

FIELD INTERPRETIVE TECHNIQUES I

EnEd 3341 (3 credits) Fall 2006 - Wednesdays 2- 5 pm

Sports and Health Center Room 9

Instructor:

Cindy Hale

Schedule & contact info:

Mon, Thur, Fri- 721-3731 Boulder Lake ELC

Tue- 720-4364 The Natural Resources Research Institute

Wed-726-8677 Center for Environmental Education, Sports and Health Center Room 203

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Course Description:

This course is designed to provide the foundational skills, techniques, and knowledge involved in interpreting the natural history of the autumn and early winter environment, on and around the North Shore of Lake Superior and northern Minnesota. This course will cover basic geology, geomorphology, tree & plant identification, raptor identification, cultural history, and interpretive skills.

Goals: This course will help the participants to:

- A. **Effectively use field guide resources to identify and understand natural resources.**
- B. **Interpret general landforms of Minnesota using appropriate terminology and correct description of that landform.**
- C. **Identify migrating raptors and describe their fundamental ecology (such as life history, nesting, feeding, and behavior).**
- D. **Discover resources which will aid in interpreting the natural and cultural environment**
- E. **Learn how to effectively use field guides as tools for understanding**
- F. **Implement fundamentals of field interpretive methods such as site assessment, lesson plan construction, teaching, and use of equipment.**
- G. **Explore the “stories” of various cultural groups in Northeastern Minnesota**

Tentative Schedule

September 6

In Classroom

- Introductions, Background and expectations from the course, Explanation of syllabus itinerary, coursework, grading
- What is interpretation? How is it used?
- Informal interpretation techniques
- Explanation of Informal Interpretation project
- Lesson plans
- Explanation of Phenology Journal
- Homework after this class:
 - read in Northwoods Companion September 1-15
 - familiarize yourself with the major groups of raptors in your field guide to birds - turn in a write up of the general characteristics in identifying the following groups: accipiters, falcons, buteos, eagles, and vultures – typed
 - begin phenology journal entries
 - read “Wings Along the Coast” in The Superior North Shore

September 13

Turn in:

- write up of the general characteristics in identifying hawks - typed
At Hawk Ridge - meet at north side of SpHC (car pool)
- discussion of Northwoods Companion reading
- Raptor identification and ecology
- Fundamentals of bird identification, How to use a bird field guide
- Hawk and Exotics topics assigned - Work on Lesson Plan

Homework after this class:

- research your assigned hawk - your job will be to teach your small group about that hawk - description, migration patterns, habitat, what it feeds on, ... - use props - you will turn in a typed outline of your information
- phenology journal entries

September 20

Turn in:

- outline of what you will teach in your small group

At Hawk Ridge - meet at north side of SpHC (car pool)

- Teaching in small groups: identification of hawks and explanation of ecology of specific hawks
- discussion of Northwoods Companion reading & phenology journal
- Tree identification - trees with leaves - using the tree guide

Homework after this class:

- phenology journal entries
- read up to Sept 30 in Northwoods Companion

September 27

Turn in:

Draft exotics lesson plan

At Park Point - meet at north side of SpHC (car pool)

- Dune ecology & origins
- plants/trees, wildlife, history, migrating birds

Homework after this class:

- Read "The Antlered Mammals" in The Superior North Shore
- phenology journal entries

October 4

Turn in:

Phenology journal to date

At Olson's Bog - meet at north side of SpHC (car pool) ***have tall rubber boots or waders!

- Bog ecology:
 - Origin of bogs
 - Identification of trees & shrubs of bog wetlands

Homework after this class:

- Finalize exotic specie lesson plan
- phenology journal entries

October 11

Turn in:

Lesson plan on exotic specie presentation

At Bagley Nature Area - meet at kiosk at 2:10

- Each person will teach about the natural history of one assigned exotic plant or animal (approx 10 min.)

