

**SPACE POLICY INSTITUTE
ELLIOTT SCHOOL OF INTERNATIONAL AFFAIRS
GEORGE WASHINGTON UNIVERSITY**

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ONLINE ONLY
Mondays 7:10-9:00PM

Space and National Security

Instructor

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Course Description

Recent military operations conducted by the United States and other states demonstrate the growing efficacy of space systems and point to their increasing importance in global security dynamics. Enhancing space security has been an imperative for the United States for a generation: The 2001 Space Commission found that because U.S. military and economic security have become so dependent on space capabilities, the Nation could face a “space Pearl Harbor.” The U.S. National Space Policy from October 2006 stated: “In this new century, those who effectively utilize space will enjoy added prosperity and security and will hold a substantial advantage over those who do not. Freedom of action in space is as important to the United States as air power and sea power.” The June 2010 National Space Policy indicated: “Space systems allow people and governments around the world to see with clarity, communicate with certainty, navigate with accuracy, and operate with assurance.” And the March 2018 National Strategy for Space is designed to protect our vital interest in space: “unfettered access to, and freedom to operate in space, in order to advance America’s security, economic prosperity, and scientific knowledge.”

Space is also an increasingly congested, contested, and competitive domain as emphasized in the National Security Space Strategy of January 2011; the 2018 National Defense Strategy describes space as a warfighting domain. Given the changed strategic context and accelerating Chinese and Russian counterspace capability development and testing, the United States must consider a wide range of options to develop a more lethal, resilient, and agile force better able to outpace adversary threats. To operate more successfully in space, the United States is pursuing approaches including strengthening deterrence, developing more robust offensive and defensive counterspace capabilities, leveraging state-of-the-world commercial and international capabilities, rebalancing multi-domain options and modernization priorities, and enhancing space mission assurance through improved resilience, defensive operations, and reconstitution capabilities. The United States and other major space actors must also balance the growing unilateral advantages space provides with the inherently global and multilateral contributions of space to global transparency and stability. These tensions inform debates about the need for and consequences of employing space control capabilities and the wisdom of developing dedicated force application systems – “space weapons” – that can attack to, in, and from space.

Important new space security structures form an additional and foundational dimension for all these issues. In August 2019, the United States reestablished U.S. Space Command and in December 2019 created its first new military Service in more than 70 years by standing up the U.S. Space Force. Our seminar examines these and other issues associated with U.S. policy, strategy, leadership, management, and organization for the national security uses of space.

Students should consider how space security issues contribute to their understanding of a larger integrative framework for security issues that includes the interplay between technology, domestic politics, and international politics. Some of the themes related to this framework include:

- Tradeoffs between the costs and effectiveness of technology versus military personnel
- Balancing the need for secrecy in military technology with the benefits of scientific openness
- Evolutionary and revolutionary paths to technology development and adoption
- Strategic-level interactions between technology, grand strategy, and military strategies
- Tactical- and operational-level interactions between technology, doctrine, and concepts of operations
- Balancing economic efficiency with military effectiveness
- Processes to translate technological potential into operational capability
- Criteria and processes for making sound choices among competing technologies
- The role of culture, personalities, education, and training in developing and implementing national security policies and strategies
- The role of technology in sensing time, distance, and interactions as well as the role of human cognition in perceiving and structuring this data
- The role of culture and perceptions in assessing threats and opportunities
- Interactions between technology, organizations, and bureaucratic politics
- Information Age policies for issues such as dual-use technologies, technology transfer, export controls, the defense industrial base, and educating strategists for tomorrow's challenges
- Assessment criteria for evaluating whether potential benefits of restraint in developing new dual-use or weapons technology outweigh the potential benefits from these developments
- Assessment criteria for balancing privacy and civil liberty concerns against the growing ability to collect, analyze, and store personal information
- Appropriate roles for public, private, and public-private partnerships in developing and operating space capabilities
- Appropriate theories and doctrine for deriving strategic utility from space and advancing enduring U.S. strategic advantages

Course Goals

The overarching objective of this course is for students to be able to articulate and defend their understanding of space security. This requires discernment in evaluating and integrating a range of materials including background readings, written assignments, and a mixture of lectures and discussion designed to cover each week's topic. The course is a seminar; students should read and attend class ready to discuss the substantial amount of assigned material for each week. At the beginning of the course, the instructor will lecture during most of the seminar time; by the end of the course, student-led discussions should predominate and directly contribute to the overarching course objective.

Learning Outcomes

Students will be able to understand both historic and current factors and emerging trends shaping the development and implementation of U.S. national security space policy and strategy including the global security environment, domestic politics, and technology. Based on this understanding, students will be able to articulate and support policy-relevant assessments about the current prospects for developing and successfully implementing major national security space initiatives.

Class Policies

Attendance and active participation in each seminar are expected of all students. Please inform your instructor in advance if you cannot attend a seminar. Late written assignments normally will not be accepted unless there are extenuating circumstances. If you run into difficulties completing an assignment, at least one week prior to the due date, coordinate a new submission date with your instructor.