

Biological Sciences Courses

Courses

BIOL 5102. Independent Research.

Independent Research (0-0-1).

Department: Biology

1 Credit Hour

3 Total Contact Hours

0 Lab Hours

0 Lecture Hours

3 Other Hours

Major Restrictions:

Restricted to majors of BIOL

Classification Restrictions:

Excluded Class: DR

BIOL 5129. Seminar in Ecology Evolution.

Graduate seminar course for students in ecology, evolution and environmental science. Presentations are made by the enrollees and other speakers.

Department: Biology

1 Credit Hour

1 Total Contact Hour

0 Lab Hours

1 Lecture Hour

0 Other Hours

Major Restrictions:

Restricted to majors of EEB, ESCI, ESE

BIOL 5130. Seminar.

Seminar (1-0) Topics vary and are presented by enrollees and other speakers.

Department: Biology

1 Credit Hour

1 Total Contact Hour

0 Lab Hours

1 Lecture Hour

0 Other Hours

Classification Restrictions:

Excluded Class: DR

BIOL 5131. Ethical, Soc/Pol Dimensions.

Ethical, Social, and Political Dimensions of Science (1-0) Readings, and discussion on the philosophical and social structure, ethical climate, and public policy environment of the modern scientific research establishment.

Department: Biology

1 Credit Hour

1 Total Contact Hour

0 Lab Hours

1 Lecture Hour

0 Other Hours

Classification Restrictions:

Excluded Class: DR

BIOL 5202. Independent Research.

Independent Research (0-0-2)

Department: Biology

2 Credit Hours

6 Total Contact Hours

0 Lab Hours

0 Lecture Hours

6 Other Hours

Major Restrictions:

Restricted to majors of BIOL

Classification Restrictions:

Excluded Class: DR

BIOL 5208. Prof Skills Devel Eco Evo.

This course aims to provide instruction and guidance in the development of professional skills needed by graduate students in ecology, evolution and environmental science.

Department: Biology

2 Credit Hours

2 Total Contact Hours

0 Lab Hours

2 Lecture Hours

0 Other Hours

Major Restrictions:

Restricted to majors of BIOL, EEB, ESCI

Classification Restrictions:

Excluded Class: DR

BIOL 5209. Rsrch Proposals in Eco Evo.

This course aims to provide instruction and guidance in the construction and submission of competitive grant proposals, thesis/dissertation proposals and fellowship applications, for graduate students in ecology, evolution and environmental science.

Department: Biology

2 Credit Hours

2 Total Contact Hours

0 Lab Hours

2 Lecture Hours

0 Other Hours

Major Restrictions:

Restricted to majors of BIOL, EEB, ESCI

Classification Restrictions:

Excluded Class: DR

BIOL 5301. Select Adv Topics Biol Science.

Selected Advanced Topics in the Biological Sciences (0-0-3) Course in the form of formal classes. May be repeated for credit when topics vary.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

BIOL 5302. Resrch Biological Science.

Research in the Biological Sciences (0-0-3) Emphasizes research, with writing and discussion. Not given as a formal class. May be repeated, but no more than six hours of credit will be counted towards degree.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

0 Lecture Hours

3 Other Hours

Classification Restrictions:

Excluded Class: DR

BIOL 5303. Advanced Population Genetics.

Broadly defined as the study of the genetic composition of populations, population genetics attempts to quantify the distribution of genetic variation and changes in the frequencies of alleles. Specifically, we will examine how the four evolutionary processes (mutation, genetic drift, natural selection, and gene flow) affect the genetic composition of natural populations. This includes how concepts in population genetics are advancing the field of Forensic Science. We will be exploring theoretical and practical components of population genetics through lectures and labs, respectively.

Department: Biology

3 Credit Hours

3 Total Contact Hours

1 Lab Hour

2 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

BIOL 5305. Herpetology.

Herpetology (2-3) A study of the morphology, taxonomy, and life histories of reptiles and amphibians.

Department: Biology

3 Credit Hours

5 Total Contact Hours

3 Lab Hours

2 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

BIOL 5308. Rsrch Funding & Prof Developmt.

This course aims at providing Instruction and guidance in the construction and submission of competitive grant proposals and fellowship applications, as well as the development of other professional tools needed by graduate students In the biological sciences.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

BIOL 5311. Neurobiology of Brain Diseases.

