

# PLSC 130 / GLBL 260

## Nuclear Politics

Spring 2024

Meeting Time: Monday/Wednesday, 2:30-3:45pm

Classroom: Watson Center, A60

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Professor Matthew Fuhrmann

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**Office Hours:** Monday and Wednesday, 4-5pm. Please make an appointment at: <https://calendly.com/mcfuhrmann/office-hours>. If you are unavailable during my office hours, please email me to make an appointment at another time.

### Teaching Fellows

Haley Allen

[haley.allen@yale.edu](mailto:haley.allen@yale.edu)

Office Hours (Zoom):

Fridays, 2-3pm

<https://yale.zoom.us/j/3965459699>

Sign up in advance:

<https://calendly.com/haley-allen/office-hours>

Elyse Boldt

[elyse.boldt@yale.edu](mailto:elyse.boldt@yale.edu)

Office Hours (in person):

Mondays 1-2:10pm

Rosenkrantz Hall, 2nd Floor Common Area

Sign up in advance:

<https://calendly.com/elyse-boldt/elyse-boldt-office-hours>

If your last name begins with A–M, please contact Haley Allen as your primary teaching fellow. If your last name begins with N–Z, please contact Elyse Boldt.

## Course Description

Some of the most important global challenges over the last 75 years stem from nuclear weapons – the most destructive military technology ever invented. US Presidents have sought to use American nuclear forces to enhance the country’s security, while attempting to limit the spread of nuclear technology internationally. Observers sometimes paint nuclear weapons as relics of the Cold War, when the United States and the Soviet Union possessed massive nuclear arsenals aimed at one another’s territory. It is true that nuclear weapons were central to the Cold War. However, issues related to nuclear security remain critical even after the collapse of the Soviet Union. Significant international crises and events in recent memory can be traced back to nuclear weapons. This includes but is not limited to: the 1990-91 Persian Gulf War, the 1993-94 crisis with North Korea, Indian and Pakistani nuclear tests in 1998, the 2003 Iraq War, Israel’s surprise attack against Syria in 2007, Iran’s quest for nuclear technology and (possibly) a bomb, and the ongoing crisis over North Korea’s long-range missiles and nuclear forces. Understanding nuclear politics, therefore, remains critical.

## Student Learning Outcomes

The broad objectives of the class are to disseminate knowledge on a central issue in international security – the spread of nuclear weapons – and to facilitate interest in this topic. More specifically, by the end of the course, students will:

- Identify and analyze the technical dimensions of nuclear proliferation, including how nuclear bombs are made.
- Understand how nuclear weapons influence international peace and stability.
- Describe why some countries build nuclear weapons but others do not.
- Analyze the policy tools that governments and international organizations have in place to limit the diffusion of nuclear weapons.
- Critically assess the most significant contemporary nuclear challenges, including (but not limited to) the crises in Iran and North Korea.
- Recall the nuclear policies of strategically important countries.
- Understand the basics of evaluating arguments using social science tools.

## Course Policies

### *Academic Integrity*

It is the student's obligation to understand and abide by the university's policies on plagiarism and academic misconduct (see here). I will refer all cases of suspected misconduct to the appropriate Dean. If you have any questions about what constitutes plagiarism, please contact me.

### *AI Policy*

The use of ChatGPT or other AI composition software is not permitted in this course.

### *Late Work Policy*

I will accept assignments after the deadlines indicated in the syllabus, with the imposition of a penalty. I will subtract 10 points for each 24-hour period that an assignment is late. If extenuating circumstances arise, students may request that I waive this penalty. In that case, I will request a letter from your Dean.

## ***Re-grading Policy***

Students may request that assignments be re-graded if they believe that they have been unfairly evaluated. Requests for such re-evaluations must be delivered to me in typewritten form (these requests cannot be e-mailed) along with the assignment within one week after assignments are returned. The written statement must include specific reasons why the student believes the assignment was graded unfairly as well as their assessment of what grade they deserve. I will then re-grade the assignment. Note that the new grade may be the same, higher, or lower than the original grade.

