Synopsis
This course is an examination of the origins, evolution, current status, and future prospects of U.S. space policies and programs. It will cover the U.S. government’s civilian, military, and national security space programs and the space activities of the U.S. private sector, and the interactions among these four sectors of U.S. space activity. This examination will be cast in the context of the space activities of other countries, and of international cooperation and competition in space. The goal of the course is to give the student an exposure to the policy debates and decisions that have shaped U.S. efforts in space to date, and to the policy issues that must be addressed in order to determine the future goals, content, pace, and organization of U.S. space activities, both public and private.

Learning Outcomes
• Students will be able to demonstrate that they understand and can communicate the basic concepts of U.S. space policy.
• Students will be able to discuss and assess how the U.S. scientific and technical space communities have adapted to changing national and international conditions.
• Students will acquire the background knowledge and understanding of current issues that will allow them to analyze and evaluate U.S. space policy debates against multiple national interests (e.g., military, economic, diplomatic).

Approach
This is very much a reading course. Each week during the term, students will be expected to come to the course meeting familiar with the substantial amount of assigned readings related to that week's topic. The written assignments for the course (and the primary basis for assigning a grade) will be three 9-12 page papers, each addressing a particular question or issue. Each paper is worth 33% of the final course grade. The due dates for the papers are October 6, November 10, and December 1. The specific assignments for each paper are given below. Papers should be submitted electronically to space1@email.gwu.edu
## Course Schedule

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## Readings

Most course readings are contained in a compact disk that will be available after August 30. Other course reading will be distributed in the course of the semester.

**September 1 Introduction: Why Go Into Space?**


John M. Logsdon, “Which Direction in Space?” Space Policy, May 2005


Vernon van Dyke, Pride and Power: The Rationale of the Space Program (1964), pp. 3-8, 175-80

First Assignment (Due October 6)

As the U. S. Congress and Administration consider whether to continue with a national commitment to “more affordable human exploration beyond the Earth” of what relevance is the fifty-year plus history of the U.S. civilian space program? Prepare a 9-12 page essay (direct quotes should have their sources indicated) discussing the lessons that might be extracted from U.S. history with respect to whether a long-term, open-ended commitment is a feasible and desirable policy and, if it is, how best to organize and implement that policy. If it is not feasible or desirable, discuss alternatives that could be implemented. Be sure to address the differences between the Bush 43 and Obama Administration approaches to human space exploration.

September 8 Origins of U.S. Space Policies and Programs

Walter J. McDougall, . . . the Heavens and the Earth: A Political History of the Space Age (1985), pp. 112-230


NSC 5520, “U.S. Scientific Satellite Program”
S.P. Korolev, Memo to the USSR Council of Ministers, 5 January 1957

“Memorandum of Conference with the President, October 8, 1957, 8:30 a.m.,” and “Memorandum for the President, Earth Satellite,” 9 October 1957


Homer Newell, *Beyond the Atmosphere: Early Years of Space Science* (1980), Chaps. 3-5, 7-8

National Aeronautics and Space Act of 1958

September 15 Apollo and Its Impacts

**Guest Speaker: John Logsdon, George Washington University**

John M. Logsdon, *The Decision to Go to the Moon: Project Apollo and the National Interest* (1970), Chaps. 2-4, 6


McDougall, pp. 299-324, 361-362, 373-388, 403-407


Transcript of Presidential Meeting, November 21, 1962 (excerpts)


Roger Launius, “Perceptions of Apollo: Myth, Nostalgia or All of the Above?” *Space Policy*, May 2005

September 22 What Do You Do Next When You Have Been to the Moon?


Space Task Group, The Post-Apollo Space Program: Directions for the Future, September 15, 1969, excerpts


Memorandum for the President from Caspar W. Weinberger, “Future of NASA,” August 12, 1971


Howard McCurdy, “The Decision to Build the Space Station,” Space Policy, November 1988


September 29 NASA – From Challenger to Columbia


Report of the Advisory Committee on the Future of the U.S. Space Program, December 1990


Report of the Columbia Accident Investigation Board, August 2003, Chapters 5, 7, and 8


Scott Pace, “U.S. Space Transportation Policy,” *Space Policy*, November 1988


**Second Assignment (Due November 10)**

Over the past fifty years, the United States has pursued a space policy vis-à-vis the rest of the world that has mixed competitive and cooperative elements. While the United States has competed for prestige, commercial returns, and security advantages, it has also cooperated for scientific and foreign policy payoffs. As the United States pursues its 21st century direction in space, aimed at human and robotic exploration of the solar system, what balance between cooperative and competitive approaches ought to be sought and how should that balance be managed? In particular, the 2010 National Space Policy calls for international cooperation that aims to strengthen U.S. space leadership, identify areas for potential international cooperation, and develop transparency and confidence-building measures “to encourage responsible actions in, and the peaceful use of space.” What domestic and international strategies are likely to be the most effective in achieving all of these objectives?

**October 6  Vision for Space Exploration**

**Guest Speaker: Michael Hawes, Lockheed Martin Corporation**


NASA, *The Vision for Space Exploration*, February 2004


John Marburger, “Keynote Address to 46th Robert H. Goddard Memorial Symposium,” Greenbelt, MD, March 6, 2008


October 13

**The International Context of the U.S. Space Program**

**Guest Speaker:** **Andreas Diekmann, European Space Agency**

“International Space Cooperation,” Memorandum for the President from the Secretary of State, March 14, 1969


Andres Diekmann, “European Space Developments and Perspectives,” presentation to the International Space University, June 20, 2011

Jean-Jacques Dordain, “International Cooperation in Space,” remarks to the Universities Space Research Association (USRA), March 26, 2009
Scott Pace, “Space Policy in Japan,” presentation to the International Space University, June 7, 2010


Sreedhara Panicker Somanath, “Indian Space Research Organization Overview,” April 21, 2011

Novosti Kosmonavtiki, “Interview with Anatoly Perminov, Roscosmos,” February 22, 2010 (in English)


Andrew Aldrin, “Russian Space Policy,” presentation to the International Space University, June 8, 2010

Chinese Ministry of Foreign Affairs, “China’s Space Activities,” June 9, 2009


Kevin Pollpeter, “Technological Innovation and Organizational Change in China's Space Industry,” Journal of Strategic Studies, 34:3, 405-423 (2011)


James Vedda, “Astropreneurs,” in *Choice, Not Fate: Shaping a Sustainable Future in the Space Age* (2009)


October 27  

**The Evolution of National Security Space Activities**


Peter L. Hays, "To Control the Heavens: The Role of U.S. Space Systems in Deterrence and Defense,” unpublished paper


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November 3  Making Space Secure

**Guest Speaker:** Richard Buenneke, Department of State

Space Security Index, *Space Security 2011*, Executive Summary (the rest of report can be accessed as [www.spacesecurity.org](http://www.spacesecurity.org))


Laura Grego and David Wright, “Securing the Skies,” (Union of Concerned Scientists, 2010)

**Third Assignment (Due December 1)**

Writing in the June 30, 2010 issue of *Space News*, Professor John Logsdon said that, “The time is now for ending the era of Apollo... Now we need JFK-like leadership to be equally clear in purpose and equally convincing in arguing for moving to a new era in U.S. human spaceflight.” Did the Apollo era end in 1972 or is it still going on? How do today’s debates over human spaceflight compare to those that occurred in the past over Apollo, Shuttle, and the Space Station? How are domestic and international conditions similar and how are they different? How might the weighing of priorities in these debates differ depending on whether you are working for NASA, the White House or Congress?
November 10  Making National Space Policy

Guest Speakers:  Chirag Parikh, National Security Council
                Damon Wells, Office of Science and Technology Policy

“National Space Policy of the United States of America,” June 28, 2010

“U.S. National Space Policy,” October 6, 2006


“U.S. Space Transportation Policy,” January 6, 2005


“National Space Policy Fact Sheet,” September 19, 1996


November 17  The U.S. Congress and Space

Guest Speakers:  Chris Shank, Office of Rep. Lamar Smith (R-TX)
                Jeff Bingham, Senate Commerce, Science and Transportation Committee

Joan Hoff, “The Presidency, Congress, and the Deceleration of the U.S. Space Program in the 1970s” in Launius and McCurdy

“Epilogue” in Launius and McCurdy

H.R. 3237, “National and Commercial Space Programs,” referred to the House Committee on the Judiciary, July 16, 2009


November 24  Thanksgiving Holiday – No Class

December 1  Quo Vadis

**Guest Speakers: Roger Launius, National Air and Space Museum**


Scott Pace, “Challenges to U.S. Space Sustainability,” *Space Policy*, June 2009


James Vedda, Chapter 7 in *Choice, Not Fate: Shaping a Sustainable Future in the Space Age* (2009)


December 8  A Conversation with NASA Administrator Charles Bolden

Confirmation Hearing Statement of Charles Bolden, before the U.S. Senate Committee on Commerce, Science and Transportation, July 8, 2009

Statement of Charles Bolden, NASA Administrator, before the Committee on Science and Technology, United States House of Representatives, May 26, 2010

Statement of Charles Bolden, NASA Administrator, before the Committee on Science, Space and Technology, United States House of Representatives, July 12, 2011

Class Policies
Late work will receive grade deductions based on the number of days the item is late. The amount of the deduction is at the instructor’s discretion.

University Policy on Religious Holidays:
1. Students should notify faculty during the first week of the semester of their intention to be absent from class on their day(s) of religious observance;
2. Faculty should extend to these students the courtesy of absence without penalty on such occasions, including permission to make up examinations;
3. Faculty who intend to observe a religious holiday should arrange at the beginning of the semester to reschedule missed classes or to make other provisions for their course-related activities

Academic Integrity
Academic dishonesty is defined as cheating of any kind, including misrepresenting one's own work, taking credit for the work of others without crediting them and without appropriate authorization, and the fabrication of information. For the remainder of the code, see:
http://www.gwu.edu/~ntegrity/code.html

Support for Students Outside the Classroom
DISABILITY SUPPORT SERVICES (DSS)
Any student who may need an accommodation based on the potential impact of a disability should contact the Disability Support Services office at 202-994-8250 in the Marvin Center, Suite 242, to establish eligibility and to coordinate reasonable accommodations. For additional information please refer to: http://gwired.gwu.edu/dss/

UNIVERSITY COUNSELING CENTER (UCC) 202-994-5300
The University Counselling Center (UCC) offers 24/7 assistance and referral to address students' personal, social, career, and study skills problems.
http://gwired.gwu.edu/counsel/CounselingServices/AcademicSupportServices

Security
In the case of an emergency, if at all possible, the class should shelter in place. If the building that the class is in is affected, follow the evacuation procedures for the building. After evacuation, seek shelter at a predetermined rendezvous location.