INR 4115 *Strategic Weapons and Arms Control*

(Science, Politics, and Strategy of Nuclear Weapons)

School of Politics, Security and International Affairs
University of Central Florida

Instructor: Dr. Yogesh Joshi
Class Hours: 9 AM-10.20 AM, Tuesdays and Thursdays
Office Hours: Tuesday and Thursday, 11 AM-1 PM.

Synopsis: Ever since the first bombs were dropped on Hiroshima and Nagasaki in August 1945, nuclear weapons have fundamentally transformed the nature, conduct, and content of international politics. This course offers an introduction to the science, history, and politics of nuclear weapons, nuclear proliferation, and nuclear strategy, while also engaging with the global history of resistance to the bomb. How did the advent of the nuclear age reshape international relations? What are the causes and consequences of nuclear weapons proliferation? Why do some states like Iran and North Korea actively seek nuclear weapons, while others like Kazakhstan, Ukraine, and South Africa have relinquished them? How do states employ nuclear weapons in their diplomatic and military strategies? What mechanisms have Great Powers, international institutions, and regional organizations employed to curb the spread of nuclear technologies, and how have such non-proliferation efforts shaped the nuclear trajectories of countries like Argentina, Brazil, Taiwan, South Korea, and Egypt, among others?

In recent years, nuclear politics has re-emerged as a central concern amid intensifying great power rivalry and geopolitical realignment. Russia's war in Ukraine, North Korea's ongoing nuclear brinkmanship, growing tensions in the Indo-Pacific, and the uncertain future of the Iran nuclear deal all underscore the enduring salience of nuclear strategy. At the same time, the strategic landscape is undergoing rapid transformation due to the emergence of technologies such as artificial intelligence, cyber capabilities, hypersonic weapons, and the weaponization of outer space. This course examines how these technologies intersect with nuclear deterrence, command and control systems, and strategic stability, raising new questions about crisis escalation, arms racing, and vulnerability. As global norms and institutions struggle to adapt, understanding the evolving logic of nuclear weapons in this new technological and geopolitical context becomes more urgent than ever.

We will also explore why states agree—or fail to agree—on arms control and disarmament measures, and whether a nuclear-weapons-free world remains a realistic goal. Finally, the course will analyze global anti-nuclear movements, shedding light on how civil society actors have contested the legitimacy and morality of the bomb and what their resistance reveals about the politics of global security. Particular attention will be paid to diversifying the study of nuclear history and policy beyond a predominantly U.S.-centric narrative. By the end of the course, students will have developed a comprehensive and global understanding of the role nuclear weapons play in international relations, past and present, as well as the emerging challenges posed by the convergence of proliferation and advanced strategic technologies.

The course responds to a vital curricular need in Security Studies and would also appeal to students interested in understanding Technology, Politics and International Security. Whereas INR 4115 focuses primarily on the control of strategic weapons and the policy challenges of proliferation, this adaptation offers a far more holistic treatment of nuclear weapons. It integrates four critical dimensions: the underlying science and technology, the dynamics of proliferation, the study of strategy, and the debates on arms control and disarmament. In addition, it addresses a cutting-edge issue in the emerging geopolitical and technological landscape—the interaction of nuclear weapons with emerging technologies such as cyber, artificial intelligence, and autonomous systems. Beyond its content, the course also innovates in pedagogy, offering students practical, hands-on experiences. Learning will be enhanced through crisis decision-making simulations, role-playing exercises in a National Security Council setting, strategic war games, and guest lectures by practitioners and experts. These methods will train students not only to understand nuclear weapons theoretically but also to apply knowledge in high-pressure, real-world contexts. A specialized course on nuclear weapons is fundamental for students interested in International Relations and Security Studies, and at a large STEM-focused university such as UCF, it is uniquely positioned to attract students from both the social sciences and technical disciplines. By combining cutting-edge content with immersive pedagogy, the course will deepen theoretical understanding of international relations while equipping the next generation of UCF students with the analytical and practical skills necessary for careers in policy, research, and national security.

Students will not be required to buy any books or course material. All reading material will be provided on Canvas.

Learning Objectives: The course introduces the history, politics, and strategy of nuclear weapons. By the end, students should have developed a critical understanding of the core concepts and assumptions that guide the study of history, politics, and strategic uses of nuclear weapons, and should be able to apply them in understanding the contemporary world.[1]

1) Demonstrate a strong basis of knowledge of politics, history, and technologies surrounding nuclear weapons and nuclear energy globally.
2) Demonstrate an understanding of dominant explanations of why states pursue nuclear weapons (nuclear weapons proliferation), how they pursue them, and finally, how dominant states have attempted to halt the spread of nuclear weapons globally (non-proliferation).
3) Demonstrate an understanding of nuclear strategy, nuclear deterrence, and nuclear compellence, evaluate the conditions for stability and instability in nuclear dyads, understand the requirements of nuclear deterrence and its impact on crisis behaviour,

[1] Professor Jason Enia at Sam Houston State University defines critical thinking in the International Relations context thus: "Critical thinking is not about blindly accepting the wisdom of the 'talking heads' you see on television or the information you get online. It is about admitting and being comfortable with uncertainty. In the complex arena of international politics—where there are almost always multiple and competing assessments of and solutions to international problems—this type of analysis is crucial. It includes the ability *to break a problem into its component parts, to question assumptions, to recognize and critically assess multiple and competing sources of information, to evaluate alternative perspectives on problems, and finally to design and evaluate solutions to those problems.* The value of the study of the social sciences lies in the development of these critical thinking skills."

and finally explore the interaction of nuclear weapons with emerging strategic technologies such as AI and Cyber Weapons.

4) Demonstrate the ability to do historical research and analysis across geographic regions, including the use of primary sources.
5) Demonstrate an ability to apply historical, theoretical, and technological knowledge to contemporary policy debates around nuclear weapons.
6) Develop the ability to effectively collaborate within and across teams with a problem-solving approach toward contemporary security problems surrounding nuclear weapons.
7) Analyze how emerging technologies—such as cyber capabilities, artificial intelligence, and autonomous weapons—interact with nuclear strategy, and explain how their impact on modern battlefields can be understood through the core concepts and theories of nuclear weapons studies."

