

# Biological Sciences

## Major Courses

**2022 - 2026 Catalog Requirements**

To be used only for students completing quarter requirements in the 2026-27 year.

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**Do you need to fulfill a quarter course? Check the semester equivalency!**

MAJOR COURSES	QUARTER COURSE	SEMESTER COURSE	NOTES
	BIO 150 Diversity and History of Life	BIO 1150 Life History and Diversity	
	BIO 161 Intro to Cell and Molecular Biology	BIO 1151 Life: Molecules and Cells	
	BIO 162 Introduction to Organismal Form & Function	DISCONTINUED	BIO 162 content will be covered in BIO 1150, 1151 and 3352
	BIO 263 Introductory Ecology and Evolution	BIO 2253 Principles of Ecology and Evolution	
	BIO 351 Principles of Genetics	BIO 3351 -Principles of Genetics	
	BIO 413 Evolutionary Medicine or BIO 414 Evolution	BIO 4413 Evolutionary Medicine or BIO 4414 Evolution	
	BIO 461 Senior Project or BIO 462 -Senior Project Research Experience	BIO 4461 Senior Project Research Proposal OR BIO 4462 -Senior Project Research Experience	
	<b>Ecology- Select one of the following</b> BIO 327 Wildlife Ecology BIO 363 Principles of Conservation Biology BIO 442 Behavioral Ecology BOT 326 Plant Ecology MCRO 436 Microbial Ecology MSCI 300 Marine Ecology	<b>Ecology- Select one of the following:</b> BIO 3327 Wildlife Ecology BIO 3343 Principles of Conservation Biology BIO 4442 Behavioral Ecology BOT 3326 Plant Ecology MCRO 4436 Microbial Ecology MSCI 3000 Marine Ecology	
	<b>PHYSIOLOGY:</b> Select from the following: BIO 361 Principles of Animal Physiology OR BIO 434 Environmental Physiology OR BIO 435 Plant Physiology	<b>PHYSIOLOGY:</b> Select one of the following: BIO 3352 Principles of Animal Physiology or BIO 4422 Environmental Physiology or BIO 3338 Plant Physiology	

**Note: For all discontinued courses, the last time these will be offered is during the 2025-2026 academic year**



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# Biological Sciences

## Major Support Courses

2022 - 2026 Catalog Requirements

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SUPPORT COURSES	QUARTER REQUIREMENT	SEMESTER COURSE	NOTES
	<b>CHEM 127</b> Gen CHEM for Ag & Life Science I	<b>CHEM 1120</b> Fundamentals of Chemical Structure & Properties	
	<b>CHEM 128</b> Gen CHEM for Ag & Life Science II	<b>CHEM 1122</b> Fundamentals of Chemical Reactivity	
	<b>CHEM 129</b> Gen CHEM for Ag & Life Science III	<b>DISCONTINUED</b>	Term last offered: Summer 2026
	<b>CHEM 216</b> Organic Chemistry I OR <b>CHEM 312</b> Organic Chem: Fund. & Applications	<b>CHEM 2242</b> Organic Chemistry I OR <b>CHEM 2240</b> Organic Chem: Fund. & Applications	
	<b>MATH 161</b> Calculus for the Life Sciences I	<b>MATH 1264</b> Calculus for Data Science I	
	<b>MATH 162</b> Calculus for the Life Sciences II	<b>MATH 1265</b> Calculus for Data Science II	
	<b>PHYS 121</b> College Physics I	<b>PHYS 1121</b> College Physics I	
	<b>PHYS 122</b> College Physics II	<b>DISCONTINUED</b>	Students may need to take bridge class - see an advisor
	<b>PHYS 123</b> College Physics III	<b>PHYS 1123</b> College Physics II	
	<b>STAT 218</b> Applied Statistics for the Life Sciences	<b>STAT 1110</b> Applied Statistical Concepts & Methods	



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# Biological Sciences

## General Curriculum Concentration

2022 - 2026 Catalog Requirements

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Do you need to fulfill a quarter course?  
Check the semester equivalency!

