ENVS 101 – Issues in Environmental Science (3 credits)

Time: Mondays and Thursdays, 3:30-4:50 Location: MNS 212

Instructor: Dr. Loren B. Byrne Phone: X 3890 Email: lbyrne@rwu.edu Office: 227 MNS
Office Hours: Mondays, Wednesdays & Fridays 12:30-12:55; Thursdays 1:30-1:55; Fridays 2:00-2:15; and by appt.

Dr. Byrne's teaching and learning philosophy that frames the dynamics of this course can be found here:
http://faculty.rwu.edu/lbyrne/educational_philosophy.html **These quotes summarize that philosophy:**

"The mind is not a vessel to be filled but a fire to be kindled." ~ Plutarch

"Teachers open the door. You must enter by yourself." ~ Chinese proverb *"Today a reader, tomorrow a leader."* ~ W. Fusselman

"(Intelligence) is 1% inspiration and 99% perspiration." ~ T.A. Edison

"When we try to pick out anything by itself, we find it is tied to everything else in the universe." ~ John Muir

"High-quality learning is absolutely essential for high-quality living." ~ L.D. Fink

Course description

As an introduction to environmental science, this course helps students build foundational knowledge and competencies related to the examination of patterns and processes in social-environmental systems. Emphasis is on discussing relationships between environmental science and society, including the use of evidence to make decisions about management of environmental resources and conditions that support human well-being. Key topics include the current state of the Earth system, wildlife and greenspace management, current debates about complex environmental issues, and others to be decided on collectively by students. Activities include searching for, presenting, discussing, and synthesizing articles from the peer-reviewed literature.

Be prepared: this course is **reading, metacognition, and participation** intensive (a good thing for your education—see quotes 3 and 4 above). Instructor presentations will be a small (or sometime absent) part of class time and will mostly be used to introduce topics and provide background for discussions. Thus, you will maximize your learning during this course if you read assigned texts and complete assignments carefully and critically before class and then ***engage with your classmates*** about the material during class.

Course goals for learning outcomes

After this course, students should be able to:

- Describe relationships between humans and the environment using concepts and approaches from social-ecological science and systems thinking
- Apply and synthesize interdisciplinary information to explain patterns and processes in social-ecological systems
- Define environmental justice and explain why it's an important goal for environmental science
- Use scientific literature and evidence to propose and discuss solutions to challenges in social-ecological systems
- Communicate their knowledge and personal views about issues in social-environmental systems clearly through presentations and in writing

Required texts

No required textbook; readings to be provided digitally or as hard-copies, or chosen by students

Required assignments & grading

Students' grades will be based on the following:	**% Value of final grade**
Home- and in-class work (incl. writing, reading responses, group work)	25
Presentations	20
Discussion contributions	25
Other projects, including essays and independent research	25
Final oral exam (discussion during final exam time)	5

Grading scale and the meaning of grades

A= ≥ 93% - Excellent	A- = 90-92.9% Great	B+ = 87-89.9% Very Good	B= 83-86.9% Good	B- = 80-82.9% Good
C+= 77-79.9% Average	C= 73-76.9% Average	C- = 70-72.9% Average	D= 60-69.9% Poor	F= ≤59.9% Failure

See the electronic version sent in an email and posted on Bridges for essential course policies related to withdrawal dates, assignment submissions, attendance and due dates, academic integrity including plagiarism, **use of artificial intelligence**, academic support and accessibility services.

ENVS 101 Semester Outline

Week	Topic	Readings *(complete before class)*
1	8/28: Introductions & Expectations	TBD
2	9/1: Labor Day – No Class 9/4: Has nature ended? Are we in the Anthropocene?	 9/4: Anthropocene articles
3	9/8: Do humans dominate and control the Earth system? 9/11: How do humans affect wildlife?	9/8: Student-chosen articles 9/11: Wildlife articles
4	9:15: Can data inform wildlife management? 9:18: What are social-ecological-technological systems?	9/15: Student-chosen articles 9/18: SETS articles
5	9/22: What can we learn by synthesizing interdisciplinary information about SETS? 9/25: How can we intervene in SETS to generate solutions?	9/22: Student-chosen articles 9/25: Transformation articles
6	9/29: Does nature owe us anything? 10/2: Why should we care about environmental systems?	9/29: Ecosystem service articles 10/2: Student-chosen articles
7	10/6: What causes socio-political debates about env. issues? 10/9: What are the roles for science and scientists in debates?	10/6: News articles 10/9: TBD
8	10/13: Fall break – No class TUE 10/14: Student chosen issue #1 10/16: Student chosen issue #1	 10/14: TBD 10/16: Student-chosen articles
9	10/20: Student chosen issue #2 10/23: Student chosen issue #2	10/20: TBD 10/23: Student-chosen articles
10	10/27: Student chosen issue #3 10/30: Student chosen issue #3	10/27: TBD 10/30: Student-chosen articles
11	11/3: TBD 11/6: Student chosen issue #4	11/3: TBD 11/6: TBD
12	11/10: Student chosen issue #4 11/13: TBD	11/10: Student-chosen articles 11/13: TBD
13	11/17: What is environmental justice and why does it matter? 11/20: How can SETS be transformed to increase env justice?	11/17: Env justice articles 11/20: Student-chosen articles
14	11/24: TBD 11/27: Thanksgiving – No class	11/24: TBD
15	12/1: What are the big water issues in urbanized SETS? 12/4: How can we plan for water issues in SETS?	12/1: Water articles 12/4: Student-chosen articles
16	12/8: What now and in the future? Synthesis and Conclusions	12/8: TBD

Required attendance during the FINAL EXAM PERIOD: Monday Dec. 15, 12:30-2:30

*****The professor reserves the right to modify this schedule at any time if necessary*****

Assignment submission & class communications:

RWU's online course-management system *Bridges* will be used for submission of assignments and to provide course materials. Email (.rwu accounts only) is used to provide course information and communicate important reminders. Students are responsible for checking these before and after each class meeting to obtain time-sensitive information. Any concerns about access to these should be communicated to the professor ASAP.

Attendance and due date policies (short version- see e-syllabus for full policy):

- Because we form a learning *community* in this course, the presence and participation of each student in each class benefits us all. Thus, attendance is expected (*read: required*) for all class meetings.
- For in-class assignments and activities, students need to be present to complete the work, learn and earn credit. No make-up **or extra credit** opportunities for in-class activities should be expected (including quizzes and other assessments). No points will be awarded for missed in-class participation, including lab activities.
- In general, an absence is an absence, and no distinctions will be made **between excused and unexcused absences**. (including for most co-curricular events and personal travel).