

POLITICAL SCIENCE 142D: WEAPONS OF MASS DESTRUCTION, SPRING 2023 (CENTR 101)
LECTURE: MONDAY/WEDNESDAY/FRIDAY 11-11:50AM (NOTE: THIS COURSE IS **IN PERSON)**

Instructor: **Erik Gartzke** (Professor) Email: egartzke@ucsd.edu

Please read this syllabus carefully. It contains the information you need to succeed in the course.

When contacting any instructor, please identify the course (and section if appropriate). We are usually teaching more than one course at any given a time. So make it clear to us which course!

- Course website [Canvas, need UCSD SSO to access]: <https://canvas.ucsd.edu/courses/45436>
- Lecture: 11-11:50AM MW (Location: Center Hall 101 [**IN PERSON**... yes, really!])

NOTE: There are a few dates during the quarter when I will be traveling. On these days, please use the following zoom link [**DO NOT GO TO CLASS**]: <https://ucsd.zoom.us/j/93484283016>

Please Note: these lectures are NOT recorded

- Office hours: 11-11:50AM Fridays: Link: <https://ucsd.zoom.us/j/91765507699>
-

Teaching Assistants:

Jorge Olmos Camarillo (jolmoscamarillo@ucsd.edu)

Office hours: Tuesday 10AM-12PM. (Location: Social Sciences Building 349)

June Jung (j0jung@ucsd.edu)

Office hours: Friday 2-3PM. (Zoom & in-person at SSB 446 upon request)

Students can sign up for appointments via the following link:

[\[https://calendar.google.com/calendar/u/0/selfsched?sstoken=UUIwcnNFWFFoV0ZrfGRlZmF1bHR8Mzk4MjNjZDIxYjNkMjY1YWQzNmQ0ZjQ5ZDBjOTJkYWl\]](https://calendar.google.com/calendar/u/0/selfsched?sstoken=UUIwcnNFWFFoV0ZrfGRlZmF1bHR8Mzk4MjNjZDIxYjNkMjY1YWQzNmQ0ZjQ5ZDBjOTJkYWl)

Jiannan Zhao (jjz717@ucsd.edu)

Office hours: Monday 10AM-12PM (Zoom link: <https://ucsd.zoom.us/j/5899425174>)

Students can sign up for appointments via the following link: <https://shorturl.at/kzQX4>

You deserve the best possible education. The instruction team for POLI142D will do their very best to ensure you receive all possible assistance. In return, please be patient with us.

*If you have questions or concerns, **please contact your GTA first**. If this does not work or the situation is not satisfactorily resolved, please email me and I will assist you as soon as possible. Please bear in mind that this is mass education...I am vastly outnumbered. I will do my best.*

Your health (physical, mental, social) is always important. Please do not suffer in silence. A variety of resources on and off campus are available to help you get better, or stay better. I list some here in the syllabus. Others are available on the [UCSD website](#). If you have any questions, please ask your GTA or myself. We will attempt to assist you or refer you to someone who can.

Finally, this is a university course and there is work you must do to complete it satisfactorily. If for any reason you do not feel that you can commit the time and effort necessary to do well in the

*course at this time, do not take this course. All work **MUST BE COMPLETED ON TIME**. Due to logistical issues, **late assignments will automatically receive a zero (0) grade**. There is no room for flexibility on this policy. A significant amount of accommodation in the timing and pace of assignments exists to allow you flexibility and discretion in getting your work done on time.*

Course Description:

This course provides an overview of the threats posed to national and international security by chemical, biological, radiological, and nuclear (CBRN) weapons. Time permitting, some attention will also be paid to new technologies of warfare (“cyberwar,” automated systems “drones,” space) and to emerging modes of conflict (gray zone conflict, cross- or multi-domain deterrence).

Students will learn about how these weapons and strategies function, why states and some non-state actors seek them, and how nations seek or attempt to prevent their spread (proliferation). The course will do this in part by delving into the technical and policy challenges related to these weapons. It will further address how CBRN weapons shape states’ national security strategies and regional security dynamics. Efforts at the international level to restrict the use and proliferation of these weapons will be discussed. We will also explore the future of WMD and CBRN terrorism.

Course Requirements:

You can take the course P/NP or for a grade. Please consider your options and circumstances. Consult with the appropriate advising staff member if you have questions about your options.

* PLEASE TAKE NOTE: **There are no make-up assignments**. If you miss the final exam, your grade for the exam will be calculated by averaging the grades from your previous assignments.

