

Nuclear Governance - Spring
2018 Course Numbers: IR315 /
PO358 / HI335

Professor Cappella Zielinski
Professor Sarkar

Frederick S. Pardee School of Global Studies, Boston University

Course Time: M/W 4:30-5:45pm

Course Location: TBA

Professor Rosella Cappella Zielinski

Professor Jayita Sarkar

Email: cappella@bu.edu

Email: jsarkar@bu.edu

Office: 232 Bay State - Room 303

Office: 154 Bay State – Room 201A

Office Hours: W 2-4pm

Office Hours: M/Tu 10:30 am- noon

Or Skype by Appointment

Get an appointment: <https://jsarkar.youcanbook.me>

Skype Name: Rosellacappellazielinski

Nuclear Governance

Since the first nuclear weapons projects began in the early 1940s, governments have invested in the creation, management, life cycle extension, and demobilization of nuclear weapons and corresponding delivery capability infrastructure. In addition to domestic nuclear governance, both nuclear and non-nuclear states have invested in international nuclear governance, working together both informally and formally to regulate and monitor nuclear weapons.

This course examines how states administer their nuclear weapons and energy programs at the domestic and international levels. Together we will explore the financing, bureaucracies, military services, and government officials responsible for creating and maintaining nuclear weapons and energy. We will also explore the various intergovernmental organizations tasked to manage both vertical and horizontal nonproliferation including but not limited to the International Atomic Energy Agency, the Non-Proliferation Treaty, the Nuclear Suppliers Group, the Fissile Material Cut Off Treaty, and the various export control groups.

To understand domestic and international nuclear governance we delve into a series of cases: United States, India, Pakistan, EURATOM, Iran, and North Korea. Through these cases we will understand how the various states participated in and reacted to the various international governance structures.

This course is an intensive dive into nuclear governance. The course objectives are the development of a basic understanding of the politics and history of nuclear governance, an appreciation for a multidisciplinary approach combining political science, international relations, and history, and to encourage critical thinking about contemporary policy debates. In order to fully understand how states manage their nuclear weapons and meet our course objectives, we will be using a variety of sources and in-class activities. In regards to sources be prepared to read declassified documents as well as secondary sources. While documents will provide the base of the course, we will also have guest speakers visit the course throughout the semester. The course will also contain in class simulations in which you will act as the role of policymaker.

Readings: There are no required books for purchase for this course. Readings can be accessed through Blackboard or via the websites provided on the syllabus.

Working with Primary Documents: Throughout the semester we will be working with packets of primary documents curated by us as well as by government agencies, archives, and historical organizations. You will be expected to go through them *thoroughly*. Think about –

- When was the document written?
- What agency / institution / individual is responsible for / wrote the document? Position of the office or person who wrote the document?
- Format (e.g. briefing, memo, letter, transcript) of the document?
- Purpose of the document?
- Who was the intended audience for the document?
- What evidence / knowledge / insights did the intended audience gain from the document?
- How does this document fit in to the historical context?

Assignments: There are no makeup exams or simulations.

*Midterm Exam (in-class): **Wednesday, March 14**

*Simulation 1: Iran and Nonproliferation in the Middle East Strategy Study: **Wednesday, April 11; Write up due Wednesday, April 18**

*Simulation 2: TBA **Wednesday, April 25; Write up due Wednesday, MAY 2**

*Op-Ed/ Policy Brief: **MAY 2**

Simulations: These simulations are designed to put you in the role of the policymaker. You will be given a scenario and tasked, with your group, to advise the Head of State, official or organization in question, on future policy. For the simulation to be successful you **must** complete the weeks readings **before** coming to class that day. You will be graded on both your participation in class and a **1,000-word (including works cited)** write up of the simulation due the next class. The assignment will be given out at the end of the simulation. Simulation write-ups do not require extra research. You are only to use the readings assigned on the syllabus and draw from your experience during the simulation. **Note:** Attendance for simulations is **mandatory**. If you are not present on the day of the simulation you will receive a zero.

Attendance and Participation: Attendance for the course is **mandatory** and will be taken at the beginning of every class. **Be present and on time** or you will be marked absent. More than two unexcused absences will result in a zero for your attendance grade. Attendance is more than just coming to class. We expect you to fully read the material and **participate** by raising your hand in class and actively contributing to all group work and simulations.

Guest Speakers: We will XXX guest speakers come and give a lecture to our class. Again, attendance and participation is mandatory.

Date/Class: XXXX	Speaker: XXXX	Lecture Content: XXXX
Date/Class: XXXX	Speaker: XXXX	Lecture Content: XXXX
Date/Class: XXXX	Speaker: XXXX	Lecture Content: XXXX

Final Op-Ed / Policy Brief: Your final paper will be an Op-Ed on a current nuclear problem or event. It is to be anywhere between 750 and 1000 words but no longer than 1000 words. Detailed Op-Ed instructions and guidelines as well as examples can be found at the end of the syllabus.