## ***Diversity, Equity, Inclusion, and Belonging (DEIB)***

This course will invite a diversity of perspectives and foster a welcoming and inclusive environment. I believe that everyone has important ideas to contribute, regardless of their background. It is critical that our discussions are respectful of diverging viewpoints and that we reject all forms of discrimination and prejudice. You can find additional resources for DEIB issues at Yale [here](#) and [here](#).\*

## ***Accessibility***

“Your success in this class is important to me. We will all need accommodations because we all learn differently. If there are aspects of this course that prevent you from learning or that form barriers to your inclusion, please let me know as soon as possible. Together we’ll develop strategies that can enable you to succeed in the course. I encourage you to visit Student Accessibility Services to determine how you could improve your learning as well. If you need official accommodations, you have a right to have these met. There is also a range of resources on campus, including the Writing Center, Residential College Tutors, and Academic Strategies.”†

## ***Learning Management System***

Course materials and grades will be posted on Canvas.

## ***Readings***

You will read from several books and articles throughout the semester. The readings can be accessed in one of three ways: (1) online through a publicly available link, (2) online through the Yale library, or (3) on Canvas. I will provide a link if the reading is publicly available. The list below will also designate those readings that are available on Canvas. If there is not a link or a Canvas designation, the reading is available online through the university’s library. I expect that students will have completed the reading prior to the start of class period to which it is assigned.

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\*This statement is based on resources and examples provided by the Poorvu Center for Teaching and Learning here: <https://poorvucenter.yale.edu/DiversityStatements>.

†This text is taking directly from the Poorvu Center for Teaching and Learning here: <https://poorvucenter.yale.edu/AccessibilityStatements>.

## Course Grades

Students will take three exams and complete one policy paper during the semester. Grades will be determined based on the following distribution:

- **Exam 1 (22 percent).** This exam will cover material from Parts I and II of the course.
- **Exam 2 (22 percent).** This exam will cover material from Parts III and IV of the course.
- **Exam 3 (30 percent).** This exam will cover all material from the course (Parts I—VI) and will take place during the scheduled final exam period for the course.
- **Paper (25 percent).** The paper will be 5-pages in length (double-spaced, 12-pt Times New Roman Font, and standard margins). The paper is due by 5pm on April 24. It must be submitted via Canvas. All submissions will undergo a plagiarism check. See the file “Paper Guidelines” in Canvas for further details.
- **Surveys (1 percent).** Each student will take a pre- and post-class survey. Simply completing the survey is sufficient to earn full credit.

## Course Topics

Note: Deviations from this course schedule may be necessary if unforeseen events arise.

### Part I: Overview

- Introduction (1/17)
- The Nuclear Landscape (1/19 and 1/22)

### Part II: Political Effects of Nuclear Weapons

- Nuclear Deterrence and Mutually Assured Destruction (1/24 and 1/29)
- Brinkmanship and the Manipulation of Risk (1/31)
- Foreign Policy Aggression (2/5)
- Compellence and Coercive Diplomacy (2/7 and 2/12)
- The Nuclear Taboo (2/14)
- **Exam 1: 2/19**

### Part III: Managing Nuclear Weapons

- Accidents and Vulnerability (2/21)

- Nuclear Strategy (2/26)
- Command and Control (2/28)
- Debating Nuclear Superiority (3/4)

#### **Part IV: Causes of Nuclear Proliferation: Who Wants the Bomb?**

- Security-Based Drivers of Nuclear Proliferation (3/6)
- **March 8-24: Spring Recess**
- Domestic Politics (3/25)
- Prestige (3/27)
- Leaders (4/1)
- Special Guest, Rafael Mariano Grossi (4/3)
- **Exam 2: 4/8**

#### **Part V: Causes of Nuclear Proliferation: Who Can Get the Bomb?**

- Technology (4/10)
- Preventive War (4/15)
- Nuclear Nonproliferation Treaty (NPT) (4/17)
- Economic Sanctions and Inducements (4/22)

#### **Part VI: Contemporary Challenges**

- Illicit Networks, Arms Control and Nuclear Disarmament (4/24)
- **Final Exam: 5/7, 7pm**

## **Detailed Course Schedule and Readings**

### **Part I: Overview**

- Introduction (1/17)
- The Nuclear Landscape (1/19 and 1/22)
  - **Required Reading:** Charles D. Ferguson, Nuclear Energy: What Everyone Needs to Know (2011), Chapters 1 and 4. Available on Canvas.

