Instructors: Dr. Robert Sanford, Department of Environmental Science; Dr. Elizabeth Vella, Department of Psychology; Dr. Joseph Staples, Department of Environmental Science.

Class Times: This is an experiential learning experience undertaken at the convenience of the student during Summer Session II (June 30 – August 15). Each student is required to spend 10 or more days on or along the waters of the Northern Forest Canoe Trail. These days do not have to be completed all at once; choose the days you want--whatever fits your schedule--as long as ten of them occur within the prescribed Summer Session time period.

Location: Off-campus at various sections of the Northern Forest Canoe Trail selected by the participant. 740 miles (1,190 km) of marked canoeing trail extend from Old Forge, New York to Fort Kent, Maine. There is no fixed distance a participant must travel but the student must spend at least 10 days in which five or more hours per day are spent on the waters of the trail.

Texts and Resources recommended/required:

1. A personal NFCT narrative, such as Brakeley, Sam. 2012. The Northern Forest Canoe Trail: A Journey Through New England History. You can get a copy from the Northern Forest Canoe Trail web site http://www.northernforestcanoetrail.org/ (only 10 or 11 dollars). You can also use a different book or narrative.

The Mountaineers Books publishes trail maps for various sections of the NFCT—select the ones for where you plan to travel.

3. **Invasive aquatic plant species guide**, such as Hill, Roberta and Scott Williams, 2007. *Maine Field Guide to Invasive Aquatic Plants and their common native look alikes*. Maine Center for Invasive Aquatic Plants, Maine Volunteer Lake Monitoring Program. This is a nice spiral-bound, affordable book with good pictures. Feel free to use online sources or select an aquatic plants guide more suited to the region you will be paddling in.

4. **A tree book** that has a key for identifying trees in the northeast. Choose your own. The *Forest Trees of Maine*, 2088 Centennial edition, Maine Forest Service, has a simple winter key and summer key. This terrific spiral-bound book has color photographs and diagnostic features.


6. **Thoreau on rivers** Thoreau, Henry David. 1848. *A Week on the Concord and Merrimack Rivers*. You can purchase this from various sources but you do not have to buy it—you can read it online or download it for free ([http://www.gutenberg.org/ebooks/4232](http://www.gutenberg.org/ebooks/4232))

7. **Outdoor experiences and psychological/personal benefits.** Read at least one of the following articles posted on Blackboard and use for Assignment 5 (Restorative Powers)

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
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<tbody>
<tr>
<td>Garg et al.</td>
<td>2010. Perceived psychosocial benefits associated with perceived restorative potential of wilderness river-rafting trips.</td>
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<tr>
<td>Kleiber et al.,</td>
<td>2002. Leisure as a resource in transcending negative life events: Self-protection, self-restoration and personal transformation</td>
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8. **Journal**: It is good to have a physical notebook even if you also use a digital one or laptop. Rite in the Rain all-weather environmental field books work well (there are various versions of this—get the one you like), and there are other manufacturers. Bring rain-proof writing utensils.

9. **Other resources and field guides**—Rocks, Trees, Birds, Insects, etc. *National Audubon Society Regional Guide to New England* (National Audubon Society Regional Field Guides) [Turtleback]

   Northern Forest Canoe Trail, Non-profit organization. [http://www.northernforestcanoetrail.org/](http://www.northernforestcanoetrail.org/) In addition to maps, gear and other resources, the online bookstore contain a number of guides to the trail, including Sam Brakeley’s book.
Suggested reference and writing guide:
Hacker, Diana (Various years and editions) A Writer’s Reference, Bedford/St. Martin’s: Boston; or Hacker & Sommers A Pocket Style Manual, Bedford/St. Martin’s: Boston.

Required technology: Digital camera, GPS, and computer, IPad or IPhone for online connection to the Blackboard system established for this course. This course uses Blackboard for announcements, assignments, grades, discussions and other support activities. All students enrolled in courses at USM receive an email address that enables access to Blackboard. Please contact the Computer Center for information on access and use of Blackboard. The following link presents a quick guide for students new to Blackboard: http://www.learn.maine.edu/crs/bb5_guide.html

