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National Security, Innovation, and the Congress

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The study group will meet five times in the Fall 2022 semester. Meeting dates are September 23, October 14, October 28, November 11, and December 2. All meetings will take place from 1:00pm to 2:30pm in the Leung Conference Room (110), Stephen Robert Hall, 280 Brook Street.

Learning Objectives:

The Study Group will attempt to increase participants understanding of:

- the innovation challenges and opportunities facing the Pentagon
- processes by which Congress develops legislation to create policies for and fund the science, technology, and innovation activities of the Department of Defense
- key documents produced by Congress and the Executive Branch that shape the policy environment
- practical processes and methods to develop practical and politically viable solutions to challenging innovation policy problems

Biography: Dr. Arun Seraphin worked in the Congress, White House, and Department of Defense during his twenty-year government career. Among the organizations he worked in were the Senate Armed Services Committee (lead acquisition and technology policy staffer for

Chairman Jack Reed), White House Office of Science and Technology Policy (Principal Assistant Director for National Security and International Affairs), House Science Committee, and the Defense Advanced Research Projects Agency (DARPA). He is currently working in defense industry, as the Deputy Director of the Emerging Technologies Institute, a think tank house within the National Defense Industrial Association. In these positions, he has worked on legislation, policy making, budgets, and other activities that supported the use of science and technology to improve our national security.

Course Overview: The Study Group will explore the role that Congress and policy making can play in creating an environment to support innovation in our national security science and technology enterprise. The Group will discuss the opportunities and challenges of implementing innovative technologies and practices into the complex defense establishment and understand how policymakers can work to create a legal framework, regulations, culture, and financial resources that can support or inhibit innovation. The Group will explore the processes by which Congress crafts legislation, provides funding, and performs oversight activities over the Pentagon. The Group will also provide insights and information on the complementary roles of the legislative branch, executive branch, and the private sector in shaping the policy and innovation environment. Each meeting will consist of presentations by Dr. Seraphin on national security innovation policy issues, along with occasional guest lectures from experts from Washington, DC, and focused discussions related to policy problems and potential solutions to those problems. Students will be expected to read short read-ahead materials for each class, and actively participate in group discussions on class topics.

Topics to be covered include:

- **Science and Technology Innovation Opportunities and Challenges** – What is the current landscape for technological innovation in national security? What are the key organizations and their roles? What are the key technologies that the Pentagon is seeking to develop? What are the constraints that limit the Pentagon's ability to develop

and use new technologies? What is the role of Congress in the national security innovation ecosystem?

- **The National Defense Authorization Act as an Instrument for Policy Innovation** – the major annual defense policy bill produced by the Congress is the NDAA. How is the NDAA developed and passed each year? What are the major innovation issues that are addressed in the bill? How does Congress work with the Executive Branch and private sector to develop the NDAA? How does Congress ensure that the Pentagon follows the policies in the NDAA?

- **Funding for Innovation** – How does the Pentagon budget for science, technology, and innovation? How does the Congress appropriate funds for innovation programs? How do decision makers make tradeoffs in developing Pentagon budgets? How does the process of budgeting help or hinder the Department of Defense's ability to develop and deliver new technologies?

- **Advocating for Innovation** – What is the role of the private sector in working with Congress and the Pentagon in shaping policies and budgets? What is the role of lobbyists? What are examples of successful and unsuccessful advocacy for national security innovation?

- **Innovation in Managing the National Security Apparatus** - The Defense Department is one of the world's largest and most complex organizations. Managing this complex enterprise has always been a challenge, and often results in inefficiency and waste and sometimes inhibits the military's ability to deploy world leading technologies and systems. What are the major management challenges facing the Pentagon? What are some examples of successful management and policy innovation that have improved Pentagon business practices?