GPP 543 (3) Sustainable Water Systems
Course Syllabus

Instructor          Office          Office Hours          Phone          Email
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Class Time & Place: Wednesday, 2-5pm in BUCH-B219:
https://learningspaces.ubc.ca/classrooms/buch-b219

Course Overview
This course examines ways to value, manage and sustain water systems for agriculture, industry, the built
environment, recreation and ecosystems. Topics include principles of water resource modeling and
integrated resource management, water accounting in time and space, supply and demand management,
and pros and cons with decentralized and centralized solutions. Attention will be given to policy aspects
of service delivery, the multiple roles for government intervention, causes and consequences of
government policy responses in the water sector, including water system regulations. Special attention
will also be paid to the interrelationship between water and sanitation, integrated resource recovery, water
and energy, and relationships between water systems and human development.

Learning Outcomes
After actively participating in this course, students will be able to:
• demonstrate critical thinking about sustainable water systems.
• engage with major policy issues and concepts including water regulation, governance, and the
  water-energy-food nexus.
• discuss theoretical and substantive areas of water management for different human and natural
  uses.
• articulate methods used in evaluating sustainable water systems such as modeling, demand and
  supply management and water accounting.
• employ tools to evaluate real world case studies.

Course Format
This course combines lectures (including high-profile guest lectures from experienced water
professionals), student-led discussions, and in-class group activities. Discussions, policy briefs and
reports will require demonstrated knowledge of lectures and readings.

Course Requirements
This course is open to students who are enrolled in the Master of Public Policy and Global Affairs
program. Other graduate students can enroll upon approval of the instructor. A background in
environmental and economic policy as well as a basic understanding of hydrological cycles in natural and
built environments is useful, but not required.

There are no compulsory textbooks. Required weekly reading materials include journal articles and policy
reports, as listed in this document. Direct links are available via the Canvas system for the course:
https://canvas.ubc.ca/ or through the UBC library online course reserves: https://courses.library.ubc.ca/

Evaluation Criteria and Grading (details on following page)

1. Classroom discussion: facilitation and participation: 30 %
2. Policy Briefs (2 briefs; 15% each): 30 %
3. Case study (paper and presentation): 40 %
Discussion Facilitation and Participation – 30%
We will spend class time discussing the papers assigned in each week. For selected classes, small teams comprising of two or three students will be assigned as discussion leaders (teams and deadlines will be confirmed in class during Week 3). Discussion leaders will have two responsibilities:

1. First, they will be expected to prepare discussion questions prior to class. These questions may be broadly related to the general topic of the discussion and/or specific to the readings. They will be required to send the list of questions to all members of the class (including the instructors) by 4.00 pm the day before class so that classmates can consider the questions and come to class with prepared responses.

2. Second, during the actual class they will be expected to lead the discussion. Discussion leaders will provide background, depth, and the current view of the subject area. They will present this information and lead the discussion on the topic at hand. To prepare for this task, leaders should do extensive reading on the topic area and formulate an overall game plan for the session.

All class members will be expected to read all required readings for that week and to actively participate during the class discussions.

Policy briefs – 30% (each submission 15%)
Each student will need to submit two policy briefs over the course of the term. Submissions can focus on any of the topics discussed in papers identified on p.5 and p.6 within this course profile, with the stipulation that no two students may select the same study/topic. Please notify the instructor before 19 September regarding your two choices. The instructor reserves the right to reassign readings if more than 2 students select the same study.

Each policy brief should be limited to 3-4 pages in length and 1,500 words (additional tables, figures and other visuals are welcome). Further guidance for preparing the policy brief, marking criteria, and practical examples can be found on the Canvas site for this course. Due dates are as follows:

- Policy brief 1: Wednesday 3rd October
- Policy brief 2: Wednesday 24th October

Case study (paper and presentation) – 40%
By the end of the course, you will be required to submit a proposal for a study of a novel and important case in the area of sustainable water systems. The topic should be tangentially connected to the themes discussed in the course and examine a case study region/country that has not already been explored in detail within the class. The case study should include:

1. Motivation for the proposed study. (Why is it important to study this location?)
2. A thorough review of the relevant literature. (What has already been done in relevant areas of research?)
3. A clear statement of the intended contribution of the study. (How will it improve understanding?)
4. A theoretical framework for the proposed study. (What are the relevant theories, and how are you building up your theorizing based on the existing work?)
5. Intended policy recommendations. (Based on your analysis, in connection with your theoretical framework, what set of policy recommendations do you expect you would be able to make?)

Please notify the instructor before 24 October regarding your choice of study. Your case study paper is due in class by 2pm on Wednesday 21st November. Presentations lasting 5 minutes per student will be held in class on the same day.
Class Schedule & Compulsory Readings – direct links available through: https://courses.library.ubc.ca/

Week 1: Introduction
No required readings prior to class

Week 2: Humans and Water: Where we are today, where we are going tomorrow.
- Vorosmarty (2004). Humans transforming the global water system EOS.

Week 3: Sustainable development and water; Indigenous perspectives on water

Week 4: Balancing diverse needs for water: environment, ecosystem services, and the human right to water

Week 5: Water Foot-Print and Accounting; Integrated Water Resources Management

Week 6: Agricultural water use

Week 7: Cities and Towns, the urban environment

Week 8: Water use, reuse and stewardship within the industrial sector
Week 9: Designing water systems and understanding trade-offs

Week 10: Water governance, legislation and law

Week 11: Water pricing and privatization

Week 12: Case studies
No required readings this week; due date for case study presentations

Week 13: Partnerships for sustainable water governance

Optional readings to choose from for policy brief assignments:

Please choose readings from the following page as a basis for policy briefs. Please notify the instructor of your choices **before 19 September**. The instructor reserves the right to reassign readings if more than 2 students select the same case study.

Additional resources

Choose one of the following for Policy Brief 1:


Choose one of the following for Policy Brief 2:


Course Policies

Attendance
The UBC Calendar states that regular attendance is expected of students in all their classes. I have also made a special effort to organize high-profile external guest speakers throughout the course, and attendance is especially important on these occasions. Students who are unavoidably absent because of illness or other similar emergency should speak to me immediately on return to class. The University accommodates students whose religious obligations conflict with attendance, submitting assignments, or completing scheduled tests and examinations. Please let me know well in advance, preferably at the first class, if you will require any accommodation on these grounds. Students who plan to be absent for varsity athletics, family obligations, or other similar commitments cannot assume they will be accommodated, and should discuss their commitments with me before the deadline for dropping the course.

Students who may need to seek an academic concession or other forms of support should contact Academic Advising. Please keep me apprised of the process, so that we can work together to find an equitable solution.

Questions
We aim to generate an open and respectful learning environment and student participation is strongly encouraged. Please feel free to raise questions and comments about course content in class, or in office hours. As a general rule, I do not provide detailed responses to questions via email. Logistical questions are addressed here and on the course website; please check these sources before contacting your instructor.

Citation Styles
There is no mandated citation style for course assignments, but students must utilize one of the prominent forms (MLA, APA, Chicago) and do so consistently throughout their papers. Citation style guides are available on the UBC Library website (http://help.library.ubc.ca/researching/how-to-cite/).

Submitting Assignments and Late Penalties
Extensions to the assignment due dates will only be granted in cases of severe illness or similarly exceptional circumstances. Proof of absence must be provided in the form of a written document, either from Academic Advising or from a doctor. Please inform me of any such circumstances as soon as possible. Late assignments without acceptable mitigation will be penalized 5 points per 24-hour period, starting immediately after the class in which the paper was due. Assignments without appropriate documentation will not be accepted after the final examination.

Regrades and Appeals
If you wish to request a regrading of an assignment, you must submit a written statement (maximum of 1 page, single spaced) explaining why you believe that your paper did not receive the mark it deserved. Note that regrades may result in the mark increasing or decreasing. Please keep copies of your submitted assignments as well as those that have been returned.

Academic Integrity
The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you must not cheat, copy, or mislead others about what is your work. Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. For example, incidences of plagiarism or cheating may result in a mark of zero on the assignment or exam and more serious consequences may apply if the matter is referred to the President’s Advisory Committee on Student Discipline. Careful records are kept in order to monitor and prevent recurrences. A more detailed description of academic integrity, including the University's policies and procedures, may be found in the Academic Calendar at http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,54,111,0.
Plagiarism
Plagiarism, which is intellectual theft, occurs where an individual submits or presents the oral or written work of another person as his or her own. Scholarship quite properly rests upon examining and referring to the thoughts and writings of others. However, when another person's words (i.e. phrases, sentences, or paragraphs), ideas, or entire works are used, the author must be acknowledged in the text, in footnotes, in endnotes, or in another accepted form of academic citation. Where direct quotations are made, they must be clearly delineated (for example, within quotation marks or separately indented). Failure to provide proper attribution is plagiarism because it represents someone else's work as one's own. Plagiarism should not occur in submitted drafts or final works. A student who seeks assistance from a tutor or other scholastic aids must ensure that the work submitted is the student's own. Students are responsible for ensuring that any work submitted does not constitute plagiarism. Students who are in any doubt as to what constitutes plagiarism should consult their instructor before handing in any assignments.

http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,54,111,959

Access & Diversity
Access & Diversity works with the university to create an inclusive living and learning environment in which all students can thrive. The university accommodates students with disabilities who have registered with the Access & Diversity unit: [http://www.students.ubc.ca/access/drc.cfm]. Students must register with the Disability Resource Centre to be granted special accommodations for any ongoing conditions.

Religious Accommodation
The university accommodates students whose religious obligations conflict with attendance, submitting assignments, or completing scheduled tests and examinations. Students should let their instructor know in advance, preferably in the first week of class, if they will require any accommodation on these grounds. Students who plan to be absent for varsity athletics, family obligations, or other similar commitments, cannot assume they will be accommodated, and should discuss their commitments with the instructor before the course drop date. UBC policy on Religious Holidays:

UBC Statement on Respectful Environment for Students, Faculty and Staff
The University of British Columbia envisions a climate in which students, faculty and staff are provided with the best possible conditions for learning, researching and working, including an environment that is dedicated to excellence, equity and mutual respect. The University of British Columbia strives to realize this vision by establishing employment and educational practices that respect the dignity of individuals and make it possible for everyone to live, work, and study in a positive and supportive environment, free from harmful behaviours such as bullying and harassment.