### **Part II: Political Effects of Nuclear Weapons**

- Nuclear Deterrence and Mutually Assured Destruction (1/24 and 1/29)

- **Required Reading:** Robert Jervis, *The Meaning of the Nuclear Revolution* (Ithaca, NY: Cornell University Press, 1989), chapter 1. Available on Canvas.
- Optional Reading:
  - \* Francis J. Gavin. Strategies of inhibition: U.s. grand strategy, the nuclear revolution, and nonproliferation. *International Security*, 40(1):9–46, 2015.
  - \* Keir A. Lieber and Daryl G. Press. The end of MAD? the nuclear dimension of u.s. primacy. *International Security*, 30(4):7–44, 2006.
  - \* Kyung Suk Lee, James D Kim, Hwalmin Jin, and Matthew Fuhrmann. Nuclear Weapons and Low-Level Military Conflict. *International Studies Quarterly*, 66(5), 11 2022.
  - \* Caitlin Talmadge. 2017. “Would China Go Nuclear? Assessing the Risk of Chinese Nuclear Escalation in a Conventional War with the United States.” *International Security*. Vol. 41, No.4, pp. 50-92.
- Brinkmanship and the Manipulation of Risk (1/31)
  - **Required Reading:** Thomas Schelling, *Arms and Influence* (New Haven, CT: Yale University Press, 1966), chapter 3. Available on Canvas.
  - Optional Reading:
    - \* Robert Powell. *Nuclear Deterrence Theory: The Search for Credibility*. Cambridge University Press, New York, 1990.
    - \* Todd S. Sechser and Matthew Fuhrmann. *Nuclear Weapons and Coercive Diplomacy*. Cambridge University Press, Cambridge, 2017, Chapters 5 and 6.
    - \* Reid B. C. Pauly and Rose McDermott. The Psychology of Nuclear Brinkmanship. *International Security*, 47(3):9–51, 01 2023.
- Foreign Policy Aggression (2/5)
  - **Required Reading:** Mark S. Bell, “Beyond Emboldenment: How Acquiring Nuclear Weapons Can Change Foreign Policy,” *International Security*, Vol. 40, No. 1 (Summer 2015), pp. 87–11.
  - Optional Reading:
    - \* S. Paul Kapur. *Dangerous Deterrent: Nuclear Weapons Proliferation and Conflict in South Asia*. Stanford University Press, Palo Alto, Calif., 2007.
    - \* Glenn H. Snyder. The balance of power and the balance of terror. In Paul Seabury, editor, *The Balance of Power*, pages 184–201. Chandler, San Francisco, 1965.
- Compellence and Coercive Diplomacy (2/7 and 2/12)
  - **Required Reading:** Todd Sechser and Matthew Fuhrmann, *Nuclear Weapons and Coercive Diplomacy* (New York: Cambridge University Press), chapters 1 and 2. Available on Canvas.

- Optional Reading:
  - \* Robert J. Art and Patrick M. Cronin, editors. *The United States and Coercive Diplomacy*. U.S. Institute of Peace, Washington, D.C., 2003.
  - \* Tristan Volpe. Atomic leverage: Compellence with nuclear latency. *Security Studies*, 26(3):517–544, 2017.
- The Nuclear Taboo (2/14)
  - **Required Reading:** Nina Tannenwald, “How Strong is the Nuclear Taboo Today?” *The Washington Quarterly* Vol. 41 (2018).
  - Optional Reading:
    - \* Nina Tannenwald. *The Nuclear Taboo: The United States and the Nonuse of Nuclear Weapons Since 1945*. Cambridge University Press, New York, 2007.
    - \* Daryl G. Press, Scott D. Sagan, and Benjamin A. Valentino. Atomic aversion: Experimental evidence on taboos, traditions, and the non-use of nuclear weapons. *American Political Science Review*, 107(1):188–206, 2013.
- **Exam 1: 2/19**

### Part III: Managing Nuclear Weapons

- Accidents and Vulnerability (2/21)
  - **Required Reading:** Scott D. Sagan and Kenneth Waltz, *The Spread of Nuclear Weapons: A Debate Renewed* (New York: Norton, 2002), chapter 2. Available on Canvas.
  - Optional Reading:
    - \* Scott D. Sagan. The perils of proliferation: Organization theory, deterrence theory, and the spread of nuclear weapons. *International Security*, 18(4):66–107, 1994.
    - \* Eric Schlosser, *Command and Control: Nuclear Weapons, the Damascus Accident, and the Illusion of Safety*, 2014.
- Nuclear Strategy (2/26)
  - **Required Reading:** Vipin Narang, “Posturing for Peace? Pakistan’s Nuclear Postures and South Asian Stability,” *International Security* Vol. 34, No. 3 (Winter 2009/10), pp. 38–78.
  - Optional Reading:
    - \* Scott Douglas Sagan. *Moving Targets: Nuclear Strategy and National Security*. Princeton University Press, Princeton, 1989.
    - \* Matthew Fuhrmann and Todd S. Sechser. Nuclear strategy, nonproliferation, and the causes of foreign nuclear deployments. *Journal of Conflict Resolution*, 58(3):455–480, 2014.