Modes of Learning:

1) Weekly readings: Weekly readings will be organized around significant themes and debates in nuclear politics. Readings will cover not only the conceptual and theoretical aspects but also the historical, regional, and functional dimensions of nuclear weapons. These weekly readings will provide the structure for the course.
2) Documentaries and Film Screenings: nuclear weapons have been extensively covered in popular media. There will be at least one film screenings during the course.
3) Discussions and Debates: The course is designed to encourage maximum participation from students. The instructor aims to lecture for only 40-50 percent of the course schedule. Students will be divided into groups at the beginning of the session, and in each class, there will be group activities centered on the main themes and policy implications of the readings.
4) Student leadership: Throughout the course, students will be asked to present dedicated readings from the course material in terms of two or more. These presentations will be student-led, and they will also manage post-presentation activities. Assigned students will prepare their presentation and class-management strategies in active consultation with the instructor.
5) Simulation Exercise: There will be two simulation exercises: One concerning proliferation problems, such as Iran, and the other concerning escalation and de-escalation in a crisis over Taiwan.
6) Expert Interventions and Panels: The course will have expert interventions either from scholars or practitioners.

Course Design:

This course is structured around a combination of **lectures, guided discussions, directed readings, written assignments, and exams**, all designed to build your theoretical understanding and analytical capacity in international relations. Each component plays a distinct role: lectures introduce and clarify key concepts, readings deepen your engagement with the material, discussions promote critical thinking and exchange of ideas, and assignments help solidify your ability to apply theories to real-world scenarios.

You will engage with a **diverse range of readings**, including both a core textbook and original scholarly articles. The textbook will provide foundational overviews of theoretical traditions in nuclear politics and strategy, while the academic articles will expose you to how

international relations scholars pose questions, construct arguments, and use evidence. These scholarly pieces are more intellectually demanding, but they are essential for understanding how theory is produced, debated, and refined in the field. The instructor can change readings in the middle of the semester, and it is the responsibility of the students to check syllabus and assigned readings periodically.

Pre-class preparation is essential. Students should actively participate in the class; they should do so both inside and outside of the class, especially during office hours. Good participation entails listening carefully to others, referring or responding to the previous speaker's comments, and asking questions in addition to or instead of making statements. Continuously interrupting others, dominating conversations, and conducting ad hominem attacks is considered bad participation and must be avoided.

Each student should have a question or observation on one of the readings assigned for the class. I may call on you at any time during class to start a conversation with your question/observation. You may want to print it out or write it down if you frequently can't remember the brilliant observation you had. Students are required to turn in their questions/observations to Canvas before the class; this is a very good way of demonstrating participation if you tend to listen more than speak in class. You may also participate by discussing the material online before or after the class.

Students are expected to complete all assigned readings before class and come prepared to engage thoughtfully in discussion. Class time will often involve exploring topics that go beyond readings, while also unpacking and applying the core ideas they contain. Since both the readings and the lectures contain unique and complementary material, it is your responsibility to master **both the textual and in-class content**. If anything is unclear, you are strongly encouraged to ask questions—whether during class, after class, or during office hours.

To stay grounded in current global affairs, students should **regularly follow international news** through a newspaper of record such as *The New York Times*, *The Washington Post*, *Le Monde*, or *The Times of London*. Publications such as *USA Today* or *The Orlando Sentinel* are not sufficient for meeting this expectation. Being informed about ongoing international developments will enrich your understanding of how theory connects to practice and will allow for more meaningful classroom discussions. This course requires you to engage with some of the most consequential dilemmas in human history. To bridge the gap between Cold War strategic thought and modern nuclear realities, you are expected to maintain a rigorous diet of international security news. Beyond general newspapers of record, you should pay close attention to specialized outlets and policy briefs from organizations such as the **Bulletin of the Atomic Scientists**, the **Arms Control Association**, and **38 North**. Understanding the nuances of nuclear politics—from the "Second Nuclear Age" in South and East Asia to the modernization of the "Nuclear Triad"—requires a level of technical and strategic literacy that only comes through consistent engagement with current events. By monitoring these developments, you will better appreciate how the theoretical concepts of deterrence, signaling, and brinkmanship are currently being tested in real-time on the global stage.

Finally, you are encouraged to take full advantage of **office hours**, not only for help with course content but also to explore your own questions and ideas about international politics. These informal conversations are often where some of the most productive learning happens, and they are a valuable opportunity to receive guidance tailored to your interests.

Assignments

1) Class Participation **(10%):** You are expected to complete all assigned readings before class and actively engage in discussion. **Excessive absences may lower your grade**, as you cannot participate if you are not present. Participation will be assessed based on the quality and consistency of contributions. To ensure your contributions are recognized and rewarded, the expectations for class participation are centered on both consistent presence and active leadership. You are expected to complete all assigned readings prior to each session and contribute thoughtfully to our collective dialogue. Participation is not merely about attendance; it is an assessment of the quality, relevance, and consistency of your engagement. Because this course relies on a collaborative learning environment, excessive absences will directly impact your grade, as your insights cannot benefit the group if you are not present. A primary component of your participation grade is the **Discussion Leadership** assignment. Depending on the final enrollment numbers, students will be assigned specific dates to lead the analysis of a pre-assigned reading. In this role, you act as the bridge between the text and the classroom, moving beyond a simple summary to offer a critical evaluation of the author's arguments. You should briefly outline the core thesis and methodology, identify the most provocative or "interesting" aspects of the piece, and explain how the reading connects to broader themes of nuclear strategy or international stability. To facilitate a productive session, student leaders must arrive prepared with **two to three high-level discussion questions** designed to spark debate. These questions should avoid simple "yes/no" answers, instead focusing on "how" or "why" questions that challenge your peers to apply the text to real-world nuclear dilemmas. You will be evaluated on your ability to command the material, your clarity of presentation, and your success in fostering a respectful, intellectually rigorous exchange among your classmates. **Detailed rubrics and specific requirements will be available on the Canvas assignment pages.**

2) **Canvas Discussion (10%):** Additional to class presence and leadership, participation in the class will be judged through **five (5) digital discussions** designed to foster engagement with in-class activities such as simulations, documentary viewings, and war games. **Without being present and participating in class, students will find it very difficult to engage in such discussions**. Each individual discussion is worth **10 points**, and the series collectively accounts for **10% of your final grade**. Specific instructions and thematic prompts for each discussion will be released on Canvas throughout the semester. To succeed in this component, you must meet the following general requirements:
    - **Original Post:** You will submit a substantive response to the instructor's prompt. Posts must be at least **300 words or a 3–4-minute video summary** and demonstrate critical analysis or independent research.
    - **Peer Engagement:** Commenting on others' views is a mandatory component of the rubric. You must respond to your classmates' posts to facilitate a collaborative learning environment.
    - Detailed rubrics and prompt-specific requirements will be available on the Canvas assignment pages.

