Fall 2020

Nuclear Weapons & International Security

Sara Bjerg Moller

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“Thus far the chief purpose of a military establishment has been to win wars. From now on its chief purpose must be to avert them. It can have no other useful purpose.” – Bernard Brodie

“General, I’ve fought just as many nuclear wars as you have.” – Alain Enthoven

COURSE DESCRIPTION

This course serves as an introduction to the study of nuclear security. Students are provided with the necessary background and knowledge base needed for understanding contemporary nuclear strategy and policy issues. How do nuclear weapons shape international politics? Why do some states build the bomb and not others? Is a world free of nuclear weapons really possible? What is the future of America’s nuclear alliances? Are the superpowers headed for another nuclear arms race? These are just some of the important questions covered in this course.

COURSE OBJECTIVES

By the end of the semester, students should have acquired knowledge and understanding of key concepts, theories, and debates involved in the study of historical and contemporary nuclear security issues. Students should also have developed the skills to analyze complex situations, synthesize information, and communicate effectively, both orally and in writing.

COURSE FORMAT

The course will run remotely, via a combination of asynchronous and synchronous Zoom sessions. Lectures will be run asynchronously, while discussion will be held synchronously each week during our assigned class time. Both types of class sessions – lectures and discussions – will be recorded and posted to Blackboard. More details will be provided during our first Zoom meeting, which will run synchronously on the scheduled date and time previously set by the Registrar.

Readings: The syllabus differentiates between two types of readings: Required; and Optional (i.e. recommended but not required). Class discussion as well as all course evaluation methods are organized around the required readings and materials (e.g. films), only. The optional materials are just that. They are intended to serve as a guide for those wishing to delve deeper into the subject matter on their own (i.e. outside of class) time. All required readings have been posted to Blackboard. Some (but not all) of the optional readings can also be found on Blackboard.

Audiovisual Materials: In addition to the required readings, students are expected to review the assigned audiovisual materials (e.g., audio recordings, videos, and games) before the class for which they are assigned. As with the readings, some of the audiovisual materials are required, while others are optional. Students are only expected to watch/listen/play those materials listed as required; not the optional ones. Links to these
materials can be found in the syllabus and/or on Blackboard. The 3 required films can be streamed via the links posted on Blackboard. For the best streaming quality, use the Chrome browser.

**DIPL 3120 Designated Library Research Page:** Librarian Lisa DeLuca has designed a one-stop tool for all your DIPL 3120 research needs. It’s a wonderful resource, so please use it. You can access it here: https://library.shu.edu/DIPL3120

**COURSE REQUIREMENTS**

*Participation (30%)* – Students are required to do the assigned readings and watch the required films prior to each class so they can be prepared to talk about them during class discussion sessions. In addition, students are expected to follow contemporary nuclear security developments in the news (e.g. arms control, DPRK, Iran, etc.)

*Regular class participation (10%):* Students are encouraged to participate in class discussions to the best of their ability and current circumstances. If your personal situation precludes you from participating in class discussions, please let me know (via email).

*Guest Speaker Participation Questions (10%):* We will have three guest speakers over the course of the semester. For the weeks where we will have guest speakers (Weeks 2, 8, 11) students are required to submit 3 questions they would like the guest lecturer to answer. The questions can address either the weekly topic (e.g. arms control, NATO, etc.) OR aspects related to the guest speaker’s career path (e.g. What is the most difficult decision you have had to make in your career so far?). Each student must post their questions on the appropriate Blackboard page no later than the **Tuesday (5:00 pm EST/EDT)** of the week of the guest lecture. Late submissions will be graded down. **NB:** The best questions are those that are informed by the readings. As such, students are strongly encouraged to do the readings for that week before submitting their questions in writing to Prof. Moller.

*Guest Speaker Blog-Posts (10%) –* Following each guest lecture, students will be responsible for posting short blog-posts (approx. 250 words) on Blackboard discussing what they learned from the guest speaker(s). The blog posts should be posted no later than 72 hours after the guest lecture.

*Quizzes (20%) –* There will be two quizzes (each worth 10%). The first quiz will take place in Week 4; the second quiz will take place in Week 10.

*Policy Memo (50%) –* Students will write two policy memos (each worth 25%) over the course of the semester. The first memo is due **October 30, 2020;** the second memo is due **December 14, 2020.**

**REQUIRED TEXT**


- Available at the campus bookstore and online (Kindle Price: $2.99; Paperback: $12), for purchase.

