Institute for Politics and Strategy

Kiron K. Skinner, Director and Taube Professor
Department Office: Porter Hall 223E

Founded in 2015, the Institute for Politics and Strategy (http://coursecatalog.web.cmu.edu/dietrichcollegeofhumanitiesandsocialsciences/institutesforpoliticsandstrategy/www.cmu.edu/ips) (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.

At various times during the past fifty years, CMU faculty members have been innovators of what is now known as formal theory and public choice. Indeed, some of them were involved in the founding and early meetings of scholarly organizations in these areas. Political science teaching and research took place in numerous CMU colleges but by the early 2000s most teaching and research in political science occurred in the Department of Social and Decision Sciences (SDS). Home also to research and teaching in behavioral economics, complex social systems, decision science, and strategy, entrepreneurship, and technological change, SDS supported a rigorous undergraduate and doctoral program in political science focused on US politics, quantitative methods, formal theory, game theory, and social choice.

During the 1999-2000 academic year, the additional major in international relations sat alongside the political science major. That major, the university’s first full-scale undergraduate teaching program in international relations, was a joint initiative of the Department of History, the Department of Modern Languages, and the Department of Social and Decision Sciences. As student enrollment flourished and the opportunity arose to develop the major’s social science component, the additional major became a stand-alone course of study. It was renamed International Relations and Politics (IRP) and moved to the Department of Social and Decision Sciences. 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. Thus, the IRP major preserves and expands CMU’s tradition in political science.

At the same time, IRP taps into and contributes to CMU’s strengths in other social sciences that combine analytical and empirical methods. IRP has recently launched an innovative initiative to incorporate decision science in international relations. 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 (e.g., cost, risk, benefit, analysis), and the factors shaping public responses to politics and policies.

IRP is the flagship academic program in IPS. The major provides the 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:

• International Relations and Politics Major (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;
• Master of Information Technology Strategy.

The IRP major 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/ipsmasters%20degrees) is open only to Carnegie Mellon undergraduate students. Students should have an undergraduate major, additional major, or minor in International Relations and Politics, 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 additional courses in political institutions.

The Master of Information Technology Strategy (MITS) (http://www.cmu.edu/mits) program provides graduate students with core interdisciplinary competencies in cyber security. 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/ir) supports and promotes student and faculty research and hosts national and international thought leaders through its Policy Forum.

The Carnegie Mellon University Washington Semester Program (CMU/WSPI) (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/WSPI and taking an additional core course in the International Relations and Politics major.

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.

The Major in International Relations and Politics

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Offered through the Institute for Politics and Strategy (IPS), the International Relations and Politics (IRP) major 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 prerequisites 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 has recently launched an innovative initiative to incorporate decision science in international relations. 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) (https://www.cmu.edu/ips/cmwsp) 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 public policy for IRP majors. Students’ understanding of politics is further informed by courses and colloquia offered by CMU’s top-ranked departments, divisions, and schools in business, computer science, and engineering.

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 will provide additional opportunities for students.

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.

Prerequisites

All International Relations and Politics majors should complete prerequisites by the end of the sophomore year.

<table>
<thead>
<tr>
<th>Prerequisites</th>
<th>Units</th>
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<tbody>
<tr>
<td>21-111-21-112 Differential Calculus</td>
<td>10-20</td>
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<tr>
<td>or 21-120 Differential and Integral Calculus</td>
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<tr>
<td>36-200 Reasoning with Data</td>
<td>9</td>
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</tbody>
</table>

Curriculum

Core Courses

- 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 Statistics & Data Science Methods 9
- 73-102 Principles of Microeconomics 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 45 units

International Relations and Politics students will either:

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) 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) Public Policy Elective 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 Public Policy Elective list below.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>66-221</td>
<td>Topics of Law: Introduction to Intellectual Property Law</td>
<td>9</td>
</tr>
<tr>
<td>79-203</td>
<td>Social and Political Change in 20th Century Central and Eastern Europe</td>
<td>9</td>
</tr>
<tr>
<td>79-298</td>
<td>Mobile Phones &amp; Social Media in Development &amp; Human Rights: A Critical Appraisal</td>
<td>6</td>
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<tr>
<td>79-301</td>
<td>History of Surveillance: From the Plantation to Edward Snowden</td>
<td>6</td>
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<tr>
<td>79-302</td>
<td>Killer Robots: The Ethics, Law, and Politics of Lethal Autonomous Weapons System</td>
<td>6</td>
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<tr>
<td>80-135</td>
<td>Introduction to Political Philosophy</td>
<td>9</td>
</tr>
<tr>
<td>80-321</td>
<td>Causation, Law, and Social Policy</td>
<td>9</td>
</tr>
<tr>
<td>80-335</td>
<td>Social and Political Philosophy</td>
<td>9</td>
</tr>
<tr>
<td>84-309</td>
<td>Political Behavior</td>
<td>9</td>
</tr>
<tr>
<td>84-319</td>
<td>U.S. Foreign Policy and Interventions in World Affairs</td>
<td>9</td>
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<tr>
<td>84-320</td>
<td>Domestic Politics and International Affairs</td>
<td>9</td>
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<tr>
<td>84-321</td>
<td>Autocrats and Democrats</td>
<td>9</td>
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<tr>
<td>84-322</td>
<td>Nonviolent Conflict and Revolution</td>
<td>9</td>
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<tr>
<td>84-323</td>
<td>War and Peace</td>
<td>9</td>
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<tr>
<td>84-324</td>
<td>Democracies and War</td>
<td>9</td>
</tr>
<tr>
<td>84-325</td>
<td>Contemporary American Foreign Policy</td>
<td>9</td>
</tr>
<tr>
<td>84-362</td>
<td>Diplomacy and Statecraft</td>
<td>9</td>
</tr>
<tr>
<td>84-363</td>
<td>Comparative Legal Systems</td>
<td>9</td>
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<tr>
<td>84-366</td>
<td>Presidential Politics: So, You Want to Be President of the United States</td>
<td>9</td>
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<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>84-380</td>
<td>Grand Strategy in the United States</td>
<td>9</td>
</tr>
<tr>
<td>84-386</td>
<td>The Privatization of Force</td>
<td>9</td>
</tr>
<tr>
<td>84-387</td>
<td>Technology and Policy of Cyber War</td>
<td>9</td>
</tr>
<tr>
<td>84-388</td>
<td>Concepts of War and Cyber War</td>
<td>6</td>
</tr>
<tr>
<td>84-389</td>
<td>Terrorism and Insurgency</td>
<td>9</td>
</tr>
<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>9</td>
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<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>
</tr>
<tr>
<td>88-281</td>
<td>Topics in Law: 1st Amendment</td>
<td>9</td>
</tr>
<tr>
<td>88-284</td>
<td>Topics of Law: The Bill of Rights</td>
<td>9</td>
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</tbody>
</table>

Economics and Society

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>19-452</td>
<td>EPP Projects</td>
<td>12</td>
</tr>
<tr>
<td>70-342</td>
<td>Managing Across Cultures</td>
<td>9</td>
</tr>
<tr>
<td>70-365</td>
<td>International Trade and International Law</td>
<td>9</td>
</tr>
<tr>
<td>70-430</td>
<td>International Management</td>
<td>9</td>
</tr>
<tr>
<td>73-103</td>
<td>Principles of Macroeconomics</td>
<td>9</td>
</tr>
<tr>
<td>73-328</td>
<td>Health Economics</td>
<td>12</td>
</tr>
<tr>
<td>73-331</td>
<td>Political Economy of Inequality and Redistribution</td>
<td>9</td>
</tr>
<tr>
<td>73-394</td>
<td>Development Economics</td>
<td>9</td>
</tr>
<tr>
<td>79-386</td>
<td>Entrepreneurs in Africa, Past, Present and Future</td>
<td>9</td>
</tr>
<tr>
<td>80-136</td>
<td>Social Structure, Public Policy &amp; Ethics</td>
<td>9</td>
</tr>
<tr>
<td>80-244</td>
<td>Environmental Ethics</td>
<td>9</td>
</tr>
<tr>
<td>80-249</td>
<td>AI, Society, and Humanity</td>
<td>9</td>
</tr>
<tr>
<td>80-348</td>
<td>Health, Development, and Human Rights</td>
<td>9</td>
</tr>
<tr>
<td>80-447</td>
<td>Global Justice</td>
<td>9</td>
</tr>
<tr>
<td>84-310</td>
<td>International Political Economy</td>
<td>9</td>
</tr>
<tr>
<td>84-311</td>
<td>International Development: Theory and Praxis</td>
<td>9</td>
</tr>
</tbody>
</table>
## Institute for Politics and Strategy

### CMU/WSP Public Policy Elective Seminars

- **84-312** Gender and Development in Sub-Saharan Africa... 6
- **84-313** International Organizations and Law...
- **84-315** Contemporary Debates in Human Rights...
- **84-318** Politics of Developing Nations...
- **88-411** Rise of the Asian Economies...
- **88-412** Energy, Climate Change, and Economic Growth in the 21st Century...
- **88-430** Methods of Policy Analysis...

