ENR 3280
Water Quality Management
Autumn Semester 2018

Class Time/Location: Monday/Wednesday  4:10 – 5:05 pm, Smith Lab 1009

Instructor:  Dr. Rachel Gabor
gabor.40@osu.edu
473b Kottman Hall

Office Hours: Wednesday 1:00-2:00pm, Friday 12:30pm-1:45pm or by appointment.

TA:  Liz Berg
berg.229@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 are managed.

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 speices, algae, and fish
• Invasive species
• Case studies (possible examples: harmful algal blooms, mountaintop mining, urbanization)
Texts

There is no single assigned textbook for this course. There will be readings throughout the semester from a variety of sources (all available electronically through OSU’s libraries or online). Check the resources tab on Carmen for suggested supplemental resources and the weekly Carmen modules for topical readings.

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 changes to office hours. Readings and homeworks will be posted there in weekly modules, 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>
<th>Approximate percent of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm (October 17)</td>
<td>100</td>
<td>1</td>
<td>100</td>
<td>14 %</td>
</tr>
<tr>
<td>Final Exam (Finals week)</td>
<td>100</td>
<td>1</td>
<td>100</td>
<td>14 %</td>
</tr>
<tr>
<td>Project</td>
<td>200</td>
<td>1</td>
<td>200</td>
<td>29 %</td>
</tr>
<tr>
<td>Homework Assignments</td>
<td>15</td>
<td>10</td>
<td>150</td>
<td>21 %</td>
</tr>
<tr>
<td>In-Class Work</td>
<td>5</td>
<td>15</td>
<td>75</td>
<td>11 %</td>
</tr>
<tr>
<td>Online Quizzes</td>
<td>5</td>
<td>10</td>
<td>50</td>
<td>7 %</td>
</tr>
<tr>
<td>Chem Quiz (September 5)</td>
<td>25</td>
<td>1</td>
<td>25</td>
<td>4 %</td>
</tr>
<tr>
<td>Extra Credit: Water Lecture on Campus</td>
<td>10</td>
<td>2</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Total Possible Points (w/out XC)</td>
<td></td>
<td></td>
<td>700</td>
<td></td>
</tr>
</tbody>
</table>

*Note that my grading structure means the Carmen gradebook will not calculate final grade correctly. Pay attention to your total number of points as you earn them through the semester (which you can see on Carmen).
Note there are 700 possible total points available over the semester. Final course grades will be assessed from a total of 680 points to allow for some leeway on missed classes/quizzes/assignments. Final grades will be calculated 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>≥ 632</td>
<td>C+</td>
<td>524 - 544</td>
</tr>
<tr>
<td>A-</td>
<td>612 - 631</td>
<td>C</td>
<td>496 - 524</td>
</tr>
<tr>
<td>B+</td>
<td>592 - 611</td>
<td>C-</td>
<td>476 - 495</td>
</tr>
<tr>
<td>B</td>
<td>564 - 591</td>
<td>D+</td>
<td>456 - 475</td>
</tr>
<tr>
<td>B-</td>
<td>544 - 563</td>
<td>D</td>
<td>408 - 455</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 408</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Exams:** The midterm exam will be in class on October 17th. The final exam will be on Carmen during Finals week and will be comprehensive. More details will be given closer to exam time.

**Project:** You will work in groups to create a report assessing the water quality of a river or lake in the United States. Grades will be assessed both individually and for the entire group. There will be several due dates throughout November.

**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. We prefer you to turn in homework on paper but if that is not possible, submitting it on Carmen in either .docx or .pdf formats is acceptable. Cell phone photographs of your homework will not be accepted for grading.

**In-Class Work:** In-class activities will periodically be collected to assess participation. Each activity is worth 5 points and this will happen 15 times over the semester.

**Online Quizzes:** Online quizzes will be posted on Carmen. This will occur 10 times during the semester and are worth 5 points. You may use your book and notes for these but please take them independently. You will have 2 attempts for each quiz. Quizzes will be posted by 9am on Thursday and due by 5pm on Sunday.

**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 2 business days of attending. I will put seminars I am aware of on Carmen. If you find others, please check if it is acceptable. Note that some seminars, including SENR’s, are also posted online so you may watch there, but still must do so within the time limit. Check Carmen for full assignment details.
Class Policies

Please Ask for Help
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.

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.

Note About Assignment Deadlines
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. If you need flexibility with a deadline, please ask before the due date (if at all possible) so I have more options to help you.

Classroom Behavior
We are tightly packed in the classroom. 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 distract those around you (trust me, if you are reading your facebook page, everyone around you is reading your facebook page).

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/
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.

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.
Comittment to Diversity, Equity, & Inclusion

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 preferred name and pronoun. Please advise me of this preference early in the semester so I may make appropriate changes to my records.