Grades:

Attendance and Participation	20%
Midterm	20%
Simulation I	20%
Simulation II	20%
Op-Ed/Policy Brief	20%

Grading Scale:

A	93+
A-	90-92
B+	88-90
B	83-87
B-	80-82
C+	78-89
C	75-78

Extra:

In to receive news updates on current nuclear weapons topics, sign up below:

- IGCC Nuclear Newswire (register for monthly emails):
http://visitor.r20.constantcontact.com/manage/optin/ea?v=001_D6q8SmIH1rzMoJm8CbYBw%3D%3D
- The Bulletin of the Atomic Scientists's Daily "Nuclear Roundup":
<http://thebulletin.org/search/feature-type/nuclear-roundup>
- Newsletter of the Project on Nuclear Issues:
<https://docs.google.com/forms/d/e/1FAIpQLSclqBfsqMCk06un6Rf19P6vZGpXqAqmkxiVKQnPLYTlhIQvRA/viewform>

To find more primary source documents on your own here are some places to get you started:

- Foreign Relations of the United States (FRUS) Search Engine:
<https://history.state.gov/exist/apps/frus-dates/>
- See also, the FRUS collections: <http://uwdc.library.wisc.edu/collections/FRUS> (less recent) <http://history.state.gov/historicaldocuments> (more recent, by historian standards!)
- CIA Records Search Tool (CREST): <https://www.cia.gov/library/readingroom/advanced-search-view>
- Wilson Center Digital Archive, Nuclear History Collection:
<http://digitalarchive.wilsoncenter.org/theme/nuclear-history>
- National Security Archive: <http://nsarchive.chadwyck.com/home.do>
- Miller Center Tapes of U.S. Presidents, University of Virginia:
<http://millercenter.org/president>
- American Presidency Project, UC Santa Barbara:
http://www.presidency.ucsb.edu/index_docs.php
- Diplomatic Documents of Switzerland (DODIS): <https://www.dodis.ch/en>

Other

Disabilities: BU is committed to providing equal access to our coursework and programs to all students, including those with disabilities. In order to be sure that accommodations can be made in time for all exams and assignments, please plan to turn in your accommodations letter as soon as possible and no later than 14 days from the first exam/assignment. After you turn in your letter, please meet with your professor to discuss the plan for accommodations so we can be sure that they are adequate and you are supported in your learning. If you have further questions or need additional support, please contact the Office of Disability Services (access@bu.edu).

Academic Misconduct: Plagiarism and cheating are serious offences and will be punished in accordance with BU's Academic Conduct Code:

<http://www.bu.edu/academics/resources/academic-conduct-code/>

Managing Nuclear Weapons at the Domestic Level

Week 1 (January 22 and 24): Introduction to the Course: Governing Weapons of Mass Destruction. A snapshot of nuclear basics – Weapons, Delivery Systems, and Energy, (Professor Cappella Zielinski & Professor Sarkar)

Guiding Questions: What is a nuclear weapon and how do we distinguish it from other weapons of mass destruction? What is unique about nuclear energy? What is the relationship between nuclear energy and nuclear weapons?

- Younger, Stephen. 2009. *The Bomb: A New History*, New York: HarperCollins Publishers, **PP 14-30, 69-88 (On Blackboard)**
- "The Nuclear Fuel Cycle," World Nuclear Association, March 2017. Available online at <http://www.world-nuclear.org/information-library/nuclear-fuel-cycle/introduction/nuclear-fuel-cycle-overview.aspx>
- Deutch, John and Ernest J. Moniz, et. al., "The Future of Nuclear Power". Massachusetts Institute of Technology, 2003, **PP. 4-5, 7-12, 21-23**. Available online at <http://web.mit.edu/nuclearpower/pdf/nuclearpower-full.pdf>
- Koblentz, Gregory D. "The myth of biological weapons as the poor man's atomic bomb," *The Bulletin of the Atomic Scientists*, Roundtable, March 2015. Available online at <http://thebulletin.org/winter-safe-deterrence-debate/myth-biological-weapons-poor-man's-atomic-bomb>
- Calamur Krishnadev. "How Is Syria Still Using Chemical Weapons?," *The Atlantic*, April 2017. Available online at <https://www.theatlantic.com/international/archive/2017/04/syria-chemical-weapons-attack/521883/>

Week 2 (January 29 and 31): US Nuclear Civilian and Military Bureaucracy: From the Manhattan Project and the Early Years (Professor Cappella Zielinski)

Guiding Questions: What were the considerations taken into account when deciding to invest in the nuclear fission process for weapons? What inputs were needed (i.e. natural resources, money, people) in order to create a nuclear weapon? What organizations and agencies were created and took part in the process?

