

Space Commercialization SPSM-5900

F2 2021 Section 36 3 Credits 10/18/2021 to 12/17/2021 Modified 10/12/2021

Meeting Times

Tuesday 5:00 pm - 7:00 pm (Synchronous)

Late Start 30 November 2021 7:00 pm -9:00 pm mountain (Synchronous)

Zoom: <https://webster-edu.zoom.us/j/99397381795> (<https://webster-edu.zoom.us/j/99397381795>).

Contact Information

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Description

Students examine the early development of space operations from the first rocket and satellite launches; U.S. and international policies and their effect on space operations; orbit topologies and the impact they have on the space, ground and user segments. Current initiatives in the commercialization of space including: launch services; the NASA technology transfer programs; satellite communications - voice and data services, direct broadcast TV; remote sensing; radio navigation; mining, manufacturing and tourism. Examination of commercial space services, spaceports, and the assessment of business risks associated with new start-ups and competing terrestrial services is integral. Included will be a review of the U.S. International Traffic in Arms Regulation (ITAR) and Export Administration Regulation (EAR) and the impact they have on U.S. space business competitiveness. Investments and incentives for commercial development of new space business ventures, as well as legal issues with areas such as geostationary rights, international sovereignty and claim of rights of off-world resource ownership, limitations of World Radio Frequency allocations, and a broad spectrum of current trends in commercial space operations will be explored.

Requisites

None

Outcomes

The student will:

- Learn the history of the growth of space commercialism and the potential new industries that are beginning to emerge from former defense activities. The NASA technology transfer program and Congressional space commercialization act will be included.
- Apply their knowledge of the opportunities and risks associated with new space ventures that are going their own financial ways without government support or contracts to mitigate the risks inherently associated with space activities.
- Understand the unique problems and opportunities space systems present to the venture capitalist, investor, and consumer through business risk planning and assessment.
- Demonstrate their ability to understand, synthesize and apply the knowledge gained in this course through oral discussions and written examinations.

Required Textbook

Fundamentals of Space Business and Economics

Author: Guetuna

Publisher: Springer

Edition: 2013

Deliverables

Class Participation (10%)

Class participation is ten percent of the grade. Actively participating in discussions and activities is recommended. It is an expectation that all students will read assigned materials and then research trends, policy updates, or contemporary questions for discussion in class. Class absences should be coordinated in advance with the professor, if possible, and must be kept to a minimum. Students who miss more than one class may be asked to do additional assignments or face losing points.

Midterm Exam (10%)

The Midterm Exam is ten percent of the grade. Space commercialization is a dynamic topic; therefore, the Midterm Exam will be an assessment of your knowledge of pertinent subject matter from the readings and highlights from class discussions. The format will be multiple-choice, True/False, and/or short answer.

Mock Trial (5%)

The trial is five percent of the grade. Students will prepare a debate (support or refute) space legal issues for review and decision by an arbitrator. This will take place during a class session.

Research Paper (40%)

The research paper is forty percent of the grade. The research paper has two parts:

- 1.) A 10 to 12-page paper constructed using the Publication Manual of the APA (6th Edition). [35%]
- 2.) An abstract of the paper constructed using the Publication Manual of the APA (6th Edition). [5%]

The paper can be based on one of the following:

- 1.) A critical review and detailed analyses of current or proposed space commercialization legislation.
- 2.) A case study and discussion of a domestic or foreign space commercialization company or project.
- 3.) A mutually agreed upon topic (Topic should be agreed upon by third class session).

Individual Presentations (20%)

The individual presentation, representing twenty percent of the grade, should be:

- 1) 10 to 15-minute comprehensive topic overview; a formal demonstration of the research paper and discussion of findings that goes beyond simply reading the paper's abstract.
- 2) It will be recorded and uploaded to YouTube

Final Exam (15%)

The Final Exam is fifteen percent of the grade. Space commercialization is a dynamic topic; therefore, the Final Exam will be an assessment of your comprehension of pertinent subject matter from the readings and highlights from class discussions. The format will be a short essay.

Evaluation

DETERMINATION OF GRADES IS BASED THE FOLLOWING CRITERIA:

Minimum Requirements:

Products (papers, case studies, projects) must be on time, in the correct format, corrected for spelling and grammar, appropriate materials included and referenced to-the-point and on topic and conclusions must be supported.

Examinations must be complete, accurate, neat, evidence clear thought, and exhibit concise and to-the-point responses.

Behavior in class discussions and group activities should be responsible, should exhibit open communication, be constructive, and helpful.

Criteria

<u>COURSE REQUIREMENTS</u>	<u>PERCENT OF FINAL GRADE</u>
Class Participation	10 %
Midterm Exam	10 %
Mock Trial	5 %
Research Paper	40 %
Individual Presentation	20 %
Final Exam	15 %
TOTAL:	100 %

Schedule

Course Schedule

Preparation: All reading assignments are due before class sessions (e.g. Session 1 reading must be completed prior to 7 January 2014, etc.).

Session 1: 19 October 21

- Course Administration and Introduction
- Fundamentals of Space Business and Economics | Chapters 1 & 2

Session 2: 26 October 21

- Constraints on the Commercial Enterprise
- Fundamentals of Space Business and Economics | Chapters 3, 4, & 5

Session 3: 2 November 21

- Commercial Spaceports - Space Tourism
- Fundamentals of Space Business and Economics | Chapters 6 & 7

Session 4: 9 November 21

- The International Space Station
- Research Paper Abstract Due
- Fundamentals of Space Business and Economics | Chapters 8 & 9

Session 5: 16 November 21

- Mock Trial Preparation: Law, Policy, and Treaty Review
- Midterm Exam
- Fundamentals of Space Business and Economics | Chapter 10

Session 6: 23 November (Thanksgiving Break-No Class)

- Finalize Research Paper
- Format Individual Presentation

Session 7: 30 November 21 (**Class 7:00 pm - 9:00 pm Mountain **)

- Mock Trial
- Post-Trial Discussion
- Research Papers Due

Session 8: 7 December 21

- Individual Presentations – 10 to 15 minutes per student
- Group Discussion

Session 9: 14 December 21

- Final Exam

* Course Policies

Availability of Instructor

The professor is available by appointment. Students are encouraged to use e-mail as the primary means of interacting with the professor. Please use your Webster University email account with the course number and "Webster" included in the subject line. If any student needs to contact the professor for an immediate situation/emergency, a phone number is provided on page one of the syllabus. If the professor is unavailable when the student's call is placed, the student should leave a voice message with his/her name, phone number, and the best time to return their call. The professor will make contact as soon as possible.

Course Attendance

Students are expected to participate in each weekly session. In the case of unavoidable absence, the student must contact the instructor prior to the week. The student is subject to the appropriate academic penalty for incomplete or unacceptable makeup work, or for excessive or unexcused absences. Generally, a student who misses more than a one week course period (per course) without a documented military or medical excuse and advanced permission from the instructor should withdraw from the class.

Institutional Policies

Academic Policies

Academic policies provide students with important rights and responsibilities. Students are expected to familiarize themselves with all academic policