

FIELD INTERPRETIVE TECHNIQUES II  
 EnEd 3342 (3 credits)  
 Spring 2009 - Wednesdays 2-5 pm  
 Sports and Health Center Room 9  
 Course website: [www.d.umn.edu/~tbates](http://www.d.umn.edu/~tbates)

INSTRUCTOR  
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Course Description:

This course is designed to provide the foundational knowledge and basic skills/ techniques involved in interpreting the natural history of winter and spring environments. This course will cover winter survival of wildlife, tracking, forest ecology, spring migration, & wildflowers.

Goals: This course will help the participants to:

- a. Identify birds and describe their fundamental ecology (such as life history, nesting, feeding, and behavior).
- b. Identify the spring ephemeral wildflowers found in Northern Minnesota using a field guide.
- c. Explain ecological relationships of the winter environment
- d. Observe the transition of winter into spring in the natural environment
- e. Use appropriate interpretive techniques to effectively teach to an audience.
- f. Implement fundamentals of field interpretive methods such as site assessment, lesson plan construction, and use of equipment.

TENTATIVE SCHEDULE

Date	Topic	Assignments/homework after class	Location
Jan. 21	<ul style="list-style-type: none"> <li>• Introductions, background and expectations from the course</li> <li>• Explanation of syllabus: itinerary, coursework, grading, lesson plans</li> <li>• Success in this class – note taking..</li> <li>• What is Winter?</li> <li>• Winter weather</li> <li>• <u>People and Forests</u></li> </ul>	<ul style="list-style-type: none"> <li>• Before March 1, Go to the Planetarium’s Public Program - 7pm on Wednesdays - <a href="http://www.d.umn.edu/planet/">http://www.d.umn.edu/planet/</a> for topics that match your interest.</li> <li>• Read “Becoming Better Interpreters” on the website + WebX discussion</li> <li>• Read 10-25 in <u>Winter</u></li> <li>• Read January in <u>Backyard Almanac</u> (on website)</li> <li>• Winter bird list – Check off birds that could be seen in our area during the winter – use your field guide to birds.</li> </ul>	SpHC 9
Jan. 28	<ul style="list-style-type: none"> <li>• Night sky projects assigned</li> <li>• SNOW interpretation: snow as weather &amp; snow dynamics</li> <li>• Intro to winter birds at the bird feeding station</li> </ul>	<ul style="list-style-type: none"> <li>• Read 37-63 in <u>Winter</u></li> <li>• Read <i>Snow</i> chapter in <u>Nature in Winter</u> (website)</li> </ul>	Bagley Nature Area
Feb. 4	<ul style="list-style-type: none"> <li>• Intro to Tracking</li> </ul>	<ul style="list-style-type: none"> <li>• Read first 2 weeks of February in <u>Backyard Almanac</u> (on website)</li> </ul>	Bagley Nature Area
Feb. 11	<ul style="list-style-type: none"> <li>• Animal survival in winter</li> <li>• Night sky lesson plan rough draft due</li> </ul>	<ul style="list-style-type: none"> <li>• Read 73-87 + 100-116 + 131-162 in <u>Winter</u> (in between pages are optional)</li> </ul>	Bagley Nature Area
Feb. 18	<ul style="list-style-type: none"> <li>• Plant survival in winter</li> <li>• Winter tree id</li> </ul>	<ul style="list-style-type: none"> <li>• Last 2 weeks of February in <u>Backyard Almanac</u></li> <li>• Read 163-176 in <u>Winter</u></li> <li>• Read <i>Wintering Trees</i> in <u>Nature in Winter</u> (website)</li> <li>• Read <i>Sorting the Saplings</i> (website)</li> </ul>	Bagley Nature Area
Feb. 25	<ul style="list-style-type: none"> <li>• NIGHT SKY TEACHING! 6:00-9:00 PM – turn in final lesson plan</li> </ul>	<ul style="list-style-type: none"> <li>• Night sky presentations</li> </ul>	Hartley Nat. Area Hartley/ Woodhaven Rd Entr.
March 4	<ul style="list-style-type: none"> <li>• Tracking II – Stories in the Snow</li> <li>• Winter Tree Identification II</li> <li>• Mid-term Review</li> </ul>	<ul style="list-style-type: none"> <li>• Read <i>Tracking Stories</i> on WebX – respond to question</li> </ul>	Hartley Nat. Area Hartley/ Woodhaven Rd Entr.
March 11	<ul style="list-style-type: none"> <li>• Plot study - set up and procedure</li> <li>• Mid-term Exam</li> </ul>	<ul style="list-style-type: none"> <li>• Select your plot site and begin initial inventory</li> </ul>	Bagley Nature Area