- Manhattan Project
 - We will use documents from National Security Archive Electronic Briefing Book No. 525, “The Atomic Bomb and the End of World War II” edited by William Burr. You can access it here: <http://nsarchive2.gwu.edu/nukevault/ebb525-The-Atomic-Bomb-and-the-End-of-World-War-II/>. Note: All documents are highlighted in red and are embedded hyperlinks on the website.
 - Reading assignments from “The Atomic Bomb and the End of World War II”
 - Please skim the frontal matter titled “The Atomic Bomb and the End of World War II: A Collection of Primary Sources.”
 - Section I. Background on the U.S. Atomic Project; **Read the narrative to the documents as well as the documents.**
 - Documents to read: **1A; 2A (pages 1-7 only); 2B; 3; 4**
 - Section II. Targeting Japan; **Read the narrative to the documents as well as the documents.**
 - Documents to read: **11; 16; 18.**
 - Direct document links (in case of any problems):
 - Document 1A: <http://nsarchive.gwu.edu/nukevault/ebb525-The-Atomic-Bomb-and-the-End-of-World-War-II/documents/001a.pdf>
 - Document 1B: <http://nsarchive.gwu.edu/nukevault/ebb525-The-Atomic-Bomb-and-the-End-of-World-War-II/documents/001b.pdf> (Pages 1-7 only)
 - Document 2B: <http://nsarchive.gwu.edu/nukevault/ebb525-The-Atomic-Bomb-and-the-End-of-World-War-II/documents/002b.pdf>
 - Document 3: <http://nsarchive.gwu.edu/nukevault/ebb525-The-Atomic-Bomb-and-the-End-of-World-War-II/documents/003.pdf>
 - Document 4: <http://nsarchive.gwu.edu/nukevault/ebb525-The-Atomic-Bomb-and-the-End-of-World-War-II/documents/004.pdf>
 - Document 11: <http://nsarchive.gwu.edu/nukevault/ebb525-The-Atomic-Bomb-and-the-End-of-World-War-II/documents/011.pdf>
 - Document 16: <http://nsarchive.gwu.edu/nukevault/ebb525-The-Atomic-Bomb-and-the-End-of-World-War-II/documents/016.pdf>
 - Document 18: <http://nsarchive.gwu.edu/nukevault/ebb525-The-Atomic-Bomb-and-the-End-of-World-War-II/documents/018.pdf>

Guiding Questions: Once the bomb was created, what came next? Do you share nuclear energy / weapons with the world? Who was to manage them within the United States? What facilities comprise the US nuclear landscape?

- Early Civilian Bureaucracies: The Baruch Plan of 1946, the Atomic Energy Commission, the Nuclear Regulatory Commission, and the Energy Research and Development Administration
 - Brown, Robert. 2015. *Nuclear Authority*. Washington, DC: Georgetown University Press, **Pgs 42-44 (On Blackboard)**
 - Harry S. Truman: "Special Message to the Congress on Atomic Energy." October 3, 1945. Access here - <http://www.presidency.ucsb.edu/ws/?pid=12327>
 - Gerald R. Ford: "Statement on the Energy Reorganization Act of 1974," October 11, 1974. Access here - <http://www.presidency.ucsb.edu/ws/?pid=4452>
 - Ford Library Documents (**PDF pages 3-6, 13-14**). Access here - <https://www.fordlibrarymuseum.gov/library/document/0055/1668709.pdf>
 - Buck, Alice. 1983. *The Atomic Energy Commission*. Washington DC: U.S. Department of Energy, **Pgs 1-12; 15-19 (On Blackboard)**
 - Recommended: For a helpful chronology of events, statistics, and budgets see pages 24-26, 31-41

Guiding Questions: Why the Air Force? How was strategic air offensive doctrine initially received and why was it eventually embraced? How did the emphasis on a nuclear strategic offensive effect the Air Force? What is the Strategic Air Command? How did the armed services work with scientists and industries to advance nuclear research?

- Army Air Force (AAF), the U.S. Air Force (USAF), and Strategic Air Command (SAC)
 - Converse III, Elliott V. 2012. *Rearming for the Cold War, 1945-1960*, Washington, DC: Historical Office, Office of the Secretary of Defense, **Pgs 204-218**. Access here - http://history.defense.gov/Portals/70/Documents/acquisition_pub/OSDHO-Acquisition-Series-Vol1.pdf?ver=2014-05-28-103257-540
 - Recommended: Pgs 457-464
 - Document Recommendation: National Security Archive Electronic Briefing Book. "Air Force Histories." Accessed here - <http://nsarchive2.gwu.edu/nukevault/ebb249/index.htm>

Week 3 (February 5 and 7): US Nuclear Civilian and Military Bureaucracy: From the End of the Cold War to Present Times (Professor Cappella Zielinski)

Guiding Question: How do civilian and military bureaucracies ensure America's nuclear weapons infrastructure can survive a nuclear attack and that weapons are launched *only when they should be launched*?

- Command and Control
 - Blair, Bruce G. 1985. *Strategic Command and Control: Redefining the Nuclear Threat*. Washington, DC: The Brookings Institution, **Pgs 1-11, 50-78 (On Blackboard)**
 - Critchlow, Robert. 2006. "Nuclear Command and Control: Current Programs and Issues." Washington DC: Congressional Research Service, **Pgs 1-8, 12-26 34. (On Blackboard)**
 - We will listen to this in class: <http://www.radiolab.org/story/buttons-not-buttons/> (from 15:30 to end)
 - We will listen to this in class: <http://www.radiolab.org/story/nukes/> (from 5:00 to 45:00)
 - Document Recommendation: National Security Archive Electronic Briefing Book No. 43. "Launch on Warning: The Development of U.S. Capabilities, 1959-1979." Edited by William Burr. Accessed here - <http://nsarchive2.gwu.edu/NSAEBB/NSAEBB43/>
 - Document Recommendation: "The Air Force and Worldwide Military Command and Control System, " by Thomas A. Strum, USAF Historical Division Liaison Office, August 1966. Accessed here - <http://nsarchive2.gwu.edu/nukevault/ebb249/doc08.pdf>
 - Movie Recommendation: The Hunt for Red October (movie review - <http://www.nytimes.com/movie/review?res=9c0ce6dc1738f931a35750c0a966958260>)

Guiding Questions: What are current and future challenges to maintaining America's nuclear arsenal? Should the United States continue to keep the nuclear TRIAD or remove one leg?

- Managing Today's Arsenal
 - Younger, Stephen. 2009. *The Bomb: A New History*, New York: HarperCollins Publishers, **PP 117-132, 174-197 (On Blackboard)**
 - Woolf, Amy. 2017. "U.S. Strategic Nuclear Forces: Background, Developments, and Issues." Washington DC: Congressional Research Service. **(On Blackboard)**
 - Perry, William. 2016. "Why its Safe to Scrap America's ICBMs." *New York Times Op-Ed. (On Blackboard)*
 - Recommended: Congressional Budget Office. 2017. "Projected Costs of U.S. Nuclear Forces, 2017 to 2026." (On Blackboard)
 - Recommended: Klotz, Frank. "Commentary: Berlin and the Arms-Control Debate," *The National Interest*, June 27, 2013. Access here - <http://nationalinterest.org/commentary/berlin-the-arms-control-debate-8665>

Guiding Question: What are current and future challenges to maintaining America's nuclear energy infrastructure?

- Managing Nuclear Energy
 - Stratfor. 2015. "The Modest Future of US Nuclear Power." **(On Blackboard)**

- Holt, Mark. 2015. "Nuclear Energy: Overview of Congressional Issues." Washington DC: Congressional Research Service. **(On Blackboard)**
- Find your state!: <http://www.npr.org/2015/09/10/319535020/coal-gas-nuclear-hydro-how-your-state-generates-power>

Managing Nuclear Weapons at the Regional Level

Week 4 (February 12 and 14): European Atomic Energy Community (EURATOM) (Professor Sarkar)

Guiding Questions: How to share nuclear technologies with allies? What is the right balance between openness and safeguards? What about proliferation risks? What about alliance cohesion?

- Helmreich, Jonathan E. "The United States and the Formation of the Euratom." *Diplomatic History* 15, no. 3 (July 1991): 387-410.
- Krige, John "Euratom and the IAEA: The Problem of Self- Inspection." *Cold War History* 15, no. 3 (2015): 341-52.
- Downes, Robert J. "What is Euratom and why has it emerged as a Brexit battleground?," *The Bulletin of the Atomic Scientists*, July 2017. Available online at <http://thebulletin.org/what-euratom-and-why-has-it-emerged-brexit-battleground10969>
- "Euratom Debates NPT Safeguards," CIA Weekly Summary, 21 April 1967. Available online at https://www.cia.gov/library/readingroom/docs/DOC_0005284699.pdf
- Recommended: EURATOM Documents Collection, Wilson Center (for your further interest): <http://digitalarchive.wilsoncenter.org/collection/252/euratom>
- Recommended: Mallard, Grégoire. "Can the Euratom Treaty Inspire the Middle East? The Political Promises of Regional Nuclear Communities." *The Nonproliferation Review* 15, no. 3 (2008): 459- 77.

Week 5 (February 20 and 21): Nuclear Civilian & Military Bureaucracies in South Asia: India (Professor Sarkar)

****Note, Presidents' Day Holiday Monday February 19th; Substitute Monday Schedule of Classes on Tuesday****

Guiding Questions: What were some similarities and differences between the Indian and Pakistan path to nuclear energy / weapons and current civilian and military management of their respective nuclear programs?

How has the development of India and Pakistan's nuclear energy / weapons program different than the experiences of the US? What are the differences in contemporary nuclear energy / weapons program management?

