

**ESG 1500 – Introduction to Environmental Science (3 Credits)  
Fall 2021 Gen Ed Version (Version 8/26/2021)**



**Instructor:**

**Email:  
Office Phone**

**Day:**

Lecture Tu/Th

**Time:**

10:00 – 11:15

**Location:**

STEM Innovation Learning Center | Room 0027

**Communication Best Practices:**

- Email is the best way to reach your instructor or peer mentors to obtain information or to make an in-person, phone, or video appointments; we will do our best to respond within 24 hours. If you do not hear back in 24 hours, please feel free to follow up by email again.
- Be professional when emailing your instructors or peer mentors. Include your course number in the subject line, use a proper greeting, and use correct punctuation, spelling and grammar.

**Course Materials:**

- Required: *Environmental Science and Sustainability by Daniel J. Sherman and David R. Montgomery*. This will be automatically charged to your account this semester through First Day Inclusive Access
- Supplemental Material: Throughout the semester you will be given supplemental readings and videos.

**Course Description:**



This introductory interdisciplinary science course is focused and organized around environmental problems and issues that we face in the world today using real-world stories. Students critically evaluate these issues and are challenged to consider possible solutions. Students will be provided the scientific background to these issues, empowering them with a strong foundation for dialogue. Overall this course will provides students with tools for helping to build a sustainable future and to move forward with a strong environmental science education grounded in critical thinking.

**Course Format:**

The course is structured with content to be consistent with the AP Environmental Science course and serve as a Wayne State University General Education Science course. The course has a flipped design to maximize interactive in-class components, designed to support application of themes covered in the textbook. The assignments will mainly cover textbook material with additional supplemental reading and video material. The course instructor may incorporate expert guest speakers to cover material as appropriate.

**Course Specific Learning Outcomes:**



*After engaging in this course, students are expected to be able to:*

1. effectively use data and knowledge in conducting comprehensive analyses of environmental issues
2. formulate hypotheses that take account for the complex interdisciplinary nature of environmental issues
3. describe the scientific background behind historical and/or contemporary environmental issues
4. draw logical conclusions and implications through the scientific analysis of environmental issues
5. communicate about historical and/or contemporary environmental issues amongst diverse audiences

**Natural Scientific Learning Outcomes:**



*As a Natural Scientific Inquiry General Education Course, after successful completion of this requirement, students will be able to demonstrate their ability to:*

1. Explain natural phenomena using scientific concepts, theories and/or principles.
2. Describe the process of scientific inquiry.
3. Analyze historical or contemporary societal subjects using scientific concepts and principles.



## **Learner Expectations:**

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In this course, you will not be a passive learner. In order for this course to be successful, you will need to interact with each other and with me. The role of the instructor and peer mentors is to facilitate interactions in the course, but your participation is required. As a “knowledge-generator”, you will be responsible for constructing and managing your own learning. This will make you an active partner in generating knowledge. (From otl\_sample\_syllabus\_072816.pdf).

## **Diversity Statement**

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This course values the contribution of diverse perspectives. Each person brings unique viewpoints which enrich our learning. This class welcomes people of all ages, ethnicities, gender, religions, sexual orientation, disabilities, nationality, military status and socioeconomic background. We support an inclusive learning environment where diversity and individual differences are appreciated. Please respect the views of your fellow students. (From otl\_sample\_syllabus\_072816.pdf).

## **Learning Community:**

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This course is home to the **Sustainability Learning Community (LC)**. The Sustainability Learning Community (LC) is meant to connect students who share an interest in learning more about local and global sustainability issues and how to live a more sustainable lifestyle. With the help of peer mentors, the Sustainability LC provides the opportunity for Wayne State University students from diverse backgrounds and any major who are interested in learning how to live in a manner that supports ecologically, socially, and economically healthy environments and communities. As part of this Sustainability LC, students are required to participate in an class experiential project, and ten hours of approved community service. By registering for ESG 1500 students are automatically part of the LC.

## **Grading Polices:**

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### **Attendance and Class Participation:**

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Class attendance is required. You are expected to be an active participant in class discussions and activities. Class participation will be designed around analyzing historical or contemporary societal subjects using scientific concepts and principles in an environmental science and sustainability context (NSI-LO 3). Attendance will be taken at each class session and scored as following: 100% for those attending and participating; 0% for absences; 80% for those arriving more than 20 minutes late. Attendance, preparedness, and active participation in class count as 20% of the final grade. Student may request excused absences per semester and if approved will not impact the final grade. To request an excused absence please e-mail the instructor at least 24 hours in advance with your request.

