

Emerging Technology and International Security

Sample Syllabus

Instructor: Jungmin Han, Ph.D.

Office Hours: By appointment

Course Description

How will artificial intelligence transform international conflict? Will emerging technologies, like AI, make military crises easier to manage or more difficult to control? Does technological competition between major powers accelerate innovation at the expense of safety and democratic accountability? And how should governments respond when algorithms increasingly inform decisions about conflict, surveillance, targeting, and political communication?

This course examines how emerging computational technologies are reshaping international security. We focus especially on artificial intelligence, but also consider autonomous weapons, cyber capabilities, computational forecasting, surveillance technologies, and AI-generated political information. Rather than treating technology as an independent force, the course asks how political institutions, strategic rivalry, organizational incentives, and public opinion shape both the development and consequences of new technologies.

The course is organized around four themes. First, we examine theories of technological change, military innovation, and international competition. Second, we study how AI and related technologies may transform deterrence, crisis bargaining, intelligence, military decision-making, and warfare. Third, we examine the political consequences of computational technologies beyond the battlefield, including disinformation, surveillance, public opinion, and algorithmic conflict forecasting. Finally, we consider emerging debates over AI governance, democratic accountability, and U.S.–China technological competition.

Throughout the course, students will evaluate competing claims using scholarly research, policy reports, experimental evidence, and computational data. No prior programming experience is required.

Learning Objectives

By the end of the course, students should be able to:

- Explain major theories linking technological change to international conflict and security;
- Evaluate competing arguments about how AI may affect deterrence, crisis stability, escalation, and military effectiveness;
- Analyze how international rivalry shapes technological development and governance;
- Assess the political consequences of autonomous weapons, algorithmic forecasting, surveillance, and AI-generated information;
- Explain how emerging technologies affect public opinion, political communication, and democratic accountability;

- Critically evaluate quantitative, experimental, and computational evidence used in research on technology and security;
- Develop an evidence-based research project on an emerging technology and its implications for international politics.

Course Structure

The course is organized around four substantive themes:

1. **Technology, Power, and International Competition**
2. **AI, Conflict, and Military Decision-Making**
3. **Computational Technologies, Information, and Political Behavior**
4. **AI Governance and the Future of International Security**

Most class meetings will combine a short lecture with student discussion, structured debates, case analysis, interpretation of quantitative or textual evidence, and small-group exercises. Several class meetings will introduce students to computational evidence used in contemporary security research, including conflict forecasts, social-media data, and text-as-data applications.

Course Requirements

Assignment	Weight
Participation and Discussion	15%
Analytical Response Memos (2)	20%
Technology and Security Policy Brief	15%
Computational Evidence Exercise	15%
Final Research Paper	25%
Research Presentation	10%
Total	100%

Participation and Discussion (15%)

Active participation is an important component of the course. Students should complete assigned readings before class and arrive prepared to discuss their theoretical arguments, empirical evidence, and policy implications.

Participation may include whole-class discussion, structured debates, small-group exercises, written reflections, and analysis of contemporary cases. The goal is not simply to speak frequently, but to evaluate arguments critically, connect readings, and engage constructively with competing perspectives.

Analytical Response Memos (20%)

Students will write two short analytical essays of approximately 800–1,000 words. Each memo will address a theoretical or policy debate examined in class.

Possible questions include:

- Does artificial intelligence increase or decrease crisis stability?
- Will autonomous weapons make warfare more or less escalatory?
- Does competition with geopolitical rivals encourage states to sacrifice AI safety for technological speed?
- Can algorithmic forecasts improve decisions about conflict prevention?

Students should compare competing arguments rather than simply summarize readings.

Technology and Security Policy Brief (15%)

Students will prepare a 1,500-word policy brief on an emerging technology and an international security problem. The brief should identify the relevant technology, explain the strategic problem it creates or addresses, evaluate available evidence, and recommend possible policy responses.

Topics might include autonomous weapons, AI-enabled intelligence, cyber operations, deepfakes, military decision-support systems, or AI governance.

Computational Evidence Exercise (15%)

Students will complete a guided exercise examining how computational evidence is used in contemporary security research.

Depending on available data, students might:

- interpret predictions from a conflict-forecasting model;
- compare human and algorithmic assessments of political violence;
- analyze patterns in a small corpus of political or foreign-policy texts;
- evaluate the strengths and limitations of AI-generated classifications;
- identify potential sources of measurement error, bias, and uncertainty.

The purpose of the assignment is not to teach programming, but to develop students' ability to evaluate computational evidence critically.

Final Research Paper (25%)

Students will complete an 8–10 page research paper examining a question at the intersection of emerging technology and international security.

Possible topics include:

- AI and crisis escalation;
- U.S.–China technological competition;
- autonomous weapons and international law;
- AI-based conflict forecasting;
- computational technologies and humanitarian intervention;
- deepfakes and international crises;
- AI surveillance and authoritarian politics;
- public opinion toward AI-enabled military systems;
- technological rivalry and AI governance;
- algorithmic bias in national-security decision-making.

Students will be evaluated on the clarity of their research question, theoretical argument, use of evidence, engagement with relevant scholarship, and quality of writing.