3) **Homework (20%):** The course includes five homework assignments strategically designed to ensure students master the core concepts and prepare effectively for the mid-semester and final examinations. Three of these assignments focus on foundational knowledge and are delivered in an objective format. These consist of ten questions each—utilizing multiple-choice, true/false, and matching formats—with a strictly allotted completion time of 20 minutes. These exercises help students build the speed and accuracy necessary for the objective portions of the formal exams. The remaining two homework assignments are designed to refine students' analytical writing and argumentative skills. For these tasks, students must respond to an essay-type prompt within a 350-word limit and students will have 30 minutes to finish the exam. These assignments mirror the long-form response requirements of the course exams, allowing students to practice synthesizing complex information into concise, persuasive arguments. All homework assignments will be administered via Canvas, where specific prompts and deadlines will be posted. **To provide flexibility, the final homework grade will be calculated from the best four of the five assignments**. This policy allows students to drop their lowest score, ensuring that one off-day or missed assignment does not disproportionately impact the course grade. **Detailed rubrics and specific requirements will be available on the Canvas assignment pages.**

4) **Midterm Exam (20%):** Students will complete a midterm exam in person during the regular class period, lasting 80 minutes. These assessments evaluate a range of competencies, from the recall of foundational facts to the ability to construct nuanced strategic arguments. The examinations follow a consistent four-part structure to ensure students can manage their time effectively within the allotted period. The first section consists of 10 objective questions, in multiple-choice, matching, and true-false formats, that test mastery of key historical dates, technical terms, and core concepts. This is followed by two short definition questions in which students must provide concise, accurate explanations of specific terms or concepts central to the course. Next, students will answer two short-answer questions, applying course theories to specific scenarios in a focused manner. The final portion of the exam is an opinion essay based on a prompt provided by the instructor. In this section, students must take a clear stance on a significant debate in nuclear strategy or proliferation and support their claims with evidence from the readings and lectures. Because these exams are time-bound, students are encouraged to utilize the homework assignments throughout the semester as practice for the speed and analytical depth required during these 80-minute sessions. **Detailed Rubric and Instructions will be provided in class.**

5) **Final Exam (20%):** Students will complete a final exam in person during the regular class period, lasting 80-100 minutes. These assessments evaluate a range of competencies, from the recall of foundational facts to the ability to construct nuanced strategic arguments. The examinations follow a consistent four-part structure to ensure students can manage their time effectively within the allotted period. The first section consists of 10 objective questions, in multiple-choice, matching, and true-false formats, that test mastery of key historical dates, technical terms, and core concepts. This is followed by two short-definition questions in which students must provide concise, accurate explanations of specific terms or concepts central to the course. Next, students will answer two short-answer questions, applying course theories to

specific scenarios in a focused manner. The final portion of the exam is an opinion essay based on a prompt provided by the instructor. In this section, students must take a clear stance on a significant debate in nuclear strategy or proliferation and support their claims with evidence from the readings and lectures. Because these exams are time-bound, students are encouraged to utilize the homework assignments throughout the semester as practice for the speed and analytical depth required during these 80-minute sessions. **Detailed Rubric and Instructions will be provided on Canvas.**

6) **Book Review (20%):** One of the core objectives of this course is to equip students with the ability to bridge the gap between academic literature and broader strategic narratives. To achieve this, students will complete a 1,500-word formal book review. Instead of a standard summary, this assignment requires students to engage critically with a major work in the field, selecting a title from a curated list provided by the instructor. The goal is to place the chosen book into perspective by using course readings to validate, challenge, or expand upon the author's central claims. By synthesizing a single deep-dive text with the broader theoretical frameworks discussed in class, students will demonstrate their ability to navigate complex nuclear debates and contribute to professional discourse.

   The written review must be a rigorous analytical exercise in which students use additional scholarly citations to bolster their arguments. A successful review will evaluate the book's methodology, its contribution to nuclear scholarships, and its relevance to contemporary security challenges. Students should not only explain what the author says but also analyze why the work matters in the context of the theories of deterrence, proliferation, or strategy covered throughout the semester. This 1,500-word submission serves as a platform for students to practice high-level synthesis, moving beyond the classroom to participate in the kind of critical dialogue found in leading security journals.

   In addition to the written submission, students will be required to present their book reviews in class. These presentations are designed to foster collective learning, allowing the class to benefit from a wide range of perspectives on different foundational texts. During these sessions, students should be prepared to distill their 2000-word analysis into a concise oral argument and respond to questions from both the instructor and their peers. This oral component emphasizes the importance of communicating specialized academic insights clearly and persuasively, a skill essential for any professional working in international security and public policy. **Detailed Rubric and instructions will be provided on Canvas.**

A Statement and an Observation About AI:

If the instructor reasonably believes that an assignment was largely created using AI tools (such as ChatGPT), they may assign a grade of 0 (zero). Instructors have observed that AI-generated work is often poorly written and lacks depth, so even undetected use may result in low grades based on quality alone. More importantly, relying on AI to complete assignments can hinder your learning and lead to long-term consequences, regardless of your grade in the course

Grades:
Grades are assigned to both individual pieces of work and cumulative course performance. All material is graded on its own terms rather than in comparison with other students' work. I do not typically curve grades, but reserve the right to do so if necessary. For final cumulative grades, I do not round—what you get is what you get.

Grade Scale: A 94-100; A- 90-93; B+ 87-89; B 84-86; B- 80-83; C+ 77-79; C 74-76; C- 70-73; D+ 67-69; D 64-66; D- 61-63; F 0-60.

Course Rules

- All assignments must be submitted via Webcourses by the start of class on the day they are due. Late submissions will be penalized at a rate of 5% per 24 hours, up to a maximum penalty of 40%. Exceptions for university-sponsored activities, religious observances, or other valid circumstances must be requested in advance of the due date.
- Exams are to be taken on the scheduled date and time. Make-up exams will only be granted with prior approval or upon submission of a documented medical excuse at the next class session attended. Make-up exams should generally be completed within one week of the original exam date.
- Exceptions to the above rules are granted at the instructor's discretion, normally by prior approval, and only under circumstances of extreme personal emergency or serious illness. In all instances, appropriate evidentiary documentation may be requested to waive course rules.
- I take academic dishonesty very seriously. Students are bound by University rules governing conduct and performance, particularly to questions of cheating and plagiarism.
- All students are expected to complete all assigned readings before they are discussed in class, and they are expected to discuss and respond to random questioning by the instructor.
- The reading and course schedule is subject to change. Students are responsible for making sure that they are aware of any changes.
- Disruptive behavior is not tolerated. Cell phones and pagers must be turned off during class.
- If you have any questions about your grade on an assignment or an exam, please wait until 24 hours after receiving your assignment/exam before discussing the grade with the instructor. There are no exceptions to this policy. If you wish to have an assignment/exam re-graded, it must be returned to the instructor within two days of the day it was returned. Assignments to be re-graded must include a typed memo stating the reason why you believe the assignment should be re-graded. Finally, re-graded assignments can be graded higher, lower, or the same as the initial grade. Please note that to protect your privacy, no information about your grades will be given over the phone or email.

