

# SYLLABUS

## ENR 6000

Research in Environment & Natural Resources

The Ohio State University

2 credits

Autumn Semester 2021 (AU21)

### COURSE OVERVIEW

The use of science and research to address natural resource problems and the development of a literature review for a thesis proposal. This is a completely asynchronous online course. All course content, including lecture presentations and assignments will all be delivered and/or completed using Carmen (<https://carmen.osu.edu>). The course is graded satisfactory/unsatisfactory (S/U). This course is asynchronous and self-paced to give students the ability to access and satisfy requirements within a flexible time frame. There will be five writing assignments for the course. There are no quizzes and no exams. To accommodate students, all writing assignments will be open for a period of weeks on Carmen and can be completed from anywhere. All course requirements must be completed during the semester of offering. No textbook is required. All course materials (e.g., journal articles, literature reviews) are free and are provided to students using Carmen.

**Instructor - Dr. Brian H. Lower, Ph.D.**

**Course Email - [Lower.30@osu.edu](mailto:Lower.30@osu.edu)**

### Course description

This course will introduce new graduate students in the School of Environment and Natural Resources to graduate education and help students begin a successful graduate research program. As such, we will overview available university and school resources and requirements, as well as assist with the development of professional skills needed for thesis and research preparation. Each student, in consultation with their advisor, will develop a literature review that follows specific guidelines similar to a systematic review. This course is designed to facilitate this process through the completion of several assignments, but the impetus is on the student to develop the ideas that will become their MENR or MS thesis.

### Course learning outcomes

By the end of this course, students should be able to successfully:

- Develop a detailed concept map for their MS or MENR research project.
- Draft extensive Search Criteria and References for their MS or MENR research project.
- Write a Literature Review of their MS or MENR research project.

## HOW THIS COURSE WORKS

**Mode of delivery:** Everything for this course will be done using Carmen (<https://carmen.osu.edu>). This course is a **100% asynchronous** online course. There are no required sessions when students must be logged into Carmen at a scheduled time. There are no required Zoom sessions when students must be logged into Zoom at a scheduled time.

**Communication:** Dr. Lower will provide important information (e.g., due dates, assignment information, reading materials) to students using weekly **Carmen Announcements** (<https://carmen.osu.edu>). Students are expected to read these announcements on Carmen each week. Students can reach Dr. Lower by email at any time during the semester at [Lower.30@osu.edu](mailto:Lower.30@osu.edu) to ask questions, discuss concerns or set up a time to talk with Dr. Lower using Carmen Zoom.

**Pace of online activities:** This course is divided into **weekly modules**. Students are expected to keep pace with weekly deadlines but may schedule their efforts freely within a module's time frame.

**Credit hours and work expectations:** This is a **2-credit-hour course**. According to [Ohio State policy](#), students should expect around 2 hours per week of time spent on direct instruction (instructor content and Carmen activities, for example) in addition to 4 hours of homework (reading, writing and assignment preparation, for example) to receive a grade of (S) satisfactory.

**Attendance and participation requirements:** Because this is an online course, your attendance is based on your online activity and participation. You are expected to log into the course on Carmen every week to work in our class (e.g., read announcements, post discussions, download journal articles, submit assignments, complete peer reviews). If you have a situation that might cause you to miss an entire week of class, you should email [Lower.30@osu.edu](mailto:Lower.30@osu.edu) to discuss adjusted timelines.

***We will meet once this semester in-person on Tuesday September 7 from 5:00-6:30PM in 245 Kottman Hall. Detailed information will be provided on Carmen.***

## COURSE MATERIALS AND TECHNOLOGIES

### Textbooks and Readings

#### NO TEXTBOOK REQUIRED

All reading materials (e.g., journal articles, literature reviews, concept maps) will be provided by Dr. Lower to all students using Carmen. All reading materials will be FREE for all students.

## Course technology

For help with your password, university email, Carmen, or any other technology issues, questions, or requests, contact the OSU IT Service Desk. Standard support hours are available at <https://ocio.osu.edu/help/hours>, and support for urgent issues is available 24/7.