All other required readings and materials for this course can be accessed via Blackboard or using the links provided in the syllabus.
**COURSE PROCEDURES & POLICIES**

**Accommodations.** It is the policy and practice of Seton Hall University to promote inclusive learning environments. If you have a documented disability you may be eligible for reasonable accommodations in compliance with University policy, the Americans with Disabilities Act, Section 504 of the Rehabilitation Act, and/or the New Jersey Law against Discrimination. Please note, students are not permitted to negotiate accommodations directly with professors. To request accommodations or assistance, please self-identify with the Office for Disability Support Services (DSS), Duffy Hall, Room 67 at the beginning of the semester. For more information or to register for services, contact DSS at (973) 313-6003 or by email at DSS@shu.edu.

**Counseling.** The Office of Counseling and Psychological Services (CAPS) offers assistance to students in need of support. CAPS is located in Mooney Hall and can be reached at (973) 761-9500.

**Absences.** Students are expected to attend all class sessions and be on time, as well as participate in discussions. If a medical situation or other emergency arises students should inform the professor via email at the earliest possible opportunity as to the reason for their absence. Unexcused absences will bring down your participation grade.

**Athletes and Members of Other Student Groups.** It is the responsibility of the student to contact the professor about any extracurricular activities that may impinge on their attendance or participation in the course.

**Late or Incomplete Assignments.** Students who anticipate not being able to complete an assignment on time should inform me as soon as possible. Absent prior communication, failure to complete an assignment on its due date will result in a grade penalty. All late assignments will be penalized by one-third letter grade per day (i.e., an A assignment turned in one day late is an A-, two days late a B+, etc.) except in cases of medical/family emergency or COVID-related issues. See COVID Ground Rules.

**Incompletes.** Incompletes will be given only in exceptional cases for emergencies. Students wishing to request a grade of Incomplete must provide documentation to support the request accompanied by a Course Adjustment Form (available from the Diplomacy Main Office) to the professor before the date of the final examination. If the incomplete request is approved, the professor reserves the right to specify the new submission date for all missing coursework. Students who fail to submit the missing course work within this time period will receive a failing grade for all missing coursework and a final grade based on all coursework assigned. Any Incomplete not resolved within one calendar year of receiving the Incomplete or by the time of graduation (whichever comes first) automatically becomes an “FI” (which is equivalent to an F). It is the responsibility of the student to make sure they have completed all course requirements within the timeframe allotted. Please be aware that Incompletes on your transcript will impact financial aid and academic standing.

**Easter Egg:** As a reward for reading this far, I will add a point to your lowest quiz score if you send me an email with the name of a nuclear weapon in the US arsenal by 5:00 pm EDT on September 1, 2020.

**Extra Credit.** There will be no opportunities for extra credit assignments in this course (other than the one hidden in this syllabus) so do not bother asking for them. If you are struggling in the course, PLEASE book an appointment using https://profmoller.youcanbook.me/. Do not wait until the last week of the course to ask for help. See COVID Ground Rules.

**Grade Appeals.** Grades in this course are not negotiable. If you believe a calculation error has been made in the grading of your assignment, you may make a formal appeal. All appeals should be made in writing and sent to the professor via email.

**Plagiarism, Cheating and Academic Integrity.** Plagiarism and other forms of academic dishonesty will be reported to the administration, and may result in a lowered or failing grade for the course and up to possible dismissal from the School of Diplomacy. See University and School standards for academic conduct here:
Email. Before emailing the professor, students should read the syllabus in its entirety. Often, the answer has already been provided for you. If you are unable to locate the answer to your question, you may send me an email. However, I reserve the right to respond to your email with the words: “Read the syllabus” (or a meme to that effect,) which indicates that the answer to your question is found in the syllabus.

Additional Email Instructions:

- Students should include the name of the course in the subject line of the email, e.g., Subject “DIPL 3120 AA (or AB): Question about Film.” Doing so will enable me to locate your email more quickly and, thus, respond more promptly.
- Students should communicate professionally, avoiding informal salutations (e.g. “Hey Prof!”), casual language, and emoticons. Treat any communication as you would with your (future) employer. This is a professional relationship. Would you ask your boss to do X? If not, odds are you shouldn’t be asking me, either. That being said, we are living through a pandemic. See COVID Ground Rules.
- Please keep your communications brief. Complicated questions or issues are best discussed during Zoom office hour appointments.
- Remember your professor is human and (on occasion) sleeps, so it may take her a day to respond.