- Bhabha, Homi Jehangir. "Science and the Problems of Development." *Science* 151, no. 3710 (Feb. 1966): 541-48. (On Blackboard)
- Bhabha, Homi Jehangir. "The Implications of a Wider Dispersal of Military Power for World Security and the Problem of Safeguards." Paper presented at the Proceedings of the Twelfth Pugwash Conference, Udaipur, India, Jan. 27-Feb. 1, 1964. (On Blackboard)
- Abraham, Itty. "India's 'Strategic Enclave': Civilian Scientists and Military Technologies." *Armed Forces & Society* 18, no. 2 (1992): 231-52.
- Sumit Ganguly. 1999. "India's Pathway to Pokhran II: The Prospects and Sources of New Delhi's Nuclear Weapons Program." *International Security* Vol. 23 No. 4, 148-177.
- Recommended Reading: Sarkar, Jayita. "The Making of a Nonaligned Nuclear Power: India's Proliferation Drift, 1964-1968." *The International History Review* 37, no. 5 (2015): 933-50.
- Kampani, Gaurav. "New Delhi's Long Nuclear Journey: How Secrecy and Institutional Roadblocks Delayed India's Weaponization." *International Security* 38, no. 4 (Spring 2014): 79-114.
- White, Richard B. 2014. "Command and Control of India's Nuclear Forces." *The Nonproliferation Review* Vol. 21 No. 3-4, 261-274 (On Blackboard)
- Documents on the Indian Nuclear Program
 - Building Intellectual Capacity (Homi J. Bhabha & TIFR): <http://digitalarchive.wilsoncenter.org/document/114188>
 - The Dual-Use Character of Nuclear Technologies: <http://digitalarchive.wilsoncenter.org/document/116948>
 - Burr, William. "The Nixon Administration and the Indian Nuclear Program, 1972-1974." In *Nuclear Proliferation International History Project Research Update*. Washington, D.C.: Woodrow Wilson International Center for Scholars, 2012. Available online at <https://www.wilsoncenter.org/publication/the-nixon-administration-and-the-indian-nuclear-program-1972-1974>
 - Sarkar, Jayita. "From the Peaceful Atom to the Peaceful Explosion: Indo-French Nuclear Relations During the Cold War, 1950-1974." *Nuclear Proliferation International History Project Working Paper Series* 3 (2013).
+ Documents at the end Available online at <https://www.wilsoncenter.org/publication/the-peaceful-atom-to-the-peaceful-explosion>

Week 6 (February 26 and 28): Nuclear Civilian & Military Politics in South Asia: Pakistan
(Professor Sarkar)

Guiding Questions: See questions in Week 5.

- Khan, Feroz Hassan. *Eating Grass: The Making of the Pakistani Bomb*. Stanford, CA: Stanford University Press, 2013.
 - Chapter 6: Punishing Pakistan

- Chapter 7: Mastery of Uranium Enrichment
- Chapter 8: Procurement Network in the Grey Market
- Narang, Vipin. 2009. "Posturing for Peace? Pakistan's Nuclear Postures and South Asian Stability." *International Security* Vol. 34, No. 3, 38-78.
- Recommended: Kerr, Paul K. and Mary Beth Nikitin. 2016. "Pakistan's Nuclear Weapons." Washington DC: Congressional Research Service. (On Blackboard)
- Recommended: Kampani, Gaurav and Bharath Gopaldaswamy. "How to Normalize Pakistan's Nuclear Program: Two Key Problems U.S. Negotiators Should Address." *Foreign Affairs* (16 June 2017). Available online at <https://www.foreignaffairs.com/articles/south-asia/2017-06-16/how-normalize-pakistans-nuclear-program>
- Documents on the Pakistani Nuclear Program
 - Nuclear Assistance by China:
<http://digitalarchive.wilsoncenter.org/document/134064> and
<http://digitalarchive.wilsoncenter.org/document/114315>
 - Capabilities as of 1978: <http://digitalarchive.wilsoncenter.org/document/119214> (pages 1-11 only)
 - Failed Nuclear Assistance by France:
<http://digitalarchive.wilsoncenter.org/document/112841>
<http://digitalarchive.wilsoncenter.org/document/112842>
<http://digitalarchive.wilsoncenter.org/document/112845>
 - 1985 U.S. Intelligence Estimate of Pakistan Nuclear Weapons:
<http://digitalarchive.wilsoncenter.org/document/116903>

WEEK 7: SPRING BREAK – NO CLASS MARCH 5 AND 7

Week 8 (March 12 and 14): MIDTERM EXAM WEDNESDAY MARCH 14

*Note: March 12 will be a Q&A style midterm Review

****The midterm exam covers weeks 1-6****

Managing Nuclear Weapons at the International Level

Week 9 (March 19 and 21): IAEA – Origins and Governance Structures (Professor Cappella Zielinski)

Guiding Questions: How can do states attempt to collectively manage and prevent nuclear proliferation? Whose responsibility is it? What can the International Atomic Energy Agency (IAEA) do and not do? What barriers do states face to international cooperation?

