Drexel University

Department of Biology

Major Sheet for Biological Sciences - General Biology Concentration

Student Number

Humanities and Social Sciences (33 credits) **Biology Required Courses (36 credits)** ___ BIO 122 4.5 Cells & Genetics __ENGL 101 3 Exp Writing and Reading __ENGL 102 3 Personal Writing and Reading __ BIO 124 4.5 Evolution & Org Diversity __ENGL 103 3 Analytical Writing and Reading __ BIO 126 4.5 Physiology & Ecology __COM 230 3 Techniques of Speaking __ BIO Evolution 217 4 __COM 310 3 __ BIO Principles of Molecular Biology **Technical Writing** 218 4 ____PHIL 251 3 __ BIO 219 2.5 Techniques in Molecular Biology Ethics __UNIV 101 1 The Drexel Experience (Fall) __ BIO 224 4 Form, Func & Evol of Vertebrates ___UNIV 101 2 The Drexel Experience (Winter) __BIO 225 2 Vertebrate Bio & Evol Lab __ BIO 471 2 Seminar in Biological Science __ BIO 472 2 Seminar in Biological Science Humanities and Social Science Electives (9 credits) __ BIO 473 2 Seminar in Biological Science A.) General Biology Concentration Requirements (0 crs) *No Concentration Requirements **B.)** Gen Bio Conc. Electives (minimum 8 courses, 24 crs) Science, Technology & Human Affairs Elective (3 credits) Cell/Mol Bio/Genetics/Biochemistry Elective (2 or 3 courses) ____ _ _ Choose from: _____ ANTH 210 **HIST 290** PHIL 341 _____ HIST 280 HIST 292 PHIL 351 Organismal/Physiology Elective (2 or 3 courses) **HIST 281 ENGL 300** PHIL 361 HIST 285 ENGL 302 **PSCI 371** HIST 286 SOC 235 CJ 279 _ __ __ NFS 446 BIO 212 CJ 378 __ ____ ___ Mathematics and Statistics (18 credits) Evol Bio/Ecology Elective (2 or 3 courses) ___ MATH101 4 Intro to Analysis I OR MATH 121 ____ Intro to Analysis II OR MATH 122 ___ MATH102 4 _____MATH 239 4 Math for the Life Sci OR MATH 123 ____ _____MATH410 3 Scientific Data Analysis I ___MATH411 3 Scientific Data Analysis II C. Laboratory courses (minimum of 2 courses, 4 credits) **Physical Sciences (42 credits)** _____ ___ CHEM 101 3.5 General Chemistry I _____ __ CHEM 102 4.5 General Chemistry II Free Electives (24 credits – minimum 8 courses) __ CHEM 103 5 General Chemistry III __ CHEM 241 4 Organic Chemistry I __ CHEM 242 4 Organic Chemistry II Organic Chemistry III __ CHEM 243 3 _____ Organic Chemistry I Lab CHEM 244 3 _____ ____ __ CHEM 245 3 Organic Chemistry II Lab ___ PHYS 152 Introductory Physics I _____ 4 __ PHYS 153 4 Introductory Physics II _ __ _ ___ PHYS 154 Introductory Physics III 4 _____ **Co-op Placements** _ __ __ _____

A minimum of 181 credits and 2.00 GPA are required for graduation

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General Biology CONCENTRATION ELECTIVES

Cell/Mol Bio/Genetics/Biochem Electives	
*Pick two or three of the following	
BIO 214 Principles of Cell Biology	3 credits
BIO 231 Cell Physiology	3 credits
BIO 244 Genetics	3 credits
BIO 270 Developmental Biology	3 credits
BIO 311 Metabolism	4 credits
BIO 314 Pharmacology	3 credits
BIO 318 Biology of Cancer	3 credits
BIO 331 Bioinfomatics I	3 credits
BIO 332 Bioinformatics II	3 credits
BIO 346 Stem Cell Research	3 credits
BIO 404 Struct & Func of Biomolecules	4 credits
BIO 413 Genomics	3 credits
BIO 415 Proteins	3 credits
BIO 421 Biomembranes	3 credits
BIO 430 Cell Biology of Disease	3 credits
BIO 433 Advanced Cell Biology	3 credits
BIO 444 Human Genetics	3 credits
BIO 445 Microbial Genetics	5 credits
BIO 447 Adv Genetics & Molecular Bio	3 credits
BIO 449 Recombinant DNA Laboratory*	5 credits
BIO 451 Genetic Reg Development	3 credits
BIO 462 Biology of Neuron Function	3 credits
BIO 465 Neurobiology of Disease	3 credits
BIO 498 Independent Study (by permission	of department)
ENVS 326 Molecular Ecology	3 credits