Introduction:
This course is designed to credentialize a self-guided outdoor learning experience mentored by university professors with interdisciplinary and multidisciplinary expertise. Participants undergo the equivalent of ten or more days (need not be consecutive) of canoe or kayak trips along portions of the Northern Forest Canoe Trail. Since the goal is experiential, it is not important how much of the trail is covered, nor that the travel be completed all at once. Instead, participants set their own schedule, provide periodic online check-ins, and submit assignments designed to foster an experience that is contemplative and that builds independent learning skills. The course provides an introduction to environmental data gathering and assessment, and aspects of environmental management, and critical thinking about personal, social, and ecological implications of the Northern Forest Canoe Trail. Students are assumed to have basic water safety, canoeing/kayaking ability, orienteering and map reading skills, and camping/cooking or other logistical support skills. As a self-guided experience, students are expected to rely upon their own abilities and to only undertake trips that are safe and attainable within their skill set and equipment capabilities. Students are free to take along partners, friends and family members.

This course is suitable for anyone seeking to explore the environment or learn about environmental science. It is also suitable for anyone who wants a self-paced entry to a college-level experience. The course fulfils the Entry Educational Experience core education requirement for USM.

This course and USM’s Entry Year Experience (EYE) goals:
- Employ a variety of perspectives to explore the interrelationship between human culture and the natural world of the Northern Forest Canoe Trail.

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1 This draft assumes the use of Blackboard Learning System for course delivery. And Blackboard will be used to maintain an on-line confidential grade book. However, the final version of the course may use Google Community or other format as per the final syllabus.
Pose and explore questions in areas that are new and challenging: as a part of the river experience students will develop questions about the stewardship of this resource. Students may draw from conservation biology & ecology, geology, environmental history, environmental literature, economics, other social and physical sciences and the fine arts.

The online posting requirements of this course give the student opportunity to immediately respond to their experiences and to receive feedback from a mentor (one or more instructors).

Reflect upon and link learning in the course with other learning experiences (for example co-curricular experience). This course is co-curricular by its very nature. Students will provide formative assessments via their online postings/uplinks. The self-assessment piece at the end is a final summative.

Recognize that an individual’s viewpoint is shaped by his or her experience and historical and cultural context. The student will evaluate his/her views and perspectives on the NFCT.

Course objectives

• Complete a total 10 or more days of canoe/kayak experience on the waters of the NFCT. These days need not be consecutive and can be selected at the convenience of the student within the timeframe of the course.

• Employ environmental science field skills (notably, GPS, compass, dichotomous keys, transects, shoreline assessment, tree and aquatic plant identification, use of canoes and field equipment for water quality and other environmental sampling) to gather data and document river travel.

• Participate in a virtual community of paddlers.

• Record reactions to an immersive, contemplative experience in rural or even wilderness riparian settings with the intention to deepen one's connection to a natural community and foster a sense of stewardship.

• Be able to describe the interdisciplinary nature of independent learning and self-assessment as part of a college-readiness experience.

Evaluation

Evaluation will be through student assignments. Through low stakes writing—“writing to learn”—we assess achievement of learning outcomes. It is “low stakes” because there are no right or wrong answers and there are multiple assignments so no one assignment is critical; they all add up. Assignments consist of individual task write-ups you do at your own pace, and a journal you maintain. The journal is your own record but we will read it, review it, and if it is in physical form, we will return it to you after the course concludes. The journal can also be kept online as an assignment section in which only you and the instructors can see it. Thus, it is separate from anything you might post in the discussion section of Blackboard, although you can use it to develop ideas and observations that you might want to go on to post in the discussion section or
for other assignments. The questions and writing prompts draw from Bloom’s taxonomy of educational objectives and are keyed to the assigned texts, conditions of the environment, and the experiential nature of the course as a self-guided river corridor transit.