The course covers fundamental concepts of the nervous system functions and provides contemporary knowledge and insights into the genetic, molecular, cellular and neural basis of brain diseases. The course will focus on neurodegenerative and cognitive disorders prevalent in our society that include Alzheimer's disease, Parkinson's disease, Huntington disease, prion disease/CJD, autism, depression, ADHD, mental retardation and PTSD.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

BIOL 5313. Biogeography.

Biogeography (3-0) Geographic distribution of plants and animals, and analysis of causative factors.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

BIOL 5316. Biosystematics.

Biosystematics (3-0) Methods and principles of taxonomy, classification, and systematics.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

BIOL 5319. G Protein-Coupled Recept Biol.

G Protein-Coupled Receptor Biology The goal of this course is to help students learn how to thoughtfully discuss and write down their scientific ideas, in a comprehensive, organized manner. In addition to helping the students understand the interdisciplinary nature of the science background required to study signaling processes initiated through activation of G protein-coupled receptors, the course includes interactive lectures, oral presentations and exams.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Prerequisite(s): (BIOL 1305 w/C or better) OR (BIOL 1306 w/C or better) AND (BIOL 3314 w/C or better) OR (BIOL 4388 w/C or better) AND (CHEM 1305 w/C or better)

BIOL 5320. Endocrinology.

Endocrinology (2-3) A study of the effects and actions of vertebrate hormones with an emphasis on neuroendocrine control. Laboratory fee required.

Department: Biology

3 Credit Hours

5 Total Contact Hours

3 Lab Hours

2 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

BIOL 5322. Advances/Evolutionary Theory.

Advances in Evolutionary Theory (3-0) Study of evolutionary processes and phenomena at selected levels of biological organization with respect to current hypotheses and research technologies.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

Prerequisite(s): (BIOL 5301 w/C or better)

BIOL 5326. Advances Immunological Concept.

Advances in Immunological Concepts (3-0) Study of immunological and immunochemical concepts. Emphasis will be placed on recent experimental advances in immunology.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

Prerequisite(s): (MICR 1454 w/D or better AND MICR 3453 w/D or better) OR (MICR 4453 w/D or better) OR (MICR 4154 w/C or better AND MICR 4353 w/C or better)

BIOL 5327. Advances in Ecological Theory.

Advances in Ecological Theory (3-0) Study of recent advances in ecological theory with special emphasis on adaptation, population structure and dynamics, behavioral processes, and species interactions.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

BIOL 5328. Biostatistics.

Biostatistics (2-3) Study and application of specialized numerical methods in biological sciences.

Department: Biology

3 Credit Hours

5 Total Contact Hours

3 Lab Hours

2 Lecture Hours

0 Other Hours

BIOL 5329. Physiology of Bacterial Cell.

Physiology of the Bacterial Cell (3-0) The study of the biochemical and physiological process occurring in the bacterial cell. Emphasis will be placed on recent experimental approaches that are in current use in microbial physiology research.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

BIOL 5330. Cancer Biology.

An examination of cancer, tumor progression, and treatment at the cellular and molecular level.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

BIOL 5331. Advances in Eco/Evo Theory.

The class covers contemporary topics in ecological and evolutionary theory, with assignments to incorporate an understanding of the fundamentals of the field at a practical level. The first part of the course will consist of an introduction to current trends and important concepts in ecology and the second half of the course will focus on evolution. All topics will emphasize how the fields of ecology and evolution can be integrated. Keywords: Ecology, Evolution.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

BIOL 5340. Structure/Funct Macromolecules.

Structure and Function of Macromolecules (3-0) Functional biology of cells, with emphasis on the relationship between molecular structure and function.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

BIOL 5344. Molecular Pathogenesis.

Molecular Pathogenesis (3-0) The cellular and molecular basis of diseases induced or exacerbated by microbes, parasites, pollutants, poor sanitation, and malnutrition.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

BIOL 5351. Intro Bio I: Basic Seq. Comp..

Introduction to Bioinformatics I: Basic Sequence Comparisons (2-3) Theory and practice of sequence analysis, with an emphasis on nucleic acid comparisons and homologue determination. Includes understanding and use of Internet and computational tools with both public sequencing databases and experimental data.

Department: Biology

3 Credit Hours

5 Total Contact Hours

3 Lab Hours

2 Lecture Hours

0 Other Hours

BIOL 5352. Intro Bio II: Gene Find/Compar.

Introduction to Bioinformatics II: Gene Finding and Genomic Comparisons (2-3) A continuation of BIOL 5351 with an emphasis on the analysis of protein structural information. Also includes gene annotation and whole genome comparisons.

