

Political Science, Security, & Technology (BHA Concentration)

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BHA Political Science, Security, & Technology Concentration

(90 units minimum)

The concentration in Political Science, Security, & Technology takes a social science (not technical) approach to studying emerging technologies that affect war and peace. There is no better place to study security and technology than Carnegie Mellon University, a thought leader in global and national security issues, policies, and strategies related to digital technologies. CMU students are uniquely poised to influence the future, with cutting-edge research happening across campus in all the relevant technological areas—e.g., machine learning, cybersecurity, robotics, big data, neuroscience, human-computer interaction, human enhancement, synthetic biology, and various types of artificial intelligence.

In this course of study, Carnegie Mellon undergraduates learn how to analyze the political, economic, social, and ethical dimensions of new technologies, equipping themselves to contribute to vital political debates and influence technological developments in the public interest.

The lesson of the past few years is that the pace of technological change will only increase, and its impact on the future of humanity will also grow. In particular, the geopolitical implications of various forms of artificial intelligence are well along, including their impacts on work, health, environmental protection, and especially conflict. The ongoing conflicts in Ukraine, Gaza, Sudan and elsewhere reflect the role of autonomous weapons, loitering munitions, UAVs, voice-cloning tools, and open-source intelligence driven by machine learning tools.

The full effects of these technologies are some years away, but our students must be equipped to shape and adapt to them. Most serious among these effects will be the impact on war and peace, what it means to be human, patterns of economic prosperity, and the future of global stability.

Students in this concentration read, employ, and create evidence-based research that addresses and shapes the future of technology in national and international security. In choosing their electives, students have the opportunity to emphasize either the international or domestic American aspects of this topic. Challenges posed by digital technologies affect people of all political parties, in the United States and throughout the world, especially in democracies.

Political Science Core (3 courses, 27 units)

Students must complete the following three courses:

		Units
84-101	Introduction to Political Science	9
84-104	Decision Processes in American Political Institutions	9
84-226	International Relations	9

Communication (1 course, 9 units)

Students must complete the following course:

84-250	Writing for Political Science and Policy	9
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Methodology Core (2 courses, 18 units minimum)

Students must complete two of the following courses:

84-266	Research Design for Political Science	9
36-202	Methods for Statistics & Data Science	9
15-110	Principles of Computing	10
or 15-112	Fundamentals of Programming and Computer Science	

Security and Technology Core (4 courses, 36 units)

Students must complete the following course:

84-274	An Introduction to Technology and War	9
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Students must complete 27 units from the following list of courses:

84-314	Politics, Technological Change, and Economic Growth	9
84-330	Race for the Future: US-China Tech Competition	6
84-343	Offensive Cyber: Law & Policy	6
84-345	Hackers, the Law, & Policy Responses	6

84-347	Congress & National Security	9
84-349	Digital Diplomacy: Cybersecurity Challenges and Global Governance	9
84-350	A Strategist's Introduction to Artificial Intelligence	9
84-353	US-China Strategic Stability	6
84-356	Applied Political Data Analytics	9
84-363	Click. Hack. Rule: Understanding the Power & Peril of Cyber Conflict	9
84-368	Technology Ethics	9
84-370	Nuclear Security & Arms Control	9
84-371	International Governance of Artificial Intelligence	9
84-375	Geopolitics of Innovation	9
84-383	National Cyber Policy & Strategy	6
84-387	Remote Systems and the Cyber Domain in Conflict	9
84-405	The Future of Warfare	9