Homework after this class:

- read "Invader from the Sea" and "Survivors and Strangers" in The Superior North
- read up to Oct. 15 in Northwoods Companion

October 18

At Hartley Park - meet at Woodhaven & Hartley Road trailhead at 2:15 - rubber boots are necessary

- Beaver ecology
- Review for mid-term

Homework after this class:

- read up to Oct. 30 in Northwoods Companion
- phenology journal entries
- prepare for mid-term

October 25

At Bagley Nature Area - meet at kiosk at 2:10

- Mid-term exam - field and classroom

Homework after this class:

- "Iron Mountains and Other Lodes" in The Superior North Shore (become familiar with the location of some of the places referred to in this chapter)

November 1

At Leif Erickson - meet at north side of SpHC (car pool)

- Geology of Duluth and Northeastern Minnesota: Volcanic activity
- Starting of a rock collection that can be used as a teaching tool

Homework after this class:

- complete a draft lesson plan for teaching cultural history (topic is assigned)
- phenology journal entries
- read up to Nov. 15 in Northwoods Companion

- Read “Genesis by Fire” in The Superior North Shore

November 8

Turn in:

- Draft lesson plan for weekend teaching

At North Shore Interpretive Center (formerly LLO) – meet at north side of SpHC (car pool)

- Feedback on phenology journals
- Discussion of “Iron Mountains...”
- Geology of Duluth/Northeastern Minnesota: Glaciers to present time

Homework after this class:

- phenology journal entries
- Read “Early Americans” and “New Adventurers” in The Superior North Shore - **DEVELOP A TIMELINE FOR THE MAJOR EVENTS THAT OCCURRED IN EACH CHAPTER. Type it!**

November 15

Turn in:

- Timeline of history
- Hawk Ridge volunteers turn in critique

Meet in classroom

- Final Prep for weekend teaching

Homework after this class:

- read up to Nov. 30 in Northwoods Companion
- revise lesson plan

Saturday, November 18 – Cultural History Day – Jay Cooke State Park - 7am- 5pm

- Cultural History - Teaching peers about cultural history

November 22 - No Class

November 29

Turn in:

- Final cultural history lesson plan

In the Classroom

- The process of interpretation with Neil Howk from the National Park Service

Homework after this class:

- read up to Dec. 15 in Northwoods Companion

December 6

Turn in:

- Final Phenology journal

At Marshall School - meet at north side of SpHC (car pool)

- Phenology as a teaching tool + incorporating interpretation into the classroom - Larry Weber

Homework after this class:

- phenology journal entries

December 13

Turn in:

- Extra Credit work
- Great Lakes Aquarium volunteers turn in critique

At Bagley Nature Area

- Final exam review

Homework after this class:

- read up to Dec. 30 in Northwoods Companion

Monday, December 18, 2- 5pm - meet at north side of SpHC (car pool)

- Final Assessment - outside and inside

Books, Supplies, and Fees:

Required text:

- 1) Field Guide to the Birds of North America. National Geographic Society. Washington, D.C.
- OR** Peterson, R.T. A field guide to the birds. Houghton-Mifflin Co. Boston, MA.
- 2) Rathke, David M. (1996). Minnesota trees. Minnesota Extension Service. St. Paul, MN
- 3) Bates, John (1997). A Northwoods Companion: Fall and Winter. Manitowish River Press. Mercer, WI.
- 4) Waters, Thomas (1987). The Superior North Shore. University of Minnesota Press. Minneapolis, MN.

Reference Materials (available in the library):

- Green, John C. (1996). Geology on display: Geology and scenery of Minnesota's North Shore state parks. Department of Natural Resources. St. Paul, MN.
- Ham, Sam (1992). Environmental interpretation: A practical guide for people with big ideas and small budgets. North American Press. Golden, CO. (ISBN 1-55591-902-2).
- Matsch, C. and Ojakangas, R. (1982). Minnesota's Geology. University of Minnesota Press. Minneapolis, MN (ISBN 0-8166-0953-5)
- Tester, John R. (1995). Minnesota's natural heritage. University of Minnesota Press. Minneapolis, MN. (ISBN 0-8166-2133-0)

Required Supplies:

Students will need to have a pair of binoculars, a hand lens, and proper clothing to go out in **all** conditions. You should gain access to a pair of rubber boots or waders for the bog and beaver pond outings.

Fees: The only additional fees for this class are associated with obtaining proper supplies and sharing gas costs for car pooling.