- **Short Papers [Three (3)]** (30% of course grade, 10% each): Each student taking the course must prepare three short papers of **NO MORE THAN TWO PAGES** each, comparing/contrasting two or more readings from a given week. Papers of more than two (2) pages length will not be accepted. You may reference any/all of the readings for a given week. Students may choose which weeks in which to complete their short papers. **But you must sign up for your preferred weeks ahead of time! A format for sign-ups will be distributed through the Canvas course page. Stay tuned!**

All assignments must be submitted electronically and supplied to the GTA grader by Sunday evening (6PM Pacific time) of the week for which an assignment is scheduled. Be succinct, compelling and incisive. What is something interesting, peculiar or discrepant in comparing two or more of the week’s readings? **DO NOT SUMMARIZE THE READINGS!!!!!!!!!!!!!!** We already know what they say. Tell us something new. How does some difference between the readings affect the authors' conclusions or your interpretation of what the two (or more) readings imply? How does the difference or omission cause you to doubt the validity of one or more of the author’s argument(s)? How would you know if they are wrong, or if you are wrong? Write these documents expecting the reader/grader to try and disagree with you. Be logical and persuasive!

- **Commentary on Video Documentaries [Two (2)]** (30% of course grade, 15% each): Each student in the course will individually prepare two short commentaries of **NO MORE THAN THREE PAGES** each, analyzing and/or comparing one or more of the video documentaries listed in the syllabus. Special attention will be given to analyzing

or criticizing the documentary. I already know what they are about. Tell me what the investigators did wrong, got wrong, forgot to cover, misinterpreted, etc. Focus on the politics/policy aspects of each respective documentary. Where are their errors/biases? In what ways is the documentary misleading? What have you gleaned from the course readings, for example, that might allow you to assess the claims presented in the documentary more critically? What policy implications are recommended by each documentary? Do you accept these recommendations? Why or why not?

- **Final Exam** (40% of course grade): Each student will prepare an essay based on a range of questions. Unlike in the recent past, this is an **"in class" exam**. The questions will be given out a week prior. The exam will take place at the scheduled time (Friday, June 16, 11:30AM-2:29PM). A quality essay will integrate all relevant materials from the course (lecture and readings) in a concise but persuasive analytical answer to the question posed.
- ***I am precluded by the Political Science Department's policy from providing any advice to students about grading options or other aspects of your academic schedule or courses. If you have questions, please contact the appropriate advisor in your major department.***

Required Readings:

There are three required textbooks. Each is available from the UCSD Bookstore. There are also other outlets where you can purchase (website named after a famous watercourse comes to mind).

- Scott Sagan and Kenneth Waltz. 2002. *The Spread of Nuclear Weapons: A Debate Renewed, 2nd or 3rd Ed.* New York: W.W. Norton & Co. ("**Sagan and Waltz**")
- Frank Barnaby. 2004. *How to Build a Nuclear Bomb: And Other Weapons of Mass Destruction.* New York: Nation Books. ("**Barnaby**")
- Joseph Cirincione, Jon B. Wolfsthal, and Miriam Rajkumar. 2005. *Deadly Arsenals: Nuclear, Biological and Chemical Threats*, Revised Edition. Washington, DC: Carnegie Endowment for International Peace. ("**Cirincione**")

Additional Readings:

In addition to the three required textbooks, there are a number of other readings available for the course. *All of these materials can be accessed online* via the Canvas course page. I ask that you read at least one (1) of these additional readings each week (you can certainly read more).

DATE

TOPIC/ASSIGNMENT

WEEK 1 (April 3 & 5): Introduction/Syllabus/Levels, Methods, and Concepts

- Wolfgang K. H. Panofsky. 1998. "Dismantling the Concept of Weapons of Mass Destruction" *Arms Control Today* (April).
- George Perkovich. 2006. "Deconflating 'WMD.'" WMD Commission.

VIDEO DOCUMENTARY: "The Bomb" <https://ucsd.kanopy.com/product/bomb>
(alternate source, YouTube: <https://www.youtube.com/watch?v=Orze43Uchm8>). Also consider "The Day After Trinity" <https://www.youtube.com/watch?v=Vm5fCxXnK7Y>

WEEK 2 (April 10 & 12): An Overview of Nuclear Policy Dynamics

- Cirincione. "Global Trends." *Deadly Arsenals*, 1-26.
- Thomas C. Schelling. 2009. "A World without Nuclear Weapons?" *Daedalus*. 138(4):124-129.