Attendance Policy (N/A)
Students are expected to attend all of their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance. Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an

athletic or scholastic team, musical and theatrical performances and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.

Financial Aid Accountability

All instructors/faculty are required to document students' academic activity at the beginning of each course. In order to document that you began this course, please complete a **200-word introduction about yourself and explain why you are interested in learning International Relations** by the end of the first week of classes or as soon as possible after adding the course. Failure to do so may result in a delay in the disbursement of your financial aid.

UCF Academic Integrity Statement: Students should familiarize themselves with UCF's Rules of Conduct at <https://scai.sdes.ucf.edu/student-rules-of-conduct/>. According to Section 1, "Academic
Misconduct," students are prohibited from engaging in
1. Unauthorized assistance: Using or attempting to use unauthorized materials, information, or study aids in any academic exercise unless specifically authorized by the instructor of record. The unauthorized possession of examination or course-related material also constitutes cheating.
2. Communication to another through written, visual, electronic, or oral means: The presentation of material which has not been studied or learned, but rather was obtained through someone else's efforts and used as part of an examination, course assignment, or project.
3. Commercial Use of Academic Material: Selling of course material to another person, student, and/or uploading course material to a third-party vendor without authorization or without the express written permission of the university and the instructor. Course materials include but are not limited to class notes, Instructor's PowerPoints, course syllabi, tests, quizzes, labs, instruction sheets, homework, study guides, handouts, etc.
4. Falsifying or misrepresenting the student's own academic work.
5. Plagiarism: Using or appropriating another's work without any indication of the source, thereby attempting to convey the impression that such work is the student's own.
6. Multiple Submissions: Submitting the same academic work for credit more than once without the express written permission of the instructor.
7. Helping another violate academic behavior standards.
8. Soliciting assistance with academic coursework and/or degree requirements.

Responses to Academic Dishonesty, Plagiarism, or Cheating
Students should also familiarize themselves with the procedures for academic misconduct in UCF's student handbook, The Golden Rule <https://goldenrule.sdes.ucf.edu/>. UCF faculty members have a responsibility for students' education and the value of a UCF degree, and so seek to prevent unethical behaviour and respond to academic misconduct when necessary. Penalties for violating rules, policies, and instructions within this course can range from a zero on the exercise to an "F" letter grade in the course. In addition, an Academic Misconduct report could be filed with the Office of Student Conduct, which could lead to disciplinary

warning, disciplinary probation, or deferred suspension or separation from the University through suspension, dismissal, or expulsion with the addition of a "Z" designation on one's transcript. Being found in violation of academic conduct standards could result in a student having to disclose such behavior on a graduate school application, being removed from a leadership position within a student organization, the recipient of scholarships, participation in university activities such as study abroad, internships, etc. Let's avoid all of this by demonstrating values of honesty, trust, and integrity. No grade is worth compromising your integrity and moving your moral compass. Stay true to doing the right thing: take the zero, not a shortcut.

In-Class Recording Policy
Outside of the notetaking and recording services offered by Student Accessibility Services, the creation of an audio or video recording of all or part of a class for personal use is allowed *only* with the advance and explicit written consent of the instructor. Such recordings are only acceptable in the context of personal, private studying and notetaking and are not authorized to be shared with *anyone* without the separate written approval of the instructor.

Unauthorized Use of Class Materials
There are many fraudulent websites claiming to offer study aids to students but are actually cheat sites. They encourage students to upload course materials, such as test questions, individual assignments, and examples of graded material. Such materials are the intellectual property of instructors, the university, or publishers and may not be distributed without prior authorization. Students who engage in such activity are in violation of academic conduct standards and may face penalties.

Course Accessibility Statement: The University of Central Florida is committed to providing access and inclusion for all persons with disabilities. Students with disabilities who need access to course content due to course design limitations should contact the professor as soon as possible. Students should also connect with Student Accessibility Services (SAS) <http://sas.sdes.ucf.edu/> (Ferrell Commons 185, sas@ucf.edu, phone 407-823-2371). For students connected with SAS, a Course Accessibility Letter may be created and sent to professors, which informs faculty of potential course access and accommodations that might be necessary and reasonable. Determining reasonable access and accommodations require consideration of the course design, course learning objectives and the individual academic and course barriers experienced by the student. Further conversation with SAS, faculty and the student may be warranted to ensure an accessible course experience.

Campus safety statement: Emergencies on campus are rare, but if one should arise during class,
everyone needs to work together. Students should be aware of their surroundings and familiar with
some basic safety and security concepts.

- In case of an emergency, dial 911 for assistance.
- Every UCF classroom contains an emergency procedure guide posted on a wall near the door. Students should make a note of the guide's physical location and review the online version at http://emergency.ucf.edu/emergency_guide.html
- Students should know the evacuation routes from each of their classrooms and have a plan for finding safety in case of an emergency.

- If there is a medical emergency during class, students may need to access a first-aid kit or AED (Automated External Defibrillator). To learn where those are located, see https://ehs.ucf.edu/automated-external-defibrillator-aed-locations
- To stay informed about emergency situations, students can sign up to receive UCF text alerts by going to <https://my.ucf.edu> and logging in. Click on "Student Self Service" located on the left side of the screen in the toolbar, scroll down to the blue "Personal Information" heading on the Student Center screen, click on "UCF Alert", fill out the information, including e-mail address, cell phone number, and cell phone provider, click "Apply" to save the changes, and then click "OK."
- Students with special needs related to emergency situations should speak with their instructors outside of class.
- To learn about how to manage an active-shooter situation on campus or elsewhere, consider viewing this video https://youtu.be/NIKYajEx4pk

Campus Safety Statement for Students in Online-Only Courses
Though most emergency situations are primarily relevant to courses that meet in person, such incidents can also impact online students, either when they are on or near campus to participate in other courses or activities or when their coursework is affected by off-campus emergencies. The following policies apply to courses in online modalities.