- **Self-Service and Chat support:** <http://ocio.osu.edu/selfservice>
- **Phone:** 614-688-HELP (4357)
- **Email:** [8help@osu.edu](mailto:8help@osu.edu)
- **TDD:** 614-688-8743

## BASELINE TECHNICAL SKILLS FOR ONLINE COURSES

- Basic computer and web-browsing skills
- Navigating Carmen: for questions about specific functionality, see the [Canvas Student Guide](#).

## REQUIRED EQUIPMENT

- Computer: current Mac (OS X) or PC (Windows 7+) with high-speed internet connection
- Microphone: built-in laptop or tablet mic or external microphone
- (Recommended) Webcam: built-in or external webcam, fully installed and tested
- Other: a mobile device (smartphone or tablet) or landline to use for BuckeyePass authentication

## REQUIRED SOFTWARE

- [Microsoft Office 365](#): All Ohio State students are now eligible for free Microsoft Office 365 ProPlus through Microsoft's Student Advantage program. Full instructions for downloading and installation can be found [at go.osu.edu/office365help](http://go.osu.edu/office365help).

## CARMEN ACCESS

You will need to use [BuckeyePass](#) multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you take the following steps:

- Register multiple devices in case something happens to your primary device. Visit the [BuckeyePass - Adding a Device](#) help article for step-by-step instructions.
- Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click "Enter a Passcode" and then click the "Text me new codes" button that appears. This will text you ten passcodes good for 365 days that can each be used once.

- Download the [Duo Mobile application](#) to all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service.

If none of these options will meet the needs of your situation, you can contact the IT Service Desk at 614-688-4357 (HELP) and the IT support staff will work out a solution with you.

If you experience connection problems with Carmen then the very first thing that you should try is another web browser such as Firefox, Explorer, Chrome, and Safari. If you are having difficulty opening a document or viewing an image or any other issue associated with this class, then it is most likely a problem with your computer, Internet connection or Internet browser. Everything for this class has already been thoroughly tested by thousands of students from all over the world to ensure that it works. Occasionally we do make mistakes, and when we do, we will always make it right.

## GRADING AND FACULTY RESPONSE

### How your grade (S/U) is calculated

ASSIGNMENT	PERCENTAGE
1 Concept Map	20%
1 Search Criteria and List of Articles	20%
1 First Draft Literature Review	20%
2 Peer Reviews	20%
1 Final Draft Literature Review	20%
Total	<b>100%</b>
See course schedule below for due dates. Students will earn Satisfactory (S) or Unsatisfactory (U) for each assignment. Students are expected to complete ALL Assignments listed above in order to earn a grade of S for the course.	

### Late assignments

#### Writing Assignments:

Assignments can be completed on Carmen within a flexible time frame of approximately 1-3 weeks. These can be completed at any time within the 1-3 week submission window. Submission after the due

date for assignments will result in a 20% deduction per day from the overall grade. The submission areas will automatically close after 5 days from the due date and will not reopen. Dr. Lower will excuse missed deadlines under extreme circumstances, such as long-term sickness or hospitalization, family emergency, extensive problems at work, death in the family. If you experience one of these issues, you must contact Dr. Lower as soon as possible by email [Lower.30@osu.edu](mailto:Lower.30@osu.edu) to work out another arrangement. Dr. Lower will determine if your excuse is acceptable. Dr. Lower will not accept late assignments that are sent by email. All late assignments must be uploaded to Carmen.

**Exams:** there will be no exams for this course.

**Quizzes:** there will be no quizzes for this course.

## Grading scale

The course is graded satisfactory/unsatisfactory (S/U). Participation is expected for all class assignments and assignments are due on the dates specified below. While excellence in assignment completion may not be visible in a final grade of “Satisfactory”, excellence will be evident in the final research product of the student’s graduate program (e.g., students typically include the literature review that they write for this course as the first chapter of their thesis and some students have even published their literature review as standalone articles). For comparison purposes, a satisfactory grade (S) for an assignment in this course is comparable to a grade of 80% B- or higher for a traditional graduate-level graded course (i.e., course where a student earns a grade of A through E).

