Environment and Natural Resources Management for Forestry Fisheries and Wildlife  
ENR 4900.02 (3 Credits) Autumn Semester 2016

Meeting Time and Place: Wednesday, 10:20–1:20 PM, 102 Kottman Hall

Instructors:  
Dr. Alia Dietsch  
320E Kottman  
Dietsch.29@osu.edu

Dr. Bill Peterman  
375B Kottman  
Peterman.73@osu.edu

Dr. Chris Tonra  
367D Kottman Hall  
Tonra.1@osu.edu

Course Objectives:  
ENR 4900.02 is a senior-level capstone course designed to provide Forestry, Fisheries, and Wildlife (FFW), and Natural Resources Management (NRM) students in the School of Environment Natural Resources at The Ohio State University with an opportunity to integrate the ideas, concepts and tools learned during their academic careers to natural resources planning, problem solving and decision-making. Students that complete ENR 4900.02 should be able to:

- Apply the subject matter of their previous college courses in identifying, analyzing, and solving natural resource problems that arise in practice for a land management agency, specifically the design and implementation of resource inventory analysis, and formulating plans and recommendations

- Work as a member of a disciplinary and/or interdisciplinary team, allocate responsibilities, budget time and resources to accomplish specific missions, goals, and objectives within constraints of personnel, time, finances, etc.

- Prepare a written, integrated, technical report, based on the design, collection and analysis of field data that will provide a basis for recommended actions

Course Description:  
In general, we will expose students to the effects (e.g., ecological, biological, social) of different management practices on ecosystems. Specifically, we will provide students with the necessary tools to work with other natural resource professionals through application of comprehensive natural resource (e.g. forestry, fisheries, wildlife, recreation) inventory methods. Students will quantify and analyze forest resources to better understand ecological, economic, and social aspects of forest ecosystems, including forest ecosystem restoration methods, and production and utilization of forest products. Wildlife resources will also be examined, focusing on quantifying the wildlife communities associated with an ecosystem of interest, and the potential impacts of different management techniques on the quality of wildlife habitat. This may entail invertebrate community surveys, habitat measurements, and other techniques. Aquatic resources will be quantified in wetlands, ponds, or streams using a variety of field sampling techniques. As with the wildlife resources, the potential impacts of different natural resource management techniques on fisheries and aquatic resources will be examined. Finally, recreation resources will be examined, with a focus on how management decisions are likely to affect various stakeholders (e.g., local community members, recreation users). As part of this inventory, students will also determine appropriate methods for gaining information from the public and/or a variety of stakeholders to inform decision-making.
Course Format:
ENR 4900.02 is taught over 16 weeks during the autumn semester, and consists of four parts:
(1) Planning and development of a comprehensive multiple resource evaluation
(2) Field data collection from predetermined sites
(3) Data analyses and presentations of resource evaluation results
(4) Writing up of results and management recommendations.*

*Students should be prepared to work on projects during class time as well as outside of class time to be successful.

This course is roughly broken into four portions. The first portion of the course is devoted to orienting students to the project area, its past history, current status, desired future condition, and barriers and opportunities for management consistent with the mission, goals, and objectives of the partnering agency. Using a team approach, groups of students will develop a comprehensive resource evaluation at the beginning of the course, and then implement the inventory during the second portion of the course using appropriate field data collection methods. The results of the inventory will be analyzed, and summarized during a presentation in the third portion of the course. Finally, students will finish their experience in the fourth portion of course by forming interdisciplinary teams to make recommendations for actions that are presented in a final, written technical report. Important ecological and inventory concepts related to forestry, fisheries, wildlife, recreation management, and stakeholder values will be reviewed and applied in completing all course assignments.

Course Materials:
There is no text book for this course, but discipline-specific methods texts will be helpful. Course materials (e.g., handouts, relevant readings) will be provided to each student, and copies of these materials will be made available on Carmen. Students will also be provided with maps/GIS layers of the project area and access to a computer lab with appropriate software needed to complete assignments, as needed. Students are encouraged to bring and use their own laptops to maximize use of in-class time for completing analyses and writing.

Group Work:
Students will be organized into two different groups during the semester. They will first work in a "disciplinary group" of 3–4 individuals with similar academic backgrounds/interests (e.g. wildlife, management & administration, forestry). This group will design and complete the data collection portion of your project and carry out analyses and interpret and write results. Following a disciplinary group presentation, groups will reorganize into "interdisciplinary" groups. Students in these groups will be from different backgrounds and will work together to write the final, comprehensive report. Group work requires equal participation from all members, and students will complete a peer-review evaluation of other members in their disciplinary groups.
**Course Schedule & Grading:**
Grades will be assigned based on evidence of competency, quality of work, and individual and group performance on the following assignments:

- **Protocols** (10%) – Draft = 5%; Final = 5%
- **Background Section** (10%)
- **Methods Section** (10%)
- **Results Section** (10%)
- **Presentation** – Disciplinary Group (20%)
- **Final Written Report** – Interdisciplinary Group (30%)
- **Individual participation** – Peer evaluation of group efforts (10%)

*Late assignments will be issued a 5% percent penalty for every 24 hours late, including weekends*

**Logistics:**
We will alternate between meeting in the classroom (102 Kottman Hall) and the project site. Transportation to the project site will be provided, if needed. Students needing transportation are required to meet at Kottman Hall at 10:20 on the east side of the building on field days (see schedule on final page); we will not wait for students that are late to ensure we are effective with the time we have.