### **Assignments:**

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Students will be responsible for reading the textbook material and completing online assignments before class on the day that it is due (see course schedule). These assignments are meant to help students understand and explain natural phenomena using scientific concepts, theories and/or principles (NSI-LO 1). Being familiar with this material will be important for participating in discussions and activities as part of the flipped classroom experience.

### **News Blitz Blog Posts and Responses:**

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This course will make use of an online blog for encouraging discussion and interaction. Students will be responsible for (1) one structured blog post and (2) twelve structured responses/comments to other course related blog posts/contributions. Up to 100 points will be credited for the News Blitz as follows: 50 points for completing the blog post; 20 points for following the directions for the blog post; 6 points for turning the blog post in at least 3 days before it is due to post; completing the 12x2 = 24 pts for engaging responses to at least one blog per block (12 blocks of five posts).

### **Community Service:**

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Students are required to participate in 10 hours of approved community service related to environmental stewardship and sustainability. Students should work with their peer mentors to arrange their community service activities, which must be approved through the Office of Campus Sustainability. Students will receive 100% of their community service points for completing the service and turning in a one-page reflection about their experience.

### **Experiential Class Project:**

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With their peer mentors, students will participate in a class project over the course of a semester to provide the opportunity to experience the scientific method focused on real-world water quality issues and then communicate their experience to a community outside of the classroom. Specifically, the class project includes aspects of: (1) knowledge development with place-based, experiential, hands-on approaches; (2) designing and conducting a class research study or experiment; and (3) communicating knowledge and experience to audiences outside of the classroom. After participating in this class project, students will be able to describe the process of scientific inquiry (NSI-LO 2).

### **Exams:**

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This course will include two exams. The first exam will cover material from Chapters 1 – 11. The second exam will cover material from Chapters 12 – 20.

### **Final Exam:**

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This course will a final exam. The final will be comprehensive and cover material from Chapters 1 – 20.

### **Grading Breakdown:**

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Assignments	20%
Blog Entry/Responses	15%
Exams	10%
Attendance/Class Participation	20%
Community Service	10%
Experiential Class Project	20%
Final	5%
	100%

Assignment of final grades for undergraduate students will be given *roughly* as follows: > 90 % A; 80 – 89 % B; 70 – 79 % C; 60 – 69 % D; < 60 % F.

### **Course Drops and Withdrawals**

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In the first two weeks of the (full) term, students can drop this class and receive 100% tuition and course fee cancellation. After the end of the second week there is no tuition or fee cancellation. Students who wish to withdraw from the class can initiate a withdrawal request on Pipeline. You will receive a transcript notation of WP (passing), WF (failing), or WN (no graded work) at the time of withdrawal. No withdrawals can be initiated after the end of the tenth week. Students enrolled in the tenth week and beyond will receive a grade. Because withdrawing from courses may have negative academic and financial consequences, students considering course withdrawal should make sure they fully understand all the consequences before taking this step. More information on this can be found at: <http://reg.wayne.edu/pdf-policies/students.pdf> (From otl\_sample\_syllabus\_072816.pdf).

### **Academic Integrity**

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While students are encouraged to work together and discuss homework problems and assignments, and consult other resources, this course will be instructed in compliance with Wayne State University policies on academic integrity which can be accessed at: <http://doso.wayne.edu/academic-integrity.html>

### **Expected Classroom Behavior:**

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All students are expected to behave in a manner conducive to the best learning environment and experience for everyone. Students should refer to the Student Code of Conduct for guidelines:

<https://doso.wayne.edu/conduct/studentcodeofconduct.pdf>

Any threatening behavior is prohibited and will be reported as outlined in Wayne State University guidelines for disruptive, threatening or violent behavior:

[http://www.clas.wayne.edu/Multimedia/CLAS/files/StaffResources/disruptive\\_behavior.pdf](http://www.clas.wayne.edu/Multimedia/CLAS/files/StaffResources/disruptive_behavior.pdf)

### **Class recordings:**

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Students need prior written permission from the instructor before recording any portion of this class. If permission is granted, the audio and/or video recording is to be used only for the student's personal instructional use. Such recordings are not intended for a wider public audience, such as postings to the internet or sharing with others. Students registered with Student Disabilities Services (SDS) who wish to record class materials must present their specific accommodation to the instructor, who will subsequently comply with the request unless there is some specific reason why s/he cannot, such as discussion of confidential or protected information. Violations of this syllabus policy may result in charges under the student code of conduct.