## Faculty feedback and response time

- **Grading and feedback:** For writing assignments, you can expect a grade and feedback within 7 days.
- **Email:** Instructors check and reply to emails daily. Please email [Lower.30@osu.edu](mailto:Lower.30@osu.edu) to contact Dr. Lower. Please use your OSU email account to send emails to this account.

## OTHER COURSE POLICIES

### Academic integrity policy

#### POLICIES FOR THIS ONLINE COURSE

- **Written assignments:** Your written assignments, including discussion posts, should be your own original work. In formal assignments, you should follow the provided course style to cite the ideas and words of your research sources. You are encouraged to ask a trusted person to proofread your assignments before you turn them in—but no one else should revise or rewrite your work. We use Turn It In software (<https://www.turnitin.com>) to check all writing

assignments for potential plagiarism. Plagiarized assignments will not be accepted and will result in a grade of 0%.

- **Reusing past work:** In general, you are prohibited in university courses from turning in work from a past class to your current class, even if you modify it. If you want to build on past research or revisit a topic you've explored in previous courses, please discuss the situation with Dr. Lower at [Lower.30@osu.edu](mailto:Lower.30@osu.edu).

## OHIO STATE'S ACADEMIC INTEGRITY POLICY

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's [\*Code of Student Conduct\*](#), and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University's *Code of Student Conduct* and this syllabus may constitute "Academic Misconduct."

The Ohio State University's *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the University or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University's *Code of Student Conduct* is never considered an excuse for academic misconduct, so I recommend that you review the *Code of Student Conduct* and, specifically, the sections dealing with academic misconduct.

**If I suspect that a student has committed academic misconduct in this course, I am obligated by University Rules to report my suspicions to the Committee on Academic Misconduct.** If COAM determines that you have violated the University's *Code of Student Conduct* (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- The Committee on Academic Misconduct web pages ([COAM Home](#))
- *Ten Suggestions for Preserving Academic Integrity* ([Ten Suggestions](#))
- *Eight Cardinal Rules of Academic Integrity* ([www.northwestern.edu/uacc/8cards.htm](http://www.northwestern.edu/uacc/8cards.htm))

## Copyright disclaimer

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the

course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

## Statement on Title IX

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at [titleix@osu.edu](mailto:titleix@osu.edu)

## Your mental health

A recent American College Health Survey found stress, sleep problems, anxiety, depression, interpersonal concerns, death of a significant other, and alcohol use among the top ten health impediments to academic performance. Students experiencing personal problems or situational crises during the quarter are encouraged to contact Ohio State University Counseling and Consultation Service (614-292-5766; [www.ccs.osu.edu](http://www.ccs.osu.edu)) for assistance, support and advocacy. This service is free and confidential.

# ACCESSIBILITY ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

## Requesting accommodations

If you would like to request academic accommodations based on the impact of a disability qualified under the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, contact your instructor privately as soon as possible to discuss your specific needs. Discussions are confidential.

In addition to contacting the instructor, please contact the Student Life Disability Services at [614-292-3307](tel:614-292-3307) or [slds@osu.edu](mailto:slds@osu.edu) to register for services and/or to coordinate any accommodations you might need in your courses at The Ohio State University. Go to <https://slds.osu.edu> for more information. There are already a number of accessibility accommodations for students built into ENR 6000. These are listed in the Student Resources module under the Modules tab in the Carmen course. We work to provide these accommodations to ALL students and want to make sure all students have a positive learning experience in the course. Please send documentation from SLDS to [ENR6000@osu.edu](mailto:ENR6000@osu.edu) in order to establish any further accommodations needed during the semester.