### International Cultures

- **76-318** Communicating in the Global Marketplace...
- **76-386** Language & Culture...
- **79-205** 20th & 21st Century Europe...
- **79-221** Development and Democracy in Latin America...
- **79-222** Between Revolutions: The Development of Modern Latin America...
- **79-223** Mexico: From the Aztec Empire to the Drug War...
- **79-224** Mayan America...
- **79-227** Modern Africa: The Slave Trade to the End of Apartheid...
- **79-229** Origins of the Arab-Israeli Conflict, 1880-1948...
- **79-230** Arab-Israeli Conflict Since 1948...
- **79-233** The United States and the Middle East since 1945...
- **79-256** 20th Century Germany...
- **79-257** Germany and the Second World War...
- **79-259** France During World War II...
- **79-262** Modern China: From the Birth of Mao ... to Now...
- **79-264** Tibet and China: History and Propaganda...
- **79-265** Russian History: From the First to the Last Tsar...
- **79-266** Russian History: From Communism to Capitalism...
- **79-267** The Soviet Union in World War II: Military, Political, and Social History...
- **79-275** Introduction to Global Studies...
- **79-288** Bananas, Baseball, and Borders: Latin America and the United States...
- **79-291** Globalization in East African History...
- **79-307** Religion and Politics in the Middle East...
- **79-313** "Unwanted": Refugees, Asylum Seekers, and Patterns of Global Migration...
- **79-314** The Politics and Culture of Memory...
- **79-318** Sustainable Social Change: History and Practice...
- **79-320** Women, Politics, and Protest...
- **79-338** History of Education in America...
- **79-342** Introduction to Science and Technology Studies...
- **79-343** Education, Democracy, and Civil Rights...
- **79-377** Food, Culture, and Power: A History of Eating...
- **79-381** Energy and Empire: How Fossil Fuels Changed the World...
- **79-385** Out of Africa: The Making of the African Diaspora...
- **79-398** Documenting the 1967 Arab-Israeli War...
- **85-375** Crosscultural Psychology...
- **300 or 400- level language course**...

### CMU/WSP Public Policy Elective Seminars

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

### International Relations and Politics, B.S.

**NOTE:** Some courses have additional prerequisites.

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

**International Relations and Politics, B.S.**

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 and take appropriate courses as early as the second semester of the freshman year and as late as the second semester sophomore year, and should consult frequently with the deputy director (see above) about their course of study.

<table>
<thead>
<tr>
<th>Freshman</th>
<th>Sophomore</th>
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<tbody>
<tr>
<td><strong>Fall</strong></td>
<td><strong>Spring</strong></td>
</tr>
<tr>
<td>36-209 Reasoning with Data</td>
<td>First-Year Writing (FW)</td>
</tr>
<tr>
<td>79-104 Global Histories</td>
<td>Freshman Seminar</td>
</tr>
<tr>
<td>21-120 Differential and Integral Calculus*</td>
<td>Language Course</td>
</tr>
<tr>
<td>84-104 Decision Processes in American Political Institutions **</td>
<td>36-202 Statistics &amp; Data Science Methods</td>
</tr>
<tr>
<td>Language Course</td>
<td>84-275 Comparative Politics</td>
</tr>
<tr>
<td>99-101 Computing @ Carnegie Mellon</td>
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</tr>
</tbody>
</table>

*If required to start with 21-111 in fall of freshman year, complete 21-112 in spring of freshman year.

**This course should be taken as the first course in the International Relations and Politics major sequence. It is intended for students in the first or second year.

### Junior

<table>
<thead>
<tr>
<th><strong>Fall</strong></th>
<th><strong>Spring</strong></th>
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<tbody>
<tr>
<td>84-369 Decision Science for International Relations</td>
<td>CMU/WSP or STUDY ABROAD*</td>
</tr>
<tr>
<td>Language Course or Elective</td>
<td>Elective</td>
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<tr>
<td>IRP Elective</td>
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*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.

