

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

International Affairs 6145.10  
Fall 2023  
Credits: 3

Thursday, 5:10-7:00  
ESIA 212  
1957 E ST, NW

**U.S. Space Policy**

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Office Hours/Video Calls: By appointment

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 space cooperation and competition. 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 and lecture 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. Lecture slides will be posted on Blackboard but the readings are important to understanding the slides. The written assignments for the course (and the primary basis for assigning a grade) will be three 4000-5000 word (~9-12 pages) 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 **September 21, October 26, and December 7**. The specific prompts for each paper are given below. Papers should be submitted electronically to [space1@email.gwu.edu](mailto:space1@email.gwu.edu)

## Course Schedule

August 24	Introduction: Why Go Into Space?
August 31	Origins of U.S. Space Policies and Programs
September 7	Apollo and Its Impacts
September 14	What Do You Do Next When You've Been to the Moon?
September 21	NASA – From <i>Challenger</i> to <i>Columbia</i>
September 28	Beyond LEO – the Vision for Space Exploration and Artemis
October 5	The International Context of the U.S. Space Program
October 12	No class: Fall Break
October 19	The Evolution of Commercial Space Activities
October 26	The Evolution of National Security Space Activities
November 2	Making Space Secure and Sustainable
November 9	The U.S. Congress and Space
November 16	Making National Space Policy
November 23	No Class: Thanksgiving Holiday
November 30	<i>Quo Vadis</i>
December 7	A Conversation with the NASA Administrator (planned)

## Readings

Course readings, including those from recommended texts below, are available on Blackboard or are on the Internet. The syllabus and lecture slides will be posted on Blackboard.

Launius, Roger D., and Howard E. McCurdy. *Spaceflight and the Myth of Presidential Leadership*. Urbana, Ill: University of Illinois Press, 1997.

Logsdon, John M. *The Penguin Book of Outer Space Exploration: NASA and the Incredible Story of Human Spaceflight*. 2019.

McDougall, Walter A. ... *the Heavens and the Earth A Political History of the Space Age*. Baltimore: Johns Hopkins University Press, 1997.

August 24     Introduction: Why Go Into Space?

John M. Logsdon, ed., *The Penguin Book of Outer Space Exploration* (2018), Chap. 1, pp. 15-30

“Introduction” in Roger D. Launius and Howard E. McCurdy, *Spaceflight and the Myth of Presidential Leadership* (1997)

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

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)

European Commission, “Space: a New Frontier for an Expanding Union,” White Paper, November 11, 2003, Executive Summary

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

Michael Griffin, “Space Exploration: Real Reasons and Acceptable Reasons,” January 19, 2007

National Research Council, *America’s Future in Space Aligning the Civil Space Program with National Needs* (2009)

David A. Mindell, et al, “The Future of Human Spaceflight: Objectives and Policy Implications in a Global Context,” American Academy of Arts and Sciences, 2009

The White House National Space Council, *A New Era for Deep Space Exploration and Development* (2020)

### First Assignment (Due September 21)

Prepare a 4,000-5,000 word essay (indicate sources for direct quotes) discussing past and current U.S. approaches to human space exploration and how the policies of other countries might differ. The essay should address questions such as: In a time of global economic turmoil and changing threats to international security, what are the purposes of human space exploration? What could or should be the purposes of human space exploration? How should the potential benefits of human space exploration be assessed related to the resources and risks involved?

August 31 Origins of U.S. Space Policies and Programs

John M. Logsdon, ed., *The Penguin Book of Outer Space Exploration* (2018), Chap. 3, pp. 146-165

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

Dwayne A. Day, “Cover Stories and Hidden Agendas: Early American Space and National Security Policy,” in Roger Launius, John Logsdon, and Robert Smith, *Reconsidering Sputnik: Forty Years Since the Soviet Satellite* (2000), pp. 161-195

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

Edwin Diamond and Stephen Bates, “Sputnik,” *American Heritage*, October 1997, pp. 85-93

David Spires, *Beyond Horizons: A Half-Century of Air Force Space Leadership* (1997), Introduction and Chapters 1-2

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

National Aeronautics and Space Act of 1958

September 7 Apollo and Its Impacts

**Guest Speaker: John Logsdon, Professor Emeritus**

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

James E. Webb and Robert McNamara, “Recommendations for Our National Space Program: Changes, Policies, Goals,” May 8, 1961

