RPOS 497Z: Weapons of Mass Destruction and International Security

Professor: Bryan R. Early  
Class Times: MWF 1:40-2:35  
Room: Chemistry Building, Room 151  
Email: bearly@albany.edu  
Office Hours: Uptown, Humanities Building B16 – M 2:35-4:35 PM  
Downtown, Milne 300A – T 10:00-11:00 AM

Course Description

This course provides an overview of the threats posed to national and international security by chemical, biological, radiological, and nuclear weapons. Students will learn why these weapons should not all be considered “weapons of mass destruction” through exploring the risks and consequences of their use by state and non-state actors. The course will do this in part by delving into the technical and policy challenges related to these weapons’ construction. It will further address how CBRN weapons shape countries’ national security strategies and regional security dynamics. Efforts at the international level to restrict the use and proliferation of these weapons will also be explored. Students will be given three writing assignments throughout the semester, including a major research paper on a related topic of their choice.

Expectations

This is a reading intensive course and students will be expected to attend every class having read and prepared to discuss the assigned texts. Attendance is mandatory and will be especially important during the simulations. Students will be expected to turn in assigned work on time. Late work will face significant deductions.

Course Objectives

By the end of the semester, students should be able to:

- Describe the major technical challenges involved in the construction of chemical, biological, radiological, and nuclear (CBRN) weapons are
- Identify what makes certain types of CBRN weapons more effective for state actors and what makes certain types more effective for non-state actors
- Explain the major issues surrounding the proliferation of nuclear weapons and the role they play in international security
- Explain the nature of the threat posed by CBRN terrorism
- Discuss the regional security issues posed by nuclear weapons and the international efforts to prevent proliferation
- Apply their knowledge of CBRN issues to understanding contemporary events
Grading

Participation – 30%

Participation will be evaluated based upon the quality and regularity of students’ contributions to course discussions and the class debates. The instructor reserves the right to give pop quizzes that will factor into the participation grade if deemed necessary. Attendance will be factored into this grade.

Getting the Bomb Paper – 10%

Students will write a 4-6 paper on the major obstacles that states must overcome to acquire a military nuclear program capable of producing atomic bombs. Students should write this paper from a contemporary perspective. The paper should address the technical challenges, domestic political issues, and international political issues that may serve as obstacles for states’ efforts to acquire atomic bombs. The use of real-world examples is encouraged. Due 3/8.

Pick Your Poison Brief – 10%

Students will write a 3-4 brief paper on a chemical or biological weapons agent. This brief should be considered a primer for high-level policymakers on the particular agent, providing them with a summary description of the agent, the military and terrorism threat it poses, and the preparations the government should undertake to redress that threat. Due 3/22.

Research Paper – 30%

Students will write a 15-20 page research paper on a topic related to CBRN weapons, CBRN terrorism, international arms control or nonproliferation efforts, or regional security involving CBRN weapons. Students will submit a rough draft of their papers to receive comments from the instructor and a peer in class. The final draft will be evaluated by the instructor on its quality and the depth of the improvement made by the student from his or her initial draft.

Rough Draft (5%): Due 4/9
Peer Review (5%): Due 4/22
Final Draft (20%): Due 4/28

Final Exam – 20%

This will be a cumulative exam that will cover the entire semester’s course material. It will be very difficult to pass for students that do not keep up with the readings and attend lectures. Students should take detailed notes throughout the semester on their readings and during their lectures. Building a running study guide throughout the semester is also suggested.

Grading Policy

Tests and papers will be graded blind by the instructor and/or teaching assistant. If a student wishes to challenge how his or her exam or paper was graded, the student must submit a written
statement describing what part of their assignment was improperly evaluated and why they think that was the case. This must be done within five days of having the assignment returned. Both the instructor and assistant will re-grade the entire project, compare their assessments, and mutually decide on a final grade. This grade may be higher or lower than the original grade given and will be final. Any clear mistakes or errors made by the instructor will be promptly corrected.

