Bachelor of Science in Biology

Curriculum Worksheet

Sept 23

UNIVERSITY CORE COURSES

Required Courses	CR	Satisfied/Term	
Core 1 Towson Seminar			
TSEM 102 Towson Seminar	3		
Core 2 English Composition			
ENGL 102 Writing for a Liberal Education	3		
Core 4 Creativity and Creative Development			
	3		
Core 5 Arts and Humanities			
	3		
Core 6 Social and Behavioral Sciences			
	3		
Core 9 Advanced Writing Seminar			
	3		
Core 10 Metropolitan Perspectives			
	3		
Core 11 The United States as a Nation			
	3		
Core 12 Global Perspectives			
	3		
Core 13 Diversity and Difference			
	3		
Core 14 Ethical Issues and Perspectives			
	3		

Cores 3, 7, and 8 are fulfilled by Biology major requirements

ANCILLARY COURSES

Required Math Course (Select one)		CR	Satisfied/Term	
MATH 237	Elementary Biostatistics	4		
MATH 231	Basic Statistics	3		
MATH 211	Calculus for Applications	3		
MATH 273	Calculus I	4		
PSYC 212	Behavioral Statistics	4		
Requirement Satisfied		3 or 4		

Required Physics Course (Select one)		CR	Satisfied/Term	
PHYS 211	General Physics I Non-Calculus-Based	4		
PHYS 241	General Physics I Calculus-Based	4		
Requirement Satisfied		4		

Required Chemistry Courses		CR	Satisfied/Term	
CHEM 131	General Chemistry I	3		
CHEM 131L	General Chemistry I Lab	1		
CHEM 132	General Chemistry II	3		
CHEM 132L	General Chemistry II Lab	1		
Requirement Satisfied		8		

Required Organic Chemistry Options[‡]		CR	Satisfied/Term	
CHEM 333	Essentials of Organic Chemistry	3		
CHEM 333L	Essentials of Organic Chemistry Lab	2		
	or			
CHEM 334	Organic Chemistry I	3		
CHEM 336	Organic Chemistry I Lab	2		
CHEM 337	Organic Chemistry II	3		
Requirement Satisfied		5 or 10		

([‡]Formerly CHEM330, CHEM331, & CHEM332)

FREE ELECTIVES

Free electives are the balance of the 120 credits required for graduation that are not used to satisfy any other requirement on this checklist.

Courses	CR	Satisfied/Term	

To apply for graduation students must also have:

- a minimum total of 120 credits
- a minimum of 32 upper-level credits
- an overall GPA > 2.0

Transfer students must fulfill residency requirement.

Biology Major Requirements

Concentration Abbreviations

BIOL = General Biology

CMOP = Cellular, Molecular, & Organismal Physiology

ECOL = Evolution, Ecology, and Conservation

Required Foundation Courses		CR	Satisfied/Term	
BIOL 200	Intro to Cell Biology and Genetics	3		
BIOL 200L	Intro to Cell Biology and Genetics Lab	1		
BIOL 206	Intro to Ecology and Evolution	3		
BIOL 206L	Intro to Ecology and Evolution Lab	1		
BIOL 204	Edu & Career Planning for the Biologist	1		
Requirement Satisfied		9		

Required Intermediate Courses		CR	Satisfied/Term	
Genetics				
BIOL 309	Genetics	4		
Biodiversity				
BIOL 208	Biodiversity	3		
	or			
BIOL 205	General Botany	4		
BIOL 207	General Zoology	4		
Physiology				
BIOL 325	Animal Physiology	4		
	or			
BIOL 436	Plant Physiology	4		
	or			
BIOL 342	Human Anat & Phys for Bio Major I	4		
BIOL 343	Human Anat & Phys for Bio Major II	4		
Requirement Satisfied		11 to 20		

Concentration Electives				
BIOL: Select one course from CMOP list and one from ECOL list				
CMOP: Select two of the following				
BIOL 408	Cell Biology	4		
BIOL 409	Molecular Biology	4		
BIOL 470	Advanced Physiology	4		
CHEM 351	Biochemistry	3		
ECOL: Select one from each pair below				
BIOL 310◊	Conservation Biology	4		
	or			
BIOL 402◊	General Ecology	4		
	and			
BIOL 405	Molecular Ecol, Evol, and Conserv	4		
	or			
BIOL 413	Evolution	3		
Requirement Satisfied		7 or 8		

