SYLLABUS
ENR 7520
Environmental Science and Law
Autumn 2019 – Online

COURSE OVERVIEW

Instructor
Instructor: Caroline Broun
Email address: broun.5@osu.edu
Phone number: 614-462-9879
Office hours: By appointment / Email / Skype / FaceTime

Course description
The holistic view of environmental systems that links all human activity to impacts on our biological and ecological systems as well as public health emerged from advances in scientific research especially beginning in the mid-20th century. The modern environmentalist movement grew from popular and academic concerns that human activities resulted in local and global degradation of our physical environment.

Science and technology provide the background and justification for prioritizing problems and defining solutions. Using law and science as the starting points, the course will then introduce environmental issues and law in an interdisciplinary context. Our challenge is that no single discipline can understand or address these complex concerns. A major goal of this course is to explore the interconnectedness of multidisciplinary approaches. To this end, understanding the role and relationships of science to the development of environmental policy and to environmental law requires that we examine the contexts within which science operates: economic, political, and socio-cultural and the narratives that define the issues broadly.

We tell this story from the perspectives nationally, through the United States, regionally through the European Union and internationally through the United Nations programmes. We
will discuss and analyze the themes and frameworks that structure environmental policy and the development of that policy in these three jurisdictions.

To gain a better understanding of these inter-relationships and influences, we will examine environmental issues through three case studies: 1) ozone depletion and the Montreal Protocol; 2) the Arctic Region and 3) plastic waste and management. You will then have the opportunity to apply what we have discussed by preparing a policy analysis on a topic of your choosing to consider the science and laws, and then to examine the social context that influences the development of environmental policy and laws to address your topic.

Because the course is designed for students with no prior legal background, the structure of the course will give some necessary basic ground in vocabulary, concepts, principles and approaches to familiarize students of non-legal disciplines with the role laws and regulations play in addressing environmental issues and problems. Complex legal terminology will be avoided where possible, but when critical legal concepts are needed, they will be explained as fully as possible to integrate with pertinent discussions. The intent is that those without formal legal training will find course accessible, interesting, informative, and a basis on which to further develop and explore their chosen disciplines.

A consistent perspective is developed and used in the course to integrate what appears to be unconnected material. We first identify and evaluate the role of science and technology in the development of environmental policy and the laws that implement the policy. We explore themes and frameworks that repeat themselves throughout environmental policy & laws in United States, the European Union and internationally through the United Nations. Finally, we will describe the relationships between and among scientific, economic, political, social and cultural factors that influence the development of environmental policy and the role that governance and legal structures play.

**COURSE DELIVERY**

This is a completely online course introduces students to laws and legal systems that address environmental issues, with emphasis on the significance of science and technology. Interdisciplinary case-studies will complement the coursework.

Course content, including lectures and videos, quizzes, participation activities and other assignments are delivered using Carmen, OSU’s learning management system (https://carmen.osu.edu/). Other resources, such as the University Libraries, certain web-based platforms may also be used. All assignments and quizzes must be completed by the due date shown in Carmen.
PREREQUISITES

ENR 7520 is graduate level course. No prior knowledge of laws or legal systems is required, though a basic knowledge of the United States government and founding documents is assumed.

Course learning outcomes

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

- Understand U.S. European Union and United Nations legal systems’ principles and approaches to address environmental issues
- Identify and evaluate the role of science and technology in the development and implementation of environmental policy and laws
- Identify legal systems’ incentives and barriers to applying science and technology to environmental management
- Explain the role of various disciplines to integrating legal and scientific responses to environmental disruptions

COURSE MATERIALS AND TECHNOLOGIES

Textbooks

REQUIRED

Environmental Law and Policy (Concepts and Insights Series) (4th Edition - 2013) by Salzman, James; Thompson, Barton Available as an ebook or paperback. (I will refer to this as the “Salzman” in the syllabus).

Additional readings / activities are provided on Carmen according to class schedule. These additional readings are not required, but provide more information about topics and issues and are intended to assist with broadening perspectives on science, environmental policy and law. These resources are useful for students as they develop their Portfolio Projects.

REFERENCES

These materials will be used for reference and discussion. You are not required to purchase them, and they may be available at libraries on or near campus:
• Environmental Law in a Nutshell (9th Edition 2014) by Daniel A. Farber (This is a small book with good, concise, and easy to understand discussions of major U.S. environmental laws) OSU Libraries (e-book): https://library.ohio-state.edu/record=b8044726~S7


• The Environmental Case: Translating Values into Policy (4th Edition 2016) by Judith A. Layzer (This book provides a multidisciplinary analysis of the challenges of developing environmental policy through a variety of case studies that provide a background to the case, a discussion of the issues, parties and agencies involved, outcomes, conclusions and questions to consider.) OSU Libraries (paper): https://library.ohio-state.edu/record=b7924342~S7

• Environmental Law: Examples & Explanations (7th Edition 2016) by Steven Ferrey (This is a denser and more detailed discussion of U.S. environmental laws, but also covers energy (public utility regulation), climate change, international laws and land use/zoning (local environmental laws). The format is to discuss relevant provisions of the various statutes, and then provide applications through examples and questions with brief, concise explanations to clarify the examples and reinforce the material.) OSU Libraries (7th ed): https://library.ohio-state.edu/record=b7991897~S7

Course technology

For help with your password, university e-mail, 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 24x7.

• Self-Service and Chat support: http://ocio.osu.edu/selfservice
• Phone: 614-688-HELP (4357)
• Email: 8help@osu.edu
• TDD: 614-688-8743

BASELINE TECHNICAL SKILLS FOR ONLINE COURSES

• Basic computer and web-browsing skills
• Navigating Carmen
TECHNOLOGY SKILLS NECESSARY FOR THIS SPECIFIC COURSE

- Recording a slide presentation with audio narration
- Recording, editing, and uploading video

REQUIRED EQUIPMENT

- Computer: current Mac (OS X) or PC (Windows 7+) with high-speed internet connection
- Webcam: built-in or external webcam, fully installed and tested
- Microphone: built-in laptop or tablet mic or external microphone

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 https://ocio.osu.edu/kb04733.

GRADING AND FACULTY RESPONSE

Assessment

Your learning will be assessed with quizzes, participation in weekly activities (this includes posting and responding to discussion boards and updates concerning your Portfolio Project), a Portfolio Project, and a mid-term exam. The Portfolio Project is the final product of the course and substitutes for a final exam.

Weekly lectures will include various activities that may require a discussion post and responding to other class members' posts. While these activities will not be graded, participation is required for the class participation points.

QUIZZES

Each week you will take an online quiz to assess your knowledge of the content of the required readings, lecture material, and activities. This is intended as a review of the week’s lectures and required reading materials. It is not intended that you memorize the material. Integrating the material into discussions and the Portfolio work is a more effective means to comprehend and apply the material presented. The syllabus quiz is due the first week of the semester and will serve as a practice quiz. There are eleven (11) graded quizzes. Your lowest quiz grade will be dropped.
PORTFOLIO PROJECT

Theory is critical to understanding environmental policy and law, professionals, however, must be able to identify an issue, define it, understand how it fits within a large governance structure but also be able to explain and analyze the social context influencing the science & policy. To this end, the course is designed to encourage you to examine issues from a variety of perspectives – not to make you a lawyer, or a politician or an economist but to enable you to understand and hopefully ask appropriate questions to help find options to address issues of concern. This is the goal of, in particular, the Portfolio Project in which you will actually analyze a case study of your choosing.

You may choose an environmental issue of interest to you, one that is new to you or that you may be familiar with through your reading or work. Because you will be building this project throughout the course, it should be manageable in scope, e.g. “climate change” would be too broad a topic for this project, though specific topics, such as ‘fracking’ or examining development of solar or wind energy are more manageable. Similarly, biodiversity loss would be too broad, though examining impacts of specific species, e.g. wildlife trafficking of a species, is more manageable. Mining would be too broad, though examining rare earth substances, or a specific mining area or issue would be more manageable. This should be a topic of interest to you, but if you are unsure, send me an email and we can discuss possible options or places to look for ideas.

You will select a topic, your target audience and the format of your project in week 2. Each week, you will provide to me an update that focuses on what we discussed that week, with information on resources that you considered. This will enable you to develop the portfolio over the course of the class, and provide the basis for your research for the final project. You are encouraged to use a wide variety of sources for your research.

**Weekly Assignment for Portfolio Project**

Each week, you will send me an audio update including:

1) What your topic is
2) What issues you researched this week related to our discussions
3) What sources you researched and relied on
4) Any challenges you have had

You can also add to or modify any prior information you provided. The intent of the weekly assignment is to help you develop your analysis over time, building on prior information and modifying your thoughts or approaches.
You may share information among yourselves through the discuss board but the work you do should be your own.

You will submit a draft of your project at the end of Week 6 (just prior to Mid-term week). Other students will have an opportunity to ask questions and to provide perspectives that you may choose to incorporate into a final project. This draft will not be a completed project but you can choose to prepare a draft for some of the steps, and a brief perspective of other factors you will consider. You should have an idea of questions you want to answer as you prepare for your final presentation.

Your final Portfolio Project will be due at the end of the semester. This will not be reviewed or commented on by other students but should consider, and where appropriate, incorporate responses to prior comments or questions received in your peer reviews. It will also be made available on Carmen for your classmates to view.

**MIDTERM**

The Midterm Exam will be a multiple-choice exam covering the first half of the semester. The exam will be administered through Carmen. This exam is open book but since it will be timed, I recommend you adequately prepare before beginning the exam. More details about the exam format, length, and availability will be announced on Carmen.

**How your grade is calculated**

<table>
<thead>
<tr>
<th>ASSIGNMENT CATEGORY</th>
<th>% FINAL GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes (11, lowest dropped)</td>
<td>15</td>
</tr>
<tr>
<td>Weekly Participation</td>
<td>30</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>15</td>
</tr>
<tr>
<td>Portfolio Project <em>(components below)</em></td>
<td>40</td>
</tr>
<tr>
<td>Weekly Audio Check-ins (12 pts)</td>
<td></td>
</tr>
<tr>
<td>Create your Portfolio Space (4 pts)</td>
<td></td>
</tr>
<tr>
<td>Select Portfolio Choices (scenario/topic/format) (4 pts)</td>
<td></td>
</tr>
<tr>
<td>Midterm Work Sample (20 pts)</td>
<td></td>
</tr>
<tr>
<td>Midterm Peer Reviews (10 pts; 5 pts each)</td>
<td></td>
</tr>
<tr>
<td>Final Portfolio Project (50 pts)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>
Late assignments

The penalty for late assignments is 10% of the assignment total per day (each 24 hour period). Quizzes and exams must be completed within the open period; they cannot be taken late.

Grading scale

- 93–100: A
- 90–92.9: A-
- 87–89.9: B+
- 83–86.9: B
- 80–82.9: B-
- 77–79.9: C+
- 73–76.9: C
- 70–72.9: C-
- 67–69.9: D+
- 60–66.9: D
- Below 60: E

Faculty feedback and response time

I am providing the following list to give you an idea of my intended availability throughout the course. (Remember that you can call 614-688-HELP at any time if you have a technical problem.)

- **Grading and feedback**: For large weekly assignments, you can generally expect feedback within 7 days.
- **E-mail**: I will reply to e-mails within 24 hours on school days.

**PARTICIPATION AND ATTENDANCE**

Student participation requirements

Because this is a distance-education course, your attendance is based on your online activity and participation. The following is a summary of everyone’s expected participation:

- **Logging in**: **AT LEAST ONCE PER WEEK**
  Be sure you are logging in to the course in Carmen each week, including weeks with
holidays or weeks with minimal online course activity. (During most weeks you will probably log in many times.) If you have a situation that might cause you to miss an entire week of class, discuss it with me as soon as possible.

- **Participating in discussion forums: 2+ TIMES PER WEEK**
  As participation, each week you can expect to post at least twice as part of our substantive class discussion on the week’s topics.

**Discussion and communication guidelines**

The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

- **Writing style:** While there is no need to participate in class discussions as if you were writing a research paper, you should remember to write using good grammar, spelling, and punctuation. A more conversational tone is fine for non-academic topics.
- **Tone and civility:** Let’s maintain a supportive learning community where everyone feels safe and where people can disagree amicably. Remember that sarcasm doesn’t always come across online.
- **Backing up your work:** Consider composing your academic posts in a word processor, where you can save your work, and then copying into the Carmen discussion.

**OTHER COURSE POLICIES**

**Academic integrity policy**

**POLICIES FOR THIS ONLINE COURSE**

- **Quizzes and exams:** You must complete the midterm and quizzes yourself, without any external help or communication from other humans. These assessments are open note and book but not open neighbor.
- **Written assignments:** Your written assignments, including discussion posts, should be your own original work. In formal assignments, you should follow APA 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.
- **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 me.
• **Collaboration and informal peer-review**: The course includes many opportunities for formal collaboration with your classmates. While study groups and peer-review of major written projects is encouraged, remember that comparing answers on a quiz or assignment is not permitted. If you’re unsure about a particular situation, please feel free just to ask ahead of time.

### 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](https://coam.osu.edu))
- *Ten Suggestions for Preserving Academic Integrity* ([Ten Suggestions](https://www.slu.edu/departments/academics/ten-suggestions.html))
- *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

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 the College of Pharmacy Office of Student Services in room 150 Parks Hall (614-292-5001) OR OSU Counseling and Consultation Services (614-292-5766) for assistance, support and advocacy. This service is free and confidential.