VIDEO DOCUMENTARY: Nuclear 101: How Nuclear Bombs Work Part 1, by Professor Matthew Bunn. Part 1: <https://www.youtube.com/watch?v=zVhQOxb1Mc> Also "Nuclear Aftershocks" <https://ucsd.kanopy.com/video/nuclear-aftershocks> (additional source, PBS Frontline) <https://video.kpbs.org/video/frontline-nuclear-aftershocks/>

WEEK 3 (April 17 & 19): Nuclear Weapons – History and How Stuff Works

- Barnaby. "Nuclear Weapons." *How to Build a Nuclear Bomb*, 15-39.
- Cirincione. "Nuclear Weapons and Materials." *Deadly Arsenals*, 45-55.

PLUS AT LEAST ONE (1) OF THE ADDITIONAL READINGS:

- Atomic Archives. 2008. "The Manhattan Project: Making the Atomic Bomb."
- Barton Bernstein. 1995. "The Atomic Bombings Reconsidered," *Foreign Affairs*, 74(1):135-152.
- Michael Mandelbaum. 1980. "The Bomb, Dread, and Eternity." *International Security*. 5(2):3-23.
- Atomic Archives. 2008. "The Effects of Nuclear Weapons," pp. 1-24.

Optional readings:

- Sarah Diehl and James Clay Moltz. 2002. "History of Nuclear Weapons and Non-proliferation." *Nuclear Weapons and Nonproliferation*. Santa Barbara: ABC-CLIO, 1-25.
- Lynn Eden. 2004. "City on Fire." *Bulletin of the Atomic Scientists* 60(1): 33-43.
- John Mueller. 2010. "Overstating the Effects." *Atomic Obsession: Nuclear Alarmism from Hiroshima to Al-Qaeda*. Oxford: Oxford University Press, 17-28.

VIDEO DOCUMENTARY: Nuclear 101: How Nuclear Bombs Work Part 2, Pt 2: <https://www.youtube.com/watch?v=MnW7DxsJth0> also "Rickover: The Birth of Nuclear Power" <https://ucsd.kanopy.com/video/rickover-birth-nuclear-power-0> (alternate source: Amazon Prime free trial): https://www.amazon.com/Rickover-Nuclear-Tim-Blake-Nelson/dp/B00QWRC210/ref=tmm_aiv_swatch_1?_encoding=UTF8&qid=&sr=

WEEK 4 (April 24 & 26): Why States Want WMD

- Barnaby. "What Does It Take to Make a WMD?" *How to Build...*, 63-88.

PLUS AT LEAST ONE (1) OF THE ADDITIONAL READINGS:

- Scott Sagan. 1996/1997. "Why Do States Build Nuclear Weapons? Three Models in Search of a Bomb." *International Security* 21(3): 54-86.

- Etel Solingen. 1994. "The Political Economy of Nuclear Restraint," *International Security* 19(2):126-169.
- Nina Tannenwald. 1999. "The Nuclear Taboo: The United States and the Normative Basis for Nonuse." *International Organization* 53(3):433-468.

Optional reading:

- David Albright. 1994. "South Africa and the Affordable Bomb." *Bulletin of the Atomic Scientists* (July/August): 37-47.
- Avner Cohen and William Burr. 2006. "Israel Crosses the Threshold." *Bulletin of the Atomic Scientists* (May/June): 22-30.
- Matthew Fuhrmann. 2009. "Proliferation and Peaceful Nuclear Cooperation Agreements." *International Security* 34 (1): 7-41.
- Matthew Fuhrmann. 2009. "Taking a Walk on the Supply Side: The Determinants of Civilian Nuclear Cooperation." *Journal of Conflict Resolution* 53 (2): 181-208.
- Jacques Hymans. 2001. "Of Gauchos and Gringos: Why Argentina Never Wanted the Bomb, and Why the United States Thought It Did." *Security Studies* 10(3): 153-185.
- Jacques Hymans. 2002. "Why Do States Acquire Nuclear Weapons? Comparing the Cases of India and France." In D.R. SarDesai and Raju Thomas's *Nuclear India in the Twenty-First Century*. New York: Palgrave Macmillan.
- "Israel: Nuclear Overview." 2010. Nuclear Threat Initiative.
- Dong-Joon Jo and Erik Gartzke. 2007. "Determinants of Nuclear Weapons Proliferation." *Journal of Conflict Resolution* 51(1): 167-194.
- Matthew Kroenig, "Importing the Bomb Sensitive Nuclear Assistance and Nuclear Proliferation," *Journal of Conflict Resolution* 53 (April 2009), 161-180.
- Ariel Levite. 2002/2003. "Never Say Never Again: Nuclear Reversal Revisited." *International Security* 27(3): 59-88.
- Alexander Montgomery. 2005. "Ring in Proliferation." *International Security* 30(2): 153-187.
- Maria Rublee. 2009. "Nuclear Decision-Making in Libya, Sweden, and Germany," *Nonproliferation Norms: Why States Choose Nuclear Restraint*. Athens: The University of George Press, 185-200.
- David Albright and Corey Hinderstein. 2005. "Unraveling the A. Q. Khan and Future Proliferation Networks." *The Washington Quarterly* 28(Spring): 111-128.

