

## Fall 2023 - Upper-Level Biology Courses for the Biochemistry Major

| COURSE CODE  | COURSE NAME   | # OF CREDITS |
|--|---|--------------|
| <a href="#">ANAT&amp;PHY 335</a>                           | Physiology  | 5            |
| <a href="#">ANAT&amp;PHY 337</a>                           | Human Anatomy   | 3            |
| <a href="#">AGRONOMY 302</a>                               | Forage Management and Utilization                     | 3            |
| <a href="#">AGRONOMY/BOTANY/HORT 340</a>                   | Plant Cell Culture and Genetic Engineering            | 3            |
| <a href="#">AGRONOMY/BOTANY/SOIL SCI 370</a>               | Grassland Ecology                                     | 3            |
| <a href="#">AN SCI/FOOD SCI 305</a>                        | Introduction to Meat Science and Technology           | 4            |
| <a href="#">AN SCI/DY SCI 414</a>                          | Ruminant Nutrition & Metabolism                       | 3            |
| <a href="#">AN SCI 415</a>                                 | Application of Monogastric Nutrition Principles       | 2            |
| <a href="#">AN SCI 431</a>                                 | Beef Cattle Production                                | 3            |
| <a href="#">AN SCI/DY SCI 434</a>                          | Reproductive Physiology                               | 3            |
| <a href="#">AN SCI 610</a>                                 | Quantitative Genetics                                 | 3            |
| <a href="#">AN SCI/NUTR SCI 626</a>                        | Experimental Diet Design                              | 1            |
| <a href="#">B M E/MED PHYS/PHMCOL-M/PHYSICS/RADIOL 619</a> | Microscopy of Life                                    | 3            |
| <a href="#">BIOCHEM/NUTR SCI 510</a>                       | Nutritional Biochemistry and Metabolism               | 3            |
| <a href="#">BIOCHEM 601</a>                                | Protein and Enzyme Structure and Function             | 2            |
| <a href="#">BIOCHEM/B M I/BMOLCHEM/MATH 609</a>            | Mathematical Methods for Systems Biology              | 3            |
| <a href="#">BIOCHEM/GENETICS/MICROBIO 612</a>              | Prokaryotic Molecular Biology                         | 3            |
| <a href="#">BIOCHEM/BOTANY 621</a>                         | Plant Biochemistry                                    | 3            |
| <a href="#">BIOCHEM/NUTR SCI 645</a>                       | Molecular Control of Metabolism and Metabolic Disease | 3            |
| <a href="#">BSE/ENVIR ST 367</a>                           | Renewable Energy Systems                              | 3            |
| <a href="#">BSE 461</a>                                    | Food and Bioprocessing Operations                     | 3            |

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| <a href="#">B M I/STAT 541</a>                           | Introduction to Biostatistics     | 3 |
| <a href="#">B M I/COMP SCI 576</a>                       | Introduction to Bioinformatics    | 3 |
| <a href="#">BOTANY 300</a>                               | Plant Anatomy                     | 4 |
| <a href="#">BOTANY 330</a>                               | Algae                             | 3 |
| <a href="#">BOTANY 400</a>                               | Plant Systematics                 | 4 |
| <a href="#">BOTANY/F&amp;W ECOL 402</a>                  | Dendrology                        | 2 |
| <a href="#">BOTANY 422</a>                               | Plant Geography                   | 3 |
| <a href="#">BOTANY/F&amp;W ECOL 455</a>                  | The Vegetation of Wisconsin       | 4 |
| <a href="#">BOTANY/F&amp;W ECOL/ZOOLOGY 460</a>          | General Ecology                   | 4 |
| <a href="#">BOTANY/HORT/SOIL SCI 626</a>                 | Mineral Nutrition of Plants       | 3 |
| <a href="#">BOTANY/ENVIR ST/F&amp;W ECOL/ZOOLOGY 651</a> | Conservation Biology              | 3 |
| <a href="#">DY SCI 378</a>                               | Lactation Physiology              | 3 |
| <a href="#">DY SCI 535</a>                               | Dairy Farm Management Practicum   | 3 |
| <a href="#">ENTOM/ZOOLOGY 302</a>                        | Introduction to Entomology        | 4 |
| <a href="#">ENTOM 331</a>                                | Taxonomy of Mature Insects        | 4 |
| <a href="#">ENTOM 351</a>                                | Principles of Economic Entomology | 3 |
| <a href="#">ENTOM/ZOOLOGY 371</a>                        | Medical Entomology                | 3 |
| <a href="#">ENTOM/ZOOLOGY 540</a>                        | Theoretical Ecology               | 3 |
| <a href="#">ENVIR ST/POP HLTH 502</a>                    | Air Pollution and Human Health    | 3 |
| <a href="#">ENVIR ST/F&amp;W ECOL 515</a>                | Natural Resources Policy          | 3 |
| <a href="#">FOOD SCI/MICROBIO 324</a>                    | Food Microbiology Laboratory      | 2 |
| <a href="#">FOOD SCI/MICROBIO 325</a>                    | Food Microbiology                 | 3 |
| <a href="#">FOOD SCI 410</a>                             | Food Chemistry                    | 3 |

