

AQUATIC POLLUTION (OEAS 403W/503)--FALL 2018

Prof. xxx

Oceanography/Physics Building, Rm. 406

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Office Hours: Tuesday and Wednesday 1500–1600 or by appointment

This course will present basic ecological principles relevant to water pollution and ecotoxicology. Topics will include runoff, eutrophication, water and sewage treatment, industrial waste, oil pollution, pesticides, and plastics in the sea. Case studies provide focal points for consideration of issues in making decisions and setting policy. This is a writing intensive course. (Undergraduates only--Prerequisite: grade of C or better in ENGL 211C, ENGL 221C, or ENGL 231C. Pre- or co-requisite: a grade of C or better in OEAS 306.)

Week	Date	Topic	Book Chapter(s)
1	28 Aug	Orientation (Course overview; Google Drive boot camp)	
		Fundamental Concepts	1
	30 Aug	Photosynthesis	2
2	4 Sep	Physical Factors Affecting Production	3 (except pp. 55-64)
	6 Sep	Cultural Eutrophication (I)	4
3	11 Sep	Hurricane Florence (I)	
	13 Sep	Hurricane Florence (II)	
4	18 Sep	Cultural Eutrophication (II): Chesapeake Bay	4 and 3 (pp. 55-64)
	20 Sep*	Nonpoint Source Pollution	5
5	25 Sep	Sewage Treatment (I)	6
	27 Sep	Sewage Treatment (II)	6 (start collecting plastics)
6	2 Oct	Pathogens in Natural Waters	7
	4 Oct*	Plastics Laboratory (bring in plastics)	
7	9 Oct	NO CLASS; Fall Break	
	11 Oct	Mid-Term Exam (includes Laws' Chapters 1-7)	
8	16 Oct	Industrial Pollution (I)	9
	18 Oct	Industrial Pollution (II)	9
9	23 Oct	Ocean Acidification; Biological Invasions	15 (pp. 610-618)
	25 Oct	Guest Lecture (TBD) Dobbs in DC—Consortium for Ocean Leadership	
10	30 Oct*	Pesticides (I)	10
	1 Nov	Pesticides (II)	10

11	6 Nov	Oil Pollution (I)	13
	8 Nov	Oil Pollution (II)	13
12	13 Nov	Groundwater Pollution (I)	16
	15 Nov*	Groundwater Pollution (II)	16
13	20 Nov	Guest Lecture (TBD)	
	22 Nov	NO CLASS--Thanksgiving holiday	
14	27 Nov	Plastics	17
	29 Nov	Plastics	17
15	4 Dec	Student Presentations	
	6 Dec*	Miscellaneous; Review for Final Examination	
16	13 Dec	Final Exam (1230—1530)	

*denotes a quiz will be given

--Required Text Book: Laws, Edward A. 2018. *Aquatic Pollution*, 4th edition, John Wiley & Sons, Inc.

--Required book: Day, R.A. and N. Sakaduski. 2011. *Scientific English*, 3rd ed., Greenwood.

--Suggested book: Borror, Donald J. 1960. *Dictionary of Word Roots and Combining Forms*, Mayfield Publishing Company. (this book now is available on the web as a pdf)

--Suggested book: Weis, Judith S. 2015. *Marine pollution—What everyone needs to know*. Oxford.

LEARNING OUTCOMES

Having successfully completed and fully participated in this class, students should be able to:

- Articulate the fundamental concepts of aquatic ecosystem function.
- Differentiate between natural phenomena in aquatic ecosystems and their augmentation or disturbance caused by anthropogenic factors.
- Use quantitative skills and reasoning to examine and test hypotheses relating to aquatic pollution.

Further, students should have:

- A basis for subsequent in-depth study of the major kinds of aquatic pollution.
- Improved their ability to write in several styles about aquatic ecological phenomena.

