



SYLLABUS

Climate Academy (ALC 3193)

Pre-course Preparation: September 15 - October 1, 2012

Course Timeline: October 1, 2012 – July 30, 2013

Final Project: July 1-July 31, 2103

DESCRIPTION

Natural resource managers are tasked with understanding climate change impacts and using this knowledge in making decisions. This 10-month online course is designed to cover the fundamentals of climate science, provide tools and resources for climate adaptation, increase climate literacy and communication, and provide guidance for maintaining literacy using shared online resources. The course will include one primary webinar lecture with discussion each month, reading assignments, online discussions, access to additional online resources, and an option to complete a final project or report. This course will complement other ongoing webinars and assist participants navigate and prioritize their use of existing online resources for understanding climate change. The course is designed to encourage networking among conservation professionals and increase collaboration on landscape-level climate change response planning. Participation in the 10 month course is available as either “registered for credit” or as a “drop-in” participant. Registered course participants will receive a Certificate of Completion from the U.S. Fish and Wildlife Service National Conservation Training Center (NCTC) and can receive Continuing Education Credits (CEUs) offered through The Wildlife Society (TWS).

The course will be offered as webinar series with additional reading and resources posted on the online class webpage, Moodle. Course participants are expected to complete all 10-months in order to receive the minimum credit hours. All webinars will be recorded and posted online for those who cannot attend the live webinar. Each session will open with a 45-minute lecture via webinar by a leading scientist/manager in a specified topic. The lecture will be followed an additional 30-45 minute discussion via the conference line. Course participants are expected to also participate in an online discussion board to receive full credit. Course participants will also have the option to develop a final written report to present during the July 2013 session addressing climate change in their management of natural resources for additional credit.

This course is based on feedback from National Conservation Training Center’s (NCTC) instructor-led “Resource Management Implication for Global Climate Change” course, the Florida Fish and Wildlife Conservation Commission’s Climate Change Certification program, and ongoing climate change webinars. The course is developed in partnership with staff from the USFWS’s NCTC, The Wildlife Society (TWS), the Association of Fish and Wildlife Agencies (AFWA), AFWA’s Management Assistance Team (MAT), the National Park Service (NPS), and the California Department of Fish and Game (CDFG).

AUDIENCE

State and federal natural resource managers and conservation professionals

GOALS

At the end of this course, you will be able to:

- Explain the scientific basis of climate change
- Understand biological impacts of climate change
- Recognize decision frameworks for addressing uncertainty
- Identify principles of adaptation planning and examples of adaptation action
- Effectively communicate climate change impacts to peers and the public
- Discuss policy implications of climate change impacts on natural resources
- Engage with stakeholders and co-workers in planning for climate change

ACCESS AND REQUIREMENTS

Accessibility

- You will need internet access (high-speed connections are recommended) and a telephone to participate live in the monthly webinar/lectures
- You will also need a computer with internet access to view archived sessions, to download pre-course reading materials, and to participate in online discussions.
- Recordings of all webinars/lectures will be close-captioned and posted to the class website, Moodle, and the NCTC Climate Change website
- To receive TWS credit, registered participants must dedicate a minimum of **4 hours each month** to participate in lectures, discussions, and complete reading assignments

Course Requirements

Two types of enrollment options are available:

Course Participant

Course participants are expected to attend each month's webinar lecture and discussion (or view the recording if absence cannot be avoided), complete the primary readings, and participate in the discussions during the live question and answer period following the webinar lecture or later in an online discussion board. Course participants are also expected to participate in an additional webinar or complete a secondary reading and post on the online discussion board. Links for all reading and webinar selections will be made available for each topic on the course website platform, Moodle. For additional continuing education credit, registered participants can complete a final written report addressing climate change in their management of natural resources to present during the last session of the course, July 2013.

Breakdown of Monthly Tasks for Course Participants [approximate time]

- Participate in monthly webinar lectures (view recorded webinar/online discussion if absent) [1.5 hr]
- Complete primary reading [1 hr]
- Complete either a secondary reading or participate in a secondary webinar [1 hr]
- Participate in at least three monthly online discussion board posts [0.5 hr]
 - 1 post for the primary webinar
 - 1 post for the primary reading
 - 1 post for a secondary reading or secondary webinar

Registration for course participants will open on August 17, 2012.

Drop-in Participant

A limited number of spaces are available for drop-in participants to attend any of the webinars and participate in the question and answer discussions. Drop-in participants will have access to all primary reading materials and recorded webinars via NCTC's Climate Change website. Drop-in participants can receive Continuing Education Credit through TWS for each webinar (1 credit per webinar).

Registration for drop-in participants is currently open. There is limited space for drop ins, so please sign up early.

