Institute for Politics and Strategy

Kiron K. Skinner, Director and Taube Professor
Location: Porter Hall 223E
www.cmu.edu/ips (http://www.cmu.edu/ips/)

Founded in 2015, the Institute for Politics and Strategy (https://www.cmu.edu/ips/) is a university-wide institute for research and undergraduate and graduate education in the fields of political science, international relations, national security, and grand strategy. IPS is dedicated to the study of politics through the discipline of political science with support from other social sciences. In this way, IPS carries on a respected tradition of interdisciplinary political science at Carnegie Mellon University (CMU). IPS also builds upon the university’s rich heritage of applying basic science to issues of public policy.

International Relations and Politics is the flagship academic program in IPS. The name of the major signifies that those studying IRP learn about international relations and domestic politics from the standpoint of the discipline of political science. The IRP major preserves and expands CMU’s tradition in political science, while at the same time, taps into and contributes to CMU’s strengths in other social sciences that combine analytical and empirical methods. IRP recently launched an innovative initiative to incorporate decision science in political science. Thus, students learn to apply the burgeoning science of judgment and decision making to understanding political actors’ strategies and foibles, the strengths and weaknesses of formal methods of policy analysis (i.e., cost, risk, benefit, analysis), and the factors shaping public responses to politics and policies.

IRP provides a rich set of courses and programmatic offerings that have made it an attractive course of study for students from all of CMU’s colleges. Basic science is the foundation for the public policy activities of IPS. Analytical social science and interdisciplinary research and teaching are used to better understand, explain, anticipate, and solve public policy problems. The CMU traditions of analytical political science and applied social science are reflected in the degree programs and entities that IPS supports and oversees. The academic programs included in the Institute for Politics and Strategy are:

- B.S. International Relations and Politics Major (primary and additional);
- B.S. Economics and Politics (primary and additional);
- International Relations and Politics Minor;
- Cybersecurity and International Conflict Minor;
- Politics and Public Policy Minor;
- Accelerated Master of Science in International Relations and Politics; and
- Master of Information Technology Strategy.

The Economics and Politics major is offered jointly between the Undergraduate Economics Program (UEP) and IPS. Students are equal members of both academic units and receive advising from both units. The major will appeal to any student interested in the design, evaluation, and political implementation of policy.

The IRP minor shares core courses with the IRP major. The minor in Politics and Public Policy has a greater focus on domestic politics and public policy than either the IRP major or minor. The minor in Cybersecurity and International Conflict analyzes the role of cyber warfare and cybersecurity in international politics – past, present, and future.

The Accelerated Master of Science in International Relations and Politics (IRP/AMP) (http://www.cmu.edu/ips/masters%20degrees/) is open only to Carnegie Mellon undergraduate students. Students should have an undergraduate major, additional major, or minor in IPS, they should have participated in the Carnegie Mellon University Washington Semester Program, or they should have special approval from the faculty admissions committee. Current undergraduates will apply for the IRP/AMP during the junior year. The primary focus of the IRP/AMP is international security, along with coursework in political institutions.

The Master of Information Technology Strategy (MITS) (http://www.cmu.edu/mits/) program provides graduate students with core interdisciplinary competencies in cybersecurity. The master’s program is a joint initiative of the College of Engineering, the Institute for Politics and Strategy, and the School of Computer Science. The Institute for Software Research, a department in the School of Computer Science, is the administrative home for MITS.

IPS administers these initiatives:

- The Center for International Relations and Politics;
- The Carnegie Mellon University Washington Semester Program; and
- The Institute for Strategic Analysis.

The Center for International Relations and Politics (CIRP) is a university hub for scholarly and policy-oriented activities on domestic and international issues. CIRP (http://www.cmu.edu/cirp/) supports and promotes student and faculty research and hosts national and international thought leaders through its Policy Forum (https://www.cmu.edu/ir/cirp-policy-forum/). The CIRP Journal (https://www.cmu.edu/ir/cirp-journal/) is an opportunity for undergraduate and graduate students to publish their work in international relations and political science. Students from across campus contribute scholarly analyses of current problems facing the United States and the international system and perform interviews with the nation’s thought leaders. The CIRP Journal is published in print and online format about twice per academic year.

The Carnegie Mellon University Washington Semester Program (CMU/ WSP) (http://www.cmu.edu/ips/cmuwsp/) is a semester-long program for undergraduates interested in taking courses and interning in Washington. The minor in Politics and Public Policy may be earned by completing CMU/ WSP and taking an additional core course in the Institute for Politics and Strategy.

Founded in 2013, the Institute for Strategic Analysis (http://www.cmu.edu/isa/) facilitates and supports CMU faculty members interested in bringing their scientific research to bear upon problems of national security. These problems include terrorism, artificial intelligence, cyber challenges, war avoidance, intelligence, and the intersection of energy and security. ISA facilitates strategic engagements between CMU faculty and leaders in the defense and intelligence community as they seek mutually beneficial ways to have basic research inform national security policy.

Bachelor of Science in International Relations and Politics

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www.cmu.edu/ips (http://coursescatalog.web.cmu.edu/schools-colleges/dietrichcollegeofhumanitiesandsocialsciences/instituteforpoliticsandstrategy/www.cmu.edu/ips/)

Offered through the Institute for Politics and Strategy (IPS), the Bachelor of Science in International Relations and Politics (IRP) analyzes the role of politics at the national, regional, international, and transnational levels; examines political and institutional arrangements within and among these levels; and investigates the grand strategy of nation-states.

Statesmen, scholars, and policy makers often define grand strategy as the combination of diplomatic, economic, military, and political factors used by leaders to defend their respective nation-states. The IRP major investigates the way in which leaders and citizens construct grand strategy and national security policy more generally; the impact of domestic and international forces on states’ security and economic policies; and the significance of alliances, coalitions, and international institutions for world politics. Although the study of grand strategy and political institutions is the flagship initiative of the major, students are also able to study the effects of culture, economics, and society on the international system through a rich set of elective courses.

