COURSE INFORMATION

Class Time: Thursdays, 3:30-6:10 pm
Classroom: School of Freshwater Sciences, Room 3097
Instructors: Linh Pham, Aaron Thiel, Val Klump
Office: Pham: SFS 2003F; Bolton Hall 857 (Main Campus)
Thiel: SFS 1047
Office Hours: Pham: Thursdays 2:00-3:15 pm or by appointment
Thiel: Mondays 12:00-1:15 pm or by appointment
Contact Information: Pham: linhpham@uwm.edu, 262-492-0993
Thiel: thiela@uwm.edu, 541-223-2527
Klump: vklump@uwm.edu, 414-382-1700

COURSE DESCRIPTION

This course will explore the impacts of economic, policy and management decisions on freshwater resources. More specifically, it will offer:

(i) A survey of major water policy topics, including water law (federal, state and local), municipal and ecological water management, and the role of science in the policy process. The primary focus will be on local, regional and national water policy, but some international topics will be covered.

(ii) A comprehensive development of the economic principles, reasoning and techniques for engineers, scientists and economists who wish to understand and evaluate current and emerging water issues and policies. Specifically, throughout this course, we will develop a sound understanding of the key principles related to water planning and economics; how economic principles can explain and inform the planning and management of water resources; and the challenges of water management in developed and developing country contexts.

PREREQUISITES

Previous courses in statistics, calculus and algebra, microeconomics, environmental science and/or limnology are recommended.

TEXTBOOKS AND READINGS

Required Texts


Additional Readings

Various academic journal articles, policy reports, popular press items, etc. All reading materials, other than the textbooks, will be available electronically on D2L.

GRADING POLICY

Grades for the course will be determined as follows:

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<th>Undergraduate</th>
<th>Graduate</th>
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<tbody>
<tr>
<td>Policy Brief</td>
<td>10%</td>
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<tr>
<td>Problem Sets (2)</td>
<td>20% (10% each)</td>
<td>20% (10% each)</td>
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<tr>
<td>Midterm Exams (2)</td>
<td>40% (20% each)</td>
<td>40% (20% each)</td>
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<td>Research Proposal</td>
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<td>Literature Review</td>
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<td>In-Class Discussion</td>
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Deadline extensions for assignments, exams and the final projects will be granted only under extenuating circumstances. Like, real extenuating.

ATTENDANCE

Attendance is strongly recommended. If you miss a class, please obtain a copy of the class notes from a classmate. It would be unfair to others if we give you our notes or offer you a personal lecture to make up for a missed class. If there are concepts you find confusing, we will happily go over them after class or during office hours.

EMAILS

Together with D2L, your UWM emails will be the primary means of electronic communication for this class. Please check your UWM email account regularly. Please note that emails should not be your first or primary means of asking questions. We will try to answer questions over emails if they are concise and clear, but we are likely to request you to come to office hours for a discussion. If you send us an email, please do so from your UWM email and please put “SFS 510” in the subject line.

CELL PHONES

Please turn off mobile phones and other telecommunication devices during class.

TIME ALLOCATION

To comply with a Higher Learning Commission requirement, this syllabus provides information on the investment of time by an average student to achieve the learning goals of the course. The amount of time that an average student should expect to spend on this class, in order to achieve the learning goals of the course, is given below:

- Time in the classroom (face to face instruction): 35 hours
- Time taking exams: 10 hours
- Time completing assignments: 30 hours
- Time for reading (preparation and study): 69 hours
- The total number of hours: 144 hours (48 hours/credit)
UNIVERSITY POLICIES

The Secretary of the University web site contains the university policies. 
http://www4.uwm.edu/secu/SyllabusLinks.pdf

1. Students with disabilities. Special accommodations are provided to meet learning and testing needs in a timely manner. http://www4.uwm.edu/sac/SACltr.pdf

2. Religious observances. Accommodations for absences due to religious observance should be noted. http://www4.uwm.edu/secu/docs/other/S1.5.htm

3. Students called to active military duty. Accommodations for absences due to call-up of reserves to active military duty should be noted.  
Students: http://www4.uwm.edu/current_students/military_call_up.cfm
Employees: http://www4.uwm.edu/secu/docs/other/S40.htm (Editorially Revised, 3/25/09)

4. Incompletes. A notation of "incomplete" may be given in lieu of a final grade to a student who has carried a subject successfully until the end of a semester but who, because of illness or other unusual and substantiated cause beyond the student's control, has been unable to take or complete the final examination or to complete some limited amount of term work. http://www4.uwm.edu/secu/docs/other/S31.pdf