## COURSE SCHEDULE

Week	Topic	Assessment	Due Date
1-2	Introductions, syllabus and course expectations. On Carmen, Dr. Lower will provide a presentation of web-based literature searches and library resources, as well as how to read and understand primary research literature.	No assessment due, but students will post brief BioSketch of themselves on Carmen Discussion Board for classmates	Friday, September 3
3-4	On Carmen, Dr. Lower will provide examples of concept maps, search criteria and list of references from previous students.	No assessment due, but students will read presentation about OSU Libraries	Friday, September 17
5-6	Students create a Concept Map for MENR or MS Research Project and upload Concept Map to Carmen	Upload "Concept Map" file to Carmen (.doc, .docx or .pdf file)	Friday, October 1
7-8	Students develop Search Criteria and List of Articles for MENR or MS Research Project and upload Search Criteria and List of References to Carmen	Upload "Search Criteria and List of Articles" file to Carmen (.doc, .docx or .pdf file)	Friday, October 15
9-11	On Carmen, Dr. Lower will provide examples of Literature Reviews from previous students. Students will write the First Draft of their Literature Review and upload this file to Carmen.	Upload "First Draft Literature Review" file to Carmen (.doc, .docx or .pdf file)	Friday, November 5
12-13	Each student will complete 2 peer reviews for 2 of their classmates' "First Draft Literature Reviews"	Complete "2 Peer Reviews" on Carmen	Friday, November 19
14-15	Students will write the Final Draft of their Literature Review and upload this file to Carmen.	Upload "Final Draft Literature Review" file to Carmen (.doc, .docx or .pdf file)	Friday, December 3
All assignments will be submitted and completed using Carmen ( <a href="https://carmen.osu.edu">https://carmen.osu.edu</a> ).			



# DETAILS ABOUT COURSE ASSIGNMENTS

**There are 6 total class assignments:** (1) OSU Libraries, (2) Concept Map, (3) Search Criteria and List of Articles, (4) First Draft Literature Review, (5) Peer Reviews, and (6) Final Draft Literature Review. Details for each assignment are listed below. Each assignment should be completed by the student on their own or in collaboration with their academic advisor. We use Turn It In software (<https://www.turnitin.com>) to check all writing assignments for potential plagiarism. Plagiarized assignments will not be accepted and will result in a grade of 0%.

## 1. OSU Libraries

The purpose of this assignment is to help get you started finding literature related to your MENR or MS project. You will learn how to (i) develop a strategy to efficiently find different kinds of resources (e.g., journal articles, technical reports, books) for your research project; (ii) design good questions and searches to find materials such as journal articles and book chapters; (iii) get your hands on materials from OSU Libraries; (iv) use a concept map and search structure to find resources such as journal articles; (v) use different bibliographical software (e.g., zotero, EndNote, RefWorks) to organize resources, create and format bibliographies and build annotated bibliographies.

## 2. Concept Map

As part of this course, you will develop a concept map that outlines the core of your research area. We recognize that your concept map could change as you get farther into your literature review, but starting here is a good exercise for thinking about the work ahead of you – a solid concept map should guide your writing. For example, you may decide to detail out your research questions and how different key search words relate or not to those questions as well as to each other. For this class, you are required to **submit your concept map to Carmen** (<https://carmen.osu.edu/>), but focus on finding a format that works best for you. Examples include online software such as Visual Understanding Environment (<http://vue.tufts.edu/>), Microsoft Powerpoint, or simply pen and paper. Also, get creative and take care with your ideas – it's possible that your final product could be a figure in your thesis or other published work! Dr. Lower will provide several good examples of concept maps from previous students on Carmen.

## 3. Search Criteria and List of Articles

We will focus on literature and systematic reviews and you will be provided instructions on how to conduct a systematic review. Please read the articles on these topics provided on Carmen (<https://carmen.osu.edu/>). You are not required to do a full systematic review as part of this class

(but you are welcome to do so). However, you *are* required to submit (i) a list of key search terms that you will use to pull from the primary research literature, including any search terms that you will exclude from your search; (ii) information on the database(s) from which you expect to obtain that literature; (iii) complete list of journal articles obtained using those criteria.

