

GOVT 423.002
Spaceflight Policy from the Cold War through the 21st Century
Instructor: Rebecca Spyke Keiser, Ph.D.
Tuesdays/Fridays from 10:20 to 11:35 a.m.
Spring 2015

DESCRIPTION:

Attention all space cadets. Plan the future of space flight to infinity and beyond in a course offered by a real space policy participant.

Taught by an Executive-in-Residence from NASA, this course will provide students with real-world policymaking tools by addressing the roles of government and commercial firms in space exploration.

INSTRUCTOR CONTACT INFORMATION:

Please feel free to email me at the address below or through Blackboard. I am also happy to talk by phone. Daytime weekday hours, from 9:00 a.m. to 5:00 p.m., are best for phone calls. I can chat in the evenings and on weekends by appointment.

Office location:

Ward 335

Office hours:

Tuesdays and Fridays from 12:00 noon to 2:00 p.m. and by appointment

Email address:

Rebecca.spyke@nasa.gov or rkeiser@american.edu

Phone number:

202-904-0341

COURSE GOALS:

This course will improve your understanding of how policy is made in the United States government and the changes in policy over time. It will help you see the value of space exploration for our nation and for the world. You will explore the relationship between the public, the Executive Branch, and the Legislative Branch, and you will understand the complexity of policy making from real-life examples.

LEARNING OUTCOMES:

By the end of this course you will be able to identify the key players and stake holders with regard to space policy making. This ability to identify key players will enable you to apply these skills other areas of policy making in the future. You will be able to present policy concepts orally, and write policy papers in the manner in which policy makers actually write them.

ATTENDANCE POLICY:

I expect students to attend all class sessions. Absences will be excused due to illness, religious holidays, family emergencies, and other unforeseen circumstances. Students need to email me as soon as they know they need to be absent. If an assignment is due the day a student is absent, it should be turned in by the next class session.

COURSE POLICIES:

Diversity:

I value diversity of all kinds, including in backgrounds, gender, ethnicity, sexuality, race, religion and viewpoints. During class discussion, on teams, and in assignments, I will respect all well-thought-out views and I expect all those in the class to do the same. I encourage respectful debate and differences of opinion and I will model this behavior myself.

Assignments:

One of your major assignments will be a team project that requires a presentation to the other members of the class. You also will do two short papers. The reason for this structure is that in your policy making career, you will need to work both individually and with others as a team and oral presentations as well as writing succinctly will be regular parts of your job. Since you will be working as a team and presenting, it is important that you focus on project due dates. If you are ill, if there is a religious holiday, or special circumstances to cause lateness then please notify me in advance. If an assignment is handed in late without prior permission, it will be graded a level lower for every day it is late (if it was to be an A, it would be graded an A- if a day late, a B+ if two days late, etc.). If you are having challenges with an assignment, please come talk to me, but do not wait until the day before the assignment is due. Come see me as soon as possible and we will work it out.

It is not necessary for every team member to speak during a presentation. You may choose to have as many presenters as you like. Just be sure that everyone has a substantive role on the team.

Papers should be submitted to me through Blackboard. Power Points associated with team and individual projects should be submitted via Blackboard the day the oral presentation is given.

Readings:

You are required to complete all assigned readings. All readings will be on course reserve through the library. You may also wish to purchase the main book we will be using, Howard E. McCurdy's *Space and the American Imagination*. Be sure to use the 2011 edition. A copy will also be on library reserve. Your knowledge of the readings will be assessed through your classroom participation and will be calculated as part of the classroom participation portion of your grade.

Use of Technology:

You may use laptops and tablets during class. There often will be time during class for you to work with your team or individually on research projects. You also may use your laptops and tablets to take notes during class. Please silence all cell phones.

But please remember that class participation is a substantial part of your grade. Therefore, since the human brain can only do one thing at a time, it is not possible to participate in class at the same time you are texting, tweeting, doing email, surfing the web, etc. Please use your technology wisely.

GRADING:

Your grade will be determined by the following percentages:

Group project: 30%

Short paper 1: 20%

Short paper 2: 25%

Class participation: 25%

There will be no extra credit. However, I will return your short paper the week after submission and at that time also give you insight into your progress in class participation so that you can gauge how well you are doing in class. If you are concerned at that point about your grade, please meet with me and we will discuss opportunities for improvement, including the potential to revise your short paper and resubmit it.

Additionally, should your team project receive an unsatisfactory grade, we will discuss it and there may be an opportunity to revise and resubmit the written portion of the project.