Transcript of Presidential Meeting, November 21, 1962 (excerpts)  
[http://whitehousetapes.net/exhibits/space/clips/1962\\_1121\\_apollo/](http://whitehousetapes.net/exhibits/space/clips/1962_1121_apollo/)

W. Henry Lambright, *Powering Apollo: James E. Webb of NASA* (1995), pp. 1-10, 102-123, 214-220, 236-241, 253

Stephen B. Johnson, "Organizing the Manned Space Program," in *The Secret of Apollo* (2002), Chapter 5

Asif A. Siddiqi, *Challenge to Apollo: The Soviet Union and Space Race, 1945-1974* (2000), Chapters 19 and 20

Central Intelligence Agency, "The Soviet Space Program," April 4, 1968

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

John M. Logsdon, *John F. Kennedy and the Race to the Moon* (2011), Chap. 14

John M. Logsdon, ed., *The Penguin Book of Outer Space Exploration* (2018), Chap. 3, pp. 260-271

#### September 14 What Do You Do Next When You Have Been to the Moon?

Robert Dallek, "Johnson, Project Apollo, and the Politics of Space Program Planning" in Roger D. Launius and Howard E. McCurdy, *Spaceflight and the Myth of Presidential Leadership* (1997)

John M. Logsdon, ed., *The Penguin Book of Outer Space Exploration* (2018), Chap. 4, pp. 288-299

John M. Logsdon, "The Space Shuttle Program: A Policy Failure?" *Science*, May 30, 1986

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

T.A. Heppenheimer, "The Space Shuttle Decision," NASA History Series, NASA SP-4221, pp. 331-414

Howard McCurdy, "The Decision to Build the Space Station," *Space Policy*, November 1988

John M. Logsdon, *Ronald Reagan and the Space Frontier* (2019), Chap. 24

Alex Roland, "Barnstorming in Space: The Rise and Fall of the Romantic Era of

Spaceflight, 1957-1986,” in Radford Byerly Jr., ed., *Space Policy Reconsidered* (1989), pp. 33-52

Peter Westwick, “From the Club of Rome to Star Wars: The Era of Limits, Space Colonization and the Origins of SDI,” Chap. 12, in *Limiting Outer Space* (2018)

September 21 NASA – From *Challenger* to *Columbia*

Gary D. Brewer, “Perfect Places: NASA as an Idealized Institution,” in Radford Byerly, Jr., ed., *Space Policy Reconsidered* (1989)

E. C. Pete Aldridge, Jr., “Assured Access: ‘The Bureaucratic Space War,’” Dr. Robert H. Goddard Historical Essay, 1985

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

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

John M. Logsdon, “Lost in Space?” *The GAO Journal*, Winter 1991/1992

Congressional Budget Office, *Reinventing NASA*, March 1994

W. Henry Lambright, “Leading Change at NASA: The Case of Dan Goldin,” *Space Policy*, February 2007

*Report of the Columbia Accident Investigation Board*, Chap. 5, 7 and 8, August 2003

John M. Logsdon, “A Failure of National Leadership: Why No Replacement for the Space Shuttle?” Chap. 9 in Steven Dick and Roger Launius, Eds. *Critical Issues in the History of Spaceflight* (2006)

Diane Vaughn, “Changing NASA: The Challenges of Organizational System Failures” Chap. 11 in Steven Dick and Roger Launius, Eds. *Critical Issues in the History of Spaceflight* (2006)

Second Assignment (Due October 26)

For over 60 years, the United States has pursued a space policy vis-à-vis the rest of the world that has mixed competitive and cooperative elements across civil, commercial, and national security sectors. While the United States has competed for prestige, commercial returns, and security advantages, it has also cooperated for scientific and foreign policy payoff. For U.S. policy makers, what balance between cooperative and competitive approaches ought to be sought

and how should that balance be managed? The 2020 National Space Policy calls for international cooperation “on mutually beneficial space activities that broaden and extend the benefits of space for all humanity; further the exploration and use of space for peaceful purposes; protect the interests of the United States, its allies, and partners; advance United States interests and values; and enhance access to space-derived information and services.” What strategies are likely to be the most effective in achieving these objectives? What are the relative risks and potential benefits to the United States?