<b>March 18</b>	Spring Break!	<ul style="list-style-type: none"> <li>Keep your eyes peeled for phenology</li> </ul>	
<b>March 25</b>	<ul style="list-style-type: none"> <li>Forest Management – Introduction to Forest Management Practices</li> <li>Winter into Spring lesson assignment discussed</li> <li>Bird research assigned</li> <li>Turn in your Plot study location – written description &amp; detailed map</li> </ul>	<ul style="list-style-type: none"> <li>Read “Pieces of Paper Protecting the Land” on the website – WebX Comments</li> </ul>	Boulder Lake - meet at car pool spot (north side of SpHC)
<b>April 1</b>	<ul style="list-style-type: none"> <li>Traditional Sugarbush</li> <li>Turn in draft lesson plan</li> </ul>	<ul style="list-style-type: none"> <li>Reading: Sugarbush (website)</li> </ul>	Bagley Nature Area
<b>April 8</b>	<ul style="list-style-type: none"> <li>Student Lessons: Winter into spring ecology lessons</li> </ul>	<ul style="list-style-type: none"> <li>Familiarize yourself with the <u>Field Guide to Birds</u> - do worksheet (10 pts)</li> <li>Finalize your Bird Research Paper</li> </ul>	Bagley Nature Area
<b>April 15</b>	<ul style="list-style-type: none"> <li>Fond du Lac Birding—Spring ornithology</li> <li>Turn in your Plot Journal</li> <li>Turn in Bird Research Paper</li> </ul>		Fond du Lac – meet at car-pool spot
<b>April 17/18</b>	<ul style="list-style-type: none"> <li>Crex Meadows Trip - birding, froggin', spring plants, interpretation</li> <li>Bird oral presentation while on trip</li> </ul>	<ul style="list-style-type: none"> <li>Summary of what you learned on the Crex trip</li> </ul>	Crex Meadows Wildlife Area
<b>April 22</b>	<ul style="list-style-type: none"> <li>Reading the Landscape from trees, plants, topography</li> <li>Hartley Park history</li> </ul>	<ul style="list-style-type: none"> <li>Read “Readin’, ‘Ritin’, and Recess” on the website – WebX Comments</li> </ul>	Hartley Nature Area – meet at HNC pkg lot
<b>April 29</b>	<ul style="list-style-type: none"> <li>Aquatic study – understanding the aquatic environment</li> <li>Crex Summary Due</li> </ul>	<ul style="list-style-type: none"> <li>Wildflower worksheet</li> </ul>	Bagley Nature Area
<b>May 6</b>	<ul style="list-style-type: none"> <li>Wildflower I.D. &amp; ecology</li> <li>Plot assignment due</li> </ul>	<ul style="list-style-type: none"> <li>Final exam review</li> <li>WEBX due--<i>most interesting observation from my plot</i></li> </ul>	Magney Snively Park - Car-pool to site
<b>Tues. May 12</b>	1- 4pm Final exam		TBA – meet at car-pool spot

Books, Supplies, and Fees:

Required texts:

- Field Guide to the Birds of North America. National Geographic Society. Washington, D.C.
- Newcomb, Lawrence (1977). *Newcomb's wildflower guide*. Little, Brown and Co. Boston, MA.
- Rathke, David M. (1996). *Minnesota trees*. Minnesota Extension Service. St. Paul, MN
- Halfpenny, James and Ozanne, Roy (1989). *Winter: An ecological handbook*. Johnson Publishing Co. Boulder, CO.

