

Syllabus for MSMGT 784 Sustainable Water Management

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

Information on course materials can be found in the [textbook section](#) of the SMGT website .

Relevant peer-reviewed journal articles or other readings will be required throughout the course. 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 abstracts, a poster and a short paper, will be assigned as part of each course unit. They are expected to be written to an acceptable standard, i.e., be 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 will be on a topic of choice by the student and should not duplicate individual topic writing exercise material or previously submitted papers. The final paper is expected to incorporate a broader range of interrelated topics covered during the course. This paper is also expected to 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 on the course syllabus. The final exam will 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 makeup exam. Students taking a makeup exam before the scheduled exam will receive full credit; students taking a makeup 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 (20%), topic writing exercises (30%), Final Paper (25%), and Final Exam (25%).

Participation (20%)

The participation portion of your grade will be comprised of two components:

- Biography/Biosketch (4%)
- Required weekly postings (one per week for 16 weeks) in response to the “Food for Thought” provided at the end of each lecture. Each posting is worth 1% of your final grade (16%)

Topic Writing Exercises (30%)

- Abstracts (4 x 2.5%)
- Scientific poster (10%)
- Paper 1 (10%)

Abstracts 2, 3 and 4 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 will be on a topic of choice by the student but should not duplicate individual topic writing exercise material, i.e., previous abstracts, poster or Paper 1. The final paper is expected to incorporate a broader range of interrelated topics covered during the course as defined in the task-specific instructions.

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.

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| 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 |

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| C- | 69.5-72.4 |
| D+ | 66.5-69.4 |
| D | 62.5-66.4 |
| D- | 59.5-62.4 |
| F | = <59.5 |