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<tr>
<th>When to do it</th>
<th>Assignment #</th>
<th>description</th>
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<tr>
<td>Week 1 continuous</td>
<td>Assignment 1</td>
<td>Introduce self</td>
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<td>continuous</td>
<td>Assignment 2</td>
<td>Maintain personal journal</td>
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<td>continuous</td>
<td>Assignment 3</td>
<td>Travel log postings</td>
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<td>By half-way point of course or trip</td>
<td>Assignment 4</td>
<td>Environmental Education reaction</td>
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<tr>
<td>By half-way point of course or trip</td>
<td>Assignment 5</td>
<td>Restorative powers article</td>
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<tr>
<td>Your choice</td>
<td>Assignment 6</td>
<td>Tree identification</td>
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<td>Your choice</td>
<td>Assignment 7</td>
<td>Shoreline erosion</td>
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<tr>
<td>Your choice</td>
<td>Assignment 8</td>
<td>Invasive water plant</td>
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<td>Second half of course</td>
<td>Assignment 9</td>
<td>NFCT data contribution</td>
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<td>Second half</td>
<td>Assignment 10</td>
<td>Thoreau report</td>
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<td>Upon completion of final leg of canoe trip</td>
<td>Assignment 11</td>
<td>Hand-drawn Explorer’s Map</td>
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<tr>
<td>Final week</td>
<td>Assignment 12</td>
<td>Self- assessment memo</td>
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**Assignment 1: Personal introduction.** During your first week of the course, use the discussion section of Blackboard to introduce yourself. You can try Screencast-O-Matic (it is free), photos, documents, drawings, or other ways to accompany a short narrative introduction. Post information about yourself that you do not mind sharing. For example: Do you work? Where are you from? Kids/siblings? Pets? Academic major or interests? Career and life goals? Preferred learning styles/formats? Things you like about the outdoors? What canoe/kayak do you use? The objective is to improve learning by establishing an online community, and for us to know a little more about you so we can do a better job as instructors.

**Assignment 2: Maintain a Journal** for each day you are on the water (10 days) and for any additional days you spend working on the course. We are interested in understanding your perceptual experience as a student in this class. Please consider this journal as a medium for your expression. Although you are being asked to write in this journal following each day on the Northern Canoe Trail, please feel free to write in this journal on other occasions throughout the duration of your enrollment in this course, should you feel inspired to do so by other experiences/reflections of time spent outdoors. Please be sure to mark the date and time of each entry.

**General Instructions:** Following each day on the Northern Canoe Trail, please take a moment to reflect upon your experience by writing in this journal. In particular, please reflect upon any personal insights that you may have experienced during your time outdoors, as well as the thoughts, feelings, and emotions that surfaced throughout the day.
First Entry Instructions:
Please describe why you selected to take this course amid the other entry year experience options and document three goals/expectations that you have for your overall experience as a student in this course. What emotions did you find yourself experiencing today? Please feel free to write about any other thoughts/concerns that may be on your mind.

Final Entry Instructions:
Please take a moment and reflect on your experience as a student in this course. What events come to mind for you as shaping your overall experience? Revisit the three goals/expectations that you documented in your first entry, commenting on the degree to which each of these were realized or if new goals/expectations emerged for you throughout your enrollment in the course. Please describe any experiences that you feel may impact your life in a meaningful way. Please feel free to write about any other thoughts/concerns that may be on your mind.

Assignment 3. Travel log postings. For every day you are on the water or camping/traveling as part of the course, post an entry into the discussion section of Blackboard about your experience. You can use your journal as the basis for this if you wish. If you do not have internet access for several days during your travels you make make-up for this by posting multiple entries as soon as you are able. Your entries can include (or be in the form of) reactions to other people’s postings as you deem appropriate.

Assignment 4. Environmental Education reaction. Read one of the essays in the Orion book and critique it or react to it from the context of your NFCT experience. 5 pages.

Assignment 5. Restorative powers article. Read one of the posted articles posted on Blackboard (Berman et al., Dusting et al., Garg, et al., and Kleiber et al.). Having been on the NFCT waters yourself by now, write a personal reaction to the article in which you assess the potential role of your trip as a “restorative powers experience.” (Write 4 - 5 pages double-spaced, full reference citations. Illustrations/figures optional.)

Assignment 6. Tree Identification. Select a site with trees, take one or more digital photos of them, provide one set of GPS coordinates for the site, identify five different trees on it using a dichotomous (“two equal parts”) key, tell if the trees are native to the area, state what type of habitat the tree is commonly found in, and describe the condition of the tree (e.g., mature, healthy, damaged by insects). A dichotomous key has us compare a characteristic that can have only one of two outcomes; something that we can fairly easily decide. We continue with a pattern of yes-no decisions based on our answers that narrows down the species. If you happen to already know what the tree is, that is ok, but you still have to give a pathway through the key to identify it, showing that you know how to use the key. For example, suppose we have a tree that we think is a pine. Instead of just looking up pines and seeing which is closest, start at the beginning of the key. For example, a first question might be whether or not the tree
has needles (actually, a type of leaf) or “regular” leaves—something that usually is fairly easy to decide. If our answer is yes to needles, then the key leads us to a second question, do the needles occur individually or in bundles. If in bundles, are they in groups or three or not. If not in groups of three, are they in groups of five, if not in groups of five, are they in groups of two or not. If in groups of two, are the needles short or long (7 or more cm)? If yes, you have a red pine (*Pinus resinosa*) as the result of a series of characteristics that have gradually narrowed down the range of species. There are over a hundred species of pine, so constructing such a key has to be done with care, and is best tailored for specific regions. Tree report should be 4-5 pages, with references.