Thinking systematically about international and domestic politics is the core objective of the IRP major. To this end, the major has required courses in mathematics and statistics that help to sharpen students’ ability to undertake scientific analysis in the required substantive and historical courses. The major is rooted in the discipline of political science but also utilizes the interdisciplinary strengths of decision science, economics, and political history. Thus, students pursuing this major will use the analytic tools of game theory, economic and statistical analysis, qualitative analysis, rational choice theory, and theories of behavioral decision making as they study alliances, coalitions, institutions, and political strategy.

The name of the major signifies that those studying IRP learn about international relations and domestic politics from the standpoint of the discipline of political science. Also, the major taps into and contributes to CMU’s strengths in other social sciences that combine analytical and empirical methods. IRP includes an innovative initiative that incorporates decision science in political science. It enables students to apply the burgeoning science of judgment and decision making to understanding
political actors’ strategies and foibles, the strengths and weaknesses of formal methods of policy analysis (e.g., cost, risk, benefit, analysis), and the factors shaping public responses to politics and policies.

Recognizing the influence of language and culture on politics, students are required to complete the intermediate (200) level, or its equivalent, in a modern language other than English. Advanced-level study is strongly encouraged.

Open to all Carnegie Mellon undergraduates, the Carnegie Mellon University Washington Semester Program (CMU/WSP) allows students to study public policy and intern in Washington for one semester. Courses taken through CMU/WSP will count toward the elective sequence in politics and public policy for IRP majors.

IRP majors interested in developing their research skills are encouraged to apply for a research position with the Center for International Relations and Politics or work directly with a member of the IPS faculty. Students are also encouraged to join student organizations focused on domestic or international politics. Becoming involved in the Institute for Politics and Strategy, as well as attending lectures and events sponsored by the Center for International Relations and Politics (https://www.cmu.edu/ir/), will provide additional opportunities for students. Students are also encouraged to submit their work for publication in the CIRP Journal (https://www.cmu.edu/ir/cirp-journal/), an online and print publication that analyzes current problems facing the United States and the international system.

In addition to the primary major in International Relations and Politics, IPS offers an additional major. Minors in International Relations and Politics, Cybersecurity and International Conflict, and Politics and Public Policy are also available. IPS also offers a Bachelor of Science in Economics and Politics jointly with the Undergraduate Economics Program.

Double Counting: Students may double count a maximum of four courses with another major or minor.

Curriculum

Core Courses

Students must complete all of the following core courses.

84-104  Decision Processes in American Political Institutions  9
84-250  Writing for Political Science and Policy  9
84-265  Political Science Research Methods  9
84-275  Comparative Politics  9
84-326  Theories of International Relations  9
84-369  Decision Science for International Relations  9
84-450  Policy Forum  6
36-202  Methods for Statistics & Data Science  9
84-110  Foundations of Political Economy  9
or 73-102  Principles of Microeconomics  9

Mathematics Requirement

Excluded from all double counting rules. Students must complete one of the following courses.

21-120  Differential and Integral Calculus  10
or 21-112  Calculus II  9

Language Requirement

Students are required to complete the intermediate (200) level or the equivalent in a modern language other than English. Advanced level study is strongly encouraged. Students who successfully pass a language placement exam on campus, at the intermediate II level or higher, are required to take an advanced language course to satisfy the language requirement.

Electives

International Relations and Politics students will fulfill the elective requirement by pursuing either Option 1 or Option 2 listed below:

Option 1: take 45 units (five courses) from the elective lists below. At least three courses (27 units) must be from the Institute for Politics and Strategy (84-xxx). Most courses listed below are 9-unit courses, but some are fewer. When courses offered for fewer than 9 units are chosen, students should note that a minimum of 45 units is required, and should plan to take one or more additional courses as appropriate.

OR

Option 2: complete the majority of their electives via the Carnegie Mellon University Washington Semester Program (CMU/WSP) politics and public policy elective sequence. Any elective units not fulfilled during CMU/WSP may be completed through coursework from the Institute for Politics and Strategy (84-xxx) elective list.

The Washington Semester Program (CMU/WSP) Politics and Public Policy sequence includes:

- Policy Forum (12 units) - This course will count as the Policy Forum (84-450) Core Course Requirement.
- Internship Seminar 84-360 CMU/WSP: Internship Seminar (12 units)
- CMU/WSP Elective Seminars (24 units total)

A list of CMU/WSP elective seminars may be found in the Politics and Public Policy elective list below.

Grand Strategy and Political Institutions

66-221  Topics of Law: Introduction to Intellectual Property Law  9
79-298  Guns in American History: Culture, Violence, and Politics  6
79-301  History of Surveillance: From the Plantation to Data Capitalism  6
79-302  Killer Robots: The Ethics, Law, and Politics of Lethal Autonomous Weapons Systems  6
80-135  Introduction to Political Philosophy  9
80-321  Causation, Law, and Social Policy  9
80-335  Social and Political Philosophy  9
84-309  Political Behavior  9
84-319  U.S. Foreign Policy and Interventions in World Affairs  9
84-320  Global Perspectives on International Affairs  9
84-321  Autocrats and Democrats  9
84-322  Nonviolent Conflict and Revolution  9
84-323  War and Peace in the Contemporary Middle East  9
84-324  The Future of Democracy  9
84-325  Contemporary American Foreign Policy  9
84-362  Diplomacy and Statecraft  9
84-363  Comparative Legal Systems  9
84-364  Comparative Presidential Behavior: Leadership, Personality, and Decision Making  9
84-366  The American Presidency  9
84-370  Global Nuclear Politics  9
84-372  Space and National Security  9
84-373  Emerging Technologies and the Law  9
84-380  Grand Strategy in the United States  9
84-386  The Privatization of Force  9
84-387  Technology and Policy of Cyber War  9
84-388  Concepts of War and Cyber War  6
84-389  Terrorism and Insurgency  9
84-390  Social Media, Technology, and Conflict  9
84-393  Legislative Decision Making: US Congress  6
84-402  Judicial Politics and Behavior  6
84-405  The Future of Warfare  9
84-414  International and Subnational Security  9
88-281  Topics in Law: 1st Amendment  9
88-284  Topics of Law: The Bill of Rights  9

Economics and Society

19-452  EPP Projects  12
70-342  Managing Across Cultures  9
70-365  International Trade and International Law  9
70-430  International Management  9
73-103  Principles of Macroeconomics  9
73-328  Health Economics  12
73-332  Political Economy  9
79-386  Pandemic – Disease, Panic, or Both? Epidemics, Past & Present  9
80-136  Social Structure, Public Policy & Ethics  9
80-244  Environmental Ethics  9
80-249  AI, Society, and Humanity  9
80-348  Health, Human Rights, and International Development  9
80-447  Global Justice  9
84-308  Political Economy of Latin America  Var.
84-310  International Political Economy  9
NOTE: Some courses have additional prerequisites.

