

# **Matrix Planned Biology Courses For 2016 - 2017 (tentative)**

| Category   | Autumn 2016   | Winter 2017   | Spring 2017  |
|--|---|---|--|
| <b>Foundation Courses</b>  | <b>BIOL 350</b> (3) - Foundations in Physiology<br><b>BIOL 354</b> (3) - Fnd in Evol & Systematics<br><b>BIOL 355</b> (3) - Fnd in Molec Cell Biology<br><b>BIOL 356</b> (3) - <i>Foundations in Ecology</i>  | <b>BIOL 350</b> (3) - Foundations in Physiology<br><b>BIOL 354</b> (3) - Fnd in Evol & Systematics<br><b>BIOL 355</b> (3) - Fnd in Molec Cell Biology<br><b>BIOL 356</b> (3) - <i>Foundations in Ecology</i>  | <b>BIOL 350</b> (3) - Foundations in Physiology<br><b>BIOL 354</b> (3) - Fnd in Evol & Systematics<br><b>BIOL 355</b> (3) - Fnd in Molec Cell Biology  |
| <b>Natural History / Biodiversity Course *</b>                   | <b>BIOL 280</b> (4) - History of Life<br><b>BIOL 441</b> (5) - <i>Trends in Land Plant Evolution</i><br><b>BIOL 440</b> (5) - General Mycology  | <b>BIOL 439</b> (5) - <i>Functional Morphology</i> *<br><b>BIOL 434</b> (5) - Invertebrate Zoology<br><b>BIOL 440</b> (5) - General Mycology<br><b>BIOL 450</b> (5) - Vertebrate Paleontology<br><b>BIOL 453</b> (5) - Com Anatomy of Vertebrates *   | <b>BIOL 311</b> (3/5) - <i>Biology of Fishes</i><br><b>BIOL 317</b> (5) - <i>Plant ID &amp; Classification</i><br><b>BIOL/ESRM 331</b> (3) - Landscape Plant Recognition<br><b>BIOL 433</b> (5) - <i>Marine Ecology</i><br><b>BIOL 437</b> (5) - <i>Herpetology</i><br><b>BIOL 440</b> (5) - <i>General Mycology</i><br><b>BIOL 443</b> (5) - <i>Evolution of Mammals and their Ances.</i><br><b>BIOL 444</b> (5) - <i>Ornithology</i><br><b>BIOL 451</b> (5) - <i>Invertebrate Paleontology</i><br><b>BIOL 452</b> (5) - <i>Vertebrate Biology</i> *<br><b>BIOL 454</b> (5) - <i>Entomology</i> |
| <b>Molecular Cell Developmental Biology Courses</b>              | <b>BIOL 302</b> (4) - <i>Lab Techniques in C&amp;M Bio</i><br><b>BIOL 380</b> (3) - Biomedical Advances and Society<br><b>BIOL 400</b> (4) - <i>Cell Biology Lab</i><br><b>BIOL 411</b> (4) - Developmental Biology<br><b>BIOL 485</b> (1) - Sr. Sem MCD  | <b>BIOL 302</b> (4) - <i>Lab Techniques in Cellular and Molecular Bio</i><br><b>BIOL 380</b> (3) - Biomedical Advances and Society<br><b>BIOL 401</b> (3) - Advanced Cell Biology<br><b>BIOL 413</b> (4) - <i>Molec Genetics of Development</i><br><b>BIOL/GENOME 414</b> (5) - <i>Molecular Evolution</i><br><b>BIOL 416</b> (3) - Mol Genetics of Plant Develop<br><b>BIOL 459</b> (3) - Developmental Neurobiology<br><b>BIOL 485</b> (1) - Sr. Sem MCD  | <b>BIOL 400</b> (4)- <i>Cell Biology Lab</i><br><b>BIOL 402</b> (4) - <i>Functional Genomics</i><br><b>BIOL 405</b> (3) - C & M Biol of Human Disease<br><b>BIOL 407</b> (4) - <i>new Cell Lab</i> (Title TBA)<br><b>BIOL 411</b> (4) - Developmental Biology<br><b>BIOL 415</b> (3) - Evolution and Development<br><b>BIOL 416</b> (3) - Mol Genetics of Plant Develop<br><b>BIOL 455</b> (3) - Immunology, Virology, and Pathology<br><b>BIOL 469</b> (3) - Evolution and Medicine<br><b>BIOL 485</b> (1) - Sr. Sem MCD  |