Office Hours: Office hours will be conducted via Zoom. To book an appointment, go to https://profmoller.youcanbook.me/. I have blocked out M-W 4:30-5:50 pm each week but if these slots fill up or you are unable to make one of these times, send me an email and we will work something out. You can reschedule and cancel appointments using this website, and it will also autogenerate a Zoom link for our meeting, so it should make all of our lives a little bit easier.

Understanding what office hours are: Office hours are opportunities for you and the professor to discuss the material presented in class or other related interests you have. There are no lesson plans for these interactions; instead the onus is on you to come prepared with any questions or issues you might like to discuss. For more background on what to expect, see http://lsc.cornell.edu/wp-content/uploads/2015/10/What-Are-Office-Hours.pdf

Understanding what professors do: Professors do much more than teach. If you’re curious about what professors do for a living, see: https://www.forbes.com/sites/marshallshepherd/2018/07/19/professors-are-often-asked-what-do-you-teach-they-do-far-more/#4d3537ae1745

COVID Ground Rules¹: We’re in a global pandemic. These are scary times. If you tell me you are struggling, I am not going to judge you or think less of you. You do not owe me personal information about your health (mental or physical) or living circumstances (and, for your sake as well as mine, I would prefer if you not get into specifics). If you have to miss a class, need extra help, or more time on an assignment, JUST ASK. I will work with you. If I can’t help you, I usually know someone who can. There are LOTS of campus resources (both virtual and in-person) available; use them. So, let’s agree on some ground rules: I will try my best and you will try your best. I will cut you some slack, provided you communicate with me about your constraints. And expect you to cut me some slack, too.

¹ Hat tip to Chris Jones (Twitter: @ProfChrisMJones), Topeka, Kansas, and Ryan Briggs (@ryanbriggs), Guelph, Ontario.
Disclaimer. I reserve the right to make changes to the syllabus in the course of the semester. Students will be given ample warning of any changes.
## COURSE SCHEDULE

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<th>Week</th>
<th>Date</th>
<th>Topic</th>
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<td>1</td>
<td>August 27, 2020</td>
<td>Introduction and Course Overview &amp; Library Session: Doing Research Virtually</td>
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<td><strong>Guest Lecturer: Lisa Deluca</strong></td>
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<td>2</td>
<td>September 3, 2020</td>
<td>Nuclear Weapons 101: Science &amp; Technology Primer</td>
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<td><strong>Guest Lecturer: Alex Wellerstein</strong></td>
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<td>(DQs due Tuesday, September 1, 2020 @ 5:00 pm EDT)</td>
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<td>3</td>
<td>September 10, 2020</td>
<td>Early Nuclear History: From Manhattan to Hiroshima</td>
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<td>September 17, 2020</td>
<td>Race for the Hydrogen Bomb</td>
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<td>September 24, 2020</td>
<td>The Nuclear Revolution</td>
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<td>October 1, 2020</td>
<td>American and Soviet Approaches During the Early Cold War</td>
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<td>October 8, 2020</td>
<td>Nuclear Acquisition &amp; Restraint</td>
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<td>October 15, 2020</td>
<td>Arms Control from a Practitioner’s Perspective</td>
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<td><strong>Guest Lecturer: The Hon. Rose Gottemoeller</strong></td>
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<td>(DQs due Tuesday, October 13, 2020 @ 5:00 pm EDT)</td>
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<td>9</td>
<td>October 22, 2020</td>
<td>Theories of Extended Deterrence</td>
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<td>NATO Nuclear Planning and Strategy During the Cold War</td>
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<td>November 5, 2020</td>
<td>NATO Nuclear Planning and Strategy Today</td>
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<td><strong>Guest Lecturer: Jessica Cox</strong></td>
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<td>(DQs due Tuesday, November 3, 2020 @ 5:00 pm EST)</td>
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<td>12</td>
<td>November 12, 2020</td>
<td>Command and Control</td>
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<tr>
<td>13</td>
<td>November 19, 2020</td>
<td>A New Cold War? China, Russia, and U.S. nuclear strategy in the 21st century</td>
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</tbody>
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2 Social Sciences Librarian, Seton Hall University  
3 Assistant Professor, Stevens Institute, and creator of NUKEMAP  
4 Payne Distinguished Lecturer, Stanford University, and former Deputy Secretary General of NATO (2016-2019)  
5 Director, Nuclear Policy Directorate, NATO International Staff
Part I: Introduction and Basics of Nuclear Weapons

Week 1: Course Introduction & Overview (August 27, 2020) [31 pages]

Required

Read:


Watch:

“Dr. Strangelove or: How I learned to stop worrying and love the bomb” (1964) [1:34:00 minutes] (On Blackboard)

Optional

Read:


Watch:

Irwin Redlener, “How to survive a nuclear attack.” TED Talk. February 2008 [25:00 min]

Week 2: Nuclear Weapons 101: Science & Technology Primer (September 3, 2020) [TBD]

Guest Lecturer: Dr. Alex Wellerstein, Stevens Institute of Technology

Required

Read:


Play:

Nuke Map @ [https://nuclearsecrecy.com/nukemap/](https://nuclearsecrecy.com/nukemap/)

Optional

Read:


Watch:

   Part 1: [https://www.youtube.com/watch?v=MnW7DxsJth0](https://www.youtube.com/watch?v=MnW7DxsJth0) [1:05:28 min]
   Part 2: [https://www.youtube.com/watch?v=MnW7DxsJth0&t=35s](https://www.youtube.com/watch?v=MnW7DxsJth0&t=35s) [45:03 min]

   Matthew Bunn. 2013. “How nuclear weapons work, 1/2.” (Slides available [here](https:).
   Matthew Bunn. 2013. “How nuclear weapons work, 2/2.” (Slides available [here](https:).

   *The Day After Trinity* (1981) [1:28:41 min]

Week 3: Early Nuclear History: From Manhattan to Hiroshima (September 10, 2020) [90 pages]

Required
Read:


Robert Serber, *The Los Alamos Primer* (Berkeley: University of California Press, 1992), pp. 1-4, 33-38, 56-61, **AND** 77-83 (i.e., Frisch–Peierls Memorandum). Don’t worry about the equations; focus on the philosophical issues the Primer raises. [23]


Listen:

BBC Radio announcement of Hiroshima (August 6, 1945) (MP3, 552KB)

Watch:

(1) *Hiroshima Nagasaki August 1945* (27:57)

**Warning:** This film contains graphic footage of the devastation wrought by the atomic bomb on Hiroshima and Nagasaki and their inhabitants. Viewer discretion advised.


Lesson 4: Maximize Efficiency [00:30:50-00:39:30 min]

Lesson 5: Proportionality should be a guideline in war [00:39:30-00:48:40 min]

Lesson 9: In order to do good, you may have to engage in evil [1:25:10-1:29:25 min]

Optional

The "Smyth Report" is still one of the best surveys of the Manhattan Project available.


John Hersey, *Hiroshima* (New York: Random House, 1985), pp. 1-152. **Warning: This is a tough one to get through. Skim as much as you’re able.** (On Blackboard)


**Week 4: Race for the Hydrogen Bomb (September 17, 2020)** [67 pages] Quiz 1

**Required**

Read:


Watch:

**H-bomb “Ivy Mike”** (4:39 min)

**Optional**


**Part II: Nuclear Strategy during the Cold War**

**Week 5: The Nuclear Revolution (September 24, 2020)** [107 pages]

**Required**

Read:


Watch:


- Lesson 1: Empathize with your enemy [00:06:50-00:14:20 min]
- Lesson 2: Rationality will not save us [00:14:40-00:25:05 min]
- Lesson 11: You can’t change human nature [1:39:35-1:42:15 min]

Optional


Week 6: American and Soviet Approaches During the Early Cold War (October 1, 2020) [89 pages]

Required

Read:


- Escalation dominance and the escalation ladder: 3-15, 23-25, 37-51, 230-234 [38]
- Crisis Damage Limitation: 153-154 [1]


Optional


**Part III: Nuclear Proliferation and Arms Control**

**Week 7: Nuclear Acquisition & Restraint: Why (and why not?) obtain the bomb? (October 8, 2020)**

[77 pages]

**Required**

Read:


Maria Rost Rublee, Nonproliferation norms: Why states choose nuclear restraint (University of Georgia Press, 2009), pp. 1-34. [33 pages]


**Optional**

Read:


**Week 8: Arms Control (October 15, 2020) - Guest Lecturer: The Hon. Rose Gottemoeller**

**Required**

**Read:**


Rose Gottemoeller – Forthcoming (TBD)


**Listen:**


**Relevant Documents:**


Optional

Read:


Listen:


Part IV: Extended Deterrence

Week 9: Theories of Extended Deterrence (October 22, 2020) [48 pages]

Required

Read:


Optional


Week 10: NATO Nuclear Planning and Strategy During the Cold War (October 29, 2020) [89 pages] Quiz 2

Required

Read:


“The Soviet War Scare” President’s Foreign Intelligence Advisory Board (February 15, 1990), pp. v-xii; SKIM 65-76. [18]


Optional

Read:
Week 11: NATO Nuclear Planning and Strategy Today (November 5, 2020) [42 pages]

Required

Read:


Watch:

“Online Briefing on NATO’s Nuclear Deterrence.” RUSI, June 16, 2020. (1:08:19)

Part V: Contemporary Nuclear Challenges
Week 12: Command and Control (November 12, 2020) [270 pages*]

Required

Read:


*Don’t get scared off by the page count; this is a fast (yet scary) read.