Sample four year plan

These sample curricula represent a plan for completing the requirements for the B.S. in International Relations and Politics. International Relations and Politics students are encouraged to spend a semester studying and interning in Washington, DC, through the CMU/WSP (http://www.cmu.edu/ips/cmuwsp/), and/or study abroad. The plan below demonstrates that a semester off-campus fits well into the curriculum. As with most majors in the Dietrich College, the International Relations and Politics major can be completed in as few as two years of undergraduate study, not that it must be. Students may declare the B.S. in International Relations and Politics as early as the second semester of the freshman year and should consult with the director (see above) about their course of study.

<table>
<thead>
<tr>
<th>Semester</th>
<th>Freshman</th>
<th>Sophomore</th>
</tr>
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<tbody>
<tr>
<td><strong>Fall</strong></td>
<td>36-200 Reasoning with Data</td>
<td>84-326 Theories of International Relations</td>
</tr>
<tr>
<td><strong>Spring</strong></td>
<td>79-104 Global Histories</td>
<td>84-250 Writing for Political Science and Policy</td>
</tr>
<tr>
<td><strong>Fall</strong></td>
<td>21-120 Differential and Integral Calculus*</td>
<td>84-265 Political Science Research Methods</td>
</tr>
<tr>
<td><strong>Spring</strong></td>
<td>84-104 Decision Processes in American Political Institutions **</td>
<td>IRP Elective</td>
</tr>
<tr>
<td><strong>Fall</strong></td>
<td>Language Course</td>
<td>IRP Elective</td>
</tr>
<tr>
<td><strong>Spring</strong></td>
<td>84-275 Comparative Politics</td>
<td>IRP Elective</td>
</tr>
<tr>
<td><strong>Fall</strong></td>
<td>99-101 Computing &amp; Carnegie Mellon</td>
<td>Gen Ed or Elective</td>
</tr>
</tbody>
</table>

*All students are strongly encouraged to participate in the CMU/WSP (http://www.cmu.edu/ips/cmuwsp/) and/or in a study abroad program. Spring semester of the junior year is a popular semester to study off-campus. However, International Relations and Politics majors may instead choose to participate in the CMU/WSP or study abroad in spring of sophomore year, fall of junior year, or fall of senior year. Students should consult the deputy director when planning their curricular program.

**Students who participate in the CMU/WSP (https://www.cmu.edu/ips/cmuwsp/) will complete the Policy Forum while studying in Washington, DC. Students who do not participate in the CMU/WSP will take the Policy Forum in the spring of the senior year in Pittsburgh.

Additional Major

Students who elect International Relations and Politics as an additional major must fulfill all of the requirements of the International Relations and Politics major.

Bachelor of Science in Economics and Politics

Politics and economics are deeply interconnected. Political institutions and decision-making impact economic growth, income distribution, and many other aspects of economic life. Both fiscal and monetary policies affect the economy, but these policies are often employed with political considerations in mind and can influence political activity. Conversely, economic outcomes shape political preferences and policy choices. The overlap between these two disciplines is endless. For example, while the United Nations is often thought of in purely political terms, the Security Council can and does impose sanctions on countries—an example of an economic policy used for political change.
The Economics and Politics major is offered jointly between the Undergraduate Economics Program ([https://www.cmu.edu/tepper/programs/undergraduate-economics/](https://www.cmu.edu/tepper/programs/undergraduate-economics/)) and the Institute for Politics and Strategy ([https://www.cmu.edu/ips/](https://www.cmu.edu/ips/)). Students are equal members of both academic units and receive advising from both units. The major will appeal to any student interested in the design, evaluation, and political implementation of policy. It will be especially attractive to students considering careers in politics, government agencies, political and business consulting, lobbying, or the law.

The B.S. in Economics and Politics is an interdisciplinary major. The major will develop the political context and underpinnings of economic policy making. It will explore how political institutions resolve the tradeoffs and disagreements associated with policymaking and how they can facilitate or impede desirable economic outcomes.

IPS strengths lie in topics like national security, grand strategy, and globalization. Economic policy is just one facet of grand strategy, through which an administration pursues domestic and international goals. This major will also address key issues such as the complementarity between the multilateral economic institutions such as the IMF and World Bank and the use of economic coercion, and enable students to understand economic statecraft more broadly. Whether coercion is successful depends not just on the levers of power but on also on variations in authoritarian regime structure, and complex linkages in the international economy. This is also important for our understanding of the relationship between international economics on human rights practices, extending even to how treaty commitments can facilitate compliance with a global initiative to combat climate change. And, not least important, there is broad recognition that the viability of the “Euro Zone” depends on whether the political-economic agreements necessary to mitigate institutional weaknesses are politically feasible or destined to failure.

Economics and Politics is available as both a primary and additional major.

### Curriculum

Students must earn a grade of ‘C’ or better in all courses taken in the Department of Economics (73-xxx).

#### Prerequisites

Students must complete all of the following courses.

- **21-120** Differential and Integral Calculus 10
- or **21-112** Calculus II 9
- **36-200** Reasoning with Data 9

#### Foundations (48 units)

Students must complete all of the following courses.

