SPST499

Course Summary

Course : RC500 F **Title :** Senior Seminar in Space Studies
Length of Course : 8 Anne Venzon
Prerequisites : Credit Hours : 3

Description

Course Description: Analyses of specific issues will be conducted that will include a review of national space organizations, objectives in past, current, and future aerospace exploration/exploitation, Space Law, government/military and commercial space industrial programs, and examine future trends in space operations. Students will review and analyze the problem solving process with consideration for the economic, social benefit, and security implications of these decisions on national and global scales. This capstone course will provide students with the opportunity to complete an approved academic research exercise that demonstrates their knowledge of their selected field of study. Prerequisite: Completion of a minimum of 106 hours towards your program.

Course Scope:

Course prerequisite: all other Space Studies courses must be satisfactorily completed or currently in progress.

This capstone course explores major topics in modern space studies including:

- A review of national space organizations
- Objectives in past, current, and future aerospace exploration/exploitation
- Space Law
- Government/military and commercial space industrial programs
- Future trends in space operations

Students will complete an approved academic research exercise that demonstrates knowledge in their chosen research topic. Students are expected to select a topic and use an analytical problem-solving approach with consideration for the economic, social benefit, and security implications of these decisions on national and global scales.

It is expected that the student will conduct research, provide analysis, and produce a paper that would be expected of a senior student in Space Studies at any college or university.

The student will select a topic from the following major areas for research, analysis, and presentation:

- The future of commercial space in the United States, including spacelift, satellite design and

construction, and spacecraft operations
- Space law: analysis of past treaties and international agreements and current and future trends
- Space exploration: a discussion of solar system exploration, including past and current missions, the effect of politics on programs and funding, and an analysis of future exploration
- Military, civil (government), and commercial space industrial programs: a discussion of the past relationships, current trends, and an analysis of future trends and direction
- Security implications: an analysis of the cooperation between the United States and other countries and organizations (e.g., the European Space Agency). Must include a discussion of the issues involved with ITAR (International Traffic in Arms Regulations) restrictions
- The economic and social benefits of space exploration, including a discussion and analysis of areas including inventions/innovations, education, public outreach and public perceptions.
- Space science and engineering: a discussion of the differences between space science and other scientific disciplines.
- Education: an analysis of why fewer young people in the U.S. are choosing science and engineering as career choices in general, and space-related careers in particular. Are other countries doing it better? Why?

Forums:

In addition to the research project, there will be seven graded forums throughout the course. Students will be graded on their analysis of the topics as well as their responses to other students.

Objectives

After successfully completing this course, you will be able to

- Discuss current and relevant space-related issues
- Articulate reasoned positions on a specific chosen space topic
- Produce a detailed report a specific chosen space topic
- Draw relationships across disciplines involving space, including science, engineering, law and policy
- Analyze current scientific literature
- Demonstrate proficiency in conducting on-line research

Outline

Week 1: Specific area of interest in Space Studies

Learning Objectives

LO-1: Discuss current and relevant space-related issues

LO-2: Articulate reasoned positions on a specific chosen space topic

Readings

(none required)

Assignment

Forum Post #1

Week 2: Problems or issues related to area of interest

Learning Objectives

LO-1: Discuss current and relevant space-related issues

LO-2: Articulate reasoned positions on a specific chosen space topic

LO-4: Draw relationships across disciplines involving space, including science, engineering, law and policy

LO-5: Analyze current scientific literature

LO-6: Demonstrate proficiency in conducting on-line research

Readings

(none required – research necessary for forum post and research paper)

Assignment

Forum Post #2

Week 3: U.S. spacelift (launch) systems – government or commercial

Learning Objectives

LO-1: Discuss current and relevant space-related issues

LO-2: Articulate reasoned positions on a specific chosen space topic

LO-3:Produce a detailed report a specific chosen space topic

LO-4: Draw relationships across disciplines involving space, including science, engineering, law and policy

LO-5: Analyze current scientific literature

LO-6: Demonstrate proficiency in conducting on-line research

Readings

(none required – research necessary for forum post and research paper)

Assignment

Forum Post #3

Research paper – draft outline and initial bibliography

Week 4: U.S. cooperation with foreign countries – space access and exploration

Learning Objectives

LO-1: Discuss current and relevant space-related issues

LO-2: Articulate reasoned positions on a specific chosen space topic

LO-4: Draw relationships across disciplines involving space, including science, engineering, law and policy

LO-5: Analyze current scientific literature

LO-6: Demonstrate proficiency in conducting on-line research

Readings

(none required – research necessary for forum post and research paper)

Assignment

Forum Post #4

Week 5: Outer Space Treaty of 1967

Learning Objectives

LO-1: Discuss current and relevant space-related issues

LO-2: Articulate reasoned positions on a specific chosen space topic

LO-4: Draw relationships across disciplines involving space, including science, engineering, law and policy

LO-5: Analyze current scientific literature

LO-6: Demonstrate proficiency in conducting on-line research

Readings

(none required – research necessary for forum post and research paper)

Assignment

Forum Post #5

Week 6: Scientific studies that lend themselves to the need for space exploration

Learning Objectives

LO-1: Discuss current and relevant space-related issues

LO-2: Articulate reasoned positions on a specific chosen space topic

LO-3:Produce a detailed report a specific chosen space topic

LO-4: Draw relationships across disciplines involving space, including science, engineering, law and policy

LO-5: Analyze current scientific literature

LO-6: Demonstrate proficiency in conducting on-line research

Readings

(none required – research necessary for forum post and research paper)

Assignment

Forum Post #6

Research paper—final outline and draft

Week 7: Space-related topic from current events

Learning Objectives

LO-1: Discuss current and relevant space-related issues

LO-2: Articulate reasoned positions on a specific chosen space topic

LO-4: Draw relationships across disciplines involving space, including science, engineering, law and policy