### **Counseling and Psychological Services (CAPS):**

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It is quite common for college students to experience mental health challenges, such as stress, anxiety and depression, that interfere with academic performance and negatively impact daily life. Help is available for any currently enrolled WSU student who is struggling with a mental health difficulty, at WSU Counseling and Psychological Services ([caps.wayne.edu](http://caps.wayne.edu); 313 577-3398). Other options, for students and nonstudents, include the Counseling and Testing Center, and the Counseling Psychology Training Clinic, in the WSU College of Education ([coe.wayne.edu/tbf/counseling/center-index.php](http://coe.wayne.edu/tbf/counseling/center-index.php)). Services at all three clinics are free and confidential. Remember that getting help, before stress reaches a crisis point, is a smart and courageous thing to do – for yourself, and for those you care about. Also, know that the WSU Police Department (313 577-2222) has personnel trained to respond sensitively to mental health emergencies at all hours.

### **Students with Disabilities:**

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If you have a documented disability that requires accommodations, you will need to register with Student Disability Services for coordination of your academic accommodations. The Student Disability Services (SDS) office is located at 1600 David Adamany Undergraduate Library in the Student Academic Success Services department. The SDS telephone number is 313-577-1851 (main number) or 313-202-4216 for videophone use. Please continue to use these numbers as SDS is still receiving calls. Once you have your accommodations in place, I will be glad to meet with you privately to discuss your special needs. Student Disability Services' mission is to assist the university in creating an accessible community where students with disabilities have an equal opportunity to fully participate in their educational experience at Wayne State University. You can learn more about the disability office at [www.studentdisability.wayne.edu](http://www.studentdisability.wayne.edu)

To register with Student Disability Services, complete the online registration form at:

[https://wayne-accommodate.symplicity.com/public\\_accommodation/](https://wayne-accommodate.symplicity.com/public_accommodation/)

### **Religious Observations:**

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Because of the extraordinary variety of religious affiliations of the University student body and staff, the Academic Calendar makes no provisions for religious holidays. However, it is University policy to respect the faith and religious obligations of the individual. Students with classes or examinations that conflict with their religious observances are expected to notify the instructor well in advance so that mutually agreeable alternatives may be worked out.

### **First Day Inclusive Access Program:**

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This course is participating in a new course material access and affordability initiative called First Day Inclusive Access. This program provides your required course material prior to the first day of classes directly through

Canvas at a price equal to or lower than the publisher-direct prices. A direct charge for the course material is placed against your student account and is visible on your tuition bill. Participation in the First Day program is optional; however, if you think you would like to opt-out, please consult with me first. Opting-out will result in a credit placed against your WSU student account, which will be disbursed in accordance with the Office of the Bursar, Student Accounts Receivables Policies. Once opted-out, you would be responsible to procure access to the required course materials on your own (i.e., online, through the bookstore, etc.).

Things to consider before opting out:

- The material through this program is guaranteed to be priced at market value or lower.
  - Market value is defined as the price you would pay if you purchased the exact same material and format directly from the publisher.
- The opt-out deadline for your course is Wednesday, September 22nd.
- You may opt-out, or back in to the First Day program through the opt-out deadline date.
- After the opt-out deadline:
  - The day following the deadline, your participation status is final.
  - If opted-out, access to the required materials (etext or etext + courseware) will remain for a short period, allowing you time to purchase/rent your materials through the bookstore or favorite online textbook provider.

For additional information regarding the First Day Inclusive Access course material program, please visit the WSU First Day website here [Studentservices.wayne.edu/bookstore/inclusive-access](https://studentservices.wayne.edu/bookstore/inclusive-access) or the Barnes & Noble College First Day Inclusive Access FAQ page at <https://customercare.bncollege.com>. You may also contact the campus bookstore via email or Microsoft TEAMS Chat at [FirstDay@wayne.edu](mailto:FirstDay@wayne.edu) or call the store during business hours, 313-577-2436.

### **COVID-19 Compliance**

All students are expected to familiarize themselves with the campus health and safety guidelines at: <https://wayne.edu/coronavirus/returning-guidelines#students-return>.

Students must complete the Campus Daily Screener before coming to campus each day. For the Fall 2021 semester, university policy requires that students, university employees, and university guests who come to campus be vaccinated against COVID-19, unless they have a medical or religious exemption approved by the Campus Health Committee.