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| <a href="#">FOOD SCI 440</a>                       | Principles of Food Engineering                     | 3 |
| <a href="#">F&amp;W ECOL 318</a>                   | Principles of Wildlife Ecology                     | 3 |
| <a href="#">F&amp;W ECOL/ENVIR ST/ZOOLOGY 360</a>  | Extinction of Species                              | 3 |
| <a href="#">F&amp;W ECOL 550</a>                   | Forest Ecology                                     | 3 |
| <a href="#">F&amp;W ECOL 561</a>                   | Wildlife Management Techniques                     | 3 |
| <a href="#">F&amp;W ECOL 590</a>                   | Integrated Resource Management                     | 3 |
| <a href="#">GENETICS 466</a>                       | Principles of Genetics                             | 3 |
| <a href="#">GENETICS 467</a>                       | General Genetics 1                                 | 3 |
| <a href="#">GENETICS 545</a>                       | Genetics Laboratory                                | 2 |
| <a href="#">GENETICS/MD GENET 565</a>              | Human Genetics                                     | 3 |
| <a href="#">HORT 320</a>                           | Environment of Horticultural Plants                | 3 |
| <a href="#">M M &amp; I/PATH-BIO 528</a>           | Immunology   | 3 |
| <a href="#">MED PHYS/B M E/H ONCOL/PHYSICS 501</a> | Radiation Physics and Dosimetry                    | 3 |
| <a href="#">MICROBIO 303</a>                       | Biology of Microorganisms                          | 3 |
| <a href="#">MICROBIO 304</a>                       | Biology of Microorganisms Laboratory               | 2 |
| <a href="#">MICROBIO 450</a>                       | Diversity, Ecology and Evolution of Microorganisms | 3 |
| <a href="#">MICROBIO 470</a>                       | Microbial Genetics & Molecular Machines            | 3 |
| <a href="#">MICROBIO 526</a>                       | Physiology of Microorganisms                       | 3 |
| <a href="#">MICROBIO 527</a>                       | Advanced Laboratory Techniques in Microbiology     | 2 |
| <a href="#">NEURODPT/NTP 629</a>                   | Molecular and Cellular Mechanisms of Memory        | 3 |
| <a href="#">NTP/NEURODPT 610</a>                   | Cellular and Molecular Neuroscience                | 4 |
| <a href="#">NUTR SCI 332</a>                       | Human Nutritional Needs                            | 3 |
| <a href="#">ONCOLOGY 401</a>                       | Introduction to Experimental Oncology              | 2 |

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| <a href="#">ONCOLOGY/M&amp;ENVTOX/PHM SCI/PHMC<br/>OL-M/POP HLTH 625</a> | Toxicology I   | 3      |
| <a href="#">PL PATH 300</a>  | Introduction to Plant Pathology                            | 4      |
| <a href="#">PL PATH/SOIL SCI 323</a>                                     | Soil Biology   | 3      |
| <a href="#">PL PATH/ONCOLOGY 640</a>                                     | General Virology-Multiplication of Viruses                 | 3      |
| <a href="#">SOIL SCI/F&amp;W ECOL 451</a>                                | Environmental Biogeochemistry                              | 3      |
| <a href="#">ZOOLOGY/ENVIR ST 315</a>                                     | Limnology-Conservation of Aquatic Resources                | 2      |
| <a href="#">ZOOLOGY 316</a>  | Laboratory for Limnology-Conservation of Aquatic Resources | 2 to 3 |
| <a href="#">ZOOLOGY 430</a>  | Comparative Anatomy of Vertebrates                         | 5      |
| <a href="#">ZOOLOGY/PSYCH 523</a>  | Neurobiology   | 3      |
| <a href="#">ZOOLOGY 555</a>  | Laboratory in Developmental Biology                        | 3      |
| <a href="#">ZOOLOGY 570</a>  | Cell Biology   | 3      |
| <a href="#">ZOOLOGY 603</a>  | Endocrinology  | 3 to 4 |