LO-5: Analyze current scientific literature

LO-6: Demonstrate proficiency in conducting on-line research

Readings

(none required – research necessary for forum post and research paper)

Assignment

Forum Post #7

Week 8: Final work on Research Paper

Learning Objectives

LO-1: Discuss current and relevant space-related issues

LO-2: Articulate reasoned positions on a specific chosen space topic

LO-3:Produce a detailed report a specific chosen space topic

LO-4: Draw relationships across disciplines involving space, including science, engineering, law and policy

LO-5: Analyze current scientific literature

LO-6: Demonstrate proficiency in conducting on-line research

Readings

(none required – research necessary for forum post and research paper)

Assignment

Forum Post #8

Research paper -- final

Evaluation

Forums: there are multiple required Forums in this workshop. See the course outline below for the subject areas and due dates.

Research paper subject approval: the student will select one topic area from the list provided under Course Scope. The student will contact the instructor through the Sakai Message System not later than the end of Week 2 to submit his or her request, with rationale, for subject approval.

Research paper – draft outline: no later than the end of Week 3, the student will provide the following:

- a draft outline of the paper, including the major topic areas to be discussed
- any subtopics or issues identified at this time
- the methodology to be used for completing the research
- an initial bibliography

Research paper – final outline and draft: no later than the end of Week 6, the student will submit the following:

- the final outline and first draft of the paper
- draft analysis results and major findings
- final bibliography

Research paper – final: not later than the end of the course (Week 8), the student will submit the final paper. The final paper must not be less than 20 pages in length, not including title page and bibliography/references. There must be a minimum of five published (not web site) references, such as textbooks or papers published in professional journals, and at least eight total sources, which may also include magazine or web articles.

Final paper grading: the research paper will be graded on the following criteria:

- Research: did the student conduct important and relevant research in the area?
- Analysis: did the student thoroughly analyze and evaluate the research and data?
- Conclusions: did the student make original, logical, rational and convincing arguments based on the analysis?
- Was the paper well-written in a clear, logical style using proper grammar? Was the paper properly formatted and referenced?

Grading:

Name	Grade %

Materials

Book Title: There are no required books for this course.

Author: N/A

Publication Info: N/A

ISBN: N/A

Required Text: None; however, it's expected that the student will work with the APUS library to obtain materials required to complete their research and analysis. See Evaluation Procedures below.

Websites:

Must be government or industry sites; e.g. NASA, NOAA, Boeing, Ball Aerospace, Digital Globe, etc.

Course Guidelines

Citation and Reference Style

- Attention Please: Students will follow the APA Format as the sole citation and reference style used in written

work submitted as part of coursework to the University. Assignments completed in a narrative essay or composition format must follow the citation style cited in the APA Format.

Tutoring

- Tutor.com offers online homework help and learning resources by connecting students to certified tutors for one-on-one help. AMU and APU students are eligible for 10 free hours* of tutoring provided by APUS. Tutors are available 24/7 unless otherwise noted. Tutor.com also has a SkillCenter Resource Library offering educational resources, worksheets, videos, websites and career help. Accessing these resources does not count against tutoring hours and is also available 24/7. Please visit the APUS Library and search for 'Tutor' to create an account.

Late Assignments

- Students are expected to submit classroom assignments by the posted due date and to complete the course according to the published class schedule. The due date for each assignment is listed under each Assignment.
- Generally speaking, late work may result in a deduction up to 20% of the grade for each day late, not to exceed 5 days.
- As a working adult I know your time is limited and often out of your control. Faculty may be more flexible if they know ahead of time of any potential late assignments.

Turn It In

- Faculty may require assignments be submitted to Turnitin.com. Turnitin.com will analyze a paper and report instances of potential plagiarism for the student to edit before submitting it for a grade. In some cases professors may require students to use Turnitin.com. This is automatically processed through the Assignments area of the course.

Academic Dishonesty

- Academic Dishonesty incorporates more than plagiarism, which is using the work of others without citation. Academic dishonesty includes any use of content purchased or retrieved from web services such as CourseHero.com. Additionally, allowing your work to be placed on such web services is academic dishonesty, as it is enabling the dishonesty of others. The copy and pasting of content from any web page, without citation as a direct quote, is academic dishonesty. When in doubt, do not copy/paste, and always cite.

Submission Guidelines

- Some assignments may have very specific requirements for formatting (such as font, margins, etc) and submission file type (such as .docx, .pdf, etc) See the assignment instructions for details. In general, standard file types such as those associated with Microsoft Office are preferred, unless otherwise specified.

Disclaimer Statement

- Course content may vary from the outline to meet the needs of this particular group.

Communicating on the Forum

- Forums are the heart of the interaction in this course. The more engaged and lively the exchanges, the more interesting and fun the course will be. Only substantive comments will receive credit. Although there is a final posting time after which the instructor will grade comments, it is not sufficient to wait until the last day to contribute your comments/questions on the forum. The purpose of the forums is to actively participate in an on-going discussion about the assigned content.
- "Substantive" means comments that contribute something new and hopefully important to the discussion. Thus a message that simply says "I agree" is not substantive. A substantive comment contributes a new idea or perspective, a good follow-up question to a point made, offers a response to a question, provides an example or illustration of a key point, points out an inconsistency in an argument, etc.
- As a class, if we run into conflicting view points, we must respect each individual's own opinion. Hateful and hurtful comments towards other individuals, students, groups, peoples, and/or societies will not be tolerated.

University Policies

[Student Handbook](#)

- [Drop/Withdrawal policy](#)
- [Extension Requests](#)
- [Academic Probation](#)
- [Appeals](#)
- [Disability Accommodations](#)

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