



U.S. Fish & Wildlife Service

National Conservation Training Center

Conserving the Nature of America

CSP4220 - Species Distribution Modeling

Course Code	CSP4220
Course Title	Species Distribution Modeling
Description	<p>Target Audience: Those working on constructing models for the development of Species Status Assessments, updating range maps of endangered species, or other conservation applications.</p> <p>Summary and Objectives: This course will provide participants with the skills needed to build species distribution and habitat models (SDHMs) for use in management and conservation planning. Topics explored include: (i) data acquisition, organization, and vetting; (ii) model construction and prediction; (iii) assessment and evaluation; and (iv) decision-risk associated with SDHM implementation. Participants will learn to apply these skills in R through hands-on exercises, with an intent to transfer the skills learned to a SDHM related to their work environment.</p> <p>Upon completion of this course, participants will be able to:</p> <ul style="list-style-type: none">• Be conversant in the philosophical and ecological underpinnings of SDHMs• Acquire, organize, and evaluate response and predictor data for a SDHM, with emphases on (i) true presence: absence vs. presence-only data; (ii) the relationships of environmental and geographic coverage to sample frames; and (iii) pre-analysis strategies for exploring characteristics of the response and predictor variables.• Apply 5 different statistical methods to build predictive SDHMs• Evaluate & assess SDHM performance, including estimation of uncertainties• Construct, evaluate and present ensembles of SDHM outputs <p>Prerequisites: Statistical Modeling for Conservation (CSP4210), or the equivalent experience (per Course Leader approval). Must also have a working knowledge of R Statistical programming language.</p>
Delivery Method	Instructor Led
Non-FWS Fee	\$1,195.00
Instructional Hours	36
Credits/CEUs	3.0
Course Content Contact	Eric Tsakiris; eric_tsakiris@fws.gov; 304-876-7430
Curriculum Category	Statistics and Modeling
Course Frequency	Once per year
Registration Link	Register in DOI Talent
DOI TALENT Course Type	ILT
College Credit Name	Semester Hours
College Credit Value	2

Schedule: CSP4220 - Species Distribution Modeling

Start	End	Session Information	Location	Session Contact
3/16/2020	3/20/2020	For course content questions: eric_tsakiris@fws.gov	Phoenix, AZ	danielle_bruce@fws.gov
7/20/2020	7/24/2020	For course content questions: eric_tsakiris@fws.gov Class begins at 8:00am on the first day and ends at noon on the last day	National Conservation Training Center (NCTC)	sharon_howard@fws.gov