Optional:

- Stokes, Donald W. (1976). *A guide to nature in winter*. Little Brown and Co. Boston, MA.
- Weber, Larry (1996). *Backyard almanac*. Pfeifer-Hamilton Publishers. Duluth, MN.

Supplies: Students will need to have a pair of binoculars, a hand lens, notebook and proper clothing to go out in all conditions (including rubber boots for exploring wetlands, stream, & pond)

Fees: The only additional fees for this class are associated with travel and camping. All costs will be shared among classmates. Costs include gas for car-pooling to field sites and food for the Crex Meadows trip.

**ALWAYS BRING YOUR FIELD GUIDES, PROPER CLOTHING, AND NOTEBOOK FOR EACH CLASS SESSION**

Expectations:

You will be expected to **take notes** and **complete readings** to expand your knowledge and understanding so that you can retain information more effectively.

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 Plot 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.

- 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. The Crex Meadows trip is worth 60 points.
- For teaching, you will be given points based on 2 things: 1) you do the teaching & 2) you teach what was assigned. Don't skip a teaching day.
- ALL ASSIGNMENTS MUST BE TURNED IN ON TIME OR YOU WILL LOSE POINTS.

<u>The Work:</u>	<u>Points Given:</u>
Homework Assignments:	
• Plot Journal Draft	50
• Plot Journal Final	50
• Worksheet/write-ups (10 pts ea.)	50
Night Sky Teaching:	
Lesson plan	25
Teaching	20
Winter/Spring Ecology Teaching:	
Lesson Plan	25
Teaching	20
Bird research paper	60
Mid-term Exam	100
Final Exam	100
Class Participation	90
Crex Trip Participation & Summary	60
WebX Comments (15 points each)	60
TOTAL	610

Grading Based on % of Possible Points:

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

Risk Management

Field experiences are an essential component to the outdoor education process. As we participate in field experiences, we must acknowledge the inherent risk of field program participation. Leaving campus presents risk management concerns including transportation and field site based dangers. In order to avoid problems and strengthen our risk management awareness, it is each student's responsibility to behave in a manner that promotes personal and group safety while in the field. Any questions, concerns, specific medical information, etc. should be directed to the instructor as a part of a shared effort to ensure a safe and optimal learning environment.

Transportation

Car-pooling is an economical and efficient part of getting to sites to learn about natural and cultural history. Doing this in a safe manner is essential. If you are involved with driving, you must follow these policies:

- Vehicle is in good working condition.
- Vehicle is legally insured.
- Driver has not had a moving violation in the past year.
- Driver has not had a DUI violation during the past the three years.
- Seatbelts are available for all passengers.
- No smoking while driving.
- No use of cell phone while driving
- Front seat passenger will handle all radio, heat, etc. adjustments

ASSIGNMENTS EXPLAINED

Plot Study

The purpose of a Plot Study is for you to explore, in detail, the natural history found in an area that intersects at least one edge between two ecotones (field/woods, grassland/pond, forest/stream, etc.). Through periods of observation, you will gain a greater understanding of the life within this area as it transitions from winter to spring. Here's how:

1. Lay out a circle with a 10 meter in radius that crosses an edge between two communities (where two communities blend together). The more plant communities you pass through, the more interesting your study will be.
2. Make an initial identification of all plants in your plot using field guides or other sources (which may include people).
3. Date and record all observations in a journal.
4. Visit your site for at least 1 hour each week, March 25- May 5. At least 1/2 of this time should be spent sitting and observing. Document all animal signs (mammals, birds, amphibians, reptiles,...) - these signs may come in the form of direct observations, tracks & trails, or sounds. Note changes in plant life as the season progresses. Observe the weather and the positioning of the sun.
5. Documentation may come in the form of writing, drawings, recordings, or other means. Please make personal comments or notes along with documentation.
6. Near the end of this process, make some comments on what you learned through this process.