ALWAYS BRING YOUR FIELD GUIDES, BINOCULARS, HAND LENSE AND PROPER CLOTHING FOR EACH CLASS SESSION

Grading

Attendance is very important. You are responsible for all information given both indoors and outside. Points will be given based on the following criteria:

- For written work, effort and quality are the criteria - all work, other than the Phenology Journal and the worksheets, must be typed and follow the given guidelines, must have all components assigned (ie. lesson plans must have each portion), and be well written with appropriate effort. We can tell if you have put effort into your work. **Note:** Phenology Journal and worksheets, though not typed, should be legible, if I can't read it, you won't get credit.
- For participation, you will be awarded 6 points per class period for which you are fully participating. If you show up unprepared for the conditions or activity (ie. you didn't bring boots, you forgot binoculars,...), you will lose points for that day.
- For teaching, you will be given points based on 2 things: 1) you do the teaching, and 2) you teach what was assigned. Don't skip a teaching day.
- **ALL ASSIGNMENTS MUST BE TURNED IN ON TIME OR YOU WILL LOSE 15% per day late.**

<u>The Work:</u>	<u>Points Possible:</u>
Homework Assignments:	
• Phenology Journal Draft	50
• Phenology Journal Final	50
• Worksheets/write-ups	30
• Lesson plans (2 final, 2 draft)	60
Teaching (2 lessons)	40
Informal Interpretation Project	90
Mid-term Exam	100
Final Exam	100
Class Participation	90
Cultural Teaching Day	60
TOTAL	670

Grading Based on % of Possible Points:

92% = A	90% = A-
82% = B	80% = B-
72% = C	70% = C-
62% = D	52% = F

EXTRA CREDIT: You can receive extra credit for participation in activities that complement this course. Each of the below can raise your grade up to 30 points. If you do participate, you will need to summarize what you participated in and what you learned (this should be at least one page long and include activities you participated in and what you learned). These must be completed on or before December 11. Here are the options:

- Conduct an interpretive hike with a group that is 1 hour or more in length. Turn in a lesson plan and an evaluation of the hike (see Tim for an evaluation form).
- Participate in a professional conference related to interpretation, outdoor education, or environmental education.

ASSIGNMENTS EXPLAINED

PHENOLOGY JOURNAL

The purpose of a phenology journal is to get you to observe nature and develop an understanding of natural occurrences as they relate to times throughout the year. Here's how you should do this:

- 1) Observe nature - you may be able to do this from your dining room window during breakfast or get outside and walk and observe what is happening around you.
 - 2) Description: describe what you see as accurately and objectively as possible. What is it? What are its features? What does it do? How does it look, feel, taste, smell, move, sound, behave, etc.?
 - 3) Relationships: Why is it here? Who are its neighbors? How did it get this way?
 - 4) Speculation: What does it have to teach us? How does it speak to the human world? Why does it fascinate or repel me?
 - 5) You need to have entries for at least 4 days per week
- Please use a spiral-type notebook to record your observations and include drawings where appropriate.
 - A "to-date" journal must be turned in on September 27th.
 - Final Journal is due on December 6

PEER TEACHING

The emphasis in this class is on content, though a portion involves teaching. You will be responsible for being involved in teaching one lesson.

FIRST LESSON

The purpose of this is to practice giving information to others in a small group setting. Incorporate ways that would make this information about a hawk interesting. Teach this on September 20th.

EXOTICS LESSON

You will be teaching peers (1/2 of the class) about one of the exotic plants or animals in this area. You will have 10 minutes, so it is important to identify the key concepts you wish to communicate in your lesson and then do so effectively and efficiently. Teach this on October 11th.

TEAM TEACHING

In teams, you will be assigned specific aspects of the cultural history of Northern Minnesota. Once assigned, you will work together to brainstorm, research the components to the topic, develop a lesson plan, and practice your teaching presentation. You will co-teach this on our Saturday outing. Once again, make it fun and interactive - we want your peers to learn this stuff. Turn in a lesson plan from the group (ie. one lesson plan per group). Teach this on November 18th.

Details are on a separate sheet.

INFORMAL INTERPRETATION

This assignment has been created to give you an opportunity to accomplish work that will be used in a real world setting. *Details are on a separate sheet.*