GENERAL CURRICULUM CONCENTRATION

QUARTER REQUIREMENT	SEMESTER COURSE	NOTES
<b>BIODIVERSITY COURSES</b> Select from the following: BIO 321 BIO 322 BIO 323 BIO 324 BIO 329 BIO 335 BIO 336 BIO 429 BOT 313 MCRO 224 MCRO 402 MSCI 324	<b>BIODIVERSITY COURSES</b> Select from the following: BIO 3321 BIO 3322 BIO 3323 BIO 3324 DISCONTINUED BIO 3325 BIO 3326 BIO 4429 BOT 3313 MCRO 2224 MCRO 4402 MSCI 3324	
<b>400 Level Electives:</b> Select from any 400 level BIO/BOT/MCRO/MSCI course, except BIO 400, 450, 461, 462, 463	<b>400 Level Electives:</b> Select from any 4000 level BIO/BOT/MCRO/MSCI course except BIO 4000, BIO 4450, BIO 4461, BIO 4462, BIO 4466	
<b>300-400 level Electives</b> Select from any 300-400 level BIO/BOT/MCRO/MSCI course, except BIO 300, 330, 400, 450, 461, 462, 463, and courses "not open for major credit in Biological Sciences."	<b>300-400 level Electives</b> Select from any 300-400 level BIO/BOT/MCRO/MSCI course, except BIO 3000, 4000, 4450, 4461, 4462, 4463, and courses "not open for major credit in Biological Sciences."	
<b>Approved Electives:</b> Any BIO/BOT/MCRO/MSCI course except those "not open for major credit in Biological Sciences. Select from the following:	<b>Approved Electives:</b> Any BIO/BOT/MCRO/MSCI course except those "not open for major credit in Biological Sciences. Select from the following:	
AG/EDES/ENGR/ISLA/SCM/UNIV 350 ANT 401 ASCI 239 ASCI 351 ASCI 403 ASCI 405 OR BIO 407 ASCI 406 ASCI 438	AG/EDES/ENGR/ISLA/SCM/UNIV 3350 ANT 4401 ASCI 2239 ASCI 3351 ASCI 4403 ASCI 4405/BIO 4434 ASCI 4406 ASCI 4438	
CHEM 217 CHEM 218 CHEM 220 CHEM 223 CHEM 314 OR CHEM 369 CHEM 331 CHEM 341 CHEM 372 CHEM 377 CHEM 418 CHEM 428	CHEM 2244 DISCONTINUED DISCONTINUED DISCONTINUED CHEM 3350 OR CHEM 3352 CHEM 3330 CHEM 3372 CHEM 3354 CHEM 4457 CHEM 4458 CHEM 4450	



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# Biological Sciences

## General Curriculum Concentration

2022 - 2026 Catalog Requirements

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Do you need to fulfill  
a quarter course?  
Check the semester  
equivalency!

GENERAL CURRICULUM CONCENTRATION	QUARTER COURSE	SEMESTER COURSE	NOTES
	COMS 418 CSC 101 DATA 301 ENGR 322/SCM 302 ERSC/GEOG 250 ES/WGQS 350	COMS 4418 CSC 1001 DATA 3301 ENGR/SCM 3302 GEOG 2250 ES/WGQS 3330	
	FSN 310 GEOG 441 KINE 406 KINE 445 KINE 446 LA/NR 218 OR GEOG 218	NUTR 3310 GEOG 4441 KINE 4406 KINE 4445 DISCONTINUED LA/NR 2218 GEOG 2218	
	NR 141 NR 142 NR 404 NR 416 NR 418 NR 425	NR 1141 NR 1142 NR 4404 NR 4416 NR 4418 DISCONTINUED	
	PHIL 323 PHIL 339 PHIL 341	PHIL 3323 PHIL 3339 PHIL 3341	
	PSC 201 PSY 320 PSY 340	PSC 2201 PSY 3320 PSY 2240	
	SS 120 SS 321 SS 322 SS 422	SS 1120 SS 3321 DISCONTINUED SS 4422	
	STAT 313 STAT 324 STAT 334 STAT 330 STAT 416 STAT 419 STAT 421	DISCONTINUED STAT 3430 STAT 3530 STAT 3800 STAT 4760 STAT 4790 DISCONTINUED	Suggested course to take for STAT 313 is STAT 3520