ACCESSIBILITY ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Requesting accommodations

The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I
may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Accessibility of course technology

This online course requires use of Carmen (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations with your instructor.

- Carmen (Canvas) accessibility
- Streaming audio and video
- Synchronous course tools

**COURSE SCHEDULE**

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Assignments*</th>
</tr>
</thead>
</table>
| 1    | Introduction / Housekeeping  
Environmental Policy, Science and Law: OVERVIEW | QUIZ: Syllabus and Course Policies  
QUIZ 1: Introduction and Overview  
Discussion Board Participation  
PORTFOLIO: Create your Portfolio Space |
| 2    | Themes and Frameworks of Environmental Law and Policy  
e.g. scientific uncertainty, precautionary principle, market failures, bias, the commons, polluter pays, etc. | QUIZ 2: Themes and Frameworks  
Discussion Board Participation  
Portfolio: Portfolio choices  
(scenario/topic/format) |
| 3    | Practice pf Environmental Protection – POLICY DEVELOPMENT  
(Creation and implementation of laws – United States, European Union and United Nations) | Quiz 3: Policy Development  
Discussion Board Participation  
Portfolio: Audio Check-in |
<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Assignments*</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 (9/9 – 9/13)</td>
<td>Practice of Environmental Protection – REGULATORY TOOLS (Legal, market instruments and the role of courts)</td>
<td>Quiz 4: Regulatory Tools Discussion Board Participation Portfolio: Audio Check-in</td>
</tr>
<tr>
<td>5 (9/16 – 9/20)</td>
<td>Enforcement of Environmental Law (The players and civil/criminal process, citizen suits)</td>
<td>Quiz 5: Enforcement of Environmental Laws Discussion Board Participation Portfolio: Audio Check-in</td>
</tr>
<tr>
<td>6 (9/23 – 9/27)</td>
<td>Environmental Impact Assessment (EIAs) and Strategic Environmental Assessments (SEAs) (U.S. National Environmental Policy Act; EIA and SEA – European Union and United Nations)</td>
<td>Quiz 6: Environmental Impact Assessment Discussion Board Participation Portfolio: Draft/Work Sample DUE</td>
</tr>
<tr>
<td>7 (9/30 – 10/4)</td>
<td>Review and Summary</td>
<td>MIDTERM EXAM Portfolio: Peer Reviews (2)</td>
</tr>
<tr>
<td>8 (10/7 – 10/11)</td>
<td>Ozone Depletion Science and Law</td>
<td>Discussion Board Participation</td>
</tr>
<tr>
<td>10 (10/21 – 10/25)</td>
<td>Arctic Region Science and Law</td>
<td>Quiz 8: The Arctic Part 1 Discussion Board Participation</td>
</tr>
<tr>
<td>11 (10/28 – 11/1)</td>
<td>Arctic Region Economic, Political, Socio-cultural factors and Narratives</td>
<td>Quiz 9: The Arctic Part 2 Discussion Board Participation Portfolio: Audio Check-in</td>
</tr>
<tr>
<td>12</td>
<td>Management of Plastic Waters</td>
<td>Quiz 10: Plastics Part 1</td>
</tr>
</tbody>
</table>

**CASE STUDIES**

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 (10/7 – 10/11)</td>
<td>Ozone Depletion Science and Law</td>
</tr>
<tr>
<td>10 (10/21 – 10/25)</td>
<td>Arctic Region Science and Law</td>
</tr>
<tr>
<td>11 (10/28 – 11/1)</td>
<td>Arctic Region Economic, Political, Socio-cultural factors and Narratives</td>
</tr>
<tr>
<td>12</td>
<td>Management of Plastic Waters</td>
</tr>
<tr>
<td>Week</td>
<td>Topic</td>
</tr>
<tr>
<td>------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>(11/4 – 11/8)</td>
<td>Science and Law</td>
</tr>
<tr>
<td>13</td>
<td>Management of Plastic Waters</td>
</tr>
<tr>
<td>11/11 – 11/15)</td>
<td>Economic, Political, Socio-cultural factors and Narratives</td>
</tr>
<tr>
<td>14</td>
<td></td>
</tr>
<tr>
<td>(11/18 – 11/22)</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
</tr>
<tr>
<td>(11/25 – 11/29)</td>
<td></td>
</tr>
</tbody>
</table>

*all assignments are due Sunday of each week unless otherwise noted – see Carmen for more details