



U.S. Fish & Wildlife Service

National Conservation Training Center

Conserving the Nature of America

CSP1104 - Conservation Biology and Modeling

Course Code	CSP1104
Course Title	Conservation Biology and Modeling
Description	<p>Conservation biology is a highly interdisciplinary science that focuses on conservation of biological diversity at the gene, population, species, ecosystem, and landscape levels. This online course will emphasize some of the crucial components of preserving biodiversity, primarily the ecological and evolutionary dimensions of conservation. In this study, we will cover population viability analysis, metapopulation and source-sink dynamics (including ecological traps and edge effects), principles of conservation genetics, recognizing critical habitats, and reserve design. These concepts and others will be explored and applied through a series of modeling exercises and spreadsheet homework assignments. This learning experience combines video lectures, spreadsheet model development and use, three virtual classroom discussions (will be recorded if you are unable to attend), participant discussion boards, readings, and instructor interaction.</p> <p>OBJECTIVES:</p> <ul style="list-style-type: none">• Define key terms: Conservation Biology, Biodiversity, and Population Ecology;• Demonstrate how ecological and evolutionary principles are applied to solving conservation problems;• Apply critical reasoning skills to assessment, analysis, and synthesis of conservation problems and solutions;• Identify linkages among conservation problems across biological (genes to landscapes), temporal, and geographical scales;• Demonstrate proficiency in tools used in conservation biology, including population modeling, population viability analysis, modeling and accounting for genetic deterioration, calculation of effective population size and design and management of protected areas or reserves;• Display competence in Excel, including familiarity with basic functions, use of macros, and use of simulation modeling;• Differentiate between populations and metapopulations and recognize different landscape effects on populations;• Explain Island Biogeography and relate this ecological theory to processes in population dynamics;• Extrapolate the importance of genetics to Conservation Biology <p>TARGET AUDIENCE:</p> <p>Federal employees and graduate students engaged in natural resources conservation who wish to apply conservation biology and modeling principles to improve the management of natural resources. This course builds skills in the Biological Planning and Conservation Design components of Strategic Habitat Conservation.</p>
Delivery Method	Online Instructor Led
Non-FWS Fee	\$995.00
Instructional Hours	52
Credits/CEUs	5.0
Course Content Contact	Eric Tsakiris; eric_tsakiris@fws.gov ; 304-876-7430; eric_tsakiris@fws.gov
Curriculum Category	Habitat Assessment Restoration and Management
Registration Link	Register in DOI Talent
DOI Talent Course Type	ILT
College Credit Name	Semester Hours
College Credit Value	2

Schedule: CSP1104 - Conservation Biology and Modeling

Start	End	Session Information	Location	Session Contact	Session Details
1/14/2019	1/14/2019	For registration questions contact: katie_poston@fws.gov For course content questions contact: eric_tsakiris@fws.gov This is a Moodle based class that has 3 virtual live sessions to be determined (TBD).	Online	katie_poston@fws.gov 304-876-7477 katie_poston@fws.gov	This is a Moodle based class that has 3 virtual live sessions to be determined (TBD).