EEBL - Ecology and Evolutionary Biology

EEBL 601 Physiological Ecology
Credit 1. 1 Lecture Hour.
Examination of how physiological systems respond, over different timescales, to variation in physical and biological environments; understanding how the interaction of organism and environment determines characteristics relevant to ecology; understanding the effect of individual characteristic on population and interspecific dynamics.
Prerequisite: Graduate classification.

EEBL 602 Population Ecology
Credit 1. 1 Lecture Hour.
Fundamental concepts in population dynamics; focus on birth, death, immigration and emigration processes; how processes are affected by internal factors and ways they affect population abundance.
Prerequisite: Graduate classification.

EEBL 603 Community Ecology
Credit 1. 1 Lecture Hour.
Fundamental concepts in community ecology; conceptual development of the sub-discipline; spatial and temporal patterns of community structure; processes that determine community structure and dynamics; interface of population, community and ecosystem ecology; applications of community ecology for natural resource management, agriculture and health
Prerequisite: Graduate classification.

EEBL 604 Ecosystem Ecology
Credit 1. 1 Lecture Hour.
Examination of flow of materials, energy and information between ecosystems and the geographic structure in which ecosystems are embedded globally; integrative nature of spatial and temporal processes acting across ecosystem units.
Prerequisite: Graduate classification.

EEBL 605 Population and Quantitative Genetics
Credit 1. 1 Lecture Hour.
Basic overview of the fields of population and quantitative genetics; fundamental concepts and their applications in research of natural populations.
Prerequisite: Graduate classification.

EEBL 606 Phylogenetics and Comparative Biology
Credit 1. 1 Lecture Hour.
Examination of phylogenetics and comparative biology.
Prerequisite: Graduate classification.

EEBL 607 Evolutionary Genomics
Credit 1. 1 Lecture Hour.
New techniques for generating large amounts of genetic data, including thousands of single-nucleotide polymorphisms and whole-genome sequence data; transforming the study of evolutionary biology and the interpretation of evolutionary phenomena; includes population genetics, adaptation, phylogenomics and speciation.
Prerequisite: Graduate classification.

EEBL 608 Integrative Animal Behavior
Credit 1. 1 Lecture Hour.
Examination of the contributions of behavior to survival and reproduction; the interaction of evolutionary history and ecological circumstance to shape the expression of behavior; integrative nature of behavior; interaction of evolutionary processes, mechanistic constraints and ecological demands involved in selecting for a set of behavioral strategies.
Prerequisite: Graduate classification.

EEBL 610 First Year Graduate Seminar
Credit 1. 1 Lecture Hour.
Attendance and active participation in the weekly dinnertime conversation on PhD and career planning with ecology and evolutionary biology core faculty and others; faculty and colleagues provide feedback on application for fellowship support.
Prerequisite: Graduate classification.

EEBL 612 Open Source for Open Science Bootcamp
Credit 1. 1 Lecture Hour.
Exposure to command line programming in R; principles of data import, vetting, processing, analysis, graphing and produce export; bootcamp precedes Fall semesters over a three-day period.
Prerequisite: Graduate classification or approval by instructor.

EEBL 630 Big Bend National Park Natural History Survey
Credits 2. 2 Other Hours.
Advanced course taught in Big Bend National Park emphasizing biological, ecological, and natural history features of the Trans-Pecos ecoregion; detailed notes on the biology and geology of Big Bend based upon daily field trips will be recorded.
Prerequisites: Graduate classification; approval of instructor.

EEBL 681 Seminar
Credit 1. 1 Lecture Hour.
Attendance and active participation in the weekly ecology and evolutionary biology colloquium featuring guest speakers invited by students and faculty.
Prerequisite: Graduate classification.

EEBL 689 Special Topics in...
Credits 1 to 4. 1 to 4 Lecture Hours.
Selected topics in an identified area of ecology and evolutionary biology.
Prerequisite: Graduate classification.