- Command and Control (2/28)
  - **Required Reading:** “Defense Primer: Command and Control of Nuclear Forces,” Congressional Research Service, December 3, 2020. Available at: <https://fas.org/sgp/crs/natsec/>
  - Optional Reading:
    - \* Paul J. Bracken. *The Command and Control of Nuclear Forces*. Yale University Press, New Haven, 1983.
    - \* Bruce G. Blair. *Strategic Command and Control: Redefining the Nuclear Threat*. Brookings Institution, Washington, D.C., 1985.
    - \* Peter D. Feaver. Command and control in emerging nuclear nations. *International Security*, 17(3):160–187, 1992.
- Debating Nuclear Superiority (3/4)

- **Required Reading:** Matthew Kroenig, *The Logic of American Nuclear Strategy* (New York: Oxford University Press, 2018), Chapter 1. Available on Canvas.
- Optional Reading:
  - \* Matthew Kroenig. Nuclear superiority and the balance of resolve: Explaining nuclear crisis outcomes. *International Organization*, 67(1), 2013.
  - \* Todd S. Sechser and Matthew Fuhrmann. Crisis bargaining and nuclear blackmail. *International Organization*, 67(4):173–95, 2013.
  - \* Lauren Sukin and Abby Fanlo, “The Disadvantage of Nuclear Superiority,” *Security Studies*, Vol. 32 No. 3, (2023): 446-475.

#### Part IV: Causes of Nuclear Proliferation: Who Wants the Bomb?

- Security-Based Drivers of Nuclear Proliferation (3/6)
  - **Required Reading:** Nuno P. Monteiro, Nuno and Alexandre Debs. 2014. “The Strategic Logic of Nuclear Proliferation.” *International Security* 39(2): 7-51.
  - Scott D. Sagan, “Why Do Countries Build Nuclear Weapons: Three Models in Search of a Bomb,” *International Security* (1996/97), pp. 54-63.
  - Optional Reading:
    - \* Alexandre Debs and Nuno P. Monteiro. *Nuclear Politics: The Strategic Causes of Proliferation*. Cambridge University Press, 2017.
    - \* T.V. Paul. *Power versus Prudence: Why Nations Forgo Nuclear Weapons*. McGill-Queens University Press, Montreal, 2000.
    - \* Sonali Singh and Christopher R. Way. The correlates of nuclear proliferation: A quantitative test. *Journal of Conflict Resolution*, 48(6):859–85, 2004.
    - \* Dong-Joon Jo and Erik Gartzke. Determinants of nuclear weapons proliferation. *Journal of Conflict Resolution*, 51(1):167–94, 2007.
- **March 8-24: Spring Recess**



- Domestic Politics (3/25)
  - **Required Reading:** Etel Solingen, *Nuclear Logics* (Princeton, NJ: Princeton University Press, 2007), Chapters 1 and 2. Available in Canvas.
  - Optional Reading:
    - \* Christopher Way and Jessica Weeks. Making it personal: Regime type and nuclear proliferation. *American Journal of Political Science*, 58(3):705–719, 2014.
    - \* Malfrid Braut-Heggehammer. *Unclear Physics: Why Iraq and Libya Failed to Build Nuclear Weapons*. Cornell University Press, Ithaca, NY, 2016.
- Prestige (3/27)
  - **Required Reading:** Sagan, “Why Do Countries Build Nuclear Weapons,” pp. 73-85.
- Leaders (4/1)
  - **Required Reading:** Jacques Hymans, *The Psychology of Nuclear Proliferation* (New York: Cambridge University Press), Chapters 1 and 2. Available in Canvas.
  - Optional Reading:
    - \* Matthew Fuhrmann and Michael C. Horowitz. When leaders matter: Rebel experience and nuclear proliferation. *Journal of Politics*, 77(1):72–87, 2015.
    - \* Rachel Whitlark. Nuclear beliefs: A leader-focused theory of counter-proliferation. *Security Studies*, 26(4):545–574, 2017.
- **Special Guest: 4/3**
  - Rafael Mariano Grossi, the Director General of the International Atomic Energy Agency, will visit our class.
- **Exam 2: 4/8**