Courses of Interest (not required and do not count towards major)				
BIOL 105	Environmental biology	3		
BIOL 210	Medical Terminology	3		
BIOL 304	Natur Hist Interp & Public Enviro Edu	3		
BIOL 485	Seminar in Applied Biotechnology	1		
BIOL 382	Env Educ/Service Learning in Tropics	3		
BIOL 425	Dissection of the Upper Extremity	2		
BIOL 471	Advanced Physiology Laboratory	2		
BIOL 484	Seminar Ecol, Evol, Behav, & Conserv	1		
CHEM 339	Organic Chemistry II Lab	2		
LIBR 100	The Information Experience	3		
PHYS 212	General Physics II Non-Calculus-Based	4		
PHYS 241	General Physics II Calculus-Based	4		

Honors College Coursework
BIOL 203 Honors Biology I: Cell Biology and Genetics replaces BIOL200/L
MATH 233 Honors Basic Satistics replaces MATH 231/237

IMPORTANT INFORMATION:

This sheet is an unofficial representation of the requirements and the information is subject to change. It is not an official record of academic progress and should not be treated as such. Official degree information can only be obtained through the Academic Requirements Report or the Office of the Registrar.

Upper-Level Electives

BIOL: select any three courses from the lists below

List of CMOP Electives		CR	Satisfied/Term	
CMOP: Select two courses from this list + a third from any U-L list				
BIOL 318◊	General Microbiology	4		
BIOL 355	Animal Parasitology	3		
BIOL 360◊	Histology	4		
BIOL 365	Pathophysiology	3		
BIOL 367	Endocrinology	3		
BIOL 403	Advanced Genetics	3		
BIOL 408*	Cell Biology	4		
BIOL 409*	Molecular Biology	4		
BIOL 410◊	Molecular Biology Laboratory	3		
BIOL 411	Cancer Biology	3		
BIOL 412◊	Cell Biology Laboratory	3		
BIOL 415	Biotechnology	3		
BIOL 418◊	Genetic Analysis in Medicine	3		
BIOL 419	Environmental Microbiology	3		
BIOL 420	Microbiology of Infectious Disease	3		
BIOL 421	Immunology	4		
BIOL 427	Neuromuscular Mech of Upper Body	2		
BIOL 428	Virology	3		
BIOL 463	Developmental Biology	4		
BIOL 470*	Advanced Physiology	4		
BIOL 474◊	Mol Techniques Ecol, Evol, & Conserv	3		
BIOL 475◊	Genetics Laboratory	3		
CHEM 351*	Biochemistry	3		
CHEM 356◊	Biochemistry Lab	2		
MBBB 301	Intro to Bioinformatics	4		
MBBB 315	Genomics	3		

List of ECOL Electives		CR	Satisfied/Term	
ECOL: Select two courses from this list + a third from any U-L list				
BIOL 310*◊	Conservation Biology	4		
BIOL 325*	Animal Physiology	4		
BIOL 334	Humans, Science, & the Chesapeake	3		
BIOL 347	Marine Biology	3		
BIOL 353◊	Invertebrate Zoology	4		
BIOL 355	Animal Parasitology	3		
BIOL 371	Animal Behavior	4		
BIOL 402*◊	General Ecology	4		
BIOL 405*	Molecular Ecol, Evol, and Conserv	4		
BIOL 406◊	Limnology	4		
BIOL 413*	Evolution	3		
BIOL 432◊	Vascular Plant Taxonomy	4		
BIOL 435◊	Plant Ecology	4		
BIOL 436*	Plant Physiology	3		
BIOL 444	Wildlife Management	3		
BIOL 446	Tropical Ecology and Conservation	3		
BIOL 447	Tropical Field Ecology in Peru	6		
BIOL 452◊	Wetland Ecology	4		
BIOL 455◊	Fish Biology	4		
BIOL 456◊	Ornithology	4		
BIOL 458◊	Mammalogy	4		
BIOL 461◊	Entomology	4		
BIOL 467◊	Herpetology	4		
BIOL 472◊	Organismal Form and Function Lab	3		
BIOL 473◊	Ecological Field Methods	3		
BIOL 474◊	Mol Techniques Ecol, Evol, & Conserv	3		

Courses that may fulfill one U-L Elective (Pre-Approval Required)				
GEOG 221	Intro to Geospatial Technology	3		
GEOG 319	Soils and Vegetation	3		
BIOL 304	Natur Hist Interp & Public Enviro Edu	3		
BIOL 389	Current Developments in Biology	3		
BIOL 483	Workshop in Biology	3		
BIOL 491	Elective in Independent Research	3		
Requirement Satisfied		9 to 12		

*If not chosen as an Intermediate Course/Concentration Elective

Upper-Level Lab Verification ◊
At least one Upper-Level Elective must be LLB, LAB, or BIOL 491
Is one of your U-L Electives marked ◊ as a lab? yes no