VIDEO DOCUMENTARY: "On Deterrence" (documentary from Scandia National Labs): <https://www.youtube.com/watch?v=tQBLpJFi6f0>. Also see: "The Cold War: MAD 1960-1972" 12/24 <https://www.youtube.com/watch?v=nsSroYTCsUo> And "Nuclear Weapons: Mutually Assured Destruction" https://www.youtube.com/watch?v=_7DvmJcKOT0

WEEK 5 (May 1 & 3): Nuclear Strategy: Deterrence

- Sagan and Waltz. "Chapters 1-2." *The Spread of Nuclear Weapons*

PLUS AT LEAST ONE (1) OF THE ADDITIONAL READINGS:

- Jeffrey Lewis. 2008. "Minimum Deterrence." *Bulletin of Atomic Scientists* 64(3):38-41.
- Kier Lieber and Daryl Press. 2006. "The End of MAD? The Nuclear Dimension of U.S. Primacy," *International Security* 30(4): 7-44.
- Robert Powell. 2003. "Nuclear Deterrence Theory, Nuclear Proliferation, and National Missile Defense," *International Security* 27(4): 86-118.

Optional reading:

- Kyle Beardsley and Victor Asal. 2009. "Winning with the Bomb," *Journal of Conflict Resolution* 53(2): 278-301.
- Lawrence Freedman. 2003. *The Evolution of Nuclear Strategy*. Basingstoke, U.K.: Palgrave MacMillan.
- Charles Glaser and Steve Fetter. 2005. "Counterforce Revisited: Assessing the Nuclear Posture Review's New Missions," *International Security*, 30(2):84-126.
- Paul K. Huth. 1999. "Deterrence and International Conflict: Empirical Findings and Theoretical Debates." *Annual Review of Political Science* 2: 25-48
- Joseph Nye. 1987. "Nuclear Learning and U.S.-Soviet Security Regimes." *International Organization* 41(3): 371-402.
- Keith Payne. 1996. "Introduction." *Deterrence in the Second Nuclear Age*. Lexington: University of Kentucky Press, 1-16.
- Robert Rauchhaus. 2009. "Evaluating the Nuclear Peace Hypothesis: A Quantitative Approach." *Journal of Conflict Resolution* 53, 2 (2009): 258-277.
- Sagan and Waltz. "Chapters 3-5." *The Spread of Nuclear Weapons*
- Thomas Schelling. 1966. "The Art of Commitment." *Arms and Influence*. New Haven: Yale University Press, 35-91.
- Waltz, Kenneth N. 1990. "Nuclear Myths and Political Realities." *The American Political Science Review*. 84(3):731-745.

VIDEO DOCUMENTARY: "Dr. Strangelove, or Why I Stopped Worrying and Learned to Love the Bomb." https://archive.org/details/DRStrangelove_20130616, other sources. And "Able Archer: Brink of Apocalypse." <https://www.youtube.com/watch?v=tPit2BGNKwo>.

WEEK 6 (May 8 & 10): Chemical and Biological Weapons.

Biological Weapons:

- Barnaby. "Biological Weapons." *How to Build a Nuclear Bomb*, 41-53.
- Cirincione. "Biological and Chemical Weapons, Agents, and Proliferation." *Deadly Arsenals*, 57-67.

Chemical Weapons:

- Barnaby. "Chemical Weapons." *How to Build a Nuclear Bomb*, 55-64.