Department: Biology

3 Credit Hours

5 Total Contact Hours

3 Lab Hours

2 Lecture Hours

0 Other Hours

BIOL 5360. Aquatic Ecology.

Study of the biological, chemical, and physical characteristics of aquatic environments.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

BIOL 5398. Thesis.

Thesis (0-0-3)

Department: Biology**3 Credit Hours****3 Total Contact Hours**

0 Lab Hours

0 Lecture Hours

3 Other Hours

BIOL 5399. Thesis.

Thesis (0-0-3) Prerequisite: BIOL 5398.

Department: Biology**3 Credit Hours****3 Total Contact Hours**

0 Lab Hours

0 Lecture Hours

3 Other Hours

Prerequisite(s): (BIOL 5398 w/P or better)**BIOL 5402. Independent Research.**

Independent Research (0-0-4)

Department: Biology**4 Credit Hours****12 Total Contact Hours**

0 Lab Hours

0 Lecture Hours

12 Other Hours

BIOL 5502. Resrch in Biological Sciences.

Research in the Biological Sciences (0-0-5) Emphasizes research, with writing and discussion. Not given as a formal class. May be repeated, but no more than six hours of credit will be counted towards degree. Course fee required.

Department: Biology**5 Credit Hours****5 Total Contact Hours**

0 Lab Hours

0 Lecture Hours

5 Other Hours

Classification Restrictions:

Excluded Class: DR

BIOL 6129. Seminar in Ecology Evolution.

Graduate seminar courses for students in ecology, evolution and environmental science. Presentations are made by the enrollees and other speakers.

Department: Biology**1 Credit Hour****1 Total Contact Hour**

0 Lab Hours

1 Lecture Hour

0 Other Hours

Major Restrictions:

Restricted to majors of EEB, ESCI, ESE

BIOL 6130. Seminar.

Seminar (1-0) Topics vary and are presented by enrollees and other speakers.

Department: Biology**1 Credit Hour****1 Total Contact Hour**

0 Lab Hours

1 Lecture Hour

0 Other Hours

BIOL 6131. Ethical, Soc/Pol Dimensions.

Ethical, Social, and Political Dimensions of Science (1-0) Readings, and discussion on the philosophical and social structure, ethical climate, and public policy environment of the modern scientific research establishment.

Department: Biology

1 Credit Hour

1 Total Contact Hour

0 Lab Hours

1 Lecture Hour

0 Other Hours

BIOL 6190. Independent Research.

Independent Research (0-0-1).

Department: Biology

1 Credit Hour

3 Total Contact Hours

0 Lab Hours

0 Lecture Hours

3 Other Hours

BIOL 6208. Prof Skills Devel Eco Evo.

This course aims to provide instruction and guidance in the development of professional skills needed by doctoral students in ecology, evolution and environmental science.

Department: Biology

2 Credit Hours

2 Total Contact Hours

0 Lab Hours

2 Lecture Hours

0 Other Hours

Major Restrictions:

Restricted to majors of BIOL, EEB, ESCI

BIOL 6209. Rsrch Proposals in Eco Evo.

This course aims to provide instruction and guidance in the construction and submission of competitive grant proposals, thesis/dissertation proposals and fellowship applications, for doctoral students in ecology, evolution and environmental science.

Department: Biology

2 Credit Hours

2 Total Contact Hours

0 Lab Hours

2 Lecture Hours

0 Other Hours

Major Restrictions:

Restricted to majors of BIOL, EEB, ESCI

BIOL 6290. Independent Research.

Independent Research (0-0-2).

Department: Biology

2 Credit Hours

6 Total Contact Hours

0 Lab Hours

0 Lecture Hours

6 Other Hours

BIOL 6301. Basic Principles of Toxicology.

Basic Principles of Toxicology: Survey of the biological basis of diseases induced or exacerbated by microbes, parasites, pollutants, and poor sanitation. Topics will include microbial ecology, the integrity and degradation of natural ecosystems, and mechanisms of pathogenesis.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

BIOL 6302. Developmental Neurobiology.

Developmental Neurobiology: The study of the mechanisms regulating normal nervous system development.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

BIOL 6303. Gene Regulation.

Gene Regulation (3-0) The molecular biology of the genome, including genetic engineering, structure, and organization of the prokaryotic and eukaryotic genome, regulation of gene expression, and processes that damage and repair genetic material.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

BIOL 6304. Physiological Regulatory Mech.