**Accommodations:**
If you need an accommodation based on the impact of a disability, please contact one of the course instructors as soon as possible to arrange an appointment so we can discuss the course format, anticipate your needs and explore potential accommodations. We rely on the Office for Disability Services for assistance in verifying the need for accommodations and developing accommodation strategies. If you have not previously contacted the Office for Disability Services, we encourage you to do so (http://www.ods.ohio-state.edu, Phone: 614-292-3307).

Arrangements can be made for enabling students with language, speech, hearing, or visual impairment to participate in the course, e.g., through assistance of transcribers or readers. Contact the course instructors immediately to discuss if you need some form of accommodation.

**Academic Misconduct:**
Academic misconduct is defined in this course as submitting plagiarized work to meet academic requirements, including the representation of another’s works or ideas as one’s own; the unacknowledged use and/or paraphrasing of another person’s work; and/or the inappropriate unacknowledged use of another person’s ideas; and/or the falsification, fabrication, or dishonesty in reporting research results. Students engaged in academic misconduct will be prosecuted accordingly. Please contact an instructor if you have any questions regarding interpretation of this policy.
## Course Schedule

<table>
<thead>
<tr>
<th>Meeting Date</th>
<th>Location Description</th>
<th>Activities</th>
<th>Due Dates for Class Products</th>
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</thead>
<tbody>
<tr>
<td>23-Aug</td>
<td></td>
<td>Complete Preference Survey (available on Canvas)</td>
<td>Submit <strong>COMPLETED SURVEY</strong> by 11:59pm on Tuesday, 8/23</td>
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<tr>
<td>24-Aug</td>
<td>Kottman Hall, Room 102</td>
<td>Introductions, review syllabus, group formation, objectives and actions</td>
<td>Submit list of <strong>GOALS AND OBJECTIVES</strong> by 5pm on Friday, 8/26</td>
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<tr>
<td>31-Aug</td>
<td>Kottman Hall, Room 102</td>
<td>Group work on sampling approach, finalize research questions</td>
<td>Submit draft of <strong>SAMPLING PROTOCOL AND DATASHEETS</strong> by 5pm, Fri. 9/2</td>
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<tr>
<td>7-Sep</td>
<td>Batelle Darby Creek Metro Park</td>
<td>Site visit and pilot data collection</td>
<td>Submit final <strong>SAMPLING PROTOCOL</strong> by 5pm on Friday, 9/9</td>
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<tr>
<td>14-Sep</td>
<td>Batelle Darby Creek Metro Park</td>
<td>Data Collection</td>
<td></td>
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<tr>
<td>21-Sep</td>
<td>Batelle Darby Creek Metro Park</td>
<td>Data Collection</td>
<td></td>
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<tr>
<td>28-Sep</td>
<td>Batelle Darby Creek Metro Park</td>
<td>Data Collection</td>
<td>Submit draft <strong>BACKGROUND report section</strong> by 5pm on Wed., 9/28</td>
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<tr>
<td>5-Oct</td>
<td>Batelle Darby Creek Metro Park</td>
<td>Data Collection</td>
<td>Submit draft <strong>METHODS report section</strong> by 5pm on Wed., 10/12</td>
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<tr>
<td>19-Oct</td>
<td>Kottman Hall, Room 102</td>
<td>Data Analysis</td>
<td>Submit draft <strong>RESULTS report section</strong> by 5pm on Fri., 10/28</td>
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<td>26-Oct</td>
<td>Kottman Hall, Room 102</td>
<td>Data Analysis</td>
<td></td>
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<tr>
<td>2-Nov</td>
<td>Kottman Hall, Room 102</td>
<td>Report writing/presentation preparation</td>
<td>Submit <strong>PRESENTATIONS</strong> by 5pm on Tues. 11/8; Submit <strong>PEER REVIEW</strong> of sampling groups by 5pm on Fri. 11/11</td>
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<tr>
<td>9-Nov</td>
<td>Kottman Hall, Room 102</td>
<td>Presentations</td>
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<td>16-Nov</td>
<td>Kottman Hall, Room 102</td>
<td>Group shuffle/Report writing</td>
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<td>23-Nov</td>
<td>NO CLASS</td>
<td>THANKSGIVING BREAK</td>
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<tr>
<td>30-Nov</td>
<td>Kottman Hall, Room 102</td>
<td>Report writing</td>
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<td>7-Dec</td>
<td>Kottman Hall, Room 102</td>
<td>Final Reports Due</td>
<td>Submit <strong>FINAL REPORT</strong> by 5pm on Wed., 12/7</td>
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