- **21-256** Multivariate Analysis 9
- **73-102** Principles of Microeconomics 9
- **73-103** Principles of Macroeconomics 9
- **84-104** Decision Processes in American Political Institutions 9
- **84-275** Comparative Politics 9
- **73-210** Economics Colloquium I 3

#### Core (63 units)

Students must complete all of the following courses.

- **73-230** Intermediate Microeconomics 9
- **73-240** Intermediate Macroeconomics 9
- **73-265** Economics and Data Science 9
- **73-274** Econometrics I 9
- **84-265** Political Science Research Methods 9
- **84-326** Theories of International Relations 9
- **84-310** International Political Economy 9

#### Communication (9 units)

Students must complete one course from the following list.

- **73-270** Professional Communication for Economists 9
- **84-250** Writing for Political Science and Policy 9

#### Electives (27 units)

Majors are required to take 27 units (three courses) from the elective lists below. At least one course (9 units) must be taken from Economics (73-xxx) and at least one course (9 units) must be taken from the Institute for Politics and Strategy (84-xxx). Students may complete electives through coursework in the Carnegie Mellon University Washington Semester Program ([CMU/WSP](https://www.cmu.edu/ips/cmuwsp/)) Politics and Public Policy elective sequence.

#### Economics Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>73-328</td>
<td>Health Economics</td>
<td>12</td>
</tr>
<tr>
<td>73-332</td>
<td>Political Economy</td>
<td>9</td>
</tr>
<tr>
<td>73-338</td>
<td>Financial Crises and Risk</td>
<td>9</td>
</tr>
<tr>
<td>73-352</td>
<td>Public Economics</td>
<td>9</td>
</tr>
<tr>
<td>73-353</td>
<td>Financial Regulation in the Digital Age</td>
<td>9</td>
</tr>
<tr>
<td>73-359</td>
<td>Benefit-Cost Analysis</td>
<td>9</td>
</tr>
<tr>
<td>73-365</td>
<td>Firms, Market Structures, and Strategy</td>
<td>9</td>
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<tr>
<td>73-367</td>
<td>Technology Jobs and the Future of Work</td>
<td>9</td>
</tr>
<tr>
<td>73-372</td>
<td>International Money and Finance</td>
<td>9</td>
</tr>
<tr>
<td>73-415</td>
<td>Data Driven Business and Public Policy Decision</td>
<td>9</td>
</tr>
<tr>
<td>73-421</td>
<td>Emerging Markets</td>
<td>9</td>
</tr>
<tr>
<td>73-427</td>
<td>Sustainability, Energy, and Environmental</td>
<td>9</td>
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<tr>
<td>Economics</td>
<td>Economics Electives</td>
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#### Politics and Strategy Electives

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>84-308</td>
<td>Political Economy of Latin America</td>
<td>Var.</td>
</tr>
<tr>
<td>84-309</td>
<td>Political Behavior</td>
<td>9</td>
</tr>
<tr>
<td>84-311</td>
<td>International Development: Theory and Praxis</td>
<td>9</td>
</tr>
<tr>
<td>84-313</td>
<td>International Organizations and Law</td>
<td>9</td>
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<tr>
<td>84-318</td>
<td>Politics of Developing Nations</td>
<td>9</td>
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<tr>
<td>84-319</td>
<td>U.S. Foreign Policy and Interventions in World Affairs</td>
<td>9</td>
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<td>84-322</td>
<td>Nonviolent Conflict and Revolution</td>
<td>9</td>
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<td>84-323</td>
<td>War and Peace in the Contemporary Middle East</td>
<td>9</td>
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<td>84-324</td>
<td>The Future of Democracy</td>
<td>6</td>
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<td>84-325</td>
<td>Contemporary American Foreign Policy</td>
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<td>84-362</td>
<td>Diplomacy and Statecraft</td>
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<td>84-363</td>
<td>Comparative Legal Systems</td>
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<td>Comparative Presidential Behavior: Leadership, Personality, and Decision Making</td>
<td>9</td>
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<tr>
<td>84-366</td>
<td>The American Presidency</td>
<td>9</td>
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<tr>
<td>84-369</td>
<td>Decision Science for International Relations</td>
<td>9</td>
</tr>
<tr>
<td>84-370</td>
<td>Global Nuclear Politics</td>
<td>9</td>
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<tr>
<td>84-372</td>
<td>Space and National Security</td>
<td>9</td>
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<tr>
<td>84-373</td>
<td>Emerging Technologies and the Law</td>
<td>9</td>
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<td>84-380</td>
<td>Grand Strategy in the United States</td>
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<td>84-386</td>
<td>The Privatization of Force</td>
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<td>84-387</td>
<td>Technology and Policy of Cyber War</td>
<td>9</td>
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<tr>
<td>84-388</td>
<td>Concepts of War and Cyber War</td>
<td>9</td>
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<tr>
<td>84-389</td>
<td>Terrorism and Insurgency</td>
<td>9</td>
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<tr>
<td>84-390</td>
<td>Social Media, Technology, and Conflict</td>
<td>9</td>
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<tr>
<td>84-393</td>
<td>Legislative Decision Making: US Congress</td>
<td>6</td>
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<tr>
<td>84-402</td>
<td>Judicial Politics and Behavior</td>
<td>6</td>
</tr>
<tr>
<td>84-405</td>
<td>The Future of Warfare</td>
<td>9</td>
</tr>
<tr>
<td>84-414</td>
<td>International and Subnational Security</td>
<td>9</td>
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#### CMU/WSP Politics and Public Policy Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>84-330</td>
<td>The Shading of Democracy: The Influence of Race on American Politics</td>
<td>6</td>
</tr>
<tr>
<td>84-331</td>
<td>Money, Media, and the Power of Data in Decisionmaking</td>
<td>6</td>
</tr>
<tr>
<td>84-332</td>
<td>Effects of US Policy on Businesses: Perspectives of Asian Americans</td>
<td>6</td>
</tr>
<tr>
<td>84-333</td>
<td>Power and Levers for Change in Washington, DC</td>
<td>12</td>
</tr>
<tr>
<td>84-334</td>
<td>Presidential Power in a Constitutional System</td>
<td>6</td>
</tr>
<tr>
<td>84-336</td>
<td>Implementing Public Policy: From Good Idea To Reality</td>
<td>6</td>
</tr>
<tr>
<td>84-337</td>
<td>Biomedical Science Research, Policy, and Governance</td>
<td>6</td>
</tr>
<tr>
<td>84-343</td>
<td>Language and Power: How to Understand and Use Political Speech</td>
<td>6</td>
</tr>
<tr>
<td>84-346</td>
<td>Legal Issues in Public Administration</td>
<td>6</td>
</tr>
<tr>
<td>84-348</td>
<td>Advocacy, Policy and Practice</td>
<td>6</td>
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</tbody>
</table>
The complexity and policy challenge of cyber-engagements is immense and to reshape how wars are fought in the twenty-first century. As such, the future. Cyber attacks by nation-states and their proxies have the potential cyber warfare and cybersecurity in international politics—past, present, and the minor in cybersecurity and international conflict analyzes the role of Health, Human Rights, and, International Development.

80-444 Global Justice 9
88-366 Behavioral Economics of Poverty and Development 9
88-419 International Negotiation 9
88-444 Public Policy and Regulation 9

CAPSTONE (15-21 units)

Students must complete all of the following courses.

84-450 Policy Forum 12 units if taken during CMU/WSP, 6 units if taken in Pittsburgh 6
73-497 Senior Project or Senior Honors Thesis 9

SAMPLE Four Year Plan

<table>
<thead>
<tr>
<th>Freshman</th>
<th>Sophomore</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall</strong></td>
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<td>19-411</td>
<td>Science and Innovation Leadership for the 21st Century: Firms, Nations, and Tech 9</td>
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<td>19-425</td>
<td>Sustainable Energy for the Developing World 9</td>
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<td>70-365</td>
<td>International Trade and International Law 9</td>
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<td>79-280</td>
<td>Coffee and Capitalism 9</td>
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<td>79-318</td>
<td>Sustainable Social Change: History and Practice 9</td>
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<td>Behavioral Economics of Poverty and Development 9</td>
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<td>Public Policy and Regulation 9</td>
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<td>Economics &amp; Politics Elective 2</td>
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<td>Economics &amp; Politics Elective 3</td>
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Economics and Politics students are highly encouraged to participate in the Carnegie Mellon University Washington Semester Program (CMU/WSP) (https://www.cmu.edu/ips/cmuwsp/) during the junior year. Study abroad is also encouraged.

Minor in Cybersecurity and International Conflict

Kiron K. Skinner, Faculty Director
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www.cmu.edu/ips (http://www.cmu.edu/ips/)

The minor in cybersecurity and international conflict analyzes the role of cyber warfare and cybersecurity in international politics—past, present, and future. Cyber attacks by nation-states and their proxies have the potential to reshape how wars are fought in the twenty-first century. As such, the complexity and policy challenge of cyber-engagements is immense and altogether without precedent. The minor addresses the role of deterrence, dissuasion, and attribution in cyber conflict, while also studying the nuances of key components of modern warfare—from the security dilemma to escalation management.

Courses in this minor focus on the existing gaps in our understanding of cybersecurity and international conflict, such as whether or not cyberespionage is offense or defense dominant and which factors are most important in determining the answer to this, and other relevant questions, including how nation-states, their primary adversaries, and a bevy of nonstate actors engage online and in the virtual and information environments. Accordingly, the minor exposes students to basic technology concepts, methods of attack and defense, potential strategy and goals for cyber-engagement, and response and forensics for cyber-engagements.

Alongside conventional methods of warfare, cybersecurity has rapidly developed into a centerpiece of state’s ability to project power and impose its will in order to achieve its national priorities and strategic objectives. As the United States and other emerging cyber powers craft and implement doctrine in this nascent domain, there is likely to be a rapid increase in activity, from efforts to disrupt the online activities of global terrorist networks like the Islamic State to near daily raids on foreign networks designed to cripple states’ cyberweapons before they can be deployed.

In the shifting landscape of cyber capabilities, how will laws, authorities, and policies keep pace? What are the implications and consequences of actions that may be considered “short of war” by some countries but “above the threshold” of conflict by others? Will a more aggressive defensive posture with respect to cybersecurity inadvertently increase the risk of conflict with states that sponsor malicious hacking groups? What is the proper balance between offense and defense in cybersecurity and how are cyber operations best integrated into a country’s overall military strategy?

Unlike other kinds of conflicts, the attribution of attacks presents significant challenges. Indeed, in many cases, it can be difficult to determine whether the attacker is a nation-state, a nonstate actor, a criminal gang, or a lone hackivist. Investigators must combine technical and traditional methods to identify potentially responsible parties and to understand their intent.

If the aggressor’s identity cannot be confirmed, how can a counterattack be launched? Some attackers may seek to mount “false flag” attacks and deception, for example, that misdirect defenders to counter-attack in the wrong direction. Additionally, what are appropriate responses to attacks made on civil infrastructure and private business operations, such as in the areas of financial services, transportation, energy, entertainment, and health care? In other words, what are the appropriate rules of engagement for national systems, infrastructural systems, businesses, and individuals? When, for example, is a counterattack or a “kinetic” response permissible?

These questions have major implications for the study of war and peace. More than at any time in the past, those who seek to start war may be harder to find and their motives more difficult to discern. Many of the technical challenges posed by cyberspace activities will be addressed in the School of Computer Science’s new security and privacy concentration for SCS students. The SCS program, available to non-SCS students as a minor, requires a high degree of math and quantitative training. The cybersecurity and international conflict minor proposed herein tackles the social-scientific dimensions of cybersecurity with a focus on the implications of the cyber age for modern statecraft, warfare, elections (local, state, and national), and politics, more generally.