Watch:

“The Day After”* (1983)
*Warning: Viewer Discretion Advised.

Play:
Download (FREE) and play Hair Trigger. Available here.

Optional

Read:


Week 13. A New Cold War? China, Russia, and US nuclear strategy in the 21st century (November 19, 2020) [111 pages]

Required

Read:


Keir Lieber and Daryl Press, The Myth of The Nuclear Revolution: Power Politics in the Atomic Age, pp. 31-65. [34]


Listen:


Optional

Read:


ADDITIONAL RESOURCES

(Available on the DIPL 3120 Library Page)


Manhattan Project – Interactive website: [https://www.osti.gov/opennet/manhattan-project-history/Resources/library.htm](https://www.osti.gov/opennet/manhattan-project-history/Resources/library.htm)

Wisconsin Project on Nuclear Arms Control, Nuclear Weapons Primer: [https://www.wisconsinproject.org/nuclear-weapons/](https://www.wisconsinproject.org/nuclear-weapons/)

Footage of historical weapons and nuclear weapons effects: [http://www.atomicarchive.com/Movies/index.shtml](http://www.atomicarchive.com/Movies/index.shtml)
Assignments

Policy Memo # 1

Instructions: Using the template provided (see Blackboard), write a decision memo addressing the prompt below. Your memo should be single-spaced; use Times New Roman size 12 font; include page numbers, and footnotes formatted according to the Chicago Manual of Style (again, see Blackboard).

Page Limit: 3 pages

Your memo is due by 5:00 pm EDT on October 30, 2020. Please upload your memo as a MICROSOFT WORD DOCUMENT using Safe Assign on Blackboard.

Prompt: It is July 15, 1945. President Truman has asked you to prepare a decision memo for him discussing whether – as well as where (i.e. what kind of target) and how (i.e. whether to give the enemy advance warning, etc.) – to use the gadget.

To assist you in this task, your aide has provided you with some background materials in the form of three documents (see below). Using these materials, make a recommendation to the president.

Documents for Policy Memo 1:

Assistant Secretary of War John J. McCloy, “Memorandum of Conversation with General Marshal May 29, 1945 – 11:45 p.m.,” Top Secret [3 pages]

Source: Record Group 107, Office of the Secretary of War, Formerly Top Secret Correspondence of Secretary of War Stimson (“Safe File”), July 1940-September 1945, box 12, S-1

“Notes of the Interim Committee Meeting Thursday, 31 May 1945, 10:00 A.M. to 1:15 P.M. – 2:15 P.M. to 4:15 P.M.,” n.d., Top Secret [17 pages]

Source: RG 77, MED Records, H-B files, folder no. 100

Memorandum from Arthur B. Compton to the Secretary of War, enclosing “Memorandum on `Political and Social Problems,' from Members of the `Metallurgical Laboratory' of the University of Chicago,” June 12, 1945, Secret [18 pages]

Source: RG 77, MED Records, H-B files, folder no. 76

Additional documents can be found here: https://nsarchive2.gwu.edu/nukevault/ebb525-The-Atomic-Bomb-and-the-End-of-World-War-II/
Policy Memo # 2

Instructions: Using the template provided (see Blackboard), write a decision memo addressing the prompt below. Your memo should be single-spaced; use Times New Roman size 12 font; include page numbers, and footnotes formatted according to the Chicago Manual of Style (again, see Blackboard).

Page Limit: 3 pages

Your memo is due by 5:00 pm EST on December 14, 2020. Please upload your memo as a MICROSOFT WORD DOCUMENT using Safe Assign on Blackboard.

Prompt: It is December 2020. The president/president-elect has asked you to prepare a decision memo for him on the status of the New START Treaty negotiations and U.S. options. To assist you in advising the president/president-elect on U.S. arms control efforts, your aide has provided you with some background materials (see below). Using these materials, make a recommendation to the president on the way forward.

Documents for Policy Memo 2:

