



U.S. Fish & Wildlife Service

National Conservation Training Center

Conserving the Nature of America

CSP4141 - Occupancy Modeling

Course Code	CSP4141
Course Title	Occupancy Modeling
Description	<p>This course introduces participants to modeling the patterns and dynamics of species occurrence. Lectures will cover the ecological and statistical theory behind site occupancy modeling, including the importance of accounting for potential biases associated with imperfect detection of species during sampling. The bulk of the course will consist of hands-on exercises using the package "unmarked" in the R Statistical programming language. The course will cover basic skills such as processing and formatting data, study design considerations, fitting single- and multiple-season occupancy models, including relevant occupancy and detection covariates, and interpreting modeling results and parameter estimates. Participants will also learn how modeling results could be used to inform future survey design and management activities.</p> <p>OBJECTIVES:</p> <ul style="list-style-type: none">• Describe the uses and limitations of single and multi-season occupancy models• Explain the importance of accounting for imperfect detection when modeling species occurrence• Describe the principles of occupancy survey design• Fit single and multiple-season occupancy models in R using the package unmarked• Interpret parameter estimates from single- and multiple-season models• Recognize the uses of occupancy modeling in species management <p>TARGET AUDIENCE:</p> <p>Anyone interested in expanding their modeling skillset for the benefit of species conservation.</p> <p>PREREQUISITES:</p> <p>Statistical Modeling for Conservation (CSP4210) or the equivalent experience (per approval by the Course Leader), and 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; eric_tsakiris@fws.gov
Curriculum Category	Statistics and Modeling
Registration Link	Register in DOI Talent
DOI LEARN Course Type	ILT
College Credit Name	Semester Hours
College Credit Value	2

Schedule: CSP4141 - Occupancy Modeling

Start	End	Session Information	Location	Session Contact
5/6/2019	5/10/2019	For registration questions: sharon_howard@fws.gov	National Conservation Training Center (NCTC)	sharon_howard@fws.gov