REGISTRATION INFORMATION

Course Participants

To receive credit for this course through USFWS NCTC and to be eligible for up to 30 Continuing Education Credits through TWS, please follow the instructions below to register through DOI Learn:

Department of Interior (DOI) Employees and **those with a DOI Learn account** (and have taken a course through DOI before):

Please register through DOI Learn <https://gm2.geolearning.com/geonext/doi/login.geo>

1. Log in with username and password
2. (Only if you are a supervisor) Change role in dropdown tab (top right corner of screen) to "Learner"
3. Under the "Home" tab, click on "Search the Catalog, Register for a Course"
4. Click on "Click here to continue to the Catalog"
5. In the search field, type the title of the course "Climate Academy" and click "Go"
6. Click on the course and then click "Details"
7. Click on "Enroll"
8. Follow the steps to complete your request

Non DOI Participants: Please register using the following link. It is **ESSENTIAL** to add the *course name* "Climate Academy" in the "Add Reason" box. If you do not, your request will be delayed and possibly denied. <https://gm2.geolearning.com/geonext/doi/requestaccount.geo>. Once you have an account, please follow the instructions above for those with a DOI Learn account.

Registration for course participants will open on August 17, 2012.

Drop-in Participants

To drop in to any of the webinars, but not receive full credit for the course, please register using this link to be put on a mailing list to receive webinar announcements. *Registration for drop-in participants is currently open. There is limited space for drop ins, so please sign up early.*

<https://www.surveymonkey.com/s/G9BGFQD>

All Participants

All course and drop-in participants will receive a monthly email with the webinar announcement. This announcement will contain a link to register for the webinar via WebEx. Everyone who wishes to view and participate in the webinar **must** register via WebEx to obtain access.

For registration questions, contact Ashley Fortune at Ashley_Fortune@fws.gov or 304-876-7631

TUITION AND CREDIT

For this first offering, there is no tuition or registration fee associated with the course.

All course participants who complete the entire course will receive a Certificate of Completion from the U.S. Fish and Wildlife Service National Conservation Training Center (NCTC).

Up to 50 credit Continuing Education Credits are available through The Wildlife Society for course participants. Information on how to obtain these credits will be available on the class website, Moodle. Credit is also available for drop-in participants for each webinar and primary reading completed.

- 1 credit per webinar (10 credits possible)
- 1 credit per primary reading (10 credits possible)
- 1 credit per secondary reading or secondary webinar (10 credits possible)
- 10 credits for a final written report (to be presented to class)

CONTACT INFORMATION

Course Content/Topic Questions

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Registration Questions

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COURSE SCHEDULE

Pre-course Reading and Preparation, Sept 1 – Oct 1:

Update individual learning about climate change processes and impacts. Moodle and WebEx tutorials. Develop understanding of basic terms used natural resource managers to describe climate change.

Webinars are scheduled for the 2nd Wednesday of each month from 2:00-3:30pm Eastern unless otherwise noted.

October 10, 2012 (2:00-3:30pm Eastern)

Basic Climate Science – Dr. Peter Griffith (NASA)

This session will provide basic understanding of climate science, including the Earth's energy budget and the carbon cycle.

November 16* (Friday), 2012 (2:00-3:30pm Eastern)

Climate Projections – Dr. Virginia Burkett (U. S. Geological Survey)

This session will provide an overview of climate projections and downscaling modeling and how they can be applied.

December 12, 2012 (2:00-3:30pm Eastern)

Biological Impacts and Responses – Dr. Terry Root (Stanford University)

This session will go over current and projected impacts of climate change on biological systems.

January 9, 2013 (2:00-3:30pm Eastern)

Addressing Uncertainty – Dr. Michelle Haynes (U.S. Fish and Wildlife Service) and Dr. Leigh Welling (National Park Service)

This session will review how conservation managers are dealing with uncertainty about future climate change projections, their impacts on natural resources, and how decision-making tools such as scenario planning, structured decision making, and adaptive management may be used to identify key uncertainties and assist long-term conservation planning.

February 13, 2013 (2:00-3:30pm Eastern)

Adaptation Planning – Dr. Bruce Stein (National Wildlife Federation) and Dr. Amber Pairis (California Department of Fish and Game)

This session will explore the fundamentals of adaptation planning for natural resources as well as what that looks like on the ground.

March 13, 2013 (2:00-3:30pm Eastern)

Adaptation Action – Dr. Matt Mitro (Wisconsin Department of Natural Resources)

This session will present how science and management interests can align to inform targeted management action for a species or resource.

April 10, 2013 (2:00-3:30pm Eastern)

Communication – Angie Richman (National Park Service)

This session will present innovative approaches to communicating the science of climate change and adaptation to natural resource professionals, stakeholders and the public.

May 8, 2013 (2:00-3:30pm Eastern)

Policy – Sarah Murdock (The Nature Conservancy)

This session will analyze the common barriers to effective climate policy for the conservation of fish and wildlife.

June 12, 2013 (2:00-3:30pm Eastern)

What Next? – speaker TBD

This session will explore the integration of climate adaptation into agency operations as a mechanism for institutional change.

July 31, 2013 (2:00-3:30pm Eastern)

Presentations Final Team Project

This session will be presentations of participant final reports.