Research Presentation (10%)

During the final week, students will give a short presentation of their research project. Presentations should identify the research question, theoretical argument, evidence, findings or expectations, and broader implications for international security.

Course Readings

All required readings will be available through the course learning-management system.

Readings will combine political science scholarship with selected policy reports and primary documents. Students will encounter quantitative, experimental, qualitative, and computational research and will be encouraged to evaluate how different forms of evidence support competing claims about technology and security.

Course Schedule

Week	Topic and Selected Readings
1	Introduction: Will AI Transform International Security? Course introduction; technological change, uncertainty, and international politics. Paul Scharre. 2023. <i>Four battlegrounds: Power in the age of artificial intelligence</i> , Ch 1.
2	Technology, Military Innovation, and International Power Michael C. Horowitz. 2010. <i>The diffusion of military power: Causes and consequences for international politics</i> , Ch 1 and 2. Discussion: when do new technologies change the balance of power?
3	Artificial Intelligence and Great-Power Competition Michael C. Horowitz. 2018. <i>Artificial intelligence, international competition, and the balance of power</i> , Ch 1 and 2 Selected policy readings on U.S.–China technological competition.
4	The AI Race: Innovation, Rivalry, and Technological Acceleration Discussion of technological races and security dilemmas. Case analysis: semiconductor controls and U.S.–China competition.
5	Autonomous Weapons and the Future of Warfare Paul Scharre. 2018. <i>Army of none: Autonomous weapons and the future of war</i> , Ch 1 and 2 Debate: should lethal autonomous weapons be restricted?
6	AI, Deterrence, and Crisis Stability Selected scholarship on emerging technology, deterrence, and escalation. Simulation exercise: AI-enabled decision-making during an international crisis.
7	Algorithms, Intelligence, and Military Decision-Making How AI changes surveillance, intelligence analysis, targeting, and command decisions. Discussion: automation bias and human–machine interaction.

Course Schedule (continued)

Week	Topic and Selected Readings
8	Can Algorithms Predict Political Violence? Introduction to computational conflict forecasting. Discussion: prediction, uncertainty, and preventive intervention. Computational Evidence Exercise
9	Cyber Conflict and Emerging Technologies Thomas Rid. 2014. <i>Cyber war will not take place</i> in <i>Strategic Studies</i> (pp. 408-428). Routledge. Discussion: cyber capabilities, signaling, and escalation.
10	AI, Disinformation, and Foreign Influence Selected scholarship on computational propaganda, deepfakes, and political communication. Case analysis: AI-generated information during international crises.
11	Surveillance, AI, and Authoritarian Power Selected research on digital surveillance and authoritarian governance. Comparative discussion: China and democratic surveillance systems.
12	Public Opinion and AI in International Security How do citizens evaluate AI-generated security information? Survey experiments, source credibility, uncertainty, and support for military intervention.
13	Democratic Discourse and the Politics of AI Development Does geopolitical rivalry narrow democratic debate over technological risks? Case comparison: the United States, China, and South Korea.
14	Governing AI: Safety, Regulation, and International Cooperation Selected readings on international AI governance and institutional cooperation. Debate: can geopolitical rivals cooperate on AI safety?
15	The Future of AI and International Security Comparative review: technological rivalry, conflict, governance, and political accountability. Student research presentations.

Inclusive Learning Environment

My goal is to create a classroom in which students with different academic backgrounds, methodological preparation, and perspectives can participate meaningfully in political inquiry.

Students may enter the course with very different levels of familiarity with international security, statistics, computer science, or artificial intelligence. No programming background is assumed. I therefore use structured discussion, small-group exercises, scaffolded assignments, and guided interpretation of quantitative and computational evidence so that all students can engage meaningfully with the material.

Because many topics examined in this course—including warfare, surveillance, authoritarianism, political violence, and military technologies—may generate disagreement, students are expected to engage one another's arguments respectfully and distinguish analytical critique from personal judgment.

Use of Generative AI

Because generative AI is itself an object of study in this course, students will engage directly with AI tools in selected classroom exercises. The goal is to understand both their capabilities and their limitations.

Generative AI may be used for limited purposes such as brainstorming research questions, clarifying concepts, generating alternative search terms, or comparing AI-generated output with scholarly evidence. Students may not submit AI-generated prose as their own work.

Any use of generative AI in graded assignments must be disclosed and comply with assignment-specific instructions. Students remain responsible for verifying factual claims, reading and citing original sources, evaluating evidence, and developing their own arguments.

Academic Integrity

Students are expected to follow the institution's academic integrity policies. All written work must appropriately acknowledge the ideas, arguments, data, and evidence of others.

Plagiarism, unauthorized collaboration, fabrication of evidence, or submission of work produced by another person or system may result in academic penalties consistent with university policy.

Accessibility and Student Support

Students who require accommodations are encouraged to work with the appropriate accessibility office and to contact the instructor early in the semester.

I welcome conversations about how approved accommodations can be implemented effectively in this course.

This syllabus is a sample and may be revised to reflect institutional requirements, the academic calendar, and developments in artificial intelligence and international security.