- To stay informed about emergency situations, students can sign up to receive UCF text alerts by going to <https://my.ucf.edu> and logging in. Click on "Student Self Service" located on the left side of the screen in the toolbar, scroll down to the blue "Personal Information" heading on the Student Center screen, click on "UCF Alert", fill out the information, including e-mail address, cell phone number, and cell phone provider, click "Apply" to save the changes, and then click "OK."
- Students with special needs related to emergency situations should speak with their instructors outside of class.

Deployed Active-Duty Military Students: Students who are deployed active duty military and/or National Guard personnel and require accommodation should contact their instructors as soon as possible after the semester begins and/or after they receive notification of deployment to make related arrangements.

Religious observances: Students must notify their instructor in advance if they intend to miss class for a
religious observance. For more information, see the UCF policy at
http://regulations.ucf.edu/chapter5/documents/5.020ReligiousObservancesFINALJan19.pdf

University Writing Center: Address and contact info: Colbourn Hall 105**;** Satellite Locations: Main
Library, Rosen Library, Online**;** 407-823-2197 http://uwc.cah.ucf.edu/

The University Writing Center (UWC) offers writing support to students from first-year to graduate in every discipline. Tutors provide help at every stage of the writing process, including understanding assignments, researching, drafting, revising, incorporating sources, and learning to proofread and edit. The UWC's purpose is not merely to fix or edit papers, but to teach writing strategies that can be applied to any writing situation. Consultations are available for individuals and small groups. You may schedule a 45-minute appointment by clicking the Success Resources tab on Webcourses, calling the UWC at 407-823-2197, or

through the UWC website. The UWC seeks graduate and undergraduate tutors from all majors. To learn more about becoming a writing tutor, please contact us.

Readings: All readings will be available in the Files folder in Canvas. I will also circulate a list of additional readings (including books and articles) for students to consult for their knowledge and interests.

Course Structure

Week 1 (Module 1)

January 13th, Tuesday: Introduction to the Class

January 15th, Thursday: The Significance of the Nuclear Era

- Robert Jervis, *The Meaning of Nuclear Revolution* (Ithaca: Cornell University Press, 1989), Chapter 1 "The Theory of Nuclear Revolution", pp. 1-45
- Kenneth Waltz, "Nuclear Myths and Political Realities," *The American Political Science Review*, Vol. 84, No. 3 (Sep 1990), pp. 731-745
- Daryl Press and Keir A Leiber, *The Myth of the Nuclear Revolution*, Chapter 1, (Ithaca: Cornell University Press, 2021), Chapter 1, 1-10.

Recommended Readings

- Bernard Brodie, "War in the Atomic Age," in the Dunn et al. (eds.) The Absolute Weapon, pp. 3-44.
- John Mueller, *Atomic Obsessions* (Ithaca, NY: Cornell University Press, 2010) Chapter 3 (Modest Influence on History) and Chapter 4 (Apocalyptic Visions, Worst Case Preoccupations, Massive Expenditures). pp. 57-83.
- Francis Gavin, *Nuclear Weapons and American Grand Strategy* (Brookings Institution Press: Washington DC), Chapter 1 (History and the Unanswered Questions of the Nuclear Age), pp. 1-22.

Discussion 1: Opens Thursday 11.59 PM; submissions due: Sunday 11.59 PM.

Week 2 (Module 2)

January 20th, Tuesday: History of the Nuclear Age

Lecture: The Frank Report, 12 June 1945: https://sgp.fas.org/eprint/franck.html

Recommended:

- Wellerstein, Alex. 2021. *Restricted Data: The History of Nuclear Secrecy in the United States*. Chicago: University of Chicago Press

- Plokhy, Serhii. 2025. *The Nuclear Age: An Epic Race for Arms, Power, and Survival*. New York: W. W. Norton & Company.
- Kaplan, Fred. 1983. *The Wizards of Armageddon*. New York: Simon & Schuster.

January 22nd, Thursday: Science and Technology

Lecture:

- Joseph Cirincione et al, "Nuclear Weapons and Materials," in Deadly Arsenals (Washington: Carnegie Endowment for International Peace, 2005), Ch. 3, pp. 45-54.
- Office of Technology Assessment, "Delivery Vehicles," in Technologies Underlying Weapons of Mass Destruction (Washington: US Government Printing Office, 1997), pp. 197-207. https://ota.fas.org/reports/9344.pdf.

Recommended:

- How do Nuclear Weapons Work? Parts 1 and 2 by Mathew Bunn
  1) https://www.youtube.com/watch?v=MnW7DxsJth0
  2) https://www.youtube.com/watch?v=zVhQOhxb1Mc

Students submit their Book Review Choices by the end of the second week.

Week 3 (Module 3)

January 27th, Tuesday: The Manhattan Project and the use of the bomb on Hiroshima and Nagasaki

- Documentary: Moment in Time: The Manhattan Project (University of California Television) The Moment in Time: THE MANHATTAN PROJECT

Student-Led Discussions

- Alex Wellerstein, "Manhattan Project," *Encyclopedia of the History of Science* (October 2019)
- Barton J. Bernstein, "The Atomic Bombings Reconsidered." *Foreign Affairs* 74, no. 1 (January/February 1995): 135–152

Recommended

- Sherwin, Martin. 2003. A World Destroyed: Hiroshima and Its Legacies. Stanford, CA: Stanford University Press. Chapters 1 and 2 (pp. 13-63).
- Sherwin, Martin. 2003. A World Destroyed: Hiroshima and Its Legacies. Stanford, CA: Stanford University Press. Chapters 8 and 9 (pp. 193-238).

Discussion 2: Open Tuesday 11.59 PM; submissions due: Sunday 11.59 PM.

January 29th, Thursday: Effects of Nuclear Weapons Use

Lecture:

- Lyn Eden (2003), *Whole World on Fire*, Chapter 1, 1-36.

Student-Led Discussion:

- John Mueller, Atomic Obsessions, Chapter 2 (Overstating the Effects), pp. 29-41

Recommended:

- John Hersey, "Hiroshima", 24 August 1946, New Yorker, https://www.newyorker.com/magazine/1946/08/31/hiroshima
- Carl Sagan and Richard P. Turco, "Nuclear Winter in the Post-Cold War Era," Vol. 30, No. 4 (1993), pp. 369-373.

Homework 1: Opens Thursday 11.59 PM; Submissions due: Sunday 11.59 PM.

