Class Time/Location: Mondays 4:10 – 5:50 pm, 1015 McPherson Lab

Instructor: Dr. Rachel Gabor
gabor.40@osu.edu
473b Kottman Hall
Office Hours: Monday 2:00-3:00pm, Thursday 1pm-2:15pm or by appointment.

TA: Kristen Diesburg
diesburg.1@osu.edu
465c Kottman Hall
Office Hours: Monday 9:00-11:00am or by appointment.

Course Description:
In this course we will explore the physical, chemical, and biological aspects of water quality. We will study how natural watershed processes drive the functioning of lakes and rivers and how anthropogenic processes alter water quality. We will then explore critical water quality issues in North America and the world, their impacts on human health, and ways they can be addressed.

Topics we will cover include:
• Physical properties of water and the hydrologic cycle
• Physical structure of watersheds, lakes, and rivers
• Nutrient cycling
• Metals and dissolved solids
• Acids and bases
• Water quality impacts on benthic species, algae, and fish
• Water quality indicators
• Invasive species
• Case studies (possible examples: harmful algal blooms, mountaintop mining, urbanization)
Texts


Additional Reference Texts (on reserve at FAES library)

Pennington, Karrie Lynn and Thomas Cech 2010. *Introduction to Water Resources and Environmental Issues*. Cambridge University Press. [Some course material will come from this book]

Vigil, Kenneth M. 2003. *Clean Water: An Introduction to Water Quality and Pollution Control*, 2nd edition. Corvallis: Oregon State University Press. [This is written for the general public and may help if you are struggling to understand a concept]

Carmen / Course Communication

Carmen will be used throughout the semester so please make a habit to check both it and your osu.edu email regularly. The Carmen calendar will be updated with seminars, topics to be covered, and possible changes to office hours. Readings and homeworks will be posted there, as will online quizzes.

Course Evaluation

Your course evaluation will consist of the following possible exams and assignments:

<table>
<thead>
<tr>
<th>Evaluation</th>
<th>Points per Assignment</th>
<th># / semester</th>
<th>Total Possible Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm (October 23)</td>
<td>100</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Final Exam (December 14)</td>
<td>100</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Project (Due December 4)</td>
<td>200</td>
<td>1</td>
<td>200</td>
</tr>
<tr>
<td>Homework Assignments</td>
<td>15</td>
<td>10</td>
<td>150</td>
</tr>
<tr>
<td>In-Class Work</td>
<td>5</td>
<td>12</td>
<td>60</td>
</tr>
<tr>
<td>Online Quizzes</td>
<td>5</td>
<td>12</td>
<td>60</td>
</tr>
<tr>
<td>XC: Presentation of Water News</td>
<td>10</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>XC: Water Lecture on Campus</td>
<td>10</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Total Possible Points</td>
<td></td>
<td></td>
<td>700</td>
</tr>
</tbody>
</table>
Note there are 700 possible total points available over the semester, including 30 from both extra credit opportunities. Final course grades will be assessed from a total of 660 points as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Point Range</th>
<th>Grade</th>
<th>Point Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>615 - 700</td>
<td>C+</td>
<td>508 - 527</td>
</tr>
<tr>
<td>A-</td>
<td>594 - 614</td>
<td>C</td>
<td>482 - 507</td>
</tr>
<tr>
<td>B+</td>
<td>574 - 593</td>
<td>C-</td>
<td>462 - 481</td>
</tr>
<tr>
<td>B</td>
<td>548 - 573</td>
<td>D+</td>
<td>442 - 461</td>
</tr>
<tr>
<td>B-</td>
<td>528 - 547</td>
<td>D</td>
<td>396 - 441</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
<td>0 - 395</td>
</tr>
</tbody>
</table>

**Exams:** The midterm exam will be in class on October 23rd. The final exam will be held December 14th, 4:00 - 5:45 pm. Both exams will be closed book, note, and computer but you will be allowed to bring 2 handwritten note sheets for use during the exam.

**Project:** More details will be given later in the semester, but you will work in groups to create a report assessing the water quality of a river or lake in the United States.

**Homework Assignments:** There will be 10 homework assignments given throughout the semester. Each assignment will be worth 15 points. Homework is due at the beginning of class. Late assignments will be accepted for a penalty of 2 points/day for up to 3 days (ie: until 5pm Thursday of that week)

**In-Class Work:** In-class activities will periodically be collected to assess participation. Each activity is worth 5 points and this will happen 12 times over the semester.

**Online Quizzes:** Online quizzes will be posted on Carmen and will be due by 5pm on Friday. This will occur 12 times during the semester and are worth 5 points. You may use your book and notes for these but please take them independently.

**XC Presentation of Water News:** This is an extra credit option. For this you must find a water quality issue currently in the news and write a 1 page (double spaced) summary, including citations to 3 popular press articles. You will give a 5 minutes presentation to the class about your findings. Up to three students can do this each week (expect exam days) and sign-ups are first come, first serve (dates and topics). If you cancel your signup with less than 7 days notice, you will lose 5 points.

**XC Water Lecture on Campus:** Many departments have seminars that include water issues. To earn this extra credit, you must attend one of them and submit a 1 page (double spaced) summary on Carmen within 3 days of attending. I will put seminars I am aware of on the Carmen Calendar. If you find others, please check if it is acceptable and so I can put it on Carmen to notify your classmates.
Class Policies

1) The students in this course come from a wide range of backgrounds and majors, so there may be times you find an aspect of this course particularly challenging. I invite you to come to office hours to have a conversation with either of us for help. The sooner you bring forth your concerns, the sooner I can help – there is very little that can be done at the end of the semester.

2) Sometimes mistakes happen during grading. If you feel that your grade on a test or assignment is incorrect, please submit in writing an explanation of why you wish to appeal your grade within one week of the assignment being returned. Final course grades are non-negotiable outside of clerical error.

3) You are encouraged to work with other classmates on assignments. However you should do the write-ups entirely on your own, in your own words, to ensure you fully understand the solution.

4) Please respect me and your fellow students and refrain from distracting behavior in class including private discussions, sleeping, phone usage, etc. If you have a laptop out to take notes please avoid watching videos or going to a website that might visually distract those around you.

5) Life happens. College is a stressful time and the world is a chaotic place. If something is happening in your life that will impact your full participation in the course, please utilize campus resources and give me a heads up so we can find how to best help you succeed.
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.”

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.

Accessibility accommodations for students with disabilities

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

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 or ods@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 http://ods.osu.edu for more information.
Diversity and Discrimination

The Ohio State University affirms the importance and value of diversity in the student body. Our programs and curricula reflect our multicultural society and global economy and seek to provide opportunities for students to learn more about persons who are different from them. We are committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own potential. Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

Class rosters are provided to the instruction with the student’s legal name. I will gladly honor your request to address you by a chosen name and pronoun. Please advise me of this preference early in the semester so I may make appropriate changes to my records.

Student Resources

There are many resources on campus devoted to assisting students personally and academically. Please do not hesitate to utilize them if you find you need. Some include:

Counseling and Consultation Service: https://ccs.osu.edu/

Ohio State Writing Center: https://cstw.osu.edu/writing-center

Dennis Learning Center: http://dennislearningcenter.osu.edu/

Office of Diversity and Inclusion: https://odi.osu.edu/

OSU Libraries: https://library.osu.edu/