



University of Missouri

Nonproliferation: Issues for Weapons of Mass Destruction UEA-602&602G/MU-NE4330&7330

Instructors

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Description

Weapons of mass destruction (WMDs) are a direct consequence of 20th-century technology. The challenges that we face in coming to grips with the awesome destructive power that WMDs hold will be a dominant theme of the 21st century. As citizens living within a pluralist society, we must gain a realistic understanding of the risks that WMDs present to our way of life. This knowledge will equip us to make decisions that can lead to the mitigation of these destructive forces. This course is designed to provide a foundation for those interested in nonproliferation issues of weapons of mass destruction and to provide an understanding of the proliferation risks of WMDs. We will also recommend a strategy to limit continued WMD proliferation by addressing the underlying reasons for their continued development and deployment.

Recommended Text

Nonproliferation Issues for Weapons of Mass

Destruction, Mark A. Prelas and Michael S. Peck. Marcel Dekker.

Pub. Date: January 2005. ISBN: 0824753399

Course Descriptions and Goals

General overview of energy systems, renewable and non-renewable energy sources, and advances in energy applications.

Grading

In-class discussions, group & individual projects and exercises.

Homework assignments (news article analysis posted on blackboard)

4 semester projects (1 – 2 page reports based on posted articles and text)

1 final project (10 page report on a topic pre-approved by the instructor)

Graduate Students will also submit a power point presentation of their final project.

Student attendance will not be taken.

The student is responsible for obtaining the materials presented in lecture in case of absence. Work must be turned in on time unless the student obtains the instructor's permission to turn in work late.

Grading will be based on:
homework participation (40%)
semester projects (30%)
final project (30%)

graduate students:

homework participation (30%)
semester projects (30%)
final project report (25%)
power point slides (15%)

Homework assignments will be posted on the discussion board of blackboard. You should post your analysis here as well as your responses to other student's analysis.

Grading of all writing assignments will be based on:

Quality of Writing 20%
Report Format 20%
Approach & Method 20%
Analysis 20%
Conclusion 20%

**Lesson plan : Lecture Outline Based on 16 Week Semester. Adjust as necessary for 8 week semester.
(W is week, D is day: e.g., W1D3 is week 1, Wednesday)**

Lesson #	Date	Topic	Reading	News Item
1	Wk 1 D1	Strategic Thinking: Lessons 1 and 2	Chapter 1	
2	Wk2 D1	Topic "What motivates proliferation"	Chapter 2	
3	Wk3 D1	Topic "What motivates proliferation continued? & What is a WMD?"		
4	Wk3 D3	Topic "What is a WMD continued": Lesson 2	first quarter of Chapter 3	
5	Wk3 D5	Topic "What is a WMD continued"	second quarter of Chapter 3	
6	Wk4 D3	Topic "Nuclear fuel cycle": Lesson 3	third quarter Chapter 3	
7	Wk4 D3	Topic "Making HEU"	Finish Chapter 3	
8	Wk5 D1	Topic Pu production: Lesson 4		
9	Wk 5 D3	Topic radioisotope production		

10	Wk6 D1	Topic radiation effects and nuclear blast: Lessons 5 and 6		
11	Wk7 D1	Topic Can nuclear materials be diverted?	first half of Chapter 4	
12	Wk7 D3	Topic Analysis of nuclear proliferation risks: Lesson 7	Finish Chapter 4	
13	Wk8 D1	Topic Biological weapons: Lesson 12		
14	Wk8 D3	Topic How are biological pharmaceuticals made? Lesson 13		
15	Wk 9 D1	Topic: Dual use facilities: Lesson 14		
16	Wk9 D3	Topic: What are the requirements to make BW?: Lesson 15	first third of Chapter 5	
17	Wk9 D3	Topic: What is the proliferation threat from BW?	second third of Chapter 5	
18	Wk 10 D1	Topic: Chemical weapons: Lesson 8	Chapter 5	
19	Wk10 D3	Topic: Description of the chemical industry: Lesson 9		
20	Wk11 D1	Topic: How are CW made: Lesson 10		
21	Wk11 D3	Topic: How are CW made: Lesson 11 and 11b		
22	Wk12 D1	Topic: How are CW made	Chapter 6	
23	Wk12 D3	Topic: Dual use facilities		
24	Wk13 D1	Topic: Treaties: Lesson 16	Chapter 7	
25	Wk13 D3	Topic: The future of WMD in a changing world: Lesson 17		
26	Wk14 D1 and D3	Topic: The future of WMD in a changing world	Chapter 8	
27	Wk15 D1	Topic: A strategy for dealing with proliferation		
28	Wk15 D3	Topic: Concluding discussion and power point presentations for graduate students		
Final	Wk16			