Space Policy

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Course prefix: INTA

Course number: 3043 / 8803

Section: A

CRN (you may add up to five):
3043 / 8803

Instructor First Name: Thomas González

Instructor Last Name: Roberts

Semester: Fall

Academic year: 2025

Course description:

As satellites orbit the Earth hundreds or thousands of kilometers above our heads, they quietly play a critical role in our daily lives, the global economy, and military power. To study space policy is to interrogate the decision-making processes for the civil, commercial, and military uses of outer space from the dawn of the space age to the modern day, spanning issues of international coordination, sustainability, and security in the domain. Through this course, students will learn about the diverse factors that have historically shaped space policy thinking, from the original rationales for spaceflight, to the birth of the commercial space industry, to the development of international systems that promote long-term stability in a rapidly densifying environment.

By engaging with the debates and decisions that have shaped global space activities, students will gain an appreciation for the role of space technologies in global society, the critical challenges facing this domain, and the intricate politics driving contemporary space policy in both the United States and around the world.

Course learning outcomes:

By actively participating in this course, students will earn familiarity with:

- The outer space environment as a geopolitical domain;
- The fundamental treaties, laws, agreements, and policies that apply to space operations; and
- The roles of key actors in the development and administration of space governance principles.

Using this knowledge, students will be able to:

- Examine the physical, social, political, and economic factors that have shaped global space policy and their impact on current and future space activities;
- Critically evaluate historical space policy proposals and decisions; and
- Develop clear and persuasive arguments for policy options that address current and future challenges in the space domain.

Required course materials:

All readings for this course will be made available at no additional cost to students. There is no need to purchase any textbooks. The readings will include a mix of open-access materials and library resources accessible through students' Georgia Tech Library credentials.

Required Readings

Required readings are those that must be completed before the Monday class meeting of the corresponding week. Content from required readings are subject to appear on the midterm exam. All required readings are posted as links in the "Course Schedule" section of the Canvas homepage or uploaded as PDFs to the "Files" repository of the course's Canvas page.

Suggested Readings

Suggested readings are those included as additional resources for students as they prepare their policy memos throughout the term, but feature content that will not appear on the midterm exam. Suggested readings appear on Canvas as links within the policy memo assignments. The following suggested readings offer background information related to the course as a whole and serve as richer introductions to the material for interested readers:

- James Alver and Michael Gleasor, "A Space Policy Primer: Key Concepts, Issues, and Actors," The Aerospace Corporation, November 2018;
- James Clay Moltz, *Crowded Orbits: Conflict and Cooperation in Space* (New York: Columbia University Press, 2014); and

Christopher D. Johnson, ed., *Handbook for New Space Actors* (Broomfield, CO: Secure World Foundation, 2017).

Grading policy:

Class participation and all required assignments are graded on equally weighted points, totaling 100 points for the semester. Extra credit opportunities to add additional points to students' total for the semester are described in the "Assignments" section.

Grading Scale

For students electing to take this course for a grade, the thresholds for earning an *A*, *B*, *C*, or *D* letter grade are 90, 80, 70, and 60 points, respectively. Students who earn fewer than 60 points during the semester will fail this course.

For students electing to take this course without a grade, the threshold for earning an *S* assessment is 70 points. Students who earn fewer than 70 points will earn a *U* assessment.

Assignments

All assignments submitted during the course of the semester are due on Wednesdays at 8 am ET on the dates described in the “Course Calendar” section. The final paper and corresponding policy memo are due at 8 am ET on Monday, December 8. All assignments are to be submitted on Canvas.

Class Participation (2×5 pts.)

Active participation is essential to students’ success in this course. Students are expected to come to each class well-prepared, having thoroughly read and reflected on the assigned materials. Engaging thoughtfully and respectfully with classmates and the instructor during discussions will deepen students’ understanding of the course content and enhance their learning experience. Full credit for participation requires consistent attendance, preparation, and meaningful contributions to seminar discussions, including those led by guest lecturers and student speakers.

Class participation is graded twice during the term: at the halfway point and end of the course, reflecting student performance in the first and second halves of the semester, respectively.

Policy Memos (5×5 pts.)

When asked to make a decision, executive leaders rely on brief, digestible materials to inform their understanding of the problem at hand and process evidence-based arguments. To develop their practice producing these materials, students will use the required and suggested readings from the course to analyze the core issue presented in the provided prompt and present their opinion on the matter, supported by both evidence and explanation. In some cases, students will benefit from sharing their interpretation of the prompt, including providing the key definitions and reasonable assumptions on which their analysis is based.

Throughout the course of the semester, students will submit five 250- to 500-word policy memos, addressing a question introduced one week in advance. Although there are 10 opportunities to submit memos, students need only submit five in order to meet the course requirements. If students submit more than five policy memos, the top five scores will contribute to their final grade. Students are strongly recommended to submit Policy Memo 1 to earn early feedback.

Grading will be based on clarity, accuracy, and style. Submitted policy memos should always be contained on a single page, written in 11- or 12-point Times New Roman or Arial font, and use footnote citations in the "Notes" format from the Chicago Manual of Style.

Milestone Presentations (5 pts.)

Throughout the history of space operations, a number of key milestones—from treaties, to speeches, to presidential directives—have had outsized impact in shaping the direction of space policy in both the United States and on the international stage. To better understand these foundational materials, students will select one of these milestones and produce a five-minute presentation describing its:

- Principal actors (Who was responsible?);
- Core contributions (What did it do?)
- Context in the history of space decision-making (When did it happen?); and
- Impact on space operations, including international affairs and space technology (Why did it matter?).