Week 4 (Module 4)

Proliferation: Why do States seek nuclear weapons?

February 3rd Tuesday: Demand Side Dynamics

Lecture:

- Scott Sagan, "Why Do States Build Nuclear Weapons? Three Models in Search of a Bomb," International Security 21, No. 3 (1996-1997): 54-86.

Student-Led Discussion:

- Etel Solingen, "The Political Economy of Nuclear Restraint," International Security 19, No. 2 (1994): 126-169.

Recommended:

- Jacques Hymans, The Psychology of Nuclear Weapons: Identity, Emotions and Foreign Policy, (London: Cambridge University Press), Chapters 1 and 2.
- Itty, Abraham. 1998. *The Making of the Indian Atomic Bomb: Science, Secrecy and the Postcolonial State*. London: Zed Books.
- Sonali Singh and Christopher R. Way. 2004. "The Correlates of Nuclear Proliferation: A Quantitative Test." *Journal of Conflict Resolution* 48, no. 6: 859–885
- Solingen, Etel. 2007. *Nuclear Logics: Contrasting Paths in East Asia and the Middle East*. Princeton: Princeton University Press.
- Alexandre Debs and Nuno P. Monteiro. 2016. *Nuclear Politics: The Strategic Causes of Proliferation*.

February 5th, Thursday: Supply-Side Dynamics

Lecture:

- Matthew Fuhrmann, "Spreading Temptation: Proliferation and Peaceful Nuclear Cooperation Agreements," International Security 34, No. 1 (2009): 7-41.

Student-Led Discussion:

- Nicholas Miller, "Why Nuclear Energy Programs rarely lead to Proliferation," International Security, Volume 42, Number 2, Fall 2017, pp. 40-77.

- Lanoszka, Alexander. 2018. "Nuclear Proliferation and Nonproliferation among Soviet Allies." *Journal of global security studies* 3.2: 217–233.

Recommended:

- Jo, Dong-Joon, and Erik Gartzke. 2007. "Determinants of Nuclear Weapons Proliferation." *Journal of Conflict Resolution* 51, no. 1: 167–194.
- Lanoszka, A. (2018). *Atomic Assurance: The Alliance Politics of Nuclear Proliferation*. Cornell University Press.
- Kroenig, Matthew. 2010. *Exporting the Bomb: Technology Transfer and the Spread of Nuclear Weapons*. Ithaca: Cornell University Press.
- Lanoszka, A. (2018). How Alliances (Mis)Manage Nuclear Proliferation. In *Atomic Assurance: The Alliance Politics of Nuclear Proliferation* (pp. 10–28). Cornell University Press.
- Matthew Fuhrmann, "Exporting Secrets: Mallinckrodt, Nuclear Fuel, and the Origins of the United States' Nuclear Nonproliferation Policy," Journal of Cold War Studies 20, No. 1 (2018): 42-73.
- R. Scott Kemp, "The Nonproliferation Emperor Has No Clothes: The Gas Centrifuge, Supply-Side Controls, and the Future of Nuclear Proliferation," International Security 38, No. 4 (2014): 39-78
- Matthew Kroenig, "Importing the Bomb: Sensitive Nuclear Assistance and Nuclear Proliferation," Journal of Conflict Resolution 53, No. 2 (2009): 161-180.
- Alexander Montgomery, "Stop symbols, not systems: The effects of the nonproliferation regime on the spread of nuclear weapons," International Security 30, No. 1 (2005): 153-186.
- Albright, David. 2010. *Peddling Peril: How the Secret Nuclear Trade Arms America's Enemies*. New York: Free Press.

Week 5 (Module 5)

February 10th, Tuesday: How Do States Acquire Nuclear Weapons?

.

- Vipin Narang, "Strategies of Nuclear Proliferation: How States Pursue the Bomb," International Security, Vol. 41, No. 3 (Winter 2016/17), pp. 110–150."

Student-Led Discussion:

- Jacques E.C. Hymans, Achieving Nuclear Ambitions: Scientists, Politicians, and Proliferation (Cambridge University Press: London, 2012). Chapter 2, pp. 71-78
- Donald MacKenzie and Graham Spinardi, "Tacit Knowledge, Weapons Design, and the Uninvention of Nuclear Weapons," American Journal of Sociology 101, No. 1 (1995): 44–99

Recommended:

- Jacques E. C. Hymans, "Botching the Bomb: Why Nuclear Weapons Programs Often Fail on Their Own Terms," Journal of Strategic Studies 35, No. 3 (2012): 439–467
- Vipin Narang, *Seeking the Bomb: Strategies of Nuclear Proliferation* (Princeton: Princeton University Press, 2022).

- Gordon Corera, *Shopping for Bombs: Nuclear Proliferation, Global Insecurity, and the Rise and Fall of the A.Q. Khan Network* (Oxford: Oxford University Press, 2006)
- Avner Cohen, *Israel and the Bomb* (New York: Columbia University Press, 1998

February 12th, Thursday: Guest Lecture:

- **Global History of Nuclear Weapons, Lecture by Prof. David Holloway**

Homework 2: Opens Thursday 11.59 PM; Submissions due: Sunday 11.59 PM.

Week 6 (Module 6): What stops states from proliferating, and why do they give up nuclear weapons?

February 17th, Tuesday: Non-proliferation

Lecture:

- Francis Gavin, "Strategies of Inhibition: US Grand Strategy, The Nuclear Revolution and Nonproliferation," International Security 40, no. 1 (Summer 2015): 9-46.

Student-led Discussion:

- Nicholas L. Miller, "The Secret Success of Nonproliferation Sanctions," International Organization 68, No. 4 (2014): 913-944

Recommended:

- Maria Rost Rublee, "Taking Stock of the Nuclear Non-proliferation Regime: Using Social Psychology to Understand Regime Effectiveness," International Studies Review 10, No. 3 (2008): 420-450.
- Nuno P. Monteiro and Alexandre Debs, "The Strategic Logic of Nuclear Proliferation," International Security 39, No. 2 (2014): 7-51.
- Nicholas L. Miller, *Stopping the Bomb: The Sources and Effectiveness of US Nonproliferation Policy* (Ithaca: Cornell University Press, 2018)
- Gene Gerzhoy, "Alliance Coercion and Nuclear Restraint: How the United States Stopped West Germany's Nuclear Program," International Security 39, No. 4 (2015): 91-129.
- Rublee, Maria Rost. 2009. *Nonproliferation Norms: Why States Choose Nuclear Restraint*. Athens: University of Georgia Press.

