2015

398-01 Environmental Seminar: Water Resources

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Environmental Seminar
Water Resources
BIOL 398 – Spring 2015

Tuesday & Thursday
11:30 - 12:45 PM

Instructor: Dr. Brent C. Blair
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Office: 209 Albers Hall, 745-4898

Office Hours: Tuesday & Wednesday 1:00 – 1:50 or by appointment

Course format
This course will use a discussion/seminar format as well as movies and class exercises to explore the interdisciplinary topic of water resources. In order for in-class discussions to function effectively where everyone is engaged, you must do the readings assigned for each class period! To ensure that this happens we will have periodic quizzes. In addition to reading the texts I expect students to prepare at least one discussion question for each class period. You should come prepared to present and discuss your question(s) during class. Attendance and active participation in all class activities is essential and required.

Water resources
“Water resources are sources of water that are useful or potentially useful. Uses of water include agricultural, industrial, household, recreational and environmental activities.”

Goals:
The purpose of this course is to explore critical water resource issues that affect our country and our world today. While we will spend time looking at water from a scientific standpoint (the water cycle, sources and availability) we will spend much of our time examining interdisciplinary issues surrounding scarcity, misuse (including pollution and overuse) and potential solutions to current problems. Within this framework we will address the many social, ethical, political, economic and cultural aspects underpinning water problems in much of the world. Particular attention will be paid to disenfranchised populations.

Readings:
Readings will be required on all days discussions are scheduled. Generally discussion readings will include 2-3 articles or book chapters. Some readings are quite long so don't try to finish all the readings at the last minute!
Readings: (cont.)

Required:

• “Water 4.0 – The Past, Present, and Future of the world’s Most Vital Resource” by David Sedlak (2014 Yale University Press)

Both titles are available online for very reasonable prices! Other than the two required texts the remainder of the readings will be available on-line on the course website (http://site.xavier.edu/Blairb/).

Assigned readings:

Assigned readings should be read BEFORE coming to discussions. I will assume that you have a basic understanding of the reading assignments.

Attendance:

Coming to class is mandatory and attendance will be taken. This course will be an interactive experience where you will be expected to think critically and interact with each other and myself. This cannot be accomplished without being present!!

Course Requirements

Written work:

Homework I

Homework questions will be posted online. All written assignments must be typed. (Due: Jan 20th)

Homework II

Homework questions will be posted online. All written assignments must be typed. (Due: Feb 26th)

Reflection I

Write a 2-3 page reflection on your personal beliefs about water conservation. Focus on the following questions: (1) Sustainability is a concept applied to renewable resource management. In your words define what that means for water resources and how it can be used in a changing and uncertain environment both with respect to water supplies and demands. (2) From what you have learned so far do you think that one’s personal water use should be an issue? Why or why not. (3) While exploring your water use did some areas surprise you? Do you think now or in the future (i.e., when you own your own home) you will attempt to conserve more water? (Due: Jan 29th)

Reflection II

Write a 2-3 page reflection on the questions answered for HW II about the availability of drinking water. You may focus on whatever you found most interesting about that assignment. Furthermore feel free to reflect on related drinking water issues that we have talked about so far or other issues you feel are important. (Due: Mar 10th)

Paper I

Write a 3-4 page essay on the “lessons” of the dust bowl and the Irish potato famine. How do these events relate to today? Do we have the potential for similar agricultural catastrophes today? You may focus on one or both of these papers. (Due: Feb 19th)

Paper II

The third and final paper (5-7 pages) will be on a topic of your choosing. Specifics of the paper and process of choosing a topic will be discussed in class. (Due dates: Mar 26th – topic due, Apr 23rd – paper due)
**Reading comprehension quizzes:**
Most weeks we will start class with a short in-class quiz on the required readings. The purpose of the quiz is to encourage you to do the reading prior to class. Questions will be short-answer format and will happen in approximately the first 10 minutes of class. You must be present during that time to take the quiz. There will be no make-up or late quizzes.

**Water Resource Presentation:**
Each student will be responsible for doing a 10-minute class presentation on the water resources of a selected country (or portion of a country). The presentation may focus on successes or challenges of the country in question. Any country can be selected but no duplicates will be allowed. The presentation should include (1) the origin of the water used in the country, (2) What problems and in what areas of the country the problems arise from, (3) what are the positive & negative impacts of how they use their water (i.e., is it sustainable)? (4 – very optional) give us a taste of your chosen country in the form of some sort of edible food, which may be shared with the class! Note it must contain water so that it is relevant to our class topic (-:-)

**Leading Discussion:**
Student groups (3 students) will be in charge of leading designated discussion periods. Each student will be assigned a group. Discussion topics and readings will be chosen by students but must be acceptable to your professor. You should look at the class schedule to make sure that your choice doesn’t overlap with currently scheduled discussions. You will be expected as a group to have detailed questions for discussion and/or an activity to deepen the classes understanding of the topic as well as 1-3 articles for the class to read. Students are expected to produce a short 1-2 page handout that outlines their presentation, which should be printed and given to me prior to the discussion. Grading will be based on your preparation and success of the day's discussion. This will require preparation! Readings should be available 1-week prior to the scheduled discussion.

**Participation:**
If you do not attend class, you cannot participate! If you are not adding your thoughts to the discussion you are not participating! This portion of your grade will be based on attendance and on your active involvement in the class. The first 15 min. of discussion will be spent talking about recent agricultural topics in the news. While not a requirement presenting current news articles to the class will reflect favorably on your participation grade.

**Grading**

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<th>Written Work</th>
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<td>Homework I</td>
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<td>Reflection I</td>
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<td>Paper I</td>
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<td>Paper II</td>
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<td>Final take home exam</td>
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<td><strong>TOTAL</strong></td>
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**Late Penalty:** Assignments are due at the beginning of class. Late assignments will be marked down 5% for each school day (or partial day) they are late.

**Final Grade:** Your course will be graded on a standard scale (i.e., not curved). If your score is close to the next letter grade (above or below) “+” and “-” grades will be used.

- **A** = 450 - 500 (90-100%) (90-92.9%=A-, 93-100%=A)
- **B** = 400 - 449 (80-89%) (80-82.9%=B-, 83-86%=B, 87-89%=B+)
- **C** = 350 - 399 (70-79%) (70-72.9%=C-, 73-76%=C, 77-79%=C+)
- **D** = 300 - 349 (60-69%) (60-66.9%=D, 67-69%=D+)
- **F** = < 300 (59% and below) (0-59%=F)