- Begin plot study the week of March 25
- A "to-date" journal must be turned in on April 15.
- Final Journal is due on May 6

### Lessons

The emphasis in this class is on content, though a portion involves teaching. You will be responsible for being involved in teaching lessons. A lesson plan is due for each of these - turn in just after the lesson is completed.

#### Night Sky Lesson

You will be assigned a topic related to the winter night sky. This lesson will be 10- 15 minutes in length. The goal is to teach peers about the assigned topic. Draft Lesson Plan is due on February 11. Teach on Feb. 25. Turn in Final Lesson Plan.

#### Winter to Spring Ecology Lesson

The purpose of this is to teach peers about late winter/early spring ecology - teach your peers something they probably don't know. This lesson will be 15 minutes in length and will include a proper introduction, body, and conclusion. You need to make a connection to Bagley, so you must scout the site and be familiar with what you are teaching. You need to make your lesson fun and interactive. The goal is to teach your peers something about winter to spring ecology. Topics will be assigned. Teach on April 8. Turn in draft lesson plan on April 1.

### Bird Research Paper

This project is designed to get you to learn more detail of the ecology of birds, particularly those that will be seen while at Crex Meadows Wildlife Refuge.

1. Choose a bird from the list that you are intrigued with.
2. Through research, answer the following questions:
  - a. How can we identify the bird? What are specific physical features of the bird?
  - b. What habitat does the bird live in? (both summer and winter)
  - c. What does it eat? What eats it? (focus on summer) - relate these to the habitat
  - d. What is its role in the ecology of that summer habitat? (Why is it important?)
  - e. What is its relationship to humans? (How do humans impact it? How does it impact humans?)
  - f. Are there any concerns related to the bird's population? What? Why?

You should be able to answer these questions concisely in about 3 pages (double spaced, Times font). This is due on April 15. You will present your findings on the Crex Trip.

### Crex Meadows Overnight Trip

One of the major ways to understand the natural environment, is to immerse yourself in that environment. This trip is a quick immersion into the world of birds, plants, and interpreting the landscape of the Crex Meadows Wildlife Area near Grantsburg Wisconsin. The focus will be to get into more depth in bird identification, bird ecology, and the ecology of west central Wisconsin/east central Minnesota.

You will be responsible for taking care of your personal camping equipment. The group will work together to take care of group items including: food, tents, cooking equipment, etc. We may be taking a van on this outing.

You will be expected to write up what you learned, as a tool for greater understanding. This summary should be about 2 pages in length and also include your comments on how this information may be useful to you. This summary will be due April 29.

### WebX Assignments

Web Crossing (WebX) is a tool to facilitate discussion of readings outside of class time. You will be expected to participate in these discussions. Each WebX assignment will have a reading and then associated questions that are posted on-line. You will need to do 2 things:

1. Post your responses to the questions (5 points)
2. Make comments on two other people's responses (which means you will need to read other people's responses to the questions) – this could be an answer to a question they had, an insight based on that person's comments, helping them identify something, etc. (10 points)

Your responses will be worth 15 points for each article. Take time and put thought into your comments. All comments must be completed by the class period after the reading was assigned.

**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 May 6. Here are the options:

- Participate in a professional conference related to interpretation, outdoor education, or environmental education. Worth up to 30 points. You must fully participate in the conference – don't just show up for a 1/2 day. Examples include:
  - Student Outdoor Educators Conference – April 3-5 at Northland College in Ashland, WI
  - Minnesota Science Teachers Association State Conference
  - See Tim's website for links to other conferences.