PLUS AT LEAST ONE (1) OF THE ADDITIONAL READINGS:

- Federation of American Scientists. 2010. "Biological Threat Agents Information."
- Federation of American Scientists. 2010. "Types of Chemical Agents."
- Richard Price. 1995. "A Genealogy of the Chemical Weapons Taboo." *International Organization* 49(1): 73-103

Optional reading:

- Ingrid Fängmark and Lena Norlander. 2006. "Indicators of State and Non-State Offensive Chemical and Biological Programmes." WMD Commission.
- Gregory Koblenz. 2004. "Pathogens as Weapons: The International Security Implications of Biological Warfare." *International Security* 28(3):84-122.
- Scott D. Sagan. 2000. "The Commitment Trap: Why the United States Should Not Use Nuclear Threats to Deter Biological and Chemical Weapons Attacks" *International Security*. 24(4):85–115.
- Jonathan B. Tucker. 1994. "Dilemmas of a Dual-Use Technology: Toxins in Medicine and Warfare." *Politics and Life Sciences* 13(1): 51-62.
- Kathleen Vogel. 2006. "Bioweapons Proliferation: Where Science Studies and Public Policy Collide." *Social Studies of Science* 36(5): 659-690.
- WMD Commission. 2006. "Chapter 4: Biological and Toxin Weapons," and "Chapter 5: Chemical Weapons." *Weapons of Terror: Freeing the World of Nuclear, Biological and Chemical Arms*. Stockholm.

VIDEO DOCUMENTARIES: Watch several of these (they are all short) "100 Years of Chemical Weapons" <https://www.bbc.com/news/av/science-environment-43700924>.
"Trump's "limited strike" on Syria" <https://www.youtube.com/watch?v=Tc90I4FrLqM>.
"Inside the US Government's Top Secret Bioweapons Lab" (also short) <https://www.youtube.com/watch?v=f1GnYs4LOc0> "Bioterror" (NOTE: may be offensive) https://www.youtube.com/watch?v=C30ZKprLSkI&has_verified=1&bpctr=1585549991

WEEK 7 (May 15 & 17): Nuclear Proliferation/Counter Proliferation

- Cirincione. "The International Nonproliferation Reg..." *Deadly Arsenals*, 27-43.

PLUS AT LEAST ONE (1) OF THE ADDITIONAL READINGS:

- Sheena Chestnut. 2007. "Illicit Activity and Proliferation: North Korean Smuggling Networks," *International Security* 32(1):80-111.
- Fuhrmann, Matthew and Sarah E. Kreps. 2010. "Targeting Nuclear Programs in War and Peace: A Quantitative Empirical Analysis, 1941-2000" *Journal of Conflict Resolution* 54(6): 831-859.
- William Langeweische. 2005. "The Wrath of Khan," *The Atlantic Monthly*.
- Andrew Winner. 2005. "The Proliferation Security Initiative: The New Face of Interdiction," *Washington Quarterly* 28 (2): 129–143.

Optional readings:

- David Albright and Corey Hinderstein. 2005. "Unraveling the A.Q. Khan and Future Proliferation Networks." *Washington Quarterly* 28(20): 109-128.
- Graham T. Allison. 2006. "Flight of Fancy," *Annals of the American Academy of Political and Social Science* 607(September): 167-202.
- Cirincione. "Appendix A: The Treaty on the Non-Proliferation of Nuclear Weapons." *Deadly Arsenals*, 421-426.
- Tom Z. Collina with Daryl G. Kimball. 2010. "Now More Than Ever: The Case for the Comprehensive Nuclear Test Ban Treaty." *Arms Control Association Briefing Book*.
- James Goodby and Fred McGoldrick. 2009. "Reducing the Risks of Nuclear Power's Global Spread." *Bulletin of the Atomic Scientists* (May/June): 40-47.
- Scott Jones. 2006. "Resolution 1540: Universalizing Export Control Standards?" *Arms Control Today*.
- "Nuclear Suppliers Group at a Glance." 2006. Arms Control Association.
- Scott Parrish and Jean du Preez. 2006. "Nuclear-Weapon-Free Zones: Still a Useful Disarmament and Nonproliferation Tool?" *WMD Commission*.
- T.V. Paul. 2003. "Chinese-Pakistani Nuclear/Missile Ties and Balance of Power Politics," *The Nonproliferation Review* 10(2): 21-29.
- Jean du Preez. 2006. "Half Full or Half Empty? Realizing the Promise of the Nuclear Nonproliferation Treaty." *Arms Control Today* (December): 6-12.
- Douglas Stinnett, Bryan Early, Cale Horne, and Johannes Karreth. 2011. "Complying by Denying: Explaining Why States Develop Nonproliferation Export Controls." *International Studies Perspectives* 12(3): 308-326.