5. Discriminatory conduct. Discriminatory conduct will not be tolerated by the University. It poisons the work and learning environment of the University and threatens the careers, educational experience, and well-being of students, faculty, and staff. http://www4.uwm.edu/secu/docs/other/S47.pdf

6. Academic misconduct. Cheating on exams or plagiarism are violations of the academic honor code and carry severe sanctions, including failing a course or even suspension or dismissal from the University. http://www4.uwm.edu/acad_aff/policy/academicmisconduct.cfm

7. Complaint procedures. To be addressed by the academic unit in which the complaint occurred or the appropriate university office responsible for enforcing the policy. http://www4.uwm.edu/secu/docs/other/S49.7.htm

8. Grade appeal procedures. Procedures are available in writing from the respective department or the Academic Dean of the College/School. http://www4.uwm.edu/secu/docs/other/S28.htm

9. The final exam requirement, the final exam date requirement. http://www4.uwm.edu/secu/docs/other/S22.htm
COURSE SCHEDULE (REQUIRED READINGS ARE DENOTED BY “*”)

WEEK 1 (28 JANUARY) - POLICY INTRODUCTION

WEEK 2 (4 FEBRUARY) - WATER QUALITY

Readings
*A Twenty-First Century U.S. Water Policy, Chapter 5


Guest Speaker
Peter McAvoy - Adjunct Professor, UWM School of Freshwater Sciences

WEEK 3 (11 FEBRUARY) - WATER QUANTITY

Readings
*A Twenty-First Century U.S. Water Policy, Chapters 1, 2


Guest Speakers
Cheryl Nenn - Riverkeeper, Milwaukee Riverkeeper
Will Kort - Phd. Candidate, UWM School of Freshwater Sciences

WEEK 4 (18 FEBRUARY) - MUNICIPAL WATER MANAGEMENT

Readings
*A Twenty-First Century U.S. Water Policy, Chapter 7


Guest Speaker
Chris Magruder - Community Environmental Liaison, MMSD
WEEK 5 (25 FEBRUARY) - ECOLOGICAL WATER MANAGEMENT

Readings
*A Twenty-First Century U.S. Water Policy, Chapter 6


Guest Speaker
Tim Ellinger – Associate Professor, UWM College of Nursing

WEEK 6 (3 MARCH) - THE WATER-ENERGY-FOOD NEXUS

Policy Brief Due

Readings
*A Twenty-First Century U.S. Water Policy, Chapters 8, 9


Guest Speakers
Brad Eggold - Southern Lake Michigan Fisheries Supervisor, Wisconsin DNR
Gloria McCutcheon - Former Director of the Southeast Region, Wisconsin DNR

WEEK 7 (10 MARCH) - WATER AND CLIMATE CHANGE

Mid-term Exam #1 Due

Readings
*A Twenty-First Century U.S. Water Policy, Chapter 10


Guest Speaker
Todd Ambs - Campaign Director, Healing Our Waters

SPRING BREAK (13-20 MARCH)
WEEK 8 (24 MARCH) - ECONOMICS AND STYLIZED FACTS

Readings


Guest Speaker

Cam Davis (Invited) - Senior Advisor to the Administrator, U.S. EPA

WEEK 9 (31 MARCH) - DETERMINING THE DEMAND AND SUPPLY OF WATER

Readings

*Water Resource Economics: The Analysis of Scarcity, Policies and Projects, Chapters 9, 10


WEEK 10 (7 APRIL) - WATER PRICING AND WATER MARKETS

Problem Set #1 Due

Readings

*Water Resource Economics: The Analysis of Scarcity, Policies and Projects, Chapters 7, 8, 10


**WEEK 11 (14 APRIL) - WATER MARKET FAILURES**

*Readings*

*Water Resource Economics: The Analysis of Scarcity, Policies and Projects, Chapter 4*


*Guest Speaker*

Dan Eagan – *Great Lakes Reporter, Milwaukee Journal-Sentinel*

**WEEK 12 (21 APRIL) - POLICIES FOR IMPROVING WATER QUALITY**

*Readings*


**WEEK 13 (28 APRIL) - COST-BENEFIT ANALYSIS**

*Readings*

*Water Resource Economics: The Analysis of Scarcity, Policies and Projects Chapter 6*


*Principles and requirements for federal investments in water resources*. Executive Office of the President: Council on Environmental Quality.


WEEK 14 (5 May) - WATER ISSUES IN DEVELOPING COUNTRIES

*Problem Set #2 Due*

*Readings*

*UN World Water Development Report 2015.*


WEEK 15 (12 May)

*Mid-term #2 Due*

WEEK 16 (19 May)

*Final Project Due*