CURRICULUM

60 units

Foundational Course

Students must take one of the following two foundational courses (9 units):

84-275 Comparative Politics 9
84-326 Theories of International Relations 9

Core Courses

Students must take all of the following core courses (24 units):

84-387 Technology and Policy of Cyber War 9
84-388 Concepts of War and Cyber War 9
84-405 The Future of Warfare 9

Elective Courses

Students must take three courses from the following list of elective courses (27 units). At least one course (9 units) must be taken from the Institute for Politics and Strategy and have an 84-number.

79-298 Guns in American History: Culture, Violence, and Politics 6
79-301 History of Surveillance: From the Plantation to Data Capitalism 6
Students must take all three core courses (27 units):

84-233 Decision Processes in American Political Institutions 9
84-275 Comparative Politics 9
84-326 Theories of International Relations 9

Economics Requirement
Students must complete one of the following courses. Excluded from all double counting rules.

84-110 Foundations of Political Economy 9
73-102 Principles of Microeconomics 9

Electives
Students select three courses (27 units) from any of the elective sequences below. Two courses (18 units) must be taken from the Institute for Politics and Strategy and have an 84-number.

Grand Strategy and Political Institutions
66-221 Topics of Law: Introduction to Intellectual Property Law 9
79-298 Guns in American History: Culture, Violence, and Politics 6
79-301 History of Surveillance: From the Plantation to Data Capitalism 6
79-302 Killer Robots: The Ethics, Law, and Politics of Lethal Autonomous Weapons Systems 6
80-135 Introduction to Political Philosophy 9
80-321 Causation, Law, and Social Policy 9
80-335 Social and Political Philosophy 9
84-309 Political Behavior 9
84-319 U.S. Foreign Policy and Interventions in World Affairs 9
84-320 Global Perspectives on International Affairs 6
84-321 Autocrats and Democrats 9
84-322 Nonviolent Conflict and Revolution 9
84-323 War and Peace in the Contemporary Middle East 9
84-324 The Future of Democracy 9
84-325 Contemporary American Foreign Policy 9
84-362 Diplomacy and Statecraft 9
84-363 Comparative Legal Systems 9
84-364 Comparative Presidential Behavior: Leadership, Personality, and Decision Making 9
84-366 The American Presidency 9
84-369 Decision Science for International Relations 9
84-370 Global Nuclear Politics 9
84-372 Space and National Security 9
84-373 Emerging Technologies and the Law 9
84-380 Grand Strategy in the United States 9
84-386 The Privatization of Force 9
84-387 Technology and Policy of Cyber War 9
84-388 Concepts of War and Cyber War 6
84-389 Terrorism and Insurgency 9
84-390 Social Media, Technology, and Conflict 9
84-393 Legislative Decision Making: US Congress 6
84-402 Judicial Politics and Behavior 6
84-405 The Future of Warfare 9
84-414 International and Subnational Security 9
88-281 Topics in Law: 1st Amendment 9
88-284 Topics of Law: The Bill of Rights 9

Economics and Society
19-452 EPP Projects 12
70-342 Managing Across Cultures 9
70-365 International Trade and International Law 9
70-430 International Management 9
73-103 Principles of Macroeconomics 9
73-328 Health Economics 12
73-332 Political Economy 9
79-386 Pandemic - Disease, Panic, or Both? Epidemics, Past & Present 9
80-136 Social Structure, Public Policy & Ethics 9
80-244 Environmental Ethics 9
80-249 AI, Society, and Humanity 9
80-348 Health, Human Rights, and International Development 9
80-447 Global Justice 9
84-308 Political Economy of Latin America 9

Minor in International Relations and Politics
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Emily Half, Deputy Director
email@andrew.cmu.edu, 412-268-7082

The International Relations and Politics (IRP) minor analyzes the role of politics at the national, regional, international, and transnational levels; examines political and institutional arrangements within and among these levels; and investigates the grand strategy of nation-states. Statesmen, scholars, and policy makers often define grand strategy as the combination of diplomatic, economic, military, and political factors used by leaders to defend their respective nation-states. The IRP minor investigates the way in which leaders and citizens construct grand strategy and national security policy more generally; the impact of domestic and international forces on states’ security and economic policies; and the significance of alliances, coalitions, and international institutions for world politics. The study of grand strategy and political institutions is the flagship initiative of the minor.

In the tradition of Carnegie Mellon University, political science is studied and taught in an interdisciplinary manner. Utilizing the interdisciplinary strengths of the social sciences at CMU, IRP students study political phenomena through the perspectives of decision science, economics, and political history. Students pursing the minor will be asked to develop an understanding of game theory, economic and statistical analysis, qualitative analysis, rational choice theory, and theories of behavioral decision making as they study alliances, coalitions, institutions, and political strategy. Recognizing the influence of language and culture on politics and international relations, students are encouraged to study a modern language other than English.

The International Relations and Politics minor is offered through the Institute for Politics and Strategy. A maximum of two courses may double count between the minor in International Relations and Politics and another major or minor.

Curriculum
54 units

Core Courses
Students must take all three core courses (27 units):

84-104 Decision Processes in American Political Institutions 9
84-275 Comparative Politics 9
84-326 Theories of International Relations 9
students to study public policy and intern in Washington for one semester. Undergraduates from any course of study who would value firsthand policy experience are invited to apply to the Carnegie Mellon University Washington Semester Program and declare a minor in Politics and Public Policy. In this semester-long program, students live, work, and study in Washington, DC, coming into direct contact with political, business, and community leaders and learning about the most pressing policy issues of the day.

Students earn 48 units for the Carnegie Mellon University Washington Semester Program, interning about twenty-four hours per week in any sector or field of interest within Washington, DC, while taking classes taught by Carnegie Mellon faculty. The Institute for Politics and Strategy sponsors events and policy-oriented opportunities in Washington for students participating in the program to further enrich their experience and enhance their understanding of how Washington functions as a hub of international and public policy decision making.

The minor in Politics and Public Policy is offered through the Institute for Politics and Strategy. A maximum of two courses may double count between the minor in Politics and Public Policy and another major or minor.