VIDEO DOCUMENTARY: "Stealing the Atomic Bomb" (USSR)

<https://www.youtube.com/watch?v=JpXWxgcP9Rs> "Equinox: A Very British Bomb." (UK) https://www.youtube.com/watch?v=Qk_zpjK3cTo "Israel and the Nuclear Bomb" (Israel) <https://www.youtube.com/watch?v=RjO7PSffTHg> "Raid on Iraqi Reactor" <https://www.youtube.com/watch?v=MFObTJxFuWI>. "The Terror Trader - Pakistani Rogue Scientist A Q Khan" <https://www.youtube.com/watch?v=O5AMrywjr1U>

WEEK 8 (May 22 & 24): Weapons Platforms (Ballistic/Cruise Missiles)

- Cirincione. "Missile Proliferation." *Deadly Arsenals*, 83-117.

PLUS AT LEAST ONE (1) OF THE ADDITIONAL READINGS:

- Dennis M. Gormley. 2008. "Missile Contagion." *Survival* 50(4):137-154.
- Simon A. Mettler and Dan Reiter. 2013. "Ballistic Missiles and International Conflict." *Journal of Conflict Resolution* 57(5):854-880.
- WMD Commission. 2006. "Chapter 6: Delivery Means, Missile Defenses, and Weapons in Space." *Weapons of Terror: Freeing the World of Nuclear, Biological and Chemical Arms*. Stockholm: WMD Commission, 140-149.

Optional readings:

- Jeff Kueter and Howard Kleinberg. 2007. *The Cruise Missile Challenge: Designing a Defense against Asymmetric Threats*. Washington, DC: George C. Marshall Institute.
- Thomas L. McNaugher. 1990. "Ballistic Missiles and Chemical Weapons." *International Security* 15(2): 5-34.
- Dinshaw Mistry. 2005. *Containing Missile Proliferation: Strategic Technology, Security Regimes, and International Cooperation in Arms Control*. Seattle: University of Washington Press.
- Federation of American Scientists, "Ballistic Missile Basics"
- Janne Nolan. 1991. *Trappings of Power: Ballistic Missiles in the Third World*. Brookings.
- Joshua Pollack. 2011. "Ballistic Trajectory: The Evolution of North Korea's Ballistic Missile Market." *Nonproliferation Review* 18(2): 411-429.

VIDEO DOCUMENTARY: "Command and Control"

<https://archive.org/details/CommandAndControl>. Also watch "Missileers"

<https://www.youtube.com/watch?v=w1tMx27Q4O0> and "Rise of the Rockets" (behind PBS pay wall) <https://www.pbs.org/wgbh/nova/video/rise-of-the-rockets/>

WEEK 9 (May 29 & 31): CBRN Terrorism and Nuclear Accidents

*** **No Class Monday 29 May (Memorial Day Holiday)** ***

- Graham Allison. 2004. "How to Stop Nuclear Terror." *Foreign Affairs* 83(1): 64-74.

PLUS AT LEAST ONE (1) OF THE ADDITIONAL READINGS:

- Gary Ackerman and Kevin Moran. 2006. "Bioterrorism and Threat Assessment." WMD Commission.
- Matthew Bunn and Anthony Wier. 2006. "Terrorist Nuclear Weapon Construction: How Difficult?" *The Annals of the American Academy of Political and Social Science* 607(September): 133-149.
- Michael Levi and Henry Kelly. 2002. "Weapons of Mass Disruption." *Scientific American* (November).
- James M. Acton, M. Brooke Rogers and Peter D. Zimmerman. 2007. "Beyond the Dirty Bomb: Re-thinking Radiological Terror." *Survival* 49(3):151-168.
- Heritage Foundation. "Terror Trends: 40 Years' Data on International and Domestic Terrorism."

Optional readings:

- Gene Aloise. 2009. "Preliminary Observations on Preparedness to Recover from Possible Attacks Using Radiological or Nuclear Threats." U.S. GAO (September 29).
- Matt Bunn and Susan Martin. 2010. "Is Nuclear Terrorism a Real Threat?" In Stuart Gottlieb's *Debating Terrorism and Counterterrorism*. Washington: CQ Press, 166-200.
- Malcom Dando. 2005. "The Bioterrorist Cookbook." *Bulletin of the Atomic Scientist* (November/December).

