry I: Essential Concepts of Chemistry	5	yes	yes	no		
CHEM 215	Chem 115	General Chemistry II: Quant. Appl.of Chem. Conc. (3)	3	yes	yes	yes		
MATH 226 ¹	see http://bulletin.sfsu.edu/courses/math/	Calculus I	4	yes	yes	yes		
PHYS 111/112 ¹	see http://bulletin.sfsu.edu/courses/phys/	General Physics I/Laboratory (3/1)	4	yes	yes	yes		
PHYS 121/122 ¹	see http://bulletin.sfsu.edu/courses/phys/	General Physics II and Laboratory (3/1)	4	yes	yes	yes		
Select one organic che	mistry ¹ sequence (3-6 units):		3 - 6					
CHEM 130	Chem 115	General Organic Chemistry [meets GE Area B1]		yes	yes	yes		
CHEM 233 and CHEM 335	see http://bulletin.sfsu.edu/courses/chem/	Organic Chemistry I [meets GE Area B1] and Organic Chemistry II		yes	yes	yes		
		Total lower division requirements (units)	: 34-37					r

Upper Division Requi	irements (15 units)						
BIOL 337	Biol 230 + Biol 240 + Biol 355	Evolution	3	yes	yes	no	
BIOL 355 ²	Biol 230 + Biol 240 + Chem 115	Genetics [meets GE UD-B requirement]	3	yes	yes	yes	
BIOL 401	Biol 230 + Biol 240 + Chem 233	General Microbiology	3	yes	yes	no	
BIOL 402GW	Biol 401 (may be taken concurrently) + GE Area 2	General Microbiology Laboratory - GWAR	3	yes	yes	no	
Biochemistry course ¹	selected from the following (3 units):		3				
CHEM 340	Chem 215 + Chem 233 + Chem 335 with grades of C or better	Biochemistry I		yes	yes	no	
CHEM 349	Chem 215 (grade C or better) + [Chem 130 (grade C or better) or Chem 335 (grade of C- or better)]	General Biochemistry		yes	yes	yes	
		Upper Division Requirements (units)	15				

Upper Division Electiv	ves (11 units)							
Upper division elective	es in Microbiology: Select 11 units from t	he following courses, including at	-					on
least two laboratory o	courses with approval of an advisor			Fa 21	Sp 22	Su 22	۷	DPR?
BIOL 420 ²	Biol 401 + Biol 402GW	General Virology		no	yes	no		
BIOL 425	Biol 230 + Biol 240 + [Biol 355 or Biol 401 or Biol 350] + Chem 130	Emerging Diseases		no	yes	no		
BIOL 430 ¹	Bio 401 with a C or better	Medical Microbiology		yes	no	no		
BIOL 435 ¹	Biol 350 or Biol 401	Immunology		no	yes	no		
BIOL 442	Biol 401 + Biol 402GW + Chem 349	Microbial Physiology		yes	no	no		
BIOL 453 ²	Biol 230 + Biol 240 + Biol 355	General Parasitology		yes	no	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 652	[Biol 230 + Biol 240] OR one upper division biology course	Science Education Partners in Biology (4)		no	no	no		
Select two laboratory	courses from the following:							
BIOL 431 ²	Biol 401 + Biol 402GW + Chem 349	Medical Microbiology Lab (2)		no	yes	no		
BIOL 436 ²	Biol 402GW, concurrent enrollment in Biol 435	Immunology Laboratory (2)		no	no	no		
BIOL 443	Biol 442 (may be taken concurrently)	Microbial Physiology Laboratory (2)		no	no	no		
BIOL 446	Biol 401 + Biol 402GW + Biol 355	Microbial Genomics (4)		yes	no	no		
BIOL 454 ²	Biol 453 (may be taken concurrently)	General Parasitology Laboratory (1)		yes	no	no		

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				Fa 21	Sp 22	Su 22	٧	on DPR?
BIOL 490	Biol 230 + Biol 240	Ecology of Infectious Diseases (4)		no	no	no		
BIOL 625 ¹	one college-level physiology course	Hematology		yes	yes	no		
BIOL 638	Biol 230, GPA 3.0 or higher	Bioinformatics & Genome Annotation (4)		no	yes	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	yes	no		
CHEM 336	see http://bulletin.sfsu.edu/courses/chem/	Organic Chemistry II Laboratory (2)		yes	yes	yes		
OR CHEM 343 ²	see http://bulletin.sfsu.edu/courses/chem/	Biochemistry I Laboratory		yes	yes	yes		
	sion to Clinical Laboratory Science gradue admission to Clinical Laboratory Science							
Course Num.		Course Title	Units					
What course has stu	dent taken to meet GWAR? (Typically Biol	402GW)	_					
GWAR course must b	e completed with a C- or better to meet g	raduation requirements						
			Required	1			Coi	npletea
		Total upper division unit requirements:	26					
		Total units for major (minimum 60 units)	60-63					
	or targeted post-graduate plans		•					
Recommendations for Health profession	or targeted post-graduate plans	Students must take Chem 216						
	or targeted post-graduate plans	Students must take Chem 216 Students must take the full year of organic chemistry with lab: Chem 233/234 and Chem 335/336.						
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Health profession Graduate programs		Students must take the full year of organic chemistry with lab: Chem 233/234 and Chem 335/336. Students must take Chem 216 Students must take the full year of organic chemistry with lab: Chem 233/234 and Chem 335/336. Students should take the full year of biochemistry: Chem 340 and Chem 341	=					
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