September 28 Beyond LEO – the Vision for Space Exploration and Artemis

NASA, “Briefing for the President: Future U.S. Space Exploration,” December 19, 2003

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

Space Studies Board, National Research Council, *The Scientific Context for Exploration of the Moon – Final Report*, Executive Summary (2007)

NASA Exploration Systems Mission Directorate, *Lunar Architecture Update*, AIAA Space 2007, Long Beach, CA, September 27, 2007

Michael Griffin, “Remarks to the Space Transportation Association on the Constellation Architecture,” January 22, 2008

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

John Marburger, “Remarks on the Background for the Vision for Space Exploration,” Washington, D.C., August 5, 2009

*Summary Report of the Review of U.S. Human Space Flight Plans Committee*, September 2009

Vice President Mike Pence, “Remarks at the Fifth Meeting of the National Space Council,” Huntsville, AL, March 26, 2019

Ken Bowersox, *Artemis Architecture & HEOMD Status*, Aeronautics and Space Engineering Board, Washington, D.C., June 9, 2020

NASA, *NASA’s Lunar Exploration Program Overview*, September 2020

October 5 The International Context of the U.S. Space Program

**Guest Speaker: Aaron Bateman, Assistant Professor**

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

Lynn F.H. Cline and Graham Gibbs, "Re-Negotiation of the International Space Station Agreements—1993-1997" *Acta Astronautica* 53, no. 11: 917-925. (2003)

David Lengyel and Steven Newman, ed., “International Space Station Lessons Learned for Space Exploration,” NASA, Washington, D.C., September 2014

Kent Bress, “International Cooperation at NASA,” presentation to the Space Policy Institute, Washington, D.C., May 2017

“Global Exploration Strategy: The Framework for Coordination,” May 31, 2007

United Nations, “Review of international mechanisms for cooperation in the peaceful exploration and use of outer space: information received from Member States,” Committee on the Peaceful Uses of Outer Space, Legal Subcommittee, A/AC.105/C.2/2013/CRP.17, 8 April 2013

European Space Policy Institute, “European Space Strategy in a Global Context,” ESPI Public Report 75, Vienna, November 2020

Report of the High-Level Advisory Group on Human and Robotics Space Exploration for Europe, “Revolution Space,” 23 March 2023

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

Florian Vidal, “Russia’s Space Policy: the Path of Decline,” *Notes de l’Ifri*, Institut français des relations internationales (Ifri), January 2021.

India, “India Space Policy,” New Delhi, April 2023

Japan, “Outline of the Basic Plan on Space Policy,” Presentation by the National Space Policy Secretariat, Cabinet Office, Tokyo, June 30, 2020

Japan, “Space Security Initiative,” Strategic Headquarters for Space Policy, Tokyo, June 13, 2023

People’s Republic of China, “China’s Space Program: A 2021 Perspective,” White Paper from the Information Office of the State Council, Beijing, January 28, 2021

U.S.-China Economic and Security Review Commission, “China’s Ambitions in Space,” Chap 4, Sec 3, *Annual Report to Congress*, Washington, D.C., 2019

October 19 The Evolution of Commercial Space Activities

Ralph J. Cordiner, “Competitive Private Enterprise in Space,” in Simon Ramo, Ed. *Peacetime Uses of Outer Space*, New York: McGraw-Hill (1961)

Scott Pace, “Merchants and Guardians: Balancing U.S. Interests in Space Commerce,” in John M. Logsdon and Russell Acker, Eds. *Merchants and Guardians* (1999)

Steve Bouchinger, “Space Industries of Emerging Space Nations,” Euroconsult presentation to the United Nations Office for Outer Space Affairs 2008 Industry Symposium, Vienna, February 12, 2008

James Vedda, “Planes, Trains, Automobiles, and Spaceships,” in *Becoming Spacefarers* (2012)

Bhavya Lal, Emily Sylak-Glassman, and Nayanee Gupta, “Global Trends in Civil and Commercial Space,” Science and Technology Policy Institute, Institute for Defense Analysis, 28 October 2015

Bhavya Lal, Rachel Wei, “What is Commercial Space? And Why Does it Matter?,” paper presented at the Seventieth International Astronautical Congress, Washington D.C., October 2019

Tina Highfill, Patrick Georgi, and Dominique Dubria, “Measuring the Value of the U.S. Space Economy,” *Survey of Current Business*, December 2019