Curriculum 57 units

Core Seminars
Students must take the following two courses while participating in the CMU/WSP (24 units):

- 84-360 CMU/WSP: Internship Seminar 12
- 84-450 Policy Forum 6
- 84-450 Policy Forum 6

Elective Seminars
Students must take 24 units from the below list of elective seminars offered in the CMU/WSP. Offerings vary by semester. (24 units):

- 84-330 The Shading of Democracy: The Influence of Race on American Politics 6
- 84-331 Money, Media, and the Power of Data in Decisionmaking 6
- 84-332 Effects of US Policy on Businesses: Perspectives of Asian Americans 6
- 84-333 Power and Levers for Change in Washington, DC 12
- 84-334 Presidential Power in a Constitutional System 6
- 84-336 Implementing Public Policy: From Good Idea To Reality 12
- 84-337 Biomedical Science Research, Policy, and Governance 6
- 84-343 Language and Power: How to Understand and Use Political Speech 6
- 84-346 Legal Issues in Public Administration 6
- 84-348 Advocacy, Policy and Practice 6

Foundational Course
Students select one course from the following list of courses offered at Carnegie Mellon University’s Pittsburgh or Qatar campus. Students may take this course before or after participating in the CMU/WSP. (9 units):

- 84-104 Decision Processes in American Political Institutions 9
- 84-275 Comparative Politics 9
- 84-326 Theories of International Relations 9

Economics Requirement
Students must complete one of the following courses. Students may take this course before or after participating in the CMU/WSP. Excluded from all double counting rules.

- 84-110 Foundations of Political Economy 9
- 73-102 Principles of Microeconomics 9

Minor in Politics and Public Policy

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www.cmu.edu/ips (http://www.cmu.edu/ips/)

Rooted in the discipline of political science, the minor in Politics and Public Policy investigates U.S. public policy issues and other matters of domestic politics while providing students hands-on and practical learning experiences. Students pursuing the Politics and Public Policy minor must participate in the Carnegie Mellon University Washington Semester Program for one semester during their undergraduate experience.

From embassy headquarters to nongovernmental organizations, think tanks to advocacy organizations, and consulting firms to media outlets, Washington, DC, is a focal point for many international and public policy activities. Open to all Carnegie Mellon undergraduates, the Carnegie Mellon University Washington Semester Program (CMU/WSP) allows
Carnegie Mellon University Washington Semester Program

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Emily Half, IPS Deputy Director
ehalf@andrew.cmu.edu; 412-268-7082, Porter Hall 223H

Emily Baddock, CMU/WSP Executive Director
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www.cmu.edu/ips/cmuwsp (http://www.cmu.edu/ips/cmuwsp/)

From embassy headquarters to nongovernmental organizations, think tanks to advocacy organizations, and consulting firms to media outlets, Washington, DC, is a focal point for many international and public policy activities.

Undergraduates from any course of study who would value firsthand policy experience are invited to apply to the Carnegie Mellon University Washington Semester Program (CMU/WSP), sponsored by the university’s Institute for Politics and Strategy. In this semester-long program, students live, work, and study in Washington, DC, coming into direct contact with political, business, and community leaders and learning about the most pressing policy issues of the day.

Students earn 48 units for the Carnegie Mellon University Washington Semester Program, interning about twenty-four hours per week in any sector or field of interest within Washington, DC, while taking classes taught by Carnegie Mellon faculty. The Institute for Politics and Strategy sponsors events and policy-oriented opportunities in Washington for students participating in the program to further enrich their experience and enhance their understanding of how Washington functions as a hub of international and public policy decision making.

Students should contact the IPS deputy director for more information or to discuss how the CMU/WSP may fit into their curriculum. Students who participate in the CMU/WSP may qualify for a minor in Politics and Public Policy (https://www.cmu.edu/ips/undergraduate%20degrees/minors/minor-in-politics-and-public-policy.html).

Curriculum

All students enroll in the following core seminars (24 units).

Core Seminars
84-360 CMU/WSP: Internship Seminar 12
84-450 Policy Forum 6
84-450 Policy Forum 6

Students enroll in 24 units from the below list of elective seminars. Offerings vary by semester.

Elective Seminars
84-330 The Shadowing of Democracy: The Influence of Race on American Politics 6
84-331 Money, Media, and the Power of Data in Decisionmaking 6
84-332 Effects of US Policy on Businesses: Perspectives of Asian Americans 6
84-333 Power and Levers for Change in Washington, DC 12
84-334 Presidential Power in a Constitutional System 6
84-336 Implementing Public Policy: From Good Idea To Reality 12
84-337 Biomedical Science Research, Policy, and Governance 6
84-343 Language and Power: How to Understand and Use Political Speech 6
84-346 Legal Issues in Public Administration 6
84-348 Advocacy, Policy and Practice 6

Accelerated Master of Science in International Relations and Politics

The accelerated Master of Science in International Relations and Politics (IRP/AMP) is open only to Carnegie Mellon undergraduate students. Students should have an undergraduate major, additional major, or minor in the Institute for Politics and Strategy, they should have participated in the Carnegie Mellon University Washington Semester Program, or they should have special approval from the faculty admissions committee.

Students interested in applying for the IRP/AMP should consult with the Institute for Politics and Strategy (IPS) Deputy Director in the sophomore or junior year for details and advice on shaping undergraduate coursework to qualify for the program. Current undergraduates will apply for the IRP/AMP during the junior year. Detailed information on the IRP/AMP curriculum is available on the Institute for Politics and Strategy website (http://www.cmu.edu/ips/masters%20degrees/).

Intellectual Rationale

At the end of the Cold War, there was widespread belief among democratic elites that the end of history finally had arrived. They predicted that the United States (indeed the West, if not the world) would benefit from the peace dividend resulting from the dissolution of the Soviet Union and the undisputed role of the United States as the world’s predominant power. But the spread of democracy across Eastern Europe and Latin America as the Cold War ended has been met with highly unanticipated reversals. Relations among nation-states are in flux. In the twenty-first century, the United States has been engaged in continuous Middle East and South Asian wars, intense territorial disputes among the great powers (US, China, and Russia) are redefining the international landscape, civil wars routinely spill over into larger regional conflicts, and cyber warfare and terrorism intersect in deadly ways.