Organismal/Physiology Electives *Pick two or three of the following

"PICK IWO	or three of the following	
BIO 201	Human Physiology I	4 credits
BIO 203	Human Physiology II	4 credits
BIO 221	Microbiology+	3 credits
BIO 223	Parasitology	3 credits
BIO 254	Invertebrate Morph & Phys+	3 credits
BIO 256	Vertebrate Morph & Phys*	5 credits
BIO 260	Plant Biology I	4 credits
BIO 262	Plant Biology II	4 credits
BIO 264 H	Ethnobotany	3 credits
BIO 284	Biology of Stress	3 credits
BIO 310	Comparative Physiology	3 credits
BIO 320	Microb Pathogenesis	3 credits
BIO 322	Mycology	4.5 credits
BIO 368	Embryology	4 credits
BIO 370	Teratology	3 credits
BIO 386	Gross Anatomy+	3 credits
BIO 412	Biology of Aging	3 credits
BIO 420	Virology	3 credits
BIO 424	Microbial Physiology	3 credits
BIO 426	Immunology	3 credits
BIO 435	Adv Immunology	3 credits
BIO 466	Endocrinology	4 credits

ENVS 321 Environmental Health	3 credits
ENVS 392 Ichthyology & Herpetology	3 credits
ENVS 431 Epidemiology	3 credits
ENVS 436 Principles of Toxicology I	3 credits
ENVS 430 Principles of Toxicology I	3 credits
PBHL 401- Epidemiology of Public Health	3 credits
r BHL 401- Epidemiology of rubic fleatin	5 cieuns
Evolutionary Bio/Ecology Electives	
*Pick two or three of the following	
ENVS 230 General Ecology	3 credits
ENVS 270 History of Life on Earth	4 credits
ENVS 271 Dinosaurs and Their World	3 credits
ENVS 272 Physical Geology	4 credits
ENVS 284 Phys and Pop Ecology	3 credits
ENVS 286 Comm and Ecosys Ecology	3 credits
ENVS 322 Tropical Ecology	3 credits
ENVS 323 Tropical Field Studies	3 credits
ENVS 324 Microbial Ecology	3 credits
ENVS 330 Aquatic Ecology	3 credits
ENVS 336 Terrestrial Ecology*	3 credits
ENVS 338 Biodiversity and Conservation	3 credits
ENVS 360 Evo-Devo	3 credits
ENVS 364 Animal Behavior	3 credits
ENVS 375 Invertebrate Paleontology	4 credits
ENVS 388 Marine Field Methods*	5 credits
ENVS 390 Marine Ecology	3 credits
ENVS 410 Physiological Ecology	3 credits
ENVS 412 Biophysical Ecology	3 credits
ENVS 413 Advanced Population Ecology	3 credits
ENVS 414 Adv Community Ecology	3 credits
ENVS 441 Iss in Global Change I: Sem	2 credits
ENVS 442 Iss in Global Change II: Res	2 credits
ENVS 476 Paleobotany	3 credits
ENVS 477 Vertebrate Paleontology	3 credits
ENVS 520 Fld Mthds Paleoecology	3 credits
ENVS 382 Field Botany: NJ Pine Barrens *	5 credits
ENVS 383 Ecology of NJ Pine Barrens*	5 credits

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Laboratory Electives *Pick two of the following

There is the tonowing	
BIO 202 Human Physiology Laboratory	2 credits
BIO 215 Tech Cell Biology	2 credits
BIO 222 Microbiology Lab+	2 credits
BIO 255 Invertebrate Morph & Phys Lab+	3 credits
BIO 256 Vert Morph & Phys Lab*	5 credits
BIO 271 Developmental Bio Lab	2 credits
BIO 306 Biochemistry Laboratory	2 credits
BIO 313 Comp Physiology Lab	2 credits
BIO 333 Bioinformatics Lab	2 credits
BIO 387 Gross Anatomy Lab+	2 credits
BIO 406 Comp Biochemistry Laboratory	2 credits
BIO 427 Immunology Lab	2 credits
BIO 449 Recombinant DNA Laboratory*	5 credits
BIO 497 Research (by permission of dept)	0.5 - 12 credits
ENVS 285 Population Ecology Lab	2 credits
ENVS 287 Community Ecology Lab	2 credits
ENVS 327 Molecular Ecology Lab	2 credits
ENVS 336 Terrestrial Ecology *	5 credits
ENVS 365 Animal Behavior Lab	2 credits
ENVS 382 Field Botany: NJ Pine Barrens *	^c 5 credits
ENVS 383 Ecology of NJ Pine Barrens*	5 credits
ENVS 388 Marine Field Methods *	5 credits

* Have both a lecture and laboratory component- 3 credits apply to lecture; 2 credits apply to lab ** Have both a lecture and laboratory component- 2 credits apply to lecture; 2

credits apply to lab

+ Lecture and lab must be taken together

Pre-requisites must be met before taking a course