CLASS SCHEDULE AND ASSIGNMENTS:

January 13 **Class and Instructor Introductions and Polling on Topics of Knowledge and Interest**

January 16 **Why Go Into Space?**

Readings:

- Howard E. McCurdy, *Space and the American Imagination*, pp. 11-59.
- Roger D. Launius, "Compelling Rationales for Spaceflight: History and the Search for Relevance" in Steven Dick and Roger Launius, Eds. *Critical Issues in the History of Spaceflight* (2006)
- The National Aeronautics and Space Act of 1958 (unamended)
- Simon Sinek, TED talk on the Power of Why

January 20 **Framing the Conversation: The Role of Government in Space Policy Making**

January 23 **The U.S. Preeminence Rationale: Origins of space policy**

Readings:

- Howard E. McCurdy, *Space and the American Imagination*, pp. 60-92.
- Asif A. Siddiqi, "The Rockets' Red Glare: Technology, Conflict, and Terror in the Soviet Union," *Technology and Culture* 44 (July 2003): 470-501

January 27 **The U.S. Preeminence Rationale: National Security Space**

January 30 **Guest Speaker: Chirag Parikh, National Security Council**

Readings:

- Roger D. Launius, "National Security, Space, and the Course of Recent U.S. History," in Paul G. Gillespie and Grant T. Weller, eds., *Harnessing the Heavens: National Defense Through Space*. Chicago, IL: Imprint Publications, 2008), pp. 5-23.

- Peter L. Hays, “NASA and the Department of Defense: Enduring Themes in Three Key Areas,” in Steven J. Dick and Roger D. Launius, eds., *Critical Issues in the History of Spaceflight* (Washington, DC: NASA SP-2006-4702, 2006); pp. 199-238.

February 3 ***Short Paper Number 1 Due**

The U.S. Preeminence Rationale: International Cooperation

February 6 **Panel Discussion with International Space Representatives**

Readings:

- John M. Logsdon, “The Development of International Space Cooperation,” in John M. Logsdon, et al., eds., *Exploring the Unknown: Selected Documents in the Evolution of the U.S. Civil Space Program*, Volume II (Washington, DC: NASA SP-4407, 1996), pp. 1-57.
- John Krige, “Technology, Foreign Policy and International Collaboration in Space,” in Steven J. Dick and Roger D. Launius, eds., *Critical Issues in History of Spaceflight*(Washington DC: NASA SP-2006-4702, 2006), pp. 239-60.
- Roger D. Launius, “United States Space Cooperation and Competition: Historical Reflections,” *Astropolitics: The International Journal of Space Politics & Policy* 7/2 (2009): 89-100.

February 10 **Human Drive to Explore and Survive Rationale: Origins of Human Space Flight**

February 13 **The Space Shuttle**

Readings:

- Howard E. McCurdy, *Space and the American Imagination*, pp. 93-119.
- T.A. Heppenheimer, “The Space Shuttle Decision,” NASA History Series, NASA SP-4221, pp. 331-414

- Brian Woods, “A Political History of NASA’s Space Shuttle: The Development Years, 1972–1982,” *Sociological Review* 57 (2009): 25-46.
- National Academies Report on Human Space Flight, to be found at:

http://www.nap.edu/catalog.php?record_id=18801

February 17 **Module 1 Presentations**

February 20 **Discussion of Module 1 Presentations**

Readings:

- Howard E. McCurdy, *Space and the American Imagination*, pp. 154-80.

February 24 **Human Rationale Meets International Cooperation: The International Space Station**

February 27 **The International Space Station—Its Use and Its Importance for Commercial Space**

Readings:

- Howard E. McCurdy, *Space and the American Imagination*, pp. 181-206.
- Sylvia D. Fries, “2001 to 1984: Political Environment and the Design of NASA’s Space Station System,” *Technology and Culture* 29 (July 1988): 568-93.
- W. Henry Lambright, “Leadership and Large-Scale Technology: The Case of the International Space Station,” *Space Policy* 21 (August 2005): 195-203.

March 3 **Module 2 Presentations**

March 6 **Discussion of Module 2 Presentations**

March 17 **The Discovery of Knowledge Rationale: Space Science**

March 20 **The Discovery of Knowledge Rationale Meets Benefits Rationale: Earth Science**

Readings

- Howard E. McCurdy, *Space and the American Imagination*, pp. 120-53.
- Robert W. Smith and W. Patrick McCray, “Beyond the Hubble Space Telescope: Early Development of the Next Generation Space Telescope,” in H.A. Thronson, et al., eds., *Astrophysics in the Next Decade: The James Webb Space Telescope and Concurrent Facilities* (New York: Springer Science, 2009), pp. 31-50.
- David J. Stevenson, “Planetary Science: A Space Odyssey,” *Science* 287 (February 11, 2000): 997-99, 1001-03, 1005.