February 19th, Thursday: Counterproliferation and Deproliferation

Lecture:

- Sarah Kreps and Matthew Fuhrmann, "Attacking the Atom: Does Bombing Nuclear Facilities Affect Proliferation?" Journal of Strategic Studies 34, No. 2 (2011): 161-187.

Student-Led Discussion:

- Aron Levite, "Never Say Never Again: Nuclear Reversal Revisited," International Security, Vol 27, No. 3 (2002-2003), pp. 59-88.
- Matthew Kroenig, "The History of Preventive Military Action," in *The Logic of American Nuclear Strategy: Why Strategic Superiority Matters* (New York: Oxford University Press, 2018).

Recommended:

- Robert S. Litwak, "The New Calculus of Pre-emption," Survival 44, No. 4 (2002): 53-80
- Joseph F. Pilat and Walter L. Kirchner, "The Technological Promise of Counterproliferation," The Washington Quarterly 18, No. 1 (1995): 153-166.
- Jason Ellis, "The Best Defense: Counterproliferation and U.S. National Security," Washington Quarterly 26, No. 2 (2003): 115-133
- Matthew Kroenig, "The History of Preventive Military Action," in *The Logic of American Nuclear Strategy: Why Strategic Superiority Matters* (New York: Oxford University Press, 2018).
- Libel J. Levinson, "The Psychology of Nuclear Reversal: Why States Give Up the Bomb," Journal of Strategic Studies 38, No. 4 (2015): 450-475.
- Malfrid Braut-Hegghammer, "Libya's Abandoned Nuclear Program: How Secrecy and Centralization Undermined the Project," Journal of Strategic Studies 35, No. 1 (2012): 5-32.
- William Potter, "The Politics of Nuclear Renunciation: The Cases of Belarus, Kazakhstan and Ukraine, Henry L Stimson Center, Occasional Paper No. 2, 1995, https://www.stimson.org/wp-content/files/file-attachments/Occasional%20Paper%20No.%2022%20April%201995.pdf

Discussion 3: Video Uploads on Proliferation Case Studies: Opens Thursday 11.59 PM; Submissions due: Sunday 11.59 PM.

Week 7

February 24th, Tuesday: Proliferation Case Study Panel Discussion

February 26th, Thursday: Midsemester Examination (In class)

Week 8 (Module 8)

March 3rd Tuesday: Nuclear Weapons and the Need for Strategy

Lecture:

- Thomas Schelling, *Arms and Influence*, Chapter 1,2 and 3.

Recommended:

- Charles L. Glaser, "The Natural and Necessary Evolution of Nuclear Strategy," in *Analyzing Strategic Nuclear Policy* (Princeton: Princeton University Press, 1990): 142-160
- Keir A. Lieber and Daryl G. Press, "The New Era of Counterforce: Technological Change and the Future of Nuclear Deterrence," International Security 41, No. 4 (2017): 9-49.
- Austin Long and Brendan Rittenhouse Green, "Stalking the Secure Second Strike: Intelligence, Counterforce, and Nuclear Strategy," Journal of Strategic Studies 38, No. 1-2 (2015): 38-73.

- Rose McDermott, "The Psychology of Nuclear Brinkmanship," International Security 47, No. 3 (2023): 9-46.

March 5th, Thursday: Deterrence and Assurance

Lecture:

- Lawrence Freedman, "First Two Generations of Nuclear Strategists, "in Peter Parrot, *The Makers of Modern Strategy*, pp. 735-778.

Student-Led Discussion:

- Matthew Fuhrmann and Todd S. Sechser (2014) "*Signaling Alliance Commitments: Hand-Tying and Sunk Costs in Extended Nuclear Deterrence*," American Journal of Political Science.

Recommended:

- Keith B. Payne, "On Nuclear Deterrence and Assurance," Strategic Studies Quarterly 3, No. 1 (2009): 43-80.
- Michito Tsuruoka, "The Role of Nuclear Weapons in Japan's Security Policy: Deterrence and Assurance," in *The Logic of American Nuclear Strategy* (New York: Oxford University Press, 2018).
- Astrid Forland, "The 'Cosmic Bluff' Revisited: Extended Nuclear Deterrence in the US–Norway Alliance," Journal of Strategic Studies 30, No. 3 (2007): 447-481.
- Stacie E. Goddard and Colleen Larkin, "Nuclear Shibboleths: The Logics and Future of Nuclear Nonuse," International Organization 79, No. 1 (2025): 117-145.

Week 9 (Module 9)
March 10th Tuesday: Compellance and Emboldenment

Lecture:

- Sechser, Todd S. and Matthew Fuhrmann. 2013. "Crisis Bargaining and Nuclear Blackmail." International Organization. 67(1): 173-195.

Student-Led Discussion:

- Mark S. Bell (2015), "Beyond Emboldenment: How Acquiring Nuclear Weapons Can Change Foreign Policy," International Security. 40(1) July, 87–119.

Recommended:

- Todd S. Sechser and Matthew Fuhrmann, *Nuclear Weapons and Coercive Diplomacy* (New York: Cambridge University Press, 2017).
- Matthew Kroenig, *The Logic of American Nuclear Strategy: Why Strategic Superiority Matters* (New York: Oxford University Press, 2018): Chapter 5.
- Robert J. Art and Kelly M. Greenhill, "The Power and Limits of Compellence: A Research Note," Political Science Quarterly 133, No. 1 (2018): 77–97.
- Kyle Beardsley and Victor Asal, "Winning with the Bomb: Nuclear Weapons and the Outcomes of International Crises," Journal of Conflict Resolution 53, No. 2 (2009): 278-301.

- Michael Horowitz, "The Spread of Nuclear Weapons and International Conflict: Does Proliferation Harm International Security?," Journal of Conflict Resolution 53, No. 2 (2009): 234-257.
- S. Paul Kapur, "Ten Years of Instability in a Nuclear South Asia," International Security 33, No. 2 (2008): 71-94.

March 12th, Thursday: Nuclear Balance, Crisis Behaviour and Conventional Wars

Lecture:

- Kroenig, Matthew. 2013. "Nuclear Superiority and the Balance of Resolve: Explaining Nuclear Crisis Outcomes." International Organization. 67(1): 141-171.

Student-Led Discussion:

- Alexander Lenos and Maria Polianskii, "Nuclear Weapons in Crisis Situations: Applied History and the War in Ukraine," Journal of Applied History 7, No. 1 (2025): 1-26.