**Assignment 7. Shoreline erosion.** Select a site where water craft can access the river (use a current access point or a potential one) and where you believe there are some erosion control issues. Fill out an erosion control checklist (use one of the forms on Blackboard), with photos to illustrate key issues. Assess the overall stability and the overall condition of existing erosion control measures. Accompany your form with a one-page summary narrative.

**Assignment 8. Invasive water plant.** For this assignment you write a brief field report on one invasive water plant. Identify an invasive water plant encountered on/in the water by you during this course. Draw the plant by hand and digitally photograph it. Provide ecological background on the plant—guiding questions: where did it come from, how does it propagate, how invasive is it, what does it do to the ecosystem, what role do humans, other plants, animals play in its lifecycle? What management issues does it present for the waterway? What do you recommend? Submit as a 4-6 page report with figures and references.

**Assignment 9. NFCT data contribution** Each student will do a project selected by them from the needs identified by the NFCT organization/staff. This may be environmental data collected, inventories, aspects of a management plan, an environmental lesson/education activity, or some other thing we agree upon.

**Assignment 10. Thoreau report.** Henry Davis Thoreau spent a great deal of time on various rivers and ponds. He wrote about this in a several books, especially *A Week on the Concord and Merrimack Rivers*. By now you yourself have spent some time on rivers of the Northern Forest Canoe Trail. Select several points or aspects of Thoreau’s writings and respond to them from the context of your own experience. What might Thoreau notice if he were on the river with you? 4 – 6 pages.

**Assignment 11. Annotated map of route.** Provide a map that shows where you traveled for each day on the water. Remember, you are not expected to travel a specific distance—this is more about the experience you had while traveling. Please indicate what days, start and finish points, and other salient features for this geographic record of your experience. Choose appropriate scale whether your distance was a few hundred yards or many miles. Provide at least one page of interpretive narrative/key information to accompany your map.
Assignment 12. Concluding self-assessment memorandum Submit an assessment of your learning from four perspectives and in the context of the Sam Blakeley book *Paddling the Northern Forest Canoe Trail*. A couple pages is fine.

a. descriptive What did you do—literal description.

b. analytical Think about all the course materials, how did they fit into the course. objectives, your own objectives, and your chosen field of study.

c. affective How did you feel about the experience.

d. reflective What did you learn from the experience, including the readings.

What to bring: The list of recommended equipment depends on a variety of factors, including whether you will be camping trailside, how many people, how long you will be gone, the weather conditions, and what type of experience you intend. A sample list might include canoe or kayak, spare paddle, tarp, lifejacket, first aid kit, tent/hammock, sleeping bag, towels/washcloths/soap, personal toiletries, backpack for day use (or functional equivalent), GPS unit, wide-brimmed hat, sunscreen - at least SPF 25, bug spray, sunglasses, clothing for a variety of weather conditions (including rain), canteen/water bottle, field notebook and pencils, personal entertainment, sketchpad, camera/iPhone/iPad. Always have a pack that can sustain you if you get stranded overnight in questionable weather.

On-line support: This course has a Blackboard site for announcements, discussions, grades, and other course support activities. All students are expected to access this site and use it. All students receive a university email address that allows them into Blackboard for their courses. The following link presents a quick guide for students new to Blackboard: [http://www.learn.maine.edu/crs/bb5_guide.html](http://www.learn.maine.edu/crs/bb5_guide.html)