| <b>Physiology Courses *</b>                                      | <b>BIOL 360</b> (4) - <i>Cellular Anatomy</i><br><b>BIOL 427</b> (5) - <i>Biomechanics</i><br><b>BIOL 467</b> (3) - Comparative Animal Physiology<br><b>BIOL 497</b> (3) - Neurophysiology<br><b>BIOL 497</b> (3) - Immunology, Virology, and Pathology   | <b>BIOL/PSYCH 408</b> (4) - Mechanisms of Animal Behavior<br><b>BIOL 421</b> (3) - Ecological and Evolutionary Physiology of Animals<br><b>BIOL/ESRM 424/478</b> (5) - <i>Plant Eco-Physiology</i><br><b>BIOL 425</b> (5)- <i>Plant Physiology and Development</i><br><b>BIOL 457</b> (3) - Chemical Communication<br><b>BIOL 460</b> (3) - Mammalian Physiology<br><b>BIOL 465</b> (3) - Comparative Endocrinology<br><b>BIOL 466</b> (3) - Pathobio of Emerging Diseases<br><b>BIOL 497</b> (3) - Neurophysiology | <b>BIOL 418</b> (4) - Biological Clocks and Rhythms<br><b>BIOL 422</b> (3) - Behavior of Plants<br><b>BIOL 428</b> (5) - <i>Sensory Neurophysiology and Ecology</i><br><b>BIOL 456</b> (3) - Poverty and Children<br><b>BIOL 461</b> (3) - Neurobiology<br><b>BIOL 462</b> (3) - Adv Animal Physiology<br><b>BIOL 463</b> (3) - <i>Adv Animal Physiology Lab</i><br><b>BIOL 467</b> (3) - Comparative Animal Physiology<br><b>BIOL 488</b> (2) - Sr Sem in Physiology  |
| <b>Ecology, Evolution, Systematics, and Conservation Courses</b> | <b>BIOL 315</b> (3) - Biol. Impacts of Climate Change<br><b>BIOL 420</b> (4) - Game Theory<br><b>BIOL 423</b> (3) - Marine Ecological Processes<br><b>BIOL 438</b> (5) - <i>Quant. Approaches to Paleo</i><br><b>BIOL 447</b> (5) - <i>Greening the Earth</i><br><b>BIOL 472</b> (5) - <i>Community Ecology</i><br><b>BIOL/FISH 473/474</b> (3/2) - Limnology + Lab<br><b>BIOL 483</b> (1) - Sr. Sem Paleobiology | <b>BIOL 423</b> (3) - Marine Ecological Processes<br><b>BIOL/FISH/ENVIR 478</b> (3) - Topics in Sustainable Fisheries<br><b>BIOL 483</b> (1) - Sr. Sem Paleobiology<br><b>BIOL 497</b> (4) - Dispersion and Invasion  | <b>BIOL 476</b> (5) - <i>Conservation Biology</i><br><b>BIOL 483</b> (1) - Sr. Sem Paleobiology<br><b>BIOL 489</b> (2) - Sr. Sem Plant Biology   |
| <b>Counts for all degrees</b>                                    |   | <b>BIOL 419</b> (3) - Data Science for Biologists   | <b>BIOL 492</b> (3) - Teaching Biology Inclus. to Diverse Aud  |