In addition to the presentation materials, students must produce a 100- to 150-word summary of their key findings, geared towards an audience with limited exposure to the course's topics. This summary and a copy of the student's slide is due on Canvas at the start of class on the date of the student's presentation.

Students may select any milestone that appears on a pre-approved list of topics or propose their own topic with instructor approval. Students must indicate their selection on the sign-up sheet on Canvas by Monday, September 8.

Grading will be based on clarity, accuracy, and style. Students are encouraged to explore examples in which their selected milestone relates to technical topics in space engineering, including those that may seem non-obvious.

Midterm Exam (25 pts.)

Halfway through the semester, students will sit for a midterm exam designed to assess their understanding of the material from the first half of the semester, including topics from both required readings and class meetings (Lectures 1 through 10). The exam will include short-answer and identification-based questions. The exam is scheduled for Monday, October 13, during class. To prepare students for the exam, a midterm review session is scheduled for the preceding class meeting.

Final Assignment (5+5+20+5 pts.)

At the end of the semester, students will write a 3,000- to 4,000-word paper on a space policy topic of their choice. Students are encouraged to select a topic that addresses issues directly affecting today's space policy decision-makers, such as the legal and political

challenges of rendezvous and proximity operations, the role of commercial space actors in national security missions, or the opportunities and costs of international cooperation or coordination between the United States and foreign states.

Unlike the policy memos in this course, this final paper should be written for an audience informed on past and current issues in space policy. To guide their writing style, students may refer to the journal articles and policy reports featured in the course's lists of required and suggested readings. Essays should include:

- A clear introduction to the policy research question (What are the technical and political challenges surrounding this topic? Who are the stakeholders?);
- A literature review (What background information does the reader need to know on this topic to understand the author's argument? How is the selected research question contextualized in past scholarship?);
- Approach and methodology (How will the author try to answer the research question?);
- Data and analysis (What was learned by following the previously outlined approach and methodology?); and
- Discussion and conclusion (How do the previously presented results inform decision-making in space technology development and international affairs? What concrete recommendations does the author have for policymakers?)

To prepare students for success in the final paper, they will propose the topic of their paper in the style of a policy memo to the instructor. This proposal memo, worth five points, should preview the research question, demonstrate a cursory knowledge of the subject, feature a plan for the student's approach for answering the question, and preview preliminary results, if available. The proposal memo is due on Canvas on Wednesday, November 5. Like the policy memos, proposal memos should be 250 to 500 words and no more than one page.

To demonstrate their skills briefing materials to decision-makers, students must prepare a five-minute presentation, worth five points, sharing their findings with the rest of the class.

To demonstrate their skills writing policy memos, students must submit a final policy memo, worth five points, describing the findings of their final paper. If they draw from their memo-writing experience from the past memo assignments and their mastery of the subject matter from writing the final paper, successful students should spend no more than one hour on their last memo. Like previous policy memos, this final policy memo should be 250 to 500 words and no more than one page.

Both the final paper and the final policy memo are due on Canvas at 8 am ET on Monday, December 8. All components of this final assignment—including the proposal memo, the final paper, and the final policy memo—should be written in 11- or 12-point Times New Roman or Arial font and use footnote citations in the "Notes" format from the Chicago Manual of Style.

Extra Credit (5 pts.)

Students can earn extra credit, increasing their total points for the course, in two ways: writing memos that summarize the proceedings of selected public events in the broader space policy research community and attending selected on-campus events at the intersection of space policy and technology. Students are encouraged to participate in all of the events eligible for extra credit, but can accumulate no more than five additional points to add to the total earned from the principal components of the course.

The space policy research community is exceptionally rich in opportunities for virtual engagement, including congressional hearings, panel discussions hosted by non-governmental research organizations, and keynote addresses by industry leaders, among many others. If students attend any event featured on SpacePolicyOnline.com's weekly "What's Happening in Space Policy" newsletter and write and submit one memo in the style of the course's policy memos, they will earn one point of extra credit. These memos should introduce the topic of the event, explain why it is important to contemporary issues in space policy, and summarize the viewpoints of its featured speakers, if applicable. Events on this list typically feature commentary from experts in the field; students are particularly encouraged to include verbatim quotes from these speakers, appropriately cited using the Chicago Manual of Style.

Throughout the course, the instructor will highlight on-campus events with invited speakers that plan to share their experience and research findings from their careers in space policy. Students will earn one point of extra credit for each session they attend; no memo necessary.

Attendance policy:

In-person attendance is expected and essential for classroom participation. However, there are valid reasons why students may be unable to attend class, such as illness, the death of a friend or family member, or disabilities. Students who anticipate being unable to attend class are asked to notify the instructor prior to the affected class meeting, when possible. Additionally, if a student is feeling unwell, they are advised to stay home and rest in the interest of the health and safety of the entire class.

Academic honesty/integrity statement:

Students are expected to maintain the highest standards of academic integrity. All work submitted must be original and properly cited. Plagiarism, cheating, or any form of academic dishonesty will result in immediate consequences as outlined in the university's academic integrity policy.

Core IMPACTS statement(s) (if applicable):

This course is part of Core IMPACTS' Social Sciences area. Core IMPACTS refers to the core curriculum, which provides students with essential knowledge in foundational academic areas. This course will help students master course content, and support students' broad academic and career goals.

This course should direct students toward a broad Orienting Question:

- How do I understand human experiences and connections?

Completion of this course should enable students to meet the following Learning Outcome:

- Students will effectively analyze the complexity of human behavior, and how historical, economic, political, social, or geographic relationships develop, persist, or change.

Course content, activities, and exercises in this course should help students develop the following Career-Ready Competencies:

- Intercultural Competence;
- Perspective-Taking; and
- Persuasion.