Recommended:

- Adam Mount, "Conventional Deterrence of Nuclear Use," International Security 50, No. 2 (Fall 2025): 95–129.
- Richard K. Betts, *Nuclear Blackmail and Nuclear Balance* (Washington, D.C.: Brookings Institution Press, 1987).
- Rosemary Foot, "Nuclear Coercion and the Ending of the Korean Conflict," International Security 13, No. 3 (1988-1989): 92-112.
- Marc Trachtenberg, "The Influence of Nuclear Weapons in the Cuban Missile Crisis," International Security 10, No. 1 (1985): 137-163
- Keir A. Lieber and Daryl G. Press, "The Nukes We Need: Preserving the American Deterrent," Foreign Affairs 88, No. 6 (2009): 39-51.
- Todd S. Sechser, "Threading the Needle: The Logic of Conventional Coercion in Nuclear Crises," Texas National Security Review 7, No. 1 (2025): 12-35.
- Matthew Evangelista, "The War in Ukraine and the Utility of Nuclear Weapons," Journal for Peace and Nuclear Disarmament 6, No. 1 (2023): 1-18

Homework 3: Opens Thursday 11.59 PM; Submissions due: Sunday 11.59 PM.

Spring Break: March 16th to March 21

Week 10 (Module 10)

March 24th, Tuesday: Nuclear Strategy Beyond the US

Lecture:

- Vipin Narang, *Nuclear Strategy in the Modern Era*, chapters 1 and 2

March 26th, Thursday: Russia, China, and India

Student-Led Discussion:

- Kristin Ven Bruusgaard, "Russian Nuclear Strategy and Conventional Inferiority." *Journal of Strategic Studies* 44, no. 1 (2021): 3–35
- M. Taylor Fravel and Evan Medeiros, "China's Search for Assured Retaliation: The Evolution of Chinese Nuclear Strategy and Force Structure," International Security 35, No. 2 (2010): 48-87.
- Clary, Christopher, and Vipin Narang. "India's Counterforce Temptations: Strategic Dilemmas, Doctrine, and Capabilities." *International Security* 43, no. 3 (Winter 2018/19): 7–52

Recommended Readings:

- Ankit Panda, *Kim Jong Un and the Bomb: Survival and Deterrence in North Korea* (New York: Oxford University Press, 2020).
- Rabia Akhtar, "Pakistan's nuclear policy amid the Russia–Ukraine conflict," The Nonproliferation Review 30, No. 4-6 (2024): 285-301.
- Tomasz Młynarski, "France's Nuclear Defence Strategy towards the Prospects for European Nuclear Deterrence," Politeja 21, No. 6(93) (2024): 207-229

Week 11 (Module 11)

March 31st Tuesday: Command and Control of Nuclear Weapons

- **PBS Documentary Command and Control (https://www.youtube.com/watch?v=ZCPlm-mQ9Kk)**

Discussion 4: Movie Review Command and Control (All reviews should be submitted within a week of the screening of the movie)

April 2nd, Thursday: Nuclear Escalation
Student-led discussions

- Scott Sagan, "The Perils of Proliferation: Organization Theory, Deterrence Theory, and the Spread of Nuclear Weapons," International Security 18, No. 4 (1994): 66-107.
- Peter Feaver, "Command and Control in Emerging Nuclear Nations," International Security 17, No. 3 (1992-1993): 160-187.
- Talmadge, Caitlin. "Would China Go Nuclear? Assessing the Risk of Chinese Nuclear Escalation in a Conventional War with the United States." *International Security* 41, no. 4 (Spring 2017): 50–92

Recommendations:

- James M. Acton, "Escalation through Entanglement: How the Vulnerability of Command-and-Control Systems Escalates Risk," International Security 43, No. 1 (2018): 56–99.

Homework 4

Week 13 (Module 13)

April 7th, Tuesday, Simulation: Nuclear Stability, Accidental and Inadvertent Escalation in the US-China Crisis over Taiwan

Discussion 5: Key learning outcomes from Simulation Exercise (Video presentation to be submitted within a week of the Simulation Exercise)

April 9th, Thursday: Book Review Presentations, Discussion, and Feedback in Class

Week 14 (Module 14)

April 14th, Tuesday: Book Review Presentations, Discussion, and Feedback in Class

April 16th, Thursday: Emerging Technologies and Their Impact on Nuclear Deterrence

Artificial Intelligence:
Lecture:

- Kenneth Payne (2018), "Artificial Intelligence: A Revolution in Strategic Affairs?" Survival, 60:5, 7-32.

Student-Led Discussion:

- Edward R Geist and Andrew L John, "How Might Artificial Intelligence Affect the Risk of Nuclear War?" RAND Report.
- Jon R. Lindsay (2013) "*Stuxnet and the Limits of Cyber Warfare*," Security Studies, 22:3, 365-404.

Recommended:

- Stephen J. Cimbala and Adam Lowther, "Hypersonic weapons and nuclear deterrence," Comparative Strategy 41, No. 3 (2022): 282-295.
- Margarita Konaev, "Tomorrow's Technology in Today's War: The Use of AI and Autonomous Technologies in the War in Ukraine and Implications for Strategic Stability," CNA Occasional Paper (September 2023).
- Joshua A. Schwartz and Michael C. Horowitz, "Out of the Loop: How Dangerous is Weaponizing Automated Nuclear Systems?," (May 2025), https://arxiv.org/abs/2505.00496
- UNIDIR, "Quantum Technology, Peace and Security," UNIDIR Report (November 2024), https://unidir.org/wp-content/uploads/2024/11/UNIDIR_quantum_technology.pdf.
- Tom S., "The Potentially Revolutionary Impact of Emerging and Disruptive Technologies and Strategic Conventional Weapons on the Nuclear Deterrence Debate," SIPRI Paper (June 2024). https://www.sipri.org/sites/default/files/2024-11/eunpdc_no_91.pdf.

Homework 5: Opens Thursday 11.59 PM; Submissions due: Sunday 11.59 PM

Week 15 (Module 15)

April 21st, Tuesday: Nuclear Use and Non-use
Lecture:

- Tannenwald, Nina. "The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use." *International Organization* 53, no. 3 (Summer 1999): 433–468

Class Discussion: Should the US use nuclear weapons first? An Experiment

April 23rd, Thursday: The Cause and Consequences of Nuclear Disarmament

- Movie: Countdown to Zero

Book Review Submissions: April 26th

Final Exam: Final Exam Week: 29th April to May 5th.