Tina Highfill, Chris Surfield, “New and Revised Statistics for the U.S. Space Economy, 2012–2021,” *Survey of Current Business*, 27 June, 2023

OECD, *OECD Handbook on Measuring the Space Economy, 2nd Ed.*, OECD Publishing, Paris, 2022

Bryce Space and Technology, “Start-Up Space,” 6 April 2022

October 26 The Evolution of National Security Space Activities

*AU-18 Space Primer*, Air University Press, Maxwell AFB, AL, 2023

Bruce Berkowitz, *The NRO at 50 - A Brief History, 2nd Ed.*, National Reconnaissance Office, Chantilly, VA, July 2018

Peter Marquez, “Space Deterrence: The Prêt-à-Porter Suit for the Naked Emperor,” in *Returning to Fundamentals: Deterrence and U.S. National Security in the 21<sup>st</sup> Century*, The Marshall Institute, Washington, D.C., August 2011

Dana Johnson, Scott Pace, C. Bryan Gabbard, *Space: Emerging Options for National Power* (1998), Santa Monica: RAND MR-517, Chap. 2

John Collins, “U.S. Military Spacepower: Conceptual Underpinnings and Practices,” in *Toward a Theory of Spacepower*, National Defense University Press, Washington, D.C., 2011

Peter Garretson, “What War in Space Might Look Like Circa 2030-2040?” Nonproliferation Policy Education Center, Washington, D.C., August 28, 2020

Scott Pace, “Deterrence and Geopolitics in Space,” *Space Policy*, July 2023

U.S. Department of Defense, “Space Policy,” DOD Directive 3100.10, Washington, D.C., 22 August 2023

CSIS Aerospace Security Project, “U.S. Space Force Primer,” Center for Strategic and International Studies, Washington, D.C. 22 December 2022

November 2 Making Space Secure and Sustainable

**Guest Speaker: Sean Wilson, National Space Council**

Robert Preston, et al, Space Weapons Earth Wars (2002), Santa Monica, CA: RAND MR-1209-AF, Summary

Todd Harrison, “International Perspectives on Space Weapons,” Center for Strategic and International Studies, Washington, D.C., May 2020

Bruce McClintock, et al, Responsible Space Behavior for the New Space Era (2021), Santa Monica, CA: RAND PE-A887-2

Everett Dolman, “Space Power and U.S. Hegemony: Maintaining a Liberal World Order in the 21<sup>st</sup> Century,” in John M. Logsdon and Gordon Adams, Eds. Space Weapons: Are They Needed? (2003)

Jessica West and Lauren Vyse, “Arms Control in Outer Space,” Ploughshares Report, March 2022

James Clay Moltz, “Alternative Futures for Space Security,” in The Politics of Space Security (2008)

Werner R. Balogh, “Programmes and Activities of the United Nations Office for Outer Space Affairs,” IAC-09-E3.2.2, International Astronautical Congress, October 2009

United Nations Committee on the Peaceful Uses of Outer Space, “Guidelines for the long-term sustainability of outer space activities,” A/AC.105/2018/CRP.20, 27 June 2018

General Accounting Office, “Large Satellite Constellation,” GAO-22-105166, September 2022

U.S. Department of State, “A Strategic Framework for Space Diplomacy,” Washington, D.C., 25 May 2023

### Third Assignment (Due December 7)

In a February 2, 2023 commentary in China Military Online, the English language outlet for the People’s Liberation Army, the PLA stated that “Since taking office as head of NASA, Bill Nelson has repeatedly accused China of peaceful space exploration activities, falsely claiming that China's space program is a military program and groundlessly accusing China's aerospace industry of stealing technology and ideas from other countries. Arguments like this are not uncommon in American political and military sectors. The U.S. has spared no effort to distort the facts and label other countries as ‘space competitors’ and ‘space threats’, aiming to create excuses to seek space superiority. This reflects the hegemonic thinking and Cold War thinking of the U.S.” Is this criticism valid in whole or parts? Why might the PLA say this? How should the United States respond to this narrative? Who are the most important messages and audiences for a U.S. response?

November 9 The U.S. Congress and Space

**Guest Speakers: Jared Stout, Meeks, Butera & Israel PLLC**

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

“Epilogue: Beyond NASA Exceptionalism” in Launius and McCurdy

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

Marcia Smith, “What’s A Markup? Answers to That and Other Mysteries of the Legislative Process,” September 2019

Marcia Smith, “Legislative Checklist 118<sup>th</sup> Congress,” July 29, 2022

Daniel Morgan, “NASA Appropriations and Authorizations: A Fact Sheet,” Congressional Research Service, Washington, D.C., July 14, 2023

American League of Lobbyists, “Effective Corporate Lobbying,” Lobbyists.info, presentation, July 2015

U.S. Space Foundation, “Congressional Leadership Changes and Implications for the Space Industry,” Colorado Springs, CO., October 2022

November 16 Making National Space Policy

The White House, “National Space Policy Fact Sheet,” September 19, 1996

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

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

Jeff Kueter, “Evaluating the Obama National Space Policy: Continuity and New Priorities,” Marshall Institute, July 2010

The White House, “National Space Transportation Policy,” November 21, 2013

Donald J. Trump, “Space Policy Directive-1, Reinvigorating America’s Human Space Exploration Program,” Federal Register, Vol. 82, No. 239, December 14, 2017

Donald J. Trump, “Encouraging International Support for the Recovery and Use of Space Resources,” Executive Order 13914, April 6, 2020

The White House, “National Space Policy of the United States of America,” December 9, 2020

Laura Brady and Charles Ellsey, “Comparing the 2010 and 2020 National Space Policies,” *The Space Review*, January 18, 2021. Accessed at <https://www.thespacereview.com/article/4107/1>

The White House National Space Council, “Renewing America’s Proud Legacy of Leadership in Space,” January 2021

The White House National Space Council, “United States Space Priorities Framework,” December 2021

November 23 Thanksgiving Holiday – No Class

November 30 Quo Vadis

Roger Launius, "The historical dimension of space exploration: reflections and possibilities," *Space Policy*, February 2000

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)

Brent Sherwood, "Mars: On the Path or in the Way?" presentation to the Global Exploration Conference (GLEX-12), Washington, D.C., May 2012

Scott Pace, "Strengthening Space Security: Advancing US Interests in Outer Space," *Harvard International Review*, Spring 2012, pp. 54-59

Jim Keravala, Dale Tietz, and Bill Stone. "Shackleton Energy Company's Propellant Depot and Space Transportation Architecture," *New Space Journal*, Vol. 1, No. 2, 2013, pp. 91-100

National Research Council, *Pathways to Exploration: Rationales and Approaches for a U.S. Program of Human Space Exploration*, 2014. Final presentation slides

Elon Musk, "Making Life Multiplanetary," abridged transcript of presentation to the 68<sup>th</sup> International Astronautical Congress, Adelaide, Australia, 28 September, 2017

Rand Simberg, "The Return of the Space Visionaries," *The New Atlantis*, Number 56, Summer/Fall 2018, pp. 48-68

December 7 **A Conversation with NASA Deputy Administrator Pam Melroy (planned) and John Logsdon, Professor Emeritus (invited)**

W. Henry Lambright, "Leading in Space: 50 Years of NASA Administrators," in *NASA's First 50 Years – Historical Perspectives*, Steven J. Dick, Ed. (2010)

W. Henry Lambright, "Reflections on Leadership and Its Politics: Charles Bolden, NASA Administrator, 2009-17" *Public Administration Review*, 2017, Vol. 77, no. 4, pp. 616-620

W. Henry Lambright, "Maintaining Momentum: Robert Lightfoot As NASA's Acting Administrator, 2017-2018," *Space Policy*, Number 48, 2019, pp. 87-90

Marcia Smith, "NASA Administrators and Their Professional Backgrounds," Space Policy Online, September 7, 2017. Accessed at <https://spacepolicyonline.com/wp-content/uploads/2017/09/NASA-Administrators1.pdf>

Senate Commerce Committee, Transcript of Nomination Hearing for NASA Administrator Nominee Sen. Bill Nelson, April 21, 2021

NASA Office of the Inspector General, "2022 Report on NASA's Top Management and Performance Challenges," November 2022

NASA Aerospace Safety Advisory Panel, "Annual Report for 2022," January 23, 2023

## **Other Course Information**

### Prerequisites

*Academic:* None.

*Technological:* It is necessary to possess baseline technology skills in order to participate fully in the course. Please consult the GW Online website for further information about recommended configurations and support. If you have questions or problems with technology for this course, please consult the Technology Help link in the left navigation menu in our course in Blackboard.

### Methods of Instruction

*Lectures:* Each class session will have a Power Point presentation on a particular topic, as listed in the syllabus. The instructor will make these presentations available to the students ahead of class. Occasional guest lectures will be scheduled (to be confirmed), and you should be prepared to engage the speakers.

*Readings:* The syllabus includes specific readings for the specific topic of the lecture. They are a combination of articles, book chapter extracts, official space policy documentation, and other written materials as needed for the course. Additional (optional) reading will also be available.

*Writing assignments:* Three 9-12 page (~4000-5000 words) papers, each addressing a particular question or issue, are assigned for this class. Each paper is worth 33.3% of the final course grade. Specific topics are described subsequently in this syllabus. Papers should show thoughtful analysis and a structured approach to answering the questions. You should proofread your work, and correct spelling errors before submitting the paper to the instructor. Common grammatical errors and usage, such as "**United States**' prestige" rather than "U.S. prestige", should be avoided. Also try to avoid passive sentence structure, such as "National prestige was a major factor for the U.S. Administration's space policy" rather than "The U.S. Administration specifically included factors such as national prestige in its space policy."

*Journals, Blogs, and Other Public Media:* You should make an effort to keep up on current space activities by reading news media and blogs such as *Space News* <https://spacenews.com/>, Space Policy Online <https://spacepolicyonline.com/>, and *The Space Review* <https://www.thespacereview.com/>

### Credit Hour Policy and Grading

As a three-credit course, over 15 weeks of the semester you are expected to spend about 110 minutes in live instruction and about 360 minutes of independent work per week. There will not be a final exam; rather, the three writing assignments will count towards the final grade. While class participation is not scored, you should be prepared to engage, particularly when the class has guest speakers. Late work will receive point deductions based on the number of days the item is late. The amount of the deduction is at the instructor's discretion.

Assignments are graded on a 20 point scale. The percent grading scale below determines the final letter grade:

<b>Excellent</b>	<b>Good</b>	<b>Needs Improvement</b>	<b>Low Pass</b>	<b>Fail</b>
A 96%-100%	B+ 87%-89%	B- 80%-83%	C 74%-76%	F Under 70%
A- 90%-95%	B 84%-86%	C+ 77%-79%	C- 70%-73%	

### Incomplete Grades

At the option of the instructor, an Incomplete may be given for a course if a student, for reasons beyond the student's control, is unable to complete the work of the course, and if the instructor is informed of, and approves, such reasons before the date when grades must be reported. An Incomplete can only be granted if the student's prior performance and class attendance in the course have been satisfactory. Any failure to complete the work of a course that is not satisfactorily explained to the instructor before the date when grades must be turned in will be graded F, Fail. If acceptable reasons are later presented to the instructor, the instructor may initiate a grade change to the symbol I, Incomplete. The work must be completed within the designated time period agreed upon by the instructor, student, and school, but no more than one calendar year from the end of the semester in which the course was taken. To record the exact expectations, conditions, and deadlines of the Incomplete please use the Elliott School's Incomplete Grade Contract at <http://go.gwu.edu/incompletecontractgraduate>

The completed and signed contract is to be submitted to the Academic Affairs and Student Services Office. All students who receive an Incomplete must maintain active student status during the subsequent semester(s) in which the work of the course is being completed. If not registered in other classes during this period, the student must register for continuous enrollment status. For more information please review the relevant sections of the University Bulletin: <http://bulletin.gwu.edu/university-regulations/#Incompletes>

### Instructor Response Time

I will respond to emails within one day (e.g., 24 hours on weekdays and on the next business day over weekends and holidays). I will return assignments within two weeks.

### 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 University Student Center, Suite 242, to establish eligibility and to coordinate reasonable accommodations. For additional information please refer to:

<https://disabilitysupport.gwu.edu/>

### ***UNIVERSITY COUNSELING CENTER (UCC) 202-994-5300***

The University Counseling Center (UCC) offers 24/7 assistance and referral to address students' personal, social, career, and study skills problems.

<https://healthcenter.gwu.edu/counseling-and-psychological-services>

### 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.