- William Dunlop and Harold Smith. 2006. "Who Did It? Using International Forensics to Detect and Deter Nuclear Terrorism," *Arms Control Today*, 36(8).
- Charles Ferguson and William Potter. 2004. "Chapters 1-2." *Four Faces of Nuclear Terrorism*. Monterey: Monterey Institute for Nonproliferation Studies.
- Mark Juergensmeyer. 2003. "Armageddon in Tokyo Subway." *Terror in the Mind of God: the Global Rise of Religious Violence*. Berkeley: U. of California Press, 106-120.
- Jonathon Tucker. 2008. "Chemical Terrorism: Assessing Threats and Responses." In Russell Howard and James Forest's *Weapons of Mass Destruction and Terrorism*. New York: McGraw Hill, 212-226.

VIDEO DOCUMENTARY: "Building Chernobyl's Megatomb" (behind PBS pay wall) <https://www.pbs.org/wgbh/nova/video/building-chernobyls-megatomb/> And "Inside Japan's Nuclear Meltdown" <https://ucsd.kanopy.com/video/nova-nuclear-meltdown-disaster> (alternate source, PBS Nova): <https://www.pbs.org/wgbh/frontline/film/japans-nuclear-meltdown/> See also, "Japan's Killer Quake" <https://ucsd.kanopy.com/video/nova-japan-s-killer-quake> (alternate source, PBS Nova): <https://www.pbs.org/wgbh/nova/video/japans-killer-quake/> Also "Pandora's Promise" (1) <https://www.youtube.com/watch?v=kBMj-96hols> [the video is in three parts]. (2) <https://www.youtube.com/watch?v=2yBePJrKmws> (3) <https://www.youtube.com/watch?v=TLuKXOVnzhE>

WEEK 10 (June 5 & 7): Cyber Conflict and UAVs.

- Erik Gartzke. 2013. "The Myth of Cyberwar: Bringing War in Cyberspace Back Down to Earth." *International Security* 38(2): 41-73.

PLUS AT LEAST ONE (1) OF THE ADDITIONAL READINGS:

- Erik Gartzke and Jon R. Lindsay. 2017. "Thermonuclear Cyberwar." *Journal of Cybersecurity* 3(1): 37-48.
- Eric Lipton, David E. Sanger and Scott Shane. 2016. "The Perfect Weapon: How Russian Cyberpower Invaded the U.S." December 13.
- Rid, Thomas, 2013. "Cyberwar and Peace: Hacking Can Reduce Real-World Violence." *Foreign Affairs* (Nov./Dec.): 77-87.

Optional readings:

- Erik Gartzke and Jon R. Lindsay. 2015. "Weaving Tangled Webs: Offense, Defense, and Deception in Cyberspace." *Security Studies* 24(2): 316-348.
- Axelrod, Robert and Rumén Iliev. 2014. "The Timing of Cyber Conflict," *Proceedings of the National Academy of Sciences*, 111(4): 1298-1303.
- Matthew Fuhrmann and Michael C. Horowitz. 2017. "Droning On: Explaining the Proliferation of Unmanned Aerial Vehicles." *International Organization* 71(2): 397-418.

DOCUMENTARY VIDEOS: “Cyberwar Threat” <https://ucsd.kanopy.com/video/nova-cyberwar-threat> (alternate source, PBS Nova):
<https://www.pbs.org/wgbh/nova/video/cyberwar-threat/> also “The Rise of the Drones”
<https://ucsd.kanopy.com/video/nova-rise-drones>

*** ***The Final Exam is Scheduled to be Held on Friday 16 June 11:30AM-2:29PM*** ***

Intellectual Property

My lectures and course materials, including syllabi, PowerPoint/Keynote presentations (whether “live” or recorded), tests, quizzes, outlines, and similar materials, are protected by U.S. copyright law and by University policy. I am the exclusive owner of the copyright in any of these materials I create. You may take notes and make copies of course materials for your own use. You may also share those materials with another student who is enrolled in or auditing this course, provided that this does not violate the academic integrity policy of the University or this course.

You may not reproduce, distribute or display (post/upload) lecture notes or recordings or course materials in any other way — whether or not a fee is charged — without my express prior written consent. You also may not allow others to do so.

If you do so, you may be subject to student conduct proceedings under the UC San Diego Student Code of Conduct.

Similarly, you own the copyright for your original papers and exam essays. If I am interested in posting or utilizing your answers or papers in any way, I will ask for your written permission.