4-Nov-16

*Italicized courses indicate a lab class*

\* and + - may count for only one area requirement - Natural history or adv electives

## SELECTED ADDITIONAL COURSES FOR 2016-2017 <sup>1</sup>

| Category  | Autumn 2016   | Winter 2017   | Spring 2017   |
|---|---|---|---|
| <b>Major Requirements</b>                             | BIOST 310 (4) - Biostats for the Health Sciences<br>FISH/BIOL 340 (5) - Genetics & Molecular Ecology<br>GENOME 361 (3) - Fundamentals of Genetics<br>GENOME 371 (5) - Intro Genetics<br>Q SCI 482 (5) - Stat Infer in Appl Research   | BIOST 310 (4) - Biostats for the Health Sciences<br>GENOME 361 (3) - Fundamentals of Genetics<br>Q SCI 482 (5) - Stat Infer in Appl Research  | BIOST 310 (4) - Biostats for the Health Sciences<br>GENOME 361 (3) - Fundamentals of Genetics   |
| <b>Natural Hist/Biodiversity</b>                      | ESRM 452 (3) - Field Ornithology<br>ESRM 456 (3) - Biol & Cons of Birds<br>FISH 450 (3) - Salmonid Beh & Life Hist  |   | ESRM 435/436 (3/2) - Forest Entomology / Lab<br>FISH 475 (5) - Marine Mammalogy   |
| <b>General Biology Electives</b>                      | BH 402 (5) - Ethical Theory<br>GWSS/ PSYCH 357 (5) - Psychobiology of Women<br>MICROM 301/302L (3/2) - <i>Intro to Microbio/Lab</i>   | PHG 301 (3) - Public Health Genetics  | BH 420 (3) - Philosophical Problems in Bioethics<br>BH 421 (5) - History of Eugenics<br>GWSS/ PSYCH 357 (5) - Psychobiology of Women<br>MICROM 301/302L (3/2) - <i>Intro to Microbio/Lab</i>  |
| <b>Physiology Electives</b>                           | PSYCH 421 (5) - Neural Basis of Behavior<br>FISH 441 (3/5L) - <i>Environmental Physiology</i>   | B STR 301 (4) - General Anatomy ( <i>restrictions</i> )<br>FISH 324 (3/5L) - <i>Aquatic Physiology and Repro</i>  | NUTR 405 (3) - Phys Activity in Health & Disease<br>NUTR 406 (3) - Sports Nutrition   |
| <b>Ecology, Evolution, and Conservation Electives</b> | ESRM 250 (5) - Intro to GIS<br>ESRM 350 (5) - Wildlife Biology & Cons.<br>ESRM/ENVIR 362 (5) - Intro to Rest Ecol<br>ESRM 441 (5) - Landscape Ecology<br>ESRM 455 (1) - Wildlife Sem<br>GEOG 360 (5) - Principles of GIS Mapping<br>PSYCH 300 (5) - Animal Behavior   | ESRM 400 (3) - Natural Resource Conflict Mgmt<br>ESRM 430 (3) - Hyperspatial Remote Sensing<br>ESRM 450 (5) - Wildlife Ecology & Cons.<br>ESRM 455 (1) - Wildlife Sem<br>ESRM 457 (3/5) - Fish and Wildlife Toxicology<br>ESRM 458 (5) - Mgmt of Thrt, Endgd, Sens Sp<br>ESRM 470 (5) - Natural Res Policy & Planning<br>FISH 444 (5) - Conservation Genetics<br>FISH 464- (4) Arctic Vertebrate Ecology<br>GEOG 462 (5) - Coastal GIS<br>PSYCH 300 (5) - Animal Behavior | ESRM 250 (5) - Intro to GIS<br>ESRM 455 (1) - Wildlife Sem<br>ESRM 459 (3) - Wildlife Cons. in NW Ecosystems<br>GEOG 360 (5) - Principles of GIS Mapping<br>PSYCH 419 (5) - Behavioral Stds of Zoo Animals  |
| <b>Plant Biology</b>                                  | ESRM 325 (3) - Environmental App of Plants<br>ESRM 415 (5) - Plant Invasions  |   | ESRM 411 (3) - Plant Propagation: Princ. & Practice<br>ESRM 412 (3) - Native Plant Production   |
| <b>Molecular, Cellular, Developmental Electives</b>   | BIOC 405 (3) - Survey in Biochemistry<br>BIOC 440 (4) - Biochemistry<br>BIOC 446L (4) - <i>Biochemistry Lab</i><br>GENOME 372 (5) - Genomics and Proteomics<br>GENOME 453 (3) - Genetics of the Evo Process<br>IMMUNO 441 (4) - Intro to Immunology<br>MICROM 402L (3) - <i>Fund of Gen Micro Lab</i><br>MICROM 410 (3) - Fund of Gen Micro | BIOC 406 (3) - Survey in Biochemistry<br>BIOC 441 (4) - Biochemistry<br>GENOME 465 (4) - Adv Human Genetics<br>GENOME 466 (4) - Cancer Genetics<br>MICROM 431L (3) - <i>Prok. Recomb DNA Tech</i><br>MICROM 442 (3) - Medical Bacteriology<br>MICROM 450 (3) - Molecular Bio of Viruses   | BIOC 442 (4) - Biochemistry<br>BIOC 446L (4) - <i>Biochemistry Lab</i><br>GENOME 373 (5) - Genome Informatics<br>GENOME 475 (3) - Debates in Genetics<br>MICROM 402L (3) - <i>Fund of Gen Micro Lab</i><br>MICROM 412 (3) - Prokaryotic Diversity<br>MICROM 445 (3) - Medical Virology<br>MICROM 461 (3) - Med. Mycology & Parasitology |

<sup>1</sup> **CAUTION** - Not all courses here have been approved for all specific degree options. It is the student's responsibility to determine if a course has been approved, if not then a petition must be submitted. Please refer to an advisor for further clarification.