GRADING SUMMARY: Grades will be based on 500 points distributed as follows:

	<u>OEAS 403W</u>	<u>OEAS 503</u>
Quizzes (n=5)	50 points	50 points
Mid-Term Exam	75	125
Final Exam	100	125
*Writing Assignments		
Plastics Laboratory (due 16 Oct)	40	---
Current-Event Synthesis (due 2 Nov)	80	---
Pollution Journalism		
Video (due 4 Dec—in class)	24	---
Transcript (due 7 Dec)	76	---
*Electronic portfolio (eP)		
Beginning statement (due 7 Sep)	5	---
Full eP (due 10 Dec)	50	---
*Research presentation (4 Dec—in class)	---	50
*Research paper (due 7 Dec)	---	150
Total	500 points	500 points

*Specifics about these assignments, including rubrics, will be distributed throughout the semester.

NOTA BENE

- Late assignments will be penalized by reducing the score awarded by 10% for each day late.
- Students are encouraged to work collaboratively when appropriate, but written assignments and exams must represent the work of an individual.
- Plagiarism and cheating are serious offenses and may be punishable by failure on the particular assignment and failure in the course.

UNIVERSITY POLICIES

COLLEGE CLASSROOM CONDUCT -- The following standards are intended to define acceptable classroom behavior that preserves academic integrity and ensures that students have optimum environmental conditions for effective learning.

1. Students must turn off cell phones and pagers during class.
2. Classes are expected to begin on time, and students will respect the time boundaries established by the professor. If classroom doors are locked, students may not knock or seek entrance in other ways.
3. Students should notify instructors in advance when a class will be missed. In the event of an emergency that causes a class to be missed, instructors must be notified as soon as possible.
4. Instructors may require that cell phones and other electronic devices be left on their desks during tests or examinations.

5. Students must not engage in extraneous conversations during classes. Such acts are considered to be violations of the Code of Student Conduct.
6. Students will activate their Old Dominion e-mail accounts and check them before each class. If the student chooses to have his/her messages forwarded to another account, it is the student's responsibility to take the necessary steps to have them forwarded.
7. Consumption of food and drink during class is prohibited, except when the professor has specifically approved of such acts.
8. Offensive language, gestures and the like are disrespectful and disruptive to the teaching-learning process. [http://studentservices.odu.edu/osja/ccc_pamphlet.pdf]

HONOR PLEDGE -- *I pledge to support the honor system of Old Dominion University. I will refrain from any form of academic dishonesty or deception, such as cheating or plagiarism. I am aware that as a member of the academic community, it is my responsibility to turn in all suspected violators of the honor system. I will report to Honor Council hearings if summoned.*" By attending Old Dominion University you have accepted the responsibility to abide by this code. This is an institutional policy approved by the Board of Visitors. Refer to Monarch Citizenship [<https://www.odu.edu/about/monarchcitizenship#tab152=1>]

ADA STATEMENT

Old Dominion University is committed to ensuring equal access to all qualified students with disabilities in accordance with the Americans with Disabilities Act. The Office of Educational Accessibility (OEA) is the campus office that works with students who have disabilities to provide and/or arrange reasonable accommodations.

Students are encouraged to self-disclose disabilities that have been verified by the Office of Educational Accessibility by providing Accommodation Letters to their instructors early in the semester in order to start receiving accommodations. Accommodations will not be made until the Accommodation Letters are provided to instructors each semester.

The Office of Educational Accessibility is located at 1021 Student Success Center and its phone number is (757) 683-4655. Additional information is available at the OEA website: <http://www.odu.edu/educationalaccessibility/>

UNIVERSITY EMAIL POLICY -- The Old Dominion University e-mail system is the official electronic mail system for distributing course-related communications, policies, announcements and other information. In addition, the University email user ID and password are necessary for authentication and access to numerous electronic resources (online courses, faculty web pages, etc.)

WITHDRAWAL -- A syllabus constitutes a contract between the student and the course instructor. Participation in this course indicates your acceptance of its teaching focus, requirements, and policies. Please review the syllabus and the course requirements as soon as

possible. If you believe that the nature of this course does not meet your interests, needs or expectations, if you are not prepared for the amount of work involved or if you anticipate that the class meetings, assignment deadlines, or abiding by the course policies will constitute an unacceptable hardship for you, you should drop the class by the drop/add deadline, which is located in the ODU Schedule of Classes.