For the generation of students we are now teaching, war has been a constant in their lifetime. Accordingly, the primary focus of the International Relations and Politics Accelerated Master’s Program (IRP/AMP) is international security.

Perhaps at no time since the interwar period of the twentieth century has there been so much uncertainty about what path the international system will take and how states will internally organize themselves. During this current period of uncertainty, transformation, and chaos, there is no denying President Barack Obama’s dictum: The United States is the world’s indispensable nation. In other words, the United States is the main nation-state actor that helps to organize and enforce norms in the anarchic international system. It is a system marked by the absence of any authority above states or any commonly agreed-upon authority for the use of force – the opposite of domestic society. Perforce, understanding domestic political institutions must be a component of the accelerated master’s program.

It is important to comprehend how the political institutions of other nations function because domestic political processes of all sorts help to shape international relations. Theorists of international relations no longer contend, as they did a half century ago, that politics stops at the water’s edge. International security will be the area of concentration in this accelerated master’s program. Courses in political institutions also will be integral to IRP/AMP because they will enrich students’ scientific understanding of political processes.

Faculty

KIRON K. SKINNER, Taube Professor of International Relations and Politics; Institute Director – Ph.D., Harvard University; Carnegie Mellon, 1999–

IGNACIO ARANA, Assistant Teaching Professor – Ph.D., University of Pittsburgh; Carnegie Mellon, 2016–

COLIN P. CLARKE, Assistant Teaching Professor – Ph.D., University of Pittsburgh; Carnegie Mellon, 2014–

BARUCH FISCHHOFF, Howard Heinz University Professor in the Institute for Politics and Strategy and Department of Engineering and Public Policy – Ph.D., The Hebrew University of Jerusalem; Carnegie Mellon, 1987–

Executive Committee

KIRON K. SKINNER, Taube Professor of International Relations and Politics; Institute Director – Ph.D., Harvard University; Carnegie Mellon, 1999–

KATHLEEN CARLEY, Professor – Ph.D., Harvard University; Carnegie Mellon, 1984–

BARUCH FISCHHOFF, Howard Heinz University Professor in the Institute for Politics and Strategy and Department of Engineering and Public Policy – Ph.D., The Hebrew University of Jerusalem; Carnegie Mellon, 1987–

Lecturers

MOLLY DUNIGAN, Lecturing Faculty in the Institute for Politics and Strategy – Ph.D., Cornell University; Carnegie Mellon, 2014–
GEOFFREY MCGOVERN, Lecturing Faculty in the Institute for Politics and Strategy - Ph.D., Binghamton University; J.D., Harvard University; Carnegie Mellon, 2013-

Post-Doctoral Fellows

JOHN J. CHIN, Post-Doctoral Fellow in the Institute for Politics and Strategy - Ph.D., Princeton University; Carnegie Mellon, 2016-

DANIEL HANSEN, Post-Doctoral Fellow in the Institute for Politics and Strategy – Ph.D., Michigan State University; Carnegie Mellon, 2018-

DANI NEDAL, Post-Doctoral Fellow in the Institute for Politics and Strategy - Ph.D., Georgetown University; Carnegie Mellon, 2018-

DANIEL M. SILVERMAN, Post-Doctoral Fellow in the Institute for Politics and Strategy – Ph.D., The Ohio State University; Carnegie Mellon, 2017-

Fellows

RASHALL BRACKNEY, Fellow in the Institute for Politics and Strategy - Ph.D., Robert Morris University; Carnegie Mellon, 2018-

FRED CRAWFORD, Fellow in the Institute for Politics and Strategy – J.D., Georgetown University; Carnegie Mellon, 2017-

DALE CROWELL, Fellow in the Institute for Politics and Strategy – M.A., Catholic University of America; Carnegie Mellon, 2018-

MARCIELA DEGRACE, Fellow in the Institute for Politics and Strategy – Ph.D., Harvard University; Carnegie Mellon, 2018-

JOSEPH E. DEVINE, Associate Dean of Undergraduate Studies; Fellow in the Institute for Politics and Strategy – Ph.D., Carnegie Mellon; Carnegie Mellon, 1978-

THOMAS KARAKO, Fellow in the Institute for Politics and Strategy – Ph.D., Claremont Graduate University; Carnegie Mellon, 2015-

KIM SMACZNIK, Fellow in the Institute for Politics and Strategy – J.D., Harvard University; Carnegie Mellon, 2017-

SACHIJO TAKAYASU, Fellow in the Institute for Politics and Strategy – M.B.A., The Ohio State University; Carnegie Mellon, 2018-

BEVERLEY WHEELER, Fellow in the Institute for Politics and Strategy – D.Ed., Harvard University; Carnegie Mellon, 2012-

JULIE WILSON, Fellow in the Institute for Politics and Strategy – J.D., American University; Carnegie Mellon, 2017-

SEAN ZEIGLER, Fellow in the Institute for Politics and Strategy – Ph.D., Duke University; Carnegie Mellon, 2019-

Adjunct Faculty

SOPHIE LE BLANC – Ph.D., University of Delaware; Carnegie Mellon, 2017-

MICHELLE GRISÉ – Ph.D., Yale University; J.D., University of Michigan; Carnegie Mellon, 2019–

MARIA MCCOLLESTER – Ph.D., Boston College; Carnegie Mellon, 2020–

FORREST E. MORGAN – Ph.D., University of Maryland; Carnegie Mellon, 2017–

ISAAC R. PORCHE III – Ph.D., University of Michigan; Carnegie Mellon, 2017–

CHAD C. SERENA – Ph.D., University of Pittsburgh; Carnegie Mellon, 2016–

SUSAN SOHLER EVERINGHAM – M.A., University of California, Los Angeles; Carnegie Mellon, 2017–