

## Syllabus Fall 2019

### **NRES 405/605- Lake Superior Region: Natural Resources, Culture and Climate Change (1 cr)**

College of Natural Resources, University of Wisconsin-Stevens Point

Class meetings: W (Sep. 11 and Oct 16), 5:00 -7:00 pm, TNR 359

Field visits: Sep. 25 to 29 (Lake Superior area- Northern Wisconsin)

(Note: We will meet from 5:00-7:00pm on Sep 11 (for class introduction & orientation) and from 5:00-7:00pm Oct 16 (for final presentations). Both meetings will be in TNR 359. Students are also required to attend a 5-day field trip to Lake Superior from Sep 25-29.)

#### **Instructors:**

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#### **Course Description:**

The changing climate is anticipated to affect many ecosystems and communities in Wisconsin. With increasing annual temperature and anticipated less snow, more rain and more extreme weather events, changes are projected for natural resources in Wisconsin, including forest composition, pests, fish and wildlife, and water quality and quantity. In the Lake Superior basin, these changes are likely to affect local economies dependent upon the aesthetics of water and the region, commercial and recreational fishing, forestry and the manufacture of forest products, wildlife, tourism, recreation, agriculture, and coastal communities with cultural traditions that have evolved over thousands of years. This course provides field experience-based climate change investigations within Lake Superior's coastal communities and tribal lands.

This field course is focused on the Lake Superior basin and targeted towards enhancing the capacity of current and future natural resource professionals to better manage natural resources in changing climate and to build more resilient and adaptive communities. Through place-based experiential investigation and interactions with professionals and communities, students will learn how climate change affects coastal ecosystem functions and economic and cultural systems. This culturally relevant climate literacy will provide ways and help build community leadership based on a systems approach to mitigate or adapt to climate changes.

This class is designed to expand climate change literacy for current and future natural resource professionals by integrating climate science with place-based economic and cultural perspectives that resonate with learners and engage them in climate change mitigation or adaptive decision-making. By integrating scientific knowledge with economic and culturally relevant place-based research and innovative natural resources management outreach methodologies, students will gain an understanding of climate impacts and needed adaptations in integrated natural resources management and decision-making.

## Learning outcomes:

After successful completion of this course, students should be able to:

- a. explain and apply different scientific methods and techniques of measuring and monitoring climate change impacts on terrestrial and aquatic ecosystems in the Lake Superior basin.
- b. apply backcasting and forecasting models to assess past and future changes in terrestrial and aquatic ecosystems and key indicator species in relation to human and climate change impacts.
- c. engage, communicate and effectively work with natural resource professionals from tribes, governmental agencies, and decision-makers in various communities.

## Readings:

There is no required textbook for this course. Selected articles, videos and podcasts will be shared and posted in Canvas. I expect you to complete the assigned readings before going to the field and be able to explain, interpret, apply your concept and learning as you investigate in the field.

## Evaluation (Total 100 points):

**Class Participation/ engagement:** Students are required to actively participate in all class and field investigations

**Poster and Project Presentation:** As a group, students will preselect a topic of interest and collect data and information during their field visits and investigations. Then, each group will create a poster displaying their project, and present their findings to class

**Journal:** Students will keep a journal to document their experiences on the trip.

**Final grades will be assigned based on points accumulated from a combination of sources including:**

Item	Points	Percent	Letter
Journal	30	≥93	A
Participation/Professionalism	10	90-92	A-
<b>Project items</b>		87-89	B+
Poster	30	83-86	B
Presentation	20	80-82	B-
Group eval	10	77-79	C+
		73-76	C
<b>Total</b>	100	70-72	C-
		67-69	D+
		64-66	D
		≤63	F

### Academic Integrity:

Familiarize yourself with the academic honesty policy of UWSP. Plagiarism of any type in your work is academic misconduct and unacceptable. In a nutshell, if you cheat, plagiarize, or turn in work other than your own, you will at a minimum receive a zero on that assignment. All work must be your own. Do not copy or hand in the work of other students, authors, sources. When using other sources in your writing, be sure to credit those sources both within the text and at the end of your reports/papers. If you have any questions about what constitutes plagiarism, please review the resources available at <http://library.uwsp.edu/guides/vrd/plagiarism.htm> and talk with us.

### Accessibility Statement

If you have a learning or physical challenge which requires classroom accommodation, please contact the UWSP Disability Services office with your documentation as early as possible in the semester. 103 Student Services Center, (715) 346-3365; TTY (715) 346-3363; [www.uwsp.edu/special/disability/studentinfo.htm](http://www.uwsp.edu/special/disability/studentinfo.htm)

### **Tentative schedule:**

Sep. 11, Wed: Meet in class, Introduction and field orientation, 5:00-7:00pm

Sep. 16, Mon: Project proposals due

Sep. 25, Wed: Start for Lake Superior area, 2pm

Sep 26, Thur: Field activity details (TBD)

Sep. 27, Fri: Field activity details (TBD)

Sep. 28, Sat: Field activity details (TBD)

Sep. 29, Sun: Field activity in the morning; return to UWSP in the afternoon

Oct 7, Mon: Journals due

Oct 16, Wed: Students present group project findings, 5:00-7:00pm