The deadline for fully vaccinated status is August 30 for students taking classes on campus and university employees who will be on campus full- or part- time. All on campus will be required to mask indoors through September 15. At that time, the mask requirement may be lifted or extended. (Those with an approved waiver of the vaccine mandate will be tested weekly and will be required to wear masks indoors on campus throughout the semester.) The university will monitor the pandemic situation closely, and it is possible that the measures mentioned here will change, including by moving all classes to remote learning, to ensure the safety and well-being of our faculty, staff and students.

### **WSU Student Code of Conduct Behavioral expectations / section 4.20**

“Failure to comply with University instruction pertaining to the containment of the coronavirus virus or of COVID-19, including, but not limited to:

- a) Completing the ‘campus daily screener’ each day before coming onto campus;
- b) Following the direction of the Campus Health Center regarding a positive screen;
- c) Wearing, at minimum, a cloth facial covering at all times when in public spaces on campus;
- d) Maintaining a minimum distance of not less than six feet from others when on campus;
- e) Complying with signage regarding directional hallways, elevators, common spaces, and stairwells.”

## Course Schedule\*



Date	Topic	Reading	Assignment Due	NSI-LO
<b>Week 1</b>				
Th – Sept 2	<i>Course Logistics and Ice Breaker</i>			
<b>Week 2</b>				
Tu – Sept 7	<i>Environmental Science and Sustainability</i>	Ch. 1	Assignment 1	1,3
Th – Sept 9	<i>Ethics, Economics, and Policy</i>	Ch. 2	Assignment 2	1,3
<b>Week 3</b>				
Tu – Sept 14	<i>Matter and Energy (Building Blocks)</i>	Ch. 3	Assignment 3	1,3
Th – Sept 16	<i>Life (Biodiversity)</i>	Ch. 4	Assignment 4	1,3
<b>Week 4</b>				
Tu – Sept 21	<i>Conservation (Biodiversity)</i>	Ch. 5	Assignment 5	1,3
Th – Sept 23	<i>Human Population</i>	Ch. 6	Assignment 6	1,3
<b>Week 5</b>				
Tu – Sept 28	<i>Water</i>	Ch. 7	Assignment 7	1,3
Th – Sept 30	<i>Air</i>	Ch. 8	Assignment 8	1,3
<b>Week 6</b>				
Tu – Oct 5	<i>Land</i>	Ch. 9	Assignment 9	1,3
Th – Oct 7	<i>Systems and Cycles</i>	Ch. 10	Assignment 10	1,3
<b>Week 7</b>				
Tu – Oct 12	<i>Climate</i>	Ch. 11	Assignment 11	1,3
Th – Oct 14	<b>Exam 1</b>			
<b>Week 8</b>				
Tu – Oct 19	<a href="#">Experiential Water Project</a>			2
Th – Oct 21	<a href="#">Experiential Water Project</a>			2
<b>Week 9</b>				
Tu – Oct 26	<i>Food</i>	Ch. 12	Assignment 12	1,3
Th – Oct 28	<i>Fossil Fuels</i>	Ch. 13	Assignment 13	1,3
<b>Week 10</b>				
Tu – Nov 2	<i>Energy Alternatives</i>	Ch. 14	Assignment 14	1,3
Th – Nov 4	<i>Waste</i>	Ch. 15	Assignment 15	1,3
<b>Week 11</b>				
Tu – Nov 9	<i>Urbanization</i>	Ch. 16	Assignment 16	1,3
Th – Nov 11	<i>Environmental Health and Justice</i>	Ch. 17	Assignment 17	1,3
<b>Week 12</b>				
Tu – Nov 16	<i>Decision Making</i>	Ch. 18	Assignment 18	1,3
Th – Nov 18	<i>Groups and Organizations</i>	Ch. 19	Assignment 19	1,3
<b>Week 13</b>				
Tu – Nov 23	<a href="#">Experiential Water Project</a>			2
Th – Nov 25	<b>No Class -Thanksgiving</b>			
<b>Week 14</b>				
Tu – Nov 30	<i>Government</i>	Ch. 20	Assignment 20	1,3

Th – Dec 2	Exam 2			
<b>Week 15</b>				
Tu – Dec 7	<a href="#">Experiential Water Project</a>			2
Th – Dec 9	<a href="#">Experiential Water Project</a>			2
<b>Final Exam: Tuesday, December 21 (8 am – 10 am)</b>				

*\*Subject to change at the discretion of the instructor*

