Degree Requirements for Population and Conservation Biology
M.S. Program at Texas State University

I. Core Program 6-8 hours  Students, with the advice of their committees, choose 6 – 8 hrs from the list of elective courses below to provide training in core areas of Population and Conservation Biology.

- BIO 7336 Evolutionary Ecology
- BIO 7346 Conservation Biology
- BIO 7360R Community and Ecosystem Ecology
- BIO 7367 Behavioral Ecology
- BIO 7427 Principles of Population Biology I
- BIO 7428 Principles of Population Biology II
- BIO 7433 Population Genetics
- BIO 7466 Phylogenetics
- BIO 7469 Introduction to Ecological Modeling

II. Statistics Component 8 hours

- BIO 7405 Statistical Methods for Biologists I
- BIO 7406 Statistical Methods for Biologists II

III. Population Biology Seminar Component 2 hours

- BIO 7120 Population Biology Seminar (students are required to enroll in at least two semesters)

IV. Prescribed Electives 6-8 hours  Students, with the advice of their committees, may choose elective courses from the following list to emphasize specific areas of training such as: ecology of populations, ecology of communities, population management, conservation biology or evolutionary ecology and genetics.

- BIO 5114 Collaborative Masters Research Experience
- BIO 5214 Collaborative Masters Research Experience
- BIO 5314 Collaborative Masters Research Experience
- BIO 5295 Fundamentals of Research
- BIO 5301 Evolution
- BIO 5324 Natural History and Conservation of Large Mammals
- BIO 5335 Fisheries Management
- BIO 5361 Biology of Water Pollution
- BIO 5362 Environmental Impact Analysis
- BIO 5410 Field Biology of Plants
- BIO 5411 Morphology of the Vascular Plants
- BIO 5420 Natural History of Vertebrates
- BIO 5421 Ornithology
- BIO 5422 Mammalogy
- BIO 5423 Wildlife Management
- BIO 5424 Topics in Wildlife Biology
- BIO 5435 Techniques in Wildlife Management
BIO 5445 Pathogenic Microbiology
BIO 5446 Microbial Ecology
BIO 5450 Physiological Ecology of Animals
BIO 5454 Plant Ecology
BIO 5465 General Entomology
BIO 5472 Animal Behavior
BIO 5480 Cytology and Micro-technique
BIO 5485 Scanning Electron Microscopy
GEO 5415 Digital Remote Sensing and Terrain Modeling
GEO 5417 Computer Cartography
GEO 5418 Geographic Information Systems I
GEO 5419 Geographic Information Systems II
HR 5333 Regressional Analysis and Biostatistics
HR 5339 Advanced Multivariate Health Data Analysis
BIO 7308 History of Vegetation and Climate
BIO 7324 Natural History and Conservation of Large Mammals
BIO 7325 Wildlife and Recreation: Impact and Mgt
BIO 7328 Integrated Waterbird Management
BIO 7353 Biogeography
BIO 7355 Plant Water Relations
BIO 7356 Pollution of Aquatic Ecosystems
BIO 7360E Advances in Water Quality Investigations
BIO 7360Q Spatial Ecology
BIO 7402 Molecular Field Techniques
BIO 7410 Aquatic Microbial Ecology
BIO 7415 Ichthyology
BIO 7419 Stream Ecology
BIO 7422 Wetlands Ecology
BIO 7434 Herpetology
BIO 7447 Microbial Physiology and Genetics
BIO 7468 Ground Water Resources
BIO 7470 Limnology
BIO 7471 Reservoir Ecology
GEO 7316 Remote Sensing and the Environment
GEO 7318 GIS and Environmental Geography

V. Thesis Component 6 hours

BIO 5399A Thesis
BIO 5399B Thesis

Total Hours 30-32 hrs

Other 5000-level Biology or other Science courses may be required at the recommendation of the graduate adviser or by the students graduate committee. Students entering this major will need background courses in zoology, botany, anatomy/physiology, genetics, plant taxonomy, and general ecology. If deficiencies in course background exist, some undergraduate courses may also be required.

Date: 12-4-2013