**The list of key search terms and database(s) as well as the total # of articles should be submitted as one Microsoft Word document to Carmen (<https://carmen.osu.edu/>). However, the articles you pull using your key search terms can be submitted in any format (e.g., .doc, .pdf, .xls) that works for your research.** Dr. Lower will provide several good examples of search terms and article list from previous students on Carmen.

#### 4. First Draft Literature Review

**This assignment requires that you submit a draft of your literature review to Carmen (<https://carmen.osu.edu/>).** Your review must cite at least 30 articles pulled from the primary literature during your search. The draft should be complete (full sentences and paragraphs, figures included, and formatted in a particular journal style) enough so that another colleague could reasonably provide you with feedback/guidance that will facilitate final writing of your review during this course. Note: When you submit this draft to Carmen (<https://carmen.osu.edu/>), you should also consider submitting the draft via email to your advisor – hopefully, you have already received feedback by this point, as part of this assignment is to get you collaborating with your advisor and developing those collaborative ideas. Also, an annotated bibliography is unacceptable unless you have obtained permission from your advisor to do so AND provided documentation of that permission to Dr. Lower prior to this due date. Dr. Lower will provide several good examples of literature reviews from previous students on Carmen.

#### 5. Peer Reviews

You will have two weeks to complete peer reviews for two other students' manuscripts and **submit both of your reviews to Carmen (<https://carmen.osu.edu/>)**. Please plan your time accordingly. Peer reviews are one of the most critical aspects of publishing that are aimed at ensuring only methodologically-rigorous and scientifically-appropriate articles are published in the primary literature. Additional instructions on conducting your peer-reviews will be provided on Carmen and via email.

#### 6. Final Draft Literature Review

The bulk of this course provides you the time and structure in which to complete a literature review constructed around your problem statement outlined in your concept map. The literature review is a presentation of the body of knowledge relevant to your research problem. In this review, you recognize the contributions of important authors to that body of knowledge and present the theory(ies) that defines the research area and results of past studies that support (or not) this theory (or theories). Furthermore, you should describe gaps or deficiencies in the published literature and how the research you will undertake should help to correct these

problems.

For this course, we expect **you to produce a Literature Review consisting of 7-10 pages, single-spaced, with at least 30 references from your search of the relevant literature. The final product will be developed in collaboration with your advisor and given to your advisor upon completion. You will submit a Final Draft Literature Review (i.e., .pdf file, .doc file) to Carmen (<https://carmen.osu.edu/>).** We encourage you to find a published literature review (or even better, a systematic review) in your area of study (or similar) and use it as a guideline in developing your own review – even better if that published piece has identified methods that can be replicated.

This assignment is intended to be relevant and useful to your thesis, so we encourage you to work with your advisor to identify the most appropriate format and necessary content. That said, we expect your literature review to contain an introduction that identifies:

- a. The context (relevance) of your study to environmental and natural resource management;
- b. What is “known” in your area of research (convey the most important information in just a few sentences--use this section to establish the current state of knowledge and set the scene for the next section);
- c. What is “unknown” in your area of research (the gap in knowledge that you will address);
- d. Why it is important to address this lack of knowledge (frame the problem that you plan to address);
- e. Your research question(s) and/or hypotheses. This section should reflect what you aim to answer or accomplish with your research project.

This introduction will then be followed by separate sections of the literature review, typically broken into thematic areas. You can use the following heading structure (three levels if needed) when organizing your paper:

**1<sup>st</sup> level heading: Bold face, centered**

**2<sup>nd</sup> level heading: Bold face, left-justified**

*3<sup>rd</sup> level heading: Italicized, left-justified, indented 1” followed by a period.* Regular text follows like this sentence (regular font, no bold or italicizing) and continues until the next section is introduced.

Your literature review should also conclude with a “significance” section, where you will describe how your results/findings will contribute to environmental and natural resource management. Describe what should be possible to do (or do better) after you’ve done/published your work that was not possible before.