Additional information/resources

Academic Integrity: Submitting any assignment in this course confirms that you agree to abide by UCSD’s policies as listed in the [Principles of Community](#) and the [Student Code of Conduct](#). Academic misconduct includes (but is not limited to): using another person’s words as your own, asking someone else to write any part of an assignment you submit as your own, failing to cite material from another source, editing/rephrasing someone else’s words as your own.

The [Policy on Integrity of Scholarship](#) lists some of the standards by which you are expected to complete assignments in this course. Students needing assistance may consult with the instructor or the teaching assistants. You are encouraged to use authorized UCSD [writing resources](#), such as the [Writing Hub](#). *No other person or resource may be used to assist you in preparing or writing any assignment without express permission from the instructor.* Exceptions will be made for a documented disability only. Please consult with the instructor if you have questions about this policy or believe you need the assistance of other persons or online resources. You may not use a tutor. You may not consult or collaborate with other students in preparing, conducting or writing assignments. You may not refer to *any* other source (EG: Google Translate, Grammarly).

Student Standards:

- **Plagiarism/Cheating:** You are encouraged to study and learn together. All assignments submitted for a grade must be the ***sole product*** of the person submitting the work. Tests or assignments that are suspected of containing materials that are not the student’s work or not properly referenced/cited will be referred to the academic integrity office. If you have ***any*** questions about what constitutes a violation of academic integrity, please refer to the University’s guidelines ([Excel with integrity](#)) and consult with your TA or myself.
- **Disabilities/life issues:** It is your responsibility to apprise your TA and myself of factors that may interfere with your performance in class *well in advance of scheduled due dates for assignments*. Appropriate measures will be taken in accordance with UCSD policies.

- **Grading/appeals:** All attempts to discuss grading decisions must begin with your TA. You can of course bring them to my attention if the issues cannot be resolved first with your TA. Appeals to me must be made in writing (a Word document or PDF is fine). Late or incomplete assignments/exams *do not constitute the basis for a grade appeal*. I do not offer course extensions unless instructed in writing to do so by University authorities.

Students with Disabilities

Students requesting accommodations for this course due to a disability must provide a current Authorization for Accommodation (AFA) letter issued by the Office for Students with Disabilities (<https://osd.ucsd.edu/>). Students are required to discuss accommodation arrangements with instructors and OSD liaisons in the department **well in advance** of any exams or assignments. Please contact the Department of Political Science OSD Liaison if you have any disability needs; please connect with staff via the [Virtual Advising Center](#) as soon as possible.

Academic Advising

Students who have questions pertaining to Political Science academic advising are asked to reach out the Department's Undergraduate Advisor who can be contacted via the [Virtual Advising Center](#). Academic advising questions include (but are not limited to): add/drop deadlines, course enrollment policies, planning major and minor requirements, quarter-by-quarter plans, department petitions and paperwork, and referrals to campus and student support services.

Inclusive Classroom Statement

The TA(s) and I are fully committed to creating a learning environment that supports diversity of thought, perspectives, experiences, and identities. We urge each of you to contribute your unique perspectives to discussions of course questions, themes, and materials so that we can learn from them, and from each other. If you should ever feel excluded, or unable to fully participate in class for any reason, please let me know, or you may also submit anonymous written feedback to the Department of Political Science's Undergraduate Advisor. A staff member will bring these anonymous comments to my attention. Additional resources to support equity, diversity, and inclusion in our classroom, and beyond, may be found here: Office of Equity, Diversity, and Inclusion: 858.822.3542 | diversity@ucsd.edu | <https://diversity.ucsd.edu/>
<https://students.ucsd.edu/student-life/diversity/index.html>
<https://regents.universityofcalifornia.edu/governance/policies/4400.html>

Classroom Comportment

Courtesy and a respect for different opinions, experiences and backgrounds is a foundational element of a diverse and civilized society. They are a necessary element of genuine education and open debate. UC San Diego is committed to the following "Principles of Community":

<https://ucsd.edu/about/principles.html>

Those who cannot play nice with others need a rethink. You will address my teaching staff appropriately. Students who cannot treat others politely will be referred to their college deans.

If you feel at any point that you have not been addressed or treated appropriately by myself or my teaching staff, please feel free to raise your concerns directly with me. You may also contact the Political Science Department to discuss the situation with the relevant staff member. You are of course encouraged to consider raising your concerns with OPHD. <https://ophd.ucsd.edu>