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# Biological Sciences

## Anatomy & Physiology Concentration

2022 - 2026 Catalog Requirements

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Do you need to fulfill a quarter course?  
Check the semester equivalency!

ANATOMY & PHYSIOLOGY CONCENTRATION	QUARTER COURSE	SEMESTER COURSE	NOTES
	<b>BIO 452</b> Cell Biology	<b>BIO 4452</b> Cell Biology	
	<b>CHEM 369</b> Biochemical Principles OR <b>CHEM 314</b> Biochemistry Fund & Apps	<b>CHEM 3352</b> Biochemistry OR <b>CHEM 3350</b> Biochemistry Fund & Apps	
	<b>BIODIVERSITY COURSES</b> Select from the following: <b>BIO 321</b> <b>BIO 324</b> <b>BIO 336</b> <b>MCRO 224</b> <b>BIO 322</b> <b>BIO 329</b> <b>BIO 415</b> <b>MSCI 324</b> <b>BIO 323</b> <b>BIO 335</b> <b>BOT 313</b> <b>MSCI 437</b>	<b>BIODIVERSITY COURSES</b> Select from the following: <b>BIO 3321</b> <b>BIO 3324</b> <b>BIO 3326</b> <b>MCRO 2224</b> <b>DISCNT</b> <b>DISCNT</b> <b>BIO 4429</b> <b>MSCI 3324</b> <b>BIO 3323</b> <b>BIO 3325</b> <b>BOT 3313</b> <b>MSCI 4437</b>	
	<b>Core Anatomy &amp; Physiology Courses</b> Select from the Following: <b>BIO 406</b> <b>BIO 408</b> <b>BIO 426</b> <b>BIO 407</b> <b>BIO 409</b> <b>BIO 410</b> <b>ASCI 405</b>	<b>Core Anatomy &amp; Physiology Courses</b> Select from the following: <b>BIO 4433</b> <b>BIO 4432</b> <b>BIO 4456</b> <b>BIO 4434</b> <b>BIO 4431</b> <b>BIO 4436</b> <b>ASCI 4405</b>	Consult with a faculty advisor to discuss the optimal combination of quarter and semester courses.
	<b>Department Electives</b> Select from the following: <b>BIO 321</b> <b>BIO 322</b> <b>BIO 323</b> <b>BIO 324</b> <b>BIO 329</b> <b>BIO 335</b> <b>BIO 336</b> <b>BIO 405</b>	<b>Department Electives</b> Select from the following: <b>BIO 3321</b> <b>BIO 3322</b> <b>BIO 3323</b> <b>BIO 3324</b> <b>DISCONTINUED</b> <b>BIO 3325</b> <b>BIO 3326</b> <b>BIO 4455</b>	
	<b>BIO 406</b> <b>BIO 407 or ASCI 405</b> <b>BIO 408</b> <b>BIO 409</b> <b>BIO 410</b> <b>BIO 411</b> <b>BIO 415</b>	<b>BIO 4433</b> <b>BIO 4434</b> <b>BIO 4431</b> <b>BIO 4432</b> <b>BIO 4436</b> <b>BIO 3333</b> <b>BIO 4449</b>	
	<b>BIO 426</b> <b>BIO 428</b> <b>BIO 429</b> <b>BIO 434</b> <b>BIO 435</b> <b>BIO 470</b> <b>BIO/CHEM 475</b> <b>MCRO 224</b> <b>MCRO 225</b> <b>MCRO 320</b> <b>MCRO 342</b> <b>MCRO 402</b> <b>MCRO 423</b> <b>MCRO 424</b>	<b>BIO 4456</b> <b>BIO 4458</b> <b>BIO 4429</b> <b>BIO 4422</b> <b>BIO 3338</b> <b>BIO 4470</b> <b>BIO 4457</b> <b>MCRO 2224</b> <b>MCRO 2227</b> <b>MCRO 3320</b> <b>MCRO 3342</b> <b>MCRO 4402</b> <b>MCRO 4423</b> <b>MCRO 4424</b>	