Physiological Regulatory Mechanisms (3-0) Function of cardiovascular, pulmonary, digestive, renal, reproductive, neural, endocrine, and neuroendocrine systems in humans, as a foundation for understanding the body's response to pathobiological challenges.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

BIOL 6305. Cell Physiology.

Cell Physiology (3-0) Physiological aspects of cells and cellular organelles, with emphasis on receptor mechanisms, intra- and extracellular signaling, and cell regulatory mechanisms.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

BIOL 6307. Advanced Population Genetics.

Broadly defined as the study of the genetic composition of populations, population genetics attempts to quantify the distribution of genetic variation and changes in the frequencies of alleles. Specifically, we will examine how the four evolutionary processes (mutation, genetic drift, natural selection, and gene flow) affect the genetic composition of natural populations. This includes how concepts in population genetics are advancing the field of Forensic Science. We will be exploring theoretical and practical components of population genetics through lectures and labs, respectively.

Department: Biology

3 Credit Hours

3 Total Contact Hours

1 Lab Hour

2 Lecture Hours

0 Other Hours

BIOL 6308. Rsrch Funding & Prof Developmt.

This course aims at providing Instruction and guidance in the construction and submission of competitive grant proposals and fellowship applications, as well as the development of other professional tools needed by graduate students In the biological sciences.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

BIOL 6309. Advanced Scientific Writing.

Fundamentals of grant writing, peer review, manuscript structure with professional training for biographical sketches and citation management.

Keywords: research, grant application, writing productivity.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

BIOL 6310. Adv Research Techniques.

Advanced Research Techniques (0-0-6) An overview of advanced research methods and strategies. Students will rotate through three laboratories at 3-4 weeks/laboratory.

Department: Biology

3 Credit Hours

6 Total Contact Hours

0 Lab Hours

0 Lecture Hours

6 Other Hours

BIOL 6311. Neurobiology of Brain Diseases.

The course covers fundamental concepts of the nervous system functions and provides contemporary knowledge and insights into the genetic, molecular, cellular, and neural basis of brain diseases. The course will focus on neurodegenerative and cognitive disorders prevalent in our society that include Alzheimer's disease, Parkinson's disease, Huntington's disease, prion disease/CJD, autism, depression, ADHD, mental retardation and PTSD.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

BIOL 6312. Biodiversity.

Biodiversity (3-0) This course will treat the importance of maintaining species and populations, preserving intact communities, and maintaining gene pools.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

BIOL 6313. Biogeography.

Biogeography (3-0) Geographic distribution of plants and animals, and analysis of causative factors.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

BIOL 6316. Biosystematics.

Biosystematics (3-0) Methods and principles of taxonomy, classification, and systematics.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

BIOL 6319. G Protein-Coupled Recept Biol.

G Protein-Coupled Receptor Biology The goal of this course is to help students learn how to thoughtfully discuss and write down their scientific ideas, in a comprehensive, organized manner. In addition to helping the students understand the interdisciplinary nature of the science background required to study signaling processes initiated through activation of G protein-coupled receptors, the course includes interactive lectures, oral presentations and exams.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Prerequisite(s): (BIOL 1305 w/C or better) OR (BIOL 1306 w/C or better) AND (BIOL 3314 w/C or better) OR (BIOL 4388 w/C or better) AND (CHEM 1305 w/C or better)

BIOL 6321. Select Adv Topics Biol Science.

Selected Advanced Topics in the Biological Sciences (0-0-3) Course in the form of formal classes. May be repeated for credit when topics vary.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

BIOL 6322. Advances/Evolutionary Theory.

Advances in Evolutionary Theory (3-0) Study of evolutionary processes and phenomena at selected levels of biological organization with respect to current hypotheses and research technologies.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Prerequisite(s): (BIOL 5301 w/C or better)

BIOL 6325. Herpetology.

Herpetology (2-3) A study of the morphology, taxonomy, and life histories of reptiles and amphibians.

Department: Biology

3 Credit Hours

5 Total Contact Hours

3 Lab Hours

2 Lecture Hours

0 Other Hours

BIOL 6326. Advances Immunological Concept.

Advances in Immunological Concepts (3-0) Study of immunological and immunochemical concepts. Emphasis will be placed on recent experimental advances in immunology.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Prerequisite(s): (MICR 1454 w/D or better AND MICR 3453 w/D or better) OR (MICR 4453 w/D or better) OR (MICR 4154 w/C or better AND MICR 4353 w/C or better)

BIOL 6327. Advances in Ecological Theory.