### Minor in Cybersecurity and International Conflict

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Emily Half, Deputy Director; ehalf@andrew.cmu.edu, Baker Hall A55B, 412-268-7082

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 cyberspace 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 hacktivist. 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

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>84-275</td>
<td>Comparative Politics</td>
<td>9</td>
</tr>
<tr>
<td>84-326</td>
<td>Theories of International Relations</td>
<td>9</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>84-387</td>
<td>Technology and Policy of Cyber War</td>
<td>9</td>
</tr>
<tr>
<td>84-388</td>
<td>Concepts of War and Cyber War</td>
<td>6</td>
</tr>
<tr>
<td>84-405</td>
<td>The Future of Warfare</td>
<td>9</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>79-298</td>
<td>Mobile Phones &amp; Social Media in Development &amp; Human Rights: A Critical Appraisal</td>
<td>6</td>
</tr>
<tr>
<td>79-301</td>
<td>History of Surveillance: From the Plantation to Edward Snowden</td>
<td>6</td>
</tr>
<tr>
<td>79-302</td>
<td>Killer Robots: The Ethics, Law, and Politics of Lethal Autonomous Weapons System</td>
<td>6</td>
</tr>
<tr>
<td>80-249</td>
<td>AI, Society, and Humanity</td>
<td>9</td>
</tr>
<tr>
<td>84-319</td>
<td>U.S. Foreign Policy and Interventions in World Affairs</td>
<td>9</td>
</tr>
<tr>
<td>84-325</td>
<td>Contemporary American Foreign Policy</td>
<td>9</td>
</tr>
<tr>
<td>84-370</td>
<td>Global Nuclear Politics</td>
<td>9</td>
</tr>
<tr>
<td>84-372</td>
<td>Space and National Security</td>
<td>9</td>
</tr>
<tr>
<td>84-380</td>
<td>Grand Strategy in the United States</td>
<td>9</td>
</tr>
<tr>
<td>84-386</td>
<td>The Privatization of Force</td>
<td>9</td>
</tr>
<tr>
<td>84-389</td>
<td>Terrorism and Insurgency</td>
<td>9</td>
</tr>
<tr>
<td>84-390</td>
<td>Social Media, Technology, and Conflict</td>
<td>9</td>
</tr>
<tr>
<td>84-414</td>
<td>International and Subnational Security</td>
<td>9</td>
</tr>
<tr>
<td>17-200</td>
<td>Ethics and Policy Issues in Computing</td>
<td>9</td>
</tr>
<tr>
<td>17-303</td>
<td>Cryptocurrencies, Blockchains and Applications</td>
<td>Var.</td>
</tr>
<tr>
<td>17-331</td>
<td>Information Security, Privacy, and Policy</td>
<td>12</td>
</tr>
<tr>
<td>17-333</td>
<td>Privacy Policy, Law, and Technology</td>
<td>9</td>
</tr>
<tr>
<td>17-334</td>
<td>Usable Privacy and Security</td>
<td>9</td>
</tr>
<tr>
<td>17-702</td>
<td>Current Topics in Privacy Seminar</td>
<td>3</td>
</tr>
</tbody>
</table>

Students are permitted to double count a maximum of two courses between the minor in Cybersecurity and International Conflict and another major or minor.

### Minor in International Relations and Politics

Kiron K. Skinner, Faculty Director; kskinner@andrew.cmu.edu, Porter Hall 223E

Emily Half, Deputy Director; ehalf@andrew.cmu.edu, Baker Hall A55B, 412-268-7082

www.cmu.edu/ips

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 pursuing 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.

### Prerequisites

- 73-102 Principles of Microeconomics | 9

### Curriculum

54 units

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>84-104</td>
<td>Decision Processes in American Political Institutions</td>
<td>9</td>
</tr>
<tr>
<td>84-275</td>
<td>Comparative Politics</td>
<td>9</td>
</tr>
<tr>
<td>84-326</td>
<td>Theories of International Relations</td>
<td>9</td>
</tr>
</tbody>
</table>
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
79-203 Social and Political Change in 20th Century Central and Eastern Europe 9
79-298 Mobile Phones & Social Media in Development & Human Rights: A Critical Appraisal 6
79-301 History of Surveillance: From the Plantation to Edward Snowden 6
79-302 Killer Robots: The Ethics, Law, and Politics of Lethal Autonomous Weapons System 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 Domestic Politics and International Affairs 9
84-321 Autocrats and Democrats 9
84-322 Nonviolent Conflict and Revolution 9
84-323 War and Peace 9
84-324 Democracies and War 9
84-325 Contemporary American Foreign Policy 9
84-362 Diplomacy and Statecraft 9
84-363 Comparative Legal Systems 9
84-366 Presidential Politics: So, You Want to Be President of the United States 9
84-369 Decision Science for International Relations 9
84-370 Global Nuclear Politics 9
84-372 Space and National Security 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 9
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
73-331 Political Economy of Inequality and Redistribution 9
73-394 Development Economics 9
79-386 Entrepreneurs in Africa, Past, Present and Future 9
80-136 Social Structure, Public Policy & Ethics 9
80-244 Environmental Ethics 9
80-249 AI, Society, and Humanity 9
80-348 Health, Development, and Human Rights 9
80-447 Global Justice 9
84-310 International Political Economy 9
84-311 International Development: Theory and Praxis 6
84-312 Gender and Development in Sub-Saharan Africa 6
84-313 International Organizations and Law 9
84-315 Contemporary Debates in Human Rights 9
84-318 Politics of Developing Nations 9
88-411 Rise of the Asian Economies 9
88-412 Energy, Climate Change, and Economic Growth in the 21st Century 9
88-430 Methods of Policy Analysis 12