March 24 **The Economic Rationale: The Origins of Commercial Space**

March 27 **Guest Speaker: Former NASA Deputy Administrator Lori Garver**

Readings:

- Howard E. McCurdy, *Space and the American Imagination*, 268-307.
- National Commission on Space, *Pioneering the Space Frontier* (1985), New York: Bantam Books, 1986. Available at <http://history.nasa.gov/painerep/begin.html>
- James A. Vedda, “Space Commerce,” in Eligar Sadeh, *Space Politics and Policy* (2002)
- NASA Partnership Study
- Roger D. Launius and Dennis R. Jenkins, “Is It Finally Time for Space Tourism?” *Astropolitics: The International Journal of Space Politics and Policy* 4 (Winter 2006): 253-80.
- Washington Post article, “Which Way to Space?” at: <http://www.washingtonpost.com/sf/national/2013/11/23/which-way-to-space/>

- March 31** **Module 4 Presentations**
- April 3** **Discussion of Module 4 Presentations**
- April 7** **Comparison of Rationales: The Bush 41 Vision vs. The Bush 43 Vision**
- April 10** **Space Policy Making in the Legislative Branch and the Executive Branch**

Readings:

- Thor Hogan, Mars Wars – The Rise and Fall of the Space Exploration Initiative, (2007), NASA History Series, NASA SP-2007-4410, Chaps. 1-5
- The White House, “A Renewed Spirit of Discovery: The President’s Vision for U.S. Space Exploration,” January 2004
- Daniel Morgan, “The Future of NASA: Space Policy Issues Facing Congress,” Congressional Research Service, January 14, 2010

- April 14** **Contemporary Space Policy**
- April 17** **Guest Speaker Richard Dalbello, Director of Space Policy, White House Office of Science and Technology Policy**

Readings:

- Eligar Sadeh, “Space Policy Challenges Facing the Barack Obama Administration,” *Space Policy* 25 (May 2009): 109-16.
- Summary Report of the Review of U.S. Human Space Flight Plans Committee, September 2009
- “National Space Policy of the United States of America,” June 28, 2010
- National Space Transportation Policy, 2013
- NASA Appropriations Act of 2014
- NASA Authorization Act of 2010

April 21 **What does this all mean for the future of space?**

April 24 ***Final Short paper due**
Wrapup

Modules (Each class member will choose one module):

Module 1:

You are in the government of the country of Galexia. Your country is one of the up-and-coming developing nations—in fact, many scholars are thinking of how to expand the “BRIC” acronym to include Galexia.

You and other government decision makers are trying to decide whether to embark upon a space program. Develop a 15-minute presentation with 5-10 slides that explain what you have seen as the benefits of other countries’ space programs, such as India or even Russia, as well as what some of the costs would be (both economic and political) should your country choose to invest in space.

What is your ultimate recommendation? Should your country invest in a space program, and if so, what should the scope of that space program be? What countries would you choose to cooperate with in space if you develop a program?

Module 2:

You are U.S. decision makers and need to decide whether to invite China to join the International Space Station partnership.

Develop a 15-minute presentation with 5-10 slides arguing that it is a good or bad idea for China to join the Space Station.

Discuss:

Why?

How will their joining benefit or be detrimental the US?

What other benefits or detriments are there to the space program, to the world?

Module 3:

Present a proposal for a commercial partnership with NASA. Argue why the government should pitch in some funding and how you will benefit as well. Argue how

you think you can make money in such a venture, and why you think this is a justifiable government investment.

Choose from the following:

- A commercial company developing a module that will allow humans to live in space for long periods of time
- A space tourism company that will sell commercial rides to the international space station
- A company that wants to use a launch pad at Kennedy Space Center to launch its own rockets

Short Papers

Each short paper should be no more than three pages in length and should have the following format:

You should divide your paper into the following sections and label each section:

Introduction:

The introduction should state your main thesis for the paper. For instance, you may be writing a paper positing that the main reasons why we explore space have remained constant through time. You would state this in the introduction with a few supporting sentences.

Background:

In this section, you will provide factual information that backs up your thesis stated in the introduction. You may point to events that occurred that support your thesis, writings by others in support, and any other information. Again, it should be factual proof of your statement.

Main Body:

You can call this section what you wish. If you are forwarding a policy proposal, for instance, saying that we should focus on privatization of the space program, or that we should retain the same structure of the space program because the reasons for space exploration haven't changed, then you may wish to label this section as, "policy proposal." If your paper focuses on a specific aspect, you may wish to label this section to highlight that aspect, such as China's space program.

Conclusions:

Restate your thesis from the introduction bringing in some of the supporting facts and statements from your background and main body. The conclusion should not be long. It should clearly state what you feel you proved or stated in the paper.

Topics for Short Paper #1

Write a short paper on one of the following:

- Rationale or rationales for space exploration
- The origins of space exploration
- Space and national security

Topics for Short Paper #2

You may choose from any of the topics covered in the class for this second paper. I will ask you to submit your topic choice to me three weeks prior to the paper due date. I can then assist you if you are having any challenges or questions regarding the paper topic.