Advances in Ecological Theory (3-0) Study of recent advances in ecological theory with special emphasis on adaptation, population structure and dynamics, behavioral processes, and species interactions.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

BIOL 6328. Biostatistics.

Biostatistics (2-3) Study and application of specialized numerical methods in biological sciences. Prerequisite: Department approval.

Department: Biology

3 Credit Hours

5 Total Contact Hours

3 Lab Hours

2 Lecture Hours

0 Other Hours

BIOL 6329. Physiology of Bacterial Cell.

Physiology of the Bacterial Cell (3-0) The study of the biochemical and physiological process occurring in the bacterial cell. Emphasis will be placed on recent experimental approaches that are in current use in microbial physiology research.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

BIOL 6330. Cancer Biology.

An examination of cancer, tumor progression, and treatment at the cellular and molecular level.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

BIOL 6331. Advances in Eco/Evo Theory.

The class covers contemporary topics in ecological and evolutionary theory, with assignments to incorporate an understanding of the fundamentals of the field at a practical level. The first part of the course will consist of an introduction to current trends and important concepts in ecology and the second half of the course will focus on evolution. All topics will emphasize how the fields of ecology and evolution can be integrated. Keywords: Ecology, Evolution.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

BIOL 6340. Structure/Function Macromolecules.

Structure and Function of Macromolecules (3-0) Functional biology of cells, with emphasis on the relationship between molecular structure and function.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

BIOL 6344. Molecular Pathogenesis.

Molecular Pathogenesis (3-0) The cellular and molecular basis of diseases induced or exacerbated by microbes, parasites, pollutants, poor sanitation, and malnutrition.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

BIOL 6345. Molecular Parasitology.

Molecular Parasitology (3-0) Invasive and non-invasive parasites, tropical diseases, parasite surface proteins and their variation, unusual glycosylation and fatty acylation, unusual strategies for gene expression and RNA editing, and the evolution of parasites. Biochemical and molecular techniques to control parasitic disease will also be discussed. Prerequisites: BIOL 5342 and BIOL 5344.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Prerequisite(s): (BIOL 5342 w/D or better) AND (BIOL 5344 w/D or better)

BIOL 6351. Intro Bio I: Basic Seq. Comp..

Introduction to Bioinformatics I: Basic Sequence Comparisons (2-3) Theory and practice of sequence analysis, with an emphasis on nucleic acid comparisons and homologue determination. Includes understanding and use of Internet and computational tools with both public sequencing databases and experimental data.

Department: Biology

3 Credit Hours

5 Total Contact Hours

3 Lab Hours

2 Lecture Hours

0 Other Hours

BIOL 6352. Intro Bio II: Gene Find/Compar.

Introduction to Bioinformatics II: Gene Finding and Genomic Comparisons (2-3) A continuation of BIOL 5351 with an emphasis on the analysis of protein structural information. Also includes gene annotation and whole genome comparisons.

Department: Biology

3 Credit Hours

5 Total Contact Hours

3 Lab Hours

2 Lecture Hours

0 Other Hours

BIOL 6360. Limnology.

Limnology (3-0) Study of the freshwater environment, including chemical parameters and biological populations.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

BIOL 6390. Independent Research.

Independent Research (0-0-3)

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

0 Lecture Hours

3 Other Hours

BIOL 6398. Dissertation.

Dissertation (0-0-3)

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

0 Lecture Hours

3 Other Hours

BIOL 6399. Dissertation.

Dissertation (0-0-3) Prerequisite: BIOL 6398.

Department: Biology

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

0 Lecture Hours

3 Other Hours

Prerequisite(s): (BIOL 6398 w/P or better)

BIOL 6490. Independent Research.

Independent Research (0-0-4)

Department: Biology

4 Credit Hours

4 Total Contact Hours

0 Lab Hours

0 Lecture Hours

4 Other Hours

BIOL 6590. Independent Research.

Independent Research (0-0-5)

Department: Biology

5 Credit Hours

5 Total Contact Hours

0 Lab Hours

0 Lecture Hours

5 Other Hours

BIOL 6690. Independent Research.

Independent Research (0-0-6)

Department: Biology

6 Credit Hours

6 Total Contact Hours

0 Lab Hours

0 Lecture Hours

6 Other Hours