Letter Grade Criteria: We will sum up your performance as a percentage of 100. 
A: Excellent. The student has clearly learned and obtained an excellent level of proficiency in critical thinking and in meeting the course objectives through the assignments. Aggregate 90 to 100% performance on evaluative instruments. Strong quality on-line participation. Quality writing, research, and analytical skills and superior documentation are evident.
A-: This is essentially a high B with an average of 87-89%.
B+: Good work, with an average of 85 to 86%.
B: Good work; 80 to 84% on evaluative instruments. Good writing, research, analytical skills. Work shows good development of ideas and thorough support of analyses. Student has a significant understanding of concepts and abilities reflected in the course objectives
B-: Acceptable work, average of 77-79%.
C+: Acceptable work, Average of 75-76%
C: Acceptable or Average. 70 to 74% on evaluative criteria. Acceptable college-level writing and analytical skills. Demonstrates reasonable organization and clarity. The student has demonstrated a basic understanding of the concepts and abilities identified in the course objectives.
C-: Marginal work. 68-69% aggregate average performance on exams and other evaluations, based on a scale of 1 to 100.
D: Marginal work. Average of 65-67%. Meets minimal requirements to not fail the course. Only a few objects met. Majority of assignments are not satisfactorily met.
F: Below 65%.

**Grading Weights**
Assignments: 90%
Participation (interaction Instructor, Blackboard, others): 10%

**Support for Students with Disabilities:** This course involves activities in an outdoor setting, including watercraft events. It is for adults who are expected to know their own abilities and to comport themselves safely. We are committed to providing course adaptations or accommodations as needed. Since we all learn in different ways, please do not hesitate to let us know your needs. We will do our best to accommodate. If you need course adaptations because of a disability, please contact the Disabilities Services Center [www.usm.maine.edu/dsc](http://www.usm.maine.edu/dsc) located in Luther Bonney 242, Portland Campus. Phone number 780-4706; TTY 7804395.

**Blackboard Discussion Rubric**

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<tr>
<th>EXPECTATION</th>
<th><strong>RESPONDS TO DISCUSSION PROMPT</strong></th>
<th><strong>COMMUNITY</strong></th>
<th><strong>Professionalism</strong></th>
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<tr>
<td>10</td>
<td>The participant contributes well-explained, thoroughly addressed, thoughtful and reflective ideas that have substance/depth. Includes pertinent questions, and additional or referenced resources. Discussion Prompt posts refer to the readings and are used to support the writer’s position. The entry stimulates and opens discussion. Entries include references to one's own experiences that support the topic.</td>
<td>The participant is central to the discussion. Posts are made across the discussion period (beginning, middle, end). Posts indicate &quot;listening&quot; to others' positions, ideas, and questions by responding reflectively and with substance. Contributes multiple interactions and responses that foster a sense of community. Participant has more responses of substance than those of short comment or praise.</td>
<td>Entries are free of misspellings and grammatical errors. Entries use &quot;People First&quot; language and maintain respectful language, tone and content. Maintains confidentiality. Electronic &quot;Netiquette&quot; (*below) is consistently practiced.</td>
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<td>Score</td>
<td>Description</td>
<td>Presence</td>
<td>Post Pattern</td>
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<td>7</td>
<td>The participant contributes moderately well explained ideas that have some substance/depth. May include questions and additional or referenced resources. Discussion Prompt posts do not refer to the readings - instead they copy or restate content verbatim. The entry results in some continued discussion.</td>
<td>The presence of the participant is noticeable. Posts are made consecutively. Posts indicate &quot;listening&quot; to others' positions, ideas and questions. Responses include items both of substance and of brief comment or praise.</td>
<td>Entries are mostly free of misspellings and grammatical errors. Entries use &quot;People First&quot; language and maintain respectful language, tone and content. Maintains confidentiality. Electronic &quot;Netiquette&quot; (*below) is practiced.</td>
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<tr>
<td>4</td>
<td>The participant contributes poorly explained, weakly addressed ideas, which lack substance/depth and reflection. Discussion Prompt posts do not refer to the reading/other comments at all. The entry does not stimulate discussion; lacks references to one's own experiences.</td>
<td>The presence of the participant is barely noticeable. All posts are made in one day thus leaving no time for reciprocal conversation and commenting. Posts do not &quot;listen&quot; to others and respond. Responses are mostly brief comments or praise statements and contain almost no posts of substance.</td>
<td>Entries have misspellings and grammatical errors. Entries do not use &quot;People First&quot; language and may include disrespectful or offensive language, tone or content. Adherence to electronic Netiquette (*below) is not consistently practiced.</td>
</tr>
<tr>
<td>0</td>
<td>No participation or insignificant participation</td>
<td>No participation or insignificant participation</td>
<td>No participation or insignificant participation</td>
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*Netiquette, or network etiquette, is the contemporary term for the proper way we communicate and interact with each other using email over the Internet.*  
[http://www.library.yale.edu/training/netiquette/](http://www.library.yale.edu/training/netiquette/)