- Atoms for Peace and Eisenhower Documents (from the Eisenhower Library):

- https://www.eisenhower.archives.gov/research/online_documents/atoms_for_peace/Atoms_for_Peace_Draft.pdf (an easier to read version found here if you are interested <https://www.iaea.org/about/history/atoms-for-peace-speech>) and
- https://www.eisenhower.archives.gov/research/online_documents/atoms_for_peace/1953_09_17.pdf
- https://www.eisenhower.archives.gov/research/online_documents/atoms_for_peace/Binder8.pdf and
- https://www.eisenhower.archives.gov/research/online_documents/atoms_for_peace/Binder21.pdf

- Overcoming Barriers to International Cooperation and the Origins of the IAEA
 - Brown, Robert. 2015. *Nuclear Authority*. Washington, DC: Georgetown University Press, **Pgs 23, 32-36, 44-65 (On Blackboard)**

- The Organization and Operations of the IAEA
 - Fischer, David. 1997. *History of the International Atomic Energy Agency: The First Forty Years*. Vienna: International Atomic Energy Agency, **Pgs. 74-80, 143-145, 150-156, 158-160, 162-166, 170-172, 183-88, 192-193, 243-245, 325-327, 373-387 (On Blackboard)**
 - IAEA 2015. Safeguards Serving Nuclear Non-Proliferation. Vienna: International Atomic Energy Agency, Pgs. **6-20 (On Blackboard)**

- The IAEA and the (Mini) Case of Syria
 - Nuclear Threat Initiative – Syria: <http://www.nti.org/learn/countries/syria/nuclear/>
 - Nuclear Threat Initiative – Syrian Atomic Energy Commission (SAEC) – <http://www.nti.org/learn/facilities/446/>
 - Nuclear Threat Initiative Facilities Map – http://www.nti.org/gmap/nuclear_syria.html?/
 - Recommended: Hibbs, Mark. 2011. “The IAEA and Syria: A New Paradigm for Noncompliance?” *Carnegie Endowment for International Peace*. Washington DC. <http://carnegieendowment.org/2011/06/17/iaea-and-syria-new-paradigm-for-noncompliance-pub-44691>

Week 10 (March 26 and 28): Nonproliferation Treaty (NPT) – Origins and Effectiveness (Professor Sarkar)

Guiding Questions: What is nonproliferation? What differentiates nonproliferation from arms control? What are the most striking features of the NPT? What do those tell us about the major powers’ role in international cooperation in the nuclear realm?

- Popp, Roland. "The Long Road to the Npt: From Superpower Collusion to Global Compromise." In *Negotiating the Nuclear Non-Proliferation Treaty : Origins of the Nuclear Order*, edited by Roland Popp, Liviu Horovitz and Andreas Wenger, 9 - 35. Milton Park, Abingdon, Oxon ; New York, NY: Routledge, 2017. (On Blackboard)

- Krige, John. "The Proliferation Risks of Gas Centrifuge Enrichment at the Dawn of the NPT." *The Nonproliferation Review* 19, no. 2 (2012): 219-27.
- Text of the Treaty on Nuclear Nonproliferation, 1968. Available online at <http://www.un.org/en/conf/npt/2005/npttreaty.html>
- Gladstone, Rick. "A Treaty Is Reached to Ban Nuclear Arms. Now Comes the Hard Part," *The New York Times*, 7 July 2017. Available online at <https://www.nytimes.com/2017/07/07/world/americas/united-nations-nuclear-weapons-prohibition-destruction-global-treaty.html?mcubz=0& r=0>
- Negotiations for a treaty on the Prohibition of Nuclear Weapons, 2017. Available online at <https://www.un.org/press/en/2017/dc3723.doc.htm>
- NPT Safeguards Clause, Memo from ACDA Director to Secretary Rusk, Jan. 1967 <https://history.state.gov/historicaldocuments/frus1964-68v11/d172>
- Intelligence Memo, "Prospects for a Nonproliferation Treaty," Nov. 1968 <https://www.cia.gov/library/readingroom/docs/CIA-RDP70B00338R000300140003-7.pdf>
- Intelligence Memo, "The US, the USSR and the Issue of Nonproliferation," Jun. 1966. <https://www.cia.gov/library/readingroom/docs/CIA-RDP79T00826A000800300001-4.pdf>

Week 11 (April 2 and 4): Nuclear Suppliers Group, Zangger Committee, UNSCR 1540, PSI: Controlling the Nuclear Markets (Professor Sarkar)

Guiding Questions: What is the global atomic marketplace, and why does it need to be controlled? How can it be effectively controlled? What are the factors that impede implementation of regulations in this marketplace? How can we overcome these challenges?