International Cultures
76-318 Communicating in the Global Marketplace 9
76-386 Language & Culture 9
79-205 20th & 21st Century Europe 9
79-221 Development and Democracy in Latin America 9
79-222 Between Revolutions: The Development of Modern Latin America 9
79-223 Mexico: From the Aztec Empire to the Drug War 9
79-224 Mayan America 9
79-227 Modern Africa: The Slave Trade to the End of Apartheid 9
79-229 Origins of the Arab-Israeli Conflict, 1880-1948 9
79-230 Arab-Israeli Conflict Since 1948 9
79-233 The United States and the Middle East since 1945 9
79-256 20th Century Germany 9
79-257 Germany and the Second World War 9
79-259 France During World War II 9
79-262 Modern China: From the Birth of Mao ... to Now 9
79-264 Tibet and China: History and Propaganda 9
79-265 Russian History: From the First to the Last Tsar 6
79-266 Russian History: From Communism to Capitalism 9
79-267 The Soviet Union in World War II: Military, Political, and Social History 6
79-275 Introduction to Global Studies 9
79-288 Bananas, Baseball, and Borders: Latin America and the United States 9
79-291 Globalization in East African History 9
79-307 Religion and Politics in the Middle East 9
79-313 "Unwanted": Refugees, Asylum Seekers, and Patterns of Global Migration 6
79-314 The Politics and Culture of Memory 9
79-318 Sustainable Social Change: History and Practice 9
79-320 Women, Politics, and Protest 9
79-338 History of Education in America 9
79-342 Introduction to Science and Technology Studies 9
79-343 Education, Democracy, and Civil Rights 9
79-377 Food, Culture, and Power: A History of Eating 9
79-381 Energy and Empire: How Fossil Fuels Changed the World 9
79-385 Out of Africa: The Making of the African Diaspora 9
79-398 Documenting the 1967 Arab-Israeli War 9
85-375 Crosscultural Psychology 9
300 or 400 level language class

Minor in Politics and Public Policy

Kiron K. Skinner, Faculty Director; kskinner@andrew.cmu.edu, Porter Hall 223E
Emily Half, Deputy Director; ehalf@andrew.cmu.edu, Baker Hall A55B, 412-268-7082
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 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 three days 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.

Prerequisites

- 73-102 Principles of Microeconomics

Curriculum

57 units

All students must take the following two courses while participating in the CMU/WSP (24 units):

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

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

Elective Seminars

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

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

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**Carnegie Mellon University Washington Semester Program**

Kiron Skinner, Faculty Director; kskinner@andrew.cmu.edu, Porter Hall 223E

Emily Half, IPS Deputy Director; ehalf@andrew.cmu.edu; 412-268-7082, Baker Hall A55B

Emily Baddock, CMU/WSP Executive Director; ebaddock@andrew.cmu.edu; 202-608-8316, 100 Maryland Ave NE, Suite 510, Washington, DC 20002

http://www.cmu.edu/ips/cmuwsp/index.html

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.

CMU/WSP students earn 48 units for their semester in Washington, interning three days per week in any sector or field of interest within Washington, DC, while taking classes two days per week and in the evenings. Courses are 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.

Curriculum

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

Core Seminars

- 84-360 CMU/WSP Internship Seminar
- 84-450 Policy Forum

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

Elective Seminars

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

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**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 International Relations and Politics, 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 year.

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202-608-8316, 100 Maryland Ave NE, Suite 510, Washington, DC 20002
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 Cold War 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–

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**

IGNACIO ARANA, Post-Doctoral Fellow in the Institute for Politics and Strategy – Ph.D., University of Pittsburgh; Carnegie Mellon, 2016–

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., University of Maryland; Carnegie Mellon, 2018–

DANI M. SILVERMAN, Post-Doctoral Fellow in the Institute for Politics and Strategy – Ph.D., Claremont Graduate University; Carnegie Mellon, 2016–

**Adjunct Faculty**

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

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–