Policy on Academic Honesty

Please familiarize yourself with the undergraduate bulletin’s descriptions of cheating and plagiarism. If you are involved in plagiarism or cheating on an exam or research paper, the penalty will be failure in the course and you will be reported to judicial affairs. If you are not sure if something violates standards – feel free to ask ahead of time. In general, it’s always better to err on the side of citing too much than too little in your research papers. The university’s official policy can be found at: <http://www.albany.edu/undergraduate_bulletin/2003-2004/regulations.html>. Lastly, never cite Wikipedia.

Accommodations

“Reasonable accommodations will be provided for students with documented physical, sensory, systemic, cognitive, learning and psychiatric disabilities. If you believe you have a disability requiring accommodation in this class, please notify the Director of Disabled Student Services (Campus Center 137, 442-5490). The office will provide the course instructor with verification of your disability, and will recommend appropriate accommodations.” For the University’s policy, see: <http://www.albany.edu/studentlife/dss/Accommodation.html>. If you wish to discuss academic accommodations for this class please inform the instructor as soon as possible.

Resources

This course will be very reading intensive. The readings come from a mixture of required texts, course reserve chapter and articles, and articles that students will be required to look up themselves. The instructor will indicate where the readings can be found in advance of their due dates.

Required Texts


Course Schedule

Day 1: First Day (1/20)

Introduction

Day 2: The WMD Concept (1/22)

Day 3: A Global Overview of Proliferation (1/25)

Nuclear Weapons

Day 4: History of Nuclear Weapons Development (1/27)

Day 5: How Nuclear Weapons Work and Consequences of Their Use (1/29)

Day 6: Why States Acquire Nuclear Weapons (2/1)
Day 7: Why States Acquire Nuclear Weapons (cont.) (2/3)

Day 8: Nuclear Restraint / Case Studies: Argentina and Germany (2/5)

Day 9: Nuclear Opacity and Hedging / Case Studies: Israel and South Africa (2/8)


Day 11: Processes for Acquiring Nuclear Weapons: Proliferation Networks (2/12)

Day 12: Nuclear Deterrence / Nuclear Compellence (2/17)

Day 13: Nuclear Deterrence / Nuclear Compellence (cont.) (2/19)
- Jeffrey Lewis. “Minimum Deterrence.” *Bulletin of the Atomic Scientists* 64(3): 38-41

Day 14: Nuclear Weapons and International Security (2/22)


**Limiting Nuclear Weapons Proliferation**

Day 17: The Nuclear Nonproliferation Treaty and IAEA (3/1)

Day 18: National Export Controls and Multilateral Export Control Regimes (3/3)

Day 19: UNSCR 1540 and Counter-Proliferation (3/5)

Day 20: NWFZs and Research Paper Discussion (3/8)

**** Getting the Bomb Paper Is Due****


**Chemical and Biological Weapons**

Day 21: Biological Weapons (3/10)


Day 22: Chemical Weapons (3/12)


Day 23: Chemical and Biological Weapons and the Dual-Use Dilemma (3/15)


Day 24: Why States Want Chemical and Biological Weapons (3/17)

Day 25: International Arms Control Efforts (3/19)

Ballistic Missiles
Day 26: Ballistic Missiles: Strategic Significance and Proliferation Issues (3/22)
**** Pick Your Poison Paper Is Due****

CBRN Terrorism
Day 27: Nuclear and Radiological Terrorism: Part I (3/24)

Day 28: Nuclear and Radiological Terrorism: Part II (3/26)

Day 29: Chemical Terrorism (4/7)

Day 30: Bioterrorism (4/9)
****Rough Drafts Due****

Day 31: National Security and the Prevention of CBRN Terrorism (4/12)

Day 32: Guest Speaker: Rick Matthews, Director of the National Center for Security & Preparedness (4/14)

**Regional WMD Security Issues**

Day 33: United States (4/16)

Day 34: Russia (4/19)
- *TBA Article on US-Russia START Negotiations.*

Day 35: *Simulation Preparation* (4/21)

****Papers Returned / Peer Evaluations Due****
Day 36: China (4/23)

Day 37: Iran (4/26)

Day 38: North Korea (4/28)

**Simulation**

Day 39: Simulation (4/30)

Day 40: Simulation (5/3)

Reading Day: Optional Lunch and Review Session