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# Biological Sciences

## Ecology, Evolution, Biodiversity & Conservation Concentration

2022 - 2026 Catalog Requirements

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Do you need to fulfill a quarter course?  
Check the semester equivalency!

ECOLOGY, EVOLUTION, BIODIVERSITY & CONSERVATION CONCENTRATION	QUARTER COURSE	SEMESTER COURSE	NOTES
	BIO 363 Principles of Conservation Biology	BIO 3343 Principles of Conservation Biology	
	LA/NR 218 Intro to Geographic Info Systems (GIS) OR GEOG 218 Applications in GIS	LA/NR 2218 Intro to Geographic Info Systems OR GEOG 2218 Applications in GIS	
	<b>Biodiversity Courses</b> Select from the following: BIO 321 BIO 322 BIO 323 BIO 324 BIO 335 BIO 336 BOT 313 BOT 433 MCRO 224 MSCI 437	<b>BIODIVERSITY COURSES</b> Select from the following: BIO 3321 BIO 3322 BIO 3323 BIO 3324 BIO 3325 BIO 3326 BOT 3313 BOT 4433 MCRO 2224 MSCI 4437	
	<b>Ecology &amp; Evolution Courses:</b> Select from the following: BIO 415 BIO 442 BIO 444 BIO 445 BIO 446 BIO 447 BOT 326 MCRO 436 MSCI 300	<b>Ecology &amp; Evolution Courses:</b> Select from the following: BIO 4449 BIO 4442 DISCNT BIO 4444 BIO 4446 BIO 4447 BOT 3326 MCRO 4436 MSCI 3000	
	<b>Conservation Courses:</b> Select from the following: BIO 427    MSCI 428    MSCI 439    NR 416	<b>Conservation Courses:</b> Select from the following: BIO 4427    DISCNT    MSCI 4439    NR 4416	
	<b>APPROVED ELECTIVES</b> Select from the following: ASCI 239 BIO 300 BIO 321 BIO 322 BIO 323 BIO 324 BIO 327 BIO 329 BIO 330	<b>APPROVED ELECTIVES</b> Select from the following: ASCI 2239 BIO 3000 BIO 3321 BIO 3322 BIO 3323 BIO 3324 BIO 3327 DISCONTINUED DISCONTINUED	



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# Biological Sciences: Concentration

## Ecology, Evolution, Biodiversity & Conservation Concentration

2022 - 2026 Catalog Requirements

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Do you need to fulfill a quarter course?  
Check the semester equivalency!

ECOLOGICAL, EVOLUTION, BIODIVERSITY & CONSERVATION CONCENTRATION	QUARTER COURSE		SEMESTER COURSE	NOTES
	BOI 335		BIO 3325	
	BIO 336		BIO 3326	
	BIO 400		BIO 4400	
	BIO 415		BIO 4449	
	BIO 427		BIO 4427	
	BIO 429		BIO 4429	
	BIO 434		BIO 4422	
	BIO 435		BIO 3338	
	BIO 442		BIO 4442	
	BIO 445		BIO 4444	
	BIO 446		BIO 4446	
	BIO 450		BIO 4450	
	BIO 461		BIO 4461	
	BIO 462		BIO 4462	
	BIO 463		BIO 4466	
	BOT 311		BOT 3311	
	BOT 323		PLSC 3323	
	BOT 326		BOT 3326	
	GEOG 441		GEOG 4441	
	MCRO 224		MCRO 2224	
	MCRO 436		MCRO 4436	
	MSCI 300		MSCI 3000	
	MSCI 324		MSCI 3324	
	MSCI 428		MSCI 4437	MSCI 428 & 437 content merged into MSCI 4437
	MSCI 437		MSCI 4437	
	MSCI 439		MSCI 4439	
	NR 141		NR 1141	
	NR 142		NR 1142	
	NR 314		NR 4442	
	NR 404		NR 4404	
	NR 416		NR 4416	
	NR 418		NR 4418	
	NR 425		DISCONTINUED	
	NR 445		NR 4445	
	SCM 302		SCM 3302	
	STAT 313		DISCONTINUED	
	STAT 324		STAT 3430	
	STAT 334		STAT 3530	
	STAT 330		STAT 3800	
	STAT 331		STAT 1810	
	STAT 416		STAT 4760	
	STAT 419		STAT 4790	
	STAT 421		DISCONTINUED	Suggested course to take for STAT 313 is STAT 3520



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# Biological Sciences

## Molecular & Cellular Biology Concentration

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Do you need to fulfill a quarter course?  
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MOLECULAR & CELLULAR CONCENTRATION	QUARTER COURSE	SEMESTER COURSE	NOTES
	BIO 452 Cell Biology	BIO 4452 Cell Biology	
	BIO/CHEM 475 Molecular Biology Laboratory	BIO 4457 Molecular Biology Laboratory	
	CHEM 217 Organic Chemistry II	CHEM 2244 Organic Chemistry II	
	CHEM 220 Organic Chemistry Laboratory for Life Sciences II	DISCONTINUED	Content merged with CHEM 2244
	CHEM 369 Biochemical Principles	CHEM 3352 Biochemistry	
	MCRO 224 General Microbiology I	MCRO 2224 General Microbiology I	
	Advanced Cell and Molecular Applications Select from the following:	Advanced Cell and Molecular Applications Select from the following:	
	ASCI 403 BIO 405 BIO 426 BIO 428 BIO/CHEM 441 BIO/CHEM 476 CHEM 372 CHEM 418 CHEM 474 MCRO 402 MCRO 433	ASCI 4403 BIO 4455 BIO 4456 BIO 4458 BIO 4451 DISCONTINUED CHEM 3354 CHEM 4458 CHEM 4454 MCRO 4402 MCRO 4433	
	Approved Electives Select from the following:	Approved Electives Select from the following:	
	ASCI 403 ASCI 406 ASCI 407 BIO 202 CHEM 218 CHEM 223 CHEM 331 CHEM 372 CHEM 377 CHEM 418 CHEM 428 CHEM 474	ASCI 4403 ASCI 4406 ASCI 4407 BIO 2252 DISCONTINUED DISCONTINUED CHEM 330 CHEM 3354 CHEM 4457 CHEM 4458 CHEM 4450 CHEM 4454	



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# Biological Sciences

## Molecular & Cellular Biology Concentration

2022 - 2026 Catalog Requirements



	QUARTER COURSE	SEMESTER COURSE	NOTES
MOLECULAR & CELLULAR CONCENTRATION	<b>Approved Electives</b> Select from the following:	<b>Approved Electives</b> Select from the following:	
	CSC 101	CSC 1001	
	DATA 301	DATA 3301	
	SCM 302	SCM 3302	
	ES/WGQS 350	WGQS 3350	
	PHIL 323	PHIL 3323	
	PHIL 339	PHIL 3339	
	PHIL 341	PHIL 3341	
	STAT 313	DISCONTINUED	



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