- Burr, William. "A Scheme of 'Control': The United States and the Origins of the Nuclear Suppliers' Group, 1974–1976." *The International History Review* 36, no. 2 (2014): 252-76. (On Blackboard)
- Rabinowitz, Or and Jayita Sarkar. "It Isn't over until the Fuel Cell Sings': A Reassessment of U.S. And French Pledges of Nuclear Assistance in the 1970s." *Journal of Strategic Studies* (2017), advance access. (On Blackboard)
- Stewart, Ian J. . "Antiproliferation: Tackling Proliferation by Engaging the Private Sector." *Project on Managing the Atom Discussion Paper* (November 2012). Available online at <http://www.belfercenter.org/sites/default/files/files/publication/Antiproliferation-Layout-final.pdf>
- An Overview of UNSCR 1540 by Terry Taylor, Stimson Center, Oct. 2015. Available online at <https://www.stimson.org/sites/default/files/Stimson-1540-Overview%2029-Oct-15.pdf>
- National Security Archive Electronic Briefing Book No. 467, April 2014. Available online at <http://nsarchive2.gwu.edu/nukevault/ebb467/>
- NSG & Trigger List (with reference to France-Pakistan, 1970s): <http://digitalarchive.wilsoncenter.org/document/112846>

Week 12 (April 9 and 11): IAEA – Violations and Repercussions: The Iran Deal (Professor Cappella Zielinski and Professor Sarkar)

****SIMULATION APRIL 11th – ALL readings must be completed prior to class****

Guiding Questions: Why does Iran want the bomb? What does this mean for its neighbors? How likely is a nuclear/denuclearized Middle East? How has the international community been successful and unsuccessful at preventing Iran's proliferation? What role has the IAEA played in monitoring and reporting upon Iran's nuclear program?

- Background and History of Iran's Nuclear Program
 - Albright, David, and Andrea Stricker. "The Iran Primer." US Institute of Peace: Washington, DC. **(On Blackboard)**
- Preventing Iran from Getting the Bomb – US Efforts
 - Lindsay, James M. and Ray Takeyh. "After Iran Gets the Bomb," *Foreign Affairs*, Vol. 89, No. 2 (March/April 2010). **(On Blackboard)**
 - Edelman, Eric S., Andrew F. Krepinevich Jr., and Evan Braden Montgomery. "The Dangers of a Nuclear Iran: The Limits of Containment," *Foreign Affairs*, vol. 90, no. 1 (January/February 2011). **(On Blackboard)**
 - Recommended: IAEA Report. 2009. Islamic Republic of Iran - <http://www-pub.iaea.org/MTCD/publications/PDF/cnpp2009/countryprofiles/Iran/Iran2008.htm>
- Nuclear Proliferation in the Region
 - Saudi Arabia Promises to Match Iran in Nuclear Capability - <http://www.nytimes.com/2015/05/14/world/middleeast/saudi-arabia-promises-to-match-iran-in-nuclear-capability.html>
 - Guzansky, Yoel. "The UAE's Nuclear Push and the Potential Fallout for the Middle East," *Foreign Affairs*. February 2017. **(On Blackboard)**
- The Joint Comprehensive Plan of Action, Iran, and the IAEA
 - Belfer's "The Iran Deal: A Definitive Guide," **Pgs 1-16 only** - <http://belfercenter.ksg.harvard.edu/files/IranDealDefinitiveGuide.pdf?webSyncID=e36797e7-3cdb-2173-817c-40ea389c2238&sessionGUID=29ce3007-d04b-2e7d-5030-ba01ecdcd259>
 - BBC News. 2015. "Iran's Key Nuclear Sites" - <http://www.bbc.com/news/world-middle-east-11927720>
 - IAEA Board Report, "Verification and Monitoring in the Islamic Republic of Iran in Light of United Nations Security Council Resolution 2231 (2015)," 2 June 2017 - <https://www.iaea.org/sites/default/files/gov2017-24.pdf>
 - Hecker, Siegfried S. 2016. "For Iran, A Nuclear Option More Trouble than it was Worth." *Bulletin of the Atomic Scientists* **(On Blackboard)**
 - Stratfor. 2016. "Growth: Iran's Interest in Keeping the Nuclear Deal." **(On Blackboard)**

- Stratfor. 2017. “Iran: Looking for the Nuclear Deal’s Half-Life.” **(On Blackboard)**
- Stratfor. 2017. “Iran’s Energy Resurgence at Risk as US Grows More Confrontational.” **(On Blackboard)**
- Strategic Assessment
 - Marshall, Andrew W. and Roche, James, “Strategy for Competing with the Soviets in the Military Sector of the Continuing Political-Military Competition,” DOD Memorandum, 1976:<http://goodbadstrategy.com/wp-content/downloads/StrategyforCompetingwithUSSR.pdf>

Week 13 (April 18): Guest Speaker-led Session

Details TBD

****Classes Canceled April 16 – Patriots Day****

****SIMULATION WRITEUP DUE APRIL 18th IN CLASS****

Week 14 (April 23 and 25): Week 13 (April 18): CTBT(O) – The Case of North Korean Testing (Professor Cappella Zielinski and Professor Sarkar)

****SIMULATION APRIL 25th – ALL readings must be completed prior to class****

Guiding Questions: Why do states engage in nuclear weapons testing? What is the Comprehensive Nuclear Test Ban Treaty and why has the United States’ not ratified it?

