

Syllabus for MSMGT 784 Sustainable Water Management SP20

Instructor Information

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Course Description

This course addresses practical applications of sustainability in aquatic environments. Topics covered include water and health, water quality and quantity, governance, assessing the aquatic environment, water treatment technologies, environmental mitigation, and impacts of climate change. Emphasis will be on selected areas of interest from the perspective of public health, engineering, and municipal conservation management.

Course Learning Outcomes

Definitions of sustainability inherently incorporate a systems thinking approach. This course explores sustainable water management from a human health and ecosystem perspective. This course is one of two specialty tracks available for this program. This course will require significant reasoning and writing skills in preparation for the Capstone course.

The objectives of this course are for students to gain the following:

- Understanding of the interactions between humans and the natural environment.
- Knowledge of governance and scientific methods used to maintain water resources.
- Ability to describe various water quality improvement measures.
- Appreciation for the role water plays in all aspects of sustainability and the future challenges posed by climate change.

Course Materials

Required Texts

Thirsty Planet: Strategies for Sustainable Water Management, 2004, by Constance Elizabeth Hunt; ISBN: 9781842772430

Water Resources: An Integrated Approach, 2013, by Joseph Holden; ISBN:978-0415602822

Sustainable Water Use and Management: Examples of New Approaches and Perspectives, 2015; by Walter L. Filho and Vakur Sümer (eds.); ISBN: 978-3-319-12394-3

World Water Atlas, 2009, by A. Carles and E. Petrella

http://www.theworldpoliticalforum.net/wp-content/uploads/wpf2009/02_peace_with_water_brussels/doc/atlas.pdf

Other Readings

Relevant peer-reviewed journal articles or other readings will be required throughout the course and are fair game for all papers and exams. Additional course-related readings and web resources will be recommended as part of each lesson.

Course Requirements

Class Participation

Students are required to participate in weekly discussions, exchanges, and/or shared experiences in response to a topic question introduced by the instructor as “food for thought” at the close of each lesson. Students are expected to articulate their viewpoint and understanding of the topic based on the assigned reading and additional sources from their own research. Points will be deducted for late discussion posts.

Writing Exercises

One or more topic writing exercises, in the form of a biosketch, abstracts, scientific poster and a short paper, will be assigned as part of each course unit. They are expected to be written to an acceptable standard, e.g., consistent with scientific peer-reviewed journal articles including complete citations. Exercise specific requirements will be provided at the start of each unit. Points will be deducted for late assignments.

Final Paper

The Final Paper (Paper 2) will be selected from a suite of topics (as per Abstract 3) and should not duplicate previous topic writing exercise material or previously submitted

papers (this or other courses). The final paper is expected to incorporate a broader range of interrelated topics and should be written in the style consistent with scientific peer-reviewed journal articles with complete citations. Points will be deducted for late submissions.

Final Exam

The Final Exam will be accepted on the date indicated in the calendar. The final exam will be cover material from the entire course. Students failing to turn in the final exam by the due date/time will receive no credit for the exam unless: (a) in case of illness, injury, or emergency the instructor is notified (by email) before the scheduled exam due date and (b) the student makes arrangements before the scheduled exam due date to take a make-up exam. Students taking a make-up exam before the scheduled exam will receive full credit; students taking a make-up exam after the scheduled exam period will have points deducted.

Grading Policy

Detailed rubrics are given in the course.

The final grade will be based on weekly class participation (14%), short writing assignments (36%), Paper 2 (25%), and Final Exam (25%).

Participation (20%)

Assignments Breakdown

Participation (14%)

Required weekly postings in response to the “Food for Thought” provided at the end of each lecture.

Short Writing Exercises (36%)

- Biography/Biosketch (4%)
- Abstracts (3 x 4%)
- Scientific poster (10%)
- Paper 1 (10%)

The abstracts will be graded and returned for revision prior to inclusion in the poster, Paper 1, and Final Paper (Paper 2).

Final Paper (Paper 2) (25%)

The Final Paper (Paper 2) will be selected from a suite of topics (as a continuation of Abstract 3) and should not duplicate previous topic writing exercise material or

previously submitted papers (this course or other courses). The final paper is expected to incorporate a broader range of interrelated topics and should be written in the style consistent with scientific peer-reviewed journal articles with complete citations. Points will be deducted for late submissions.

Final Exam (25%)

The final exam will be in essay format and will be comprehensive. All lecture material presented as well as required texts, external readings and multi-media offerings are fair game.

A	92.5-100
A-	89.5-92.4
B+	86.5-89.4
B	82.5-86.4
B-	79.5-82.4
C+	76.5-79.4
C	72.5-76.4
C-	69.5-72.4
D+	66.5-69.4
D	62.5-66.4
D-	59.5-62.4
F	= <59.5