## Part V: Causes of Nuclear Proliferation: Who Can Get the Bomb?

- Technology (4/10)
  - **Required Reading:** Matthew Fuhrmann, “Spreading Temptation: Proliferation and Peaceful Nuclear Cooperation Agreements,” *International Security* Vol. 34, No. 1 (2009), pp. 7-41.
  - Optional Reading:
    - \* Matthew Fuhrmann. *Atomic Assistance: How ‘Atoms for Peace’ Programs Cause Nuclear Insecurity*. Cornell University Press, Ithaca, N.Y., 2012.
    - \* Eliza Gheorghe. Proliferation and the Logic of the Nuclear Market. *International Security*, 43(4):88–127, 04 2019.

- \* Nicholas L. Miller, “Why Nuclear Energy Programs Rarely Lead to Proliferation.” *International Security*, 2017; 42 (2): 40–77.
  - \* Montgomery, Alexander H. 2013. “Stop Helping Me: When Nuclear Assistance Impedes Nuclear Programs,” in Adam Stulberg and Matthew Fuhrmann (eds.). *The Nuclear Renaissance and International Security*. Stanford, CA: Stanford University Press. 177-202.
- Preventive War (4/15)
    - **Required Reading:** Sarah E. Kreps and Matthew Fuhrmann. 2011. “Attacking the Atom: Does Bombing Nuclear Facilities Affect Proliferation,” *Journal of Strategic Studies* 34(2): 161-187.
    - Optional Reading:
      - \* Alexandre Debs and Nuno Monteiro. Known unknowns: Power shifts, uncertainty, and war. *International Organization*, 68(1):7–52, 2014.
      - \* Muhammet A. Bas and Andrew J. Coe. A dynamic theory of nuclear proliferation and preventive war. *International Organization*, 70(4):655–685, 2016.
      - \* Dan Reiter. Preventative attacks against nuclear programs and the “success” at osiraq. *The Nonproliferation Review*, 12(2):355–371, 2005.
  - Nuclear Nonproliferation Treaty (NPT) (4/17)
    - **Required Reading:** Maria Rost Rublee, Taking Stock of the Nuclear Nonproliferation Regime: Using Social Psychology to Understand Regime Effectiveness, *International Studies Review*, Volume 10, Issue 3, September 2008, pp. 420–450.
    - Optional Reading:
      - \* Andrew J. Coe and Jane Vaynman. Collusion and the nuclear nonproliferation regime. *Journal of Politics*, 77(4):983–997, 2015.
      - \* Matthew Fuhrmann and Yonatan Lupu. Do arms control treaties work? assessing the effectiveness of the nuclear nonproliferation treaty. *International Studies Quarterly*, 60(3):530–539, 2016.
  - Economic Sanctions and Inducements (4/22)
    - **Required Reading:** Rupal Mehta, *Delaying Doomsday: The Politics of Nuclear Reversal* (New York: Oxford University Press, 2020), Chapter 2. Available on Canvas.
    - Optional Reading:
      - \* Nicholas L. Miller. The secret success of nonproliferation sanctions. *International Organization*, 68(4):913–944, 2014.

## Part VI: Contemporary Challenges

- Illicit Networks, Arms Control and Nuclear Disarmament (4/24)

- **Required Reading:** Catherine Collins and Douglas Frantz, “The Long Shadow of A.Q. Khan,” *Foreign Affairs*, January 31, 2018.
- John Maurer, “The Purposes of Arms Control,” *Texas National Security Review*, Vol 2, No. 1 (2018). Available at: <https://tnsr.org/2018/11/the-purposes-of-arms-control/>.
- Optional Reading:
  - \* Matthew Kroenig. *Exporting the Bomb: Technology Transfer and the Spread of Nuclear Weapons*. Cornell University Press, Ithaca, NY, 2010.
  - \* Jane Vaynman and Trisan Volpe (2023). Dual Use Deception: How Technology Shapes Cooperation in International Relations. *International Organization*, 77(3), 599-632.
  - \* Andrew Coe and Jane Vaynman (2020). Why Arms Control Is So Rare. *American Political Science Review*, 114(2), 342-355.
  - \* Catherine Kelleher, *Getting to Zero: The Path to Nuclear Disarmament* (Stanford University Press, 2011), Introduction.

- **Final Exam: 5/7, 7pm**