- Comprehensive Test Ban Treaty
 - Medalia, Jonathan. 2008. “Comprehensive Nuclear-Test-Ban Treaty: Issues and Arguments.” Washington DC: Congressional Research Service, **Pgs 1-16, 19-46. (On Blackboard)**
 - Nikitin, Mary Beth D. 2006. “Comprehensive Nuclear-Test-Ban Treaty: Background and Current Developments.” Washington DC: Congressional Research Service, **Pgs 2-7, 15-21. (On Blackboard)**
 - Watch - <https://www.youtube.com/watch?v=JT6SIsTxEkU>

Guiding Questions: What is the Comprehensive Test Ban Treaty Organization? What role does it play regarding nuclear monitoring?

- Comprehensive Test Ban Treaty Organization
 - Read the “Who we are” section of the CTBTO website - <http://ctbto.org/specials/who-we-are/>
 - Watch the CTBTO Verification Regime Video - <http://ctbto.org/verification-regime/>

- Watch the CTBTO Seismic Network Video -
<https://www.youtube.com/watch?v=bx9YKVxvJ00>
- Watch the CTBTO Hydroacoustic Network Video -
<https://www.youtube.com/watch?v=IFomVoL92oM>
- Watch the CTBTO Infrasound Network Video -
<https://www.youtube.com/watch?v=GVWOA5pZG6o>
- Watch the CTBTO Radionuclide Network Video -
<https://www.youtube.com/watch?v=HDyU6nsUJqA>

Guiding Questions: Why does North Korea want nuclear weapons? Given the current environment, is it possible to denuclearize or contain North Korea nuclear weapons program?

- North Korea
 - Hecker, Sigfried S., "What I Found in North Korea", *Foreign Affairs*, December 9, 2010 **(On Blackboard)**
 - Cha, Victor D. "What Do They Really Want?: Obama's North Korea Conundrum," *Washington Quarterly*, vol. 32, no. 4 (2009). **(On Blackboard)**
 - Stratfor five part series – Assessing the North Korean Hazard **(On Blackboard)**
 - Watch the CTBTO 2013 Korean Nuclear Test Detection -
<https://www.youtube.com/watch?v=NbaQAo6yW40>
 - Broad, William J. et al. "This Missile Could Reach California. But Can North Korea Use It With a Nuclear Weapon?," *The New York Times*, 22 August 2017. Available online at
https://www.nytimes.com/interactive/2017/08/22/world/asia/north-korea-nuclear-weapons.html?_r=1

Week 15 (April 30 and May 2): Past, Present, and Future of Nuclear Governance (Professor Cappella Zielinski and Professor Sarkar)

****SIMULATION WRITEUP DUE MAY 2ND IN CLASS****

****OP-ED DUE MAY 2ND IN CLASS****

Guiding Questions: What lessons have states and the international community learned regarding nuclear governance? What will be the challenges of nuclear governance in the upcoming years?

Guidelines for the Op-Ed Assignment

Over the course of the semester, students will be required to craft a short opinion piece on any topic of their choice relevant to the politics of nuclear weapons and/or energy. Students can examine a contemporary case, an historical event, a policy debate, or any other issue relevant to the course, “Nuclear Governance.”

The length of the op-ed must be no longer than 1,000 words. Hence, the ability to express complex ideas within the confines of brevity is key. It will require clear thinking, conspicuous writing, and the use of appropriate language. The op-ed must have at least one key argument (no more than three arguments for brevity’s sake), and preferably (but not necessarily) a call to action.

The op-ed assignment will have to be backed up with at least two studies in political science and/or history relevant to the course. In other words, while you do not need a literature review as you might in a term paper, you do need to make reference to an academic study or two on the topic you are writing an op-ed on.

If you would like to run an idea for the op-ed assignment, please get in touch with us with a one-page document with the following items:

- Your argument in 2-3 sentences addressing the ‘what’ and ‘why’
- The academic studies which you will refer to
- How is this relevant to our course, “Nuclear Governance”?

Resources:

If you want to follow closely the styles of academics and analysts who frequently publish op-eds, you may want to take a look at the pieces published in the Monkey Cage blog (political scientists) and Made By History (historians), both hosted by the *Washington Post*. The links are below:

www.washingtonpost.com/news/monkey-cage/

www.washingtonpost.com/news/made-by-history/

Harvard Kennedy School, Shorenstein Center (this has further resources):

https://shorensteincenter.org/wp-content/uploads/2012/07/HO_NEW_HOW-TO-WRITE-AN-OPED-OR-COLUMN.pdf

The Op-Ed Project:

<https://www.theopedproject.org>