

THE GEORGE WASHINGTON UNIVERSITY
Environmental and Energy Management Program
EMSE 6295 Environmental Security
Syllabus

Instructor

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Bulletin Course Description

This course will deal with specific issues including bioterrorism and other weapons of mass destruction, intentional ecological destruction and effects on noncombatants, conflicts over resources with health implications (such as air, water and energy systems) and restoration of environmental services following disruption.

Prerequisites

No formal course prerequisites. It is assumed that students have had a basic engineering or science curriculum as an undergraduate. Ability to read and understand technical writing is required.

Required Text(s)

Author	Title
Graham Allison	"Nuclear Terrorism"
Elizabeth L. Chaleki	"Environmental Security"

The professor will provide handouts to address emerging world environmental security situations and issues.

Learning Outcomes:

As a result of completing this course, students will be able to:

1. Understand and have an introductory background in the emerging field of environmental security (including identification of environmental security problems, tools for prevention of breaches in environmental security, and response to such breaches) .
2. Understand the issues and perform at the entry level of environmental security positions in government or in the private sector. 3 hours of credit. Grading: Midterm (20%); Paper (25%); Final Exam (45%); Effective class participation (10%)

Class Schedule [week-by-week]

Date	Topic(s) and readings	Assignment(s) Due
8/30	Introduction to the Study of Environmental Security Readings: "Environmental Security" – pp1-23,	Readings

9/6	<p>“Nuclear Terrorism” – pp1-15; Handouts</p> <p>Environmental Security and Natural Resources. Readings: “Environmental Security” – pp. 26-60, “Nuclear Terrorism” – pp.1-15, Handouts</p>	Readings
9/13	<p>Environmental Security and Force Protection – complementary aspects of sustainable construction and security. Readings: “Environmental Security” – pp, 144-160, Nuclear Terrorism” – Chapter 2, Handouts</p> <p>Cyber-security and the role of intelligence gathering Infrastructure and Engineered methods for preventing environmental terrorism. Readings: Handouts</p>	Readings
9/20	<p>Renewable Energy and Environmental Security Readings: Handouts</p>	Topic for Paper Due
9/27/ 10/4, and 10/11	<p>Environmental Dispersion of Radiological Contaminants Readings: from "Nuclear Terrorism" to be assigned</p>	Readings
10/18 :	<p>Securing Environmental Infrastructure from Attack Readings: Water Sector Security Handouts</p>	Readings, Class Exercise: Water Infrastructure Security: Prevention, Mitigation, and Response
10/25	<p>Mid-term exam (20%)</p>	Mid-Term Exam
11/1	<p>Continuation of Session 10/18/2016</p>	Readings from Session
11/8 & 11/15	<p>Introduction to Chemical and Bioterrorism: Readings: “Environmental Security” – pp 66-100, Handouts</p>	Readings, Papers due 11/8/2016 (30% of Grade)
11/22	<p>Climate Resilience – Readings: Handouts</p>	Readings
11/29	<p>Review – FINAL EXAM TO BE ANNOUNCED</p>	Preparation for

		final
NOTE: In accordance with university policy, the final exam will be given during the final exam period and not the last week of the semester		

Grading

- midterm exam (25%)
- paper (30%),
- final exam (35%)
- class participation/attendance (10%)]

Assignments

A detailed breakdown of course assignments and due dates by lesson module. Including assignment descriptions, method of assessment/evaluation, and point value is recommended.]

Assignment	Description	Total Points
Paper	Topic to be discussed	30% of grade
	Total Possible Points	30 out of 100

University Policies

University Policy on Religious Holidays

1. Students should notify faculty during the first week of the semester of their intention to be absent from class on their day(s) of religious observance.
2. Faculty should extend to these students the courtesy of absence without penalty on such occasions, including permission to make up examinations.
3. Faculty who intend to observe a religious holiday should arrange at the beginning of the semester to reschedule missed classes or to make other provisions for their course-related activities

Support for Students Outside the Classroom

Disability Support Services (DSS)

Any student who may need an accommodation based on the potential impact of a disability should contact the Disability Support Services office at 202-994-8250 in the Rome Hall, Suite 102, to establish eligibility and to coordinate reasonable

accommodations. For additional information please refer to: gwired.gwu.edu/dss/

Mental Health Services 202-994-5300

The University's Mental Health Services offers 24/7 assistance and referral to address students' personal, social, career, and study skills problems. Services for students include: crisis and emergency mental health consultations confidential assessment, counseling services (individual and small group), and referrals. counselingcenter.gwu.edu/

Academic Integrity Code

Academic dishonesty is defined as cheating of any kind, including misrepresenting one's own work, taking credit for the work of others without crediting them and without appropriate authorization, and the fabrication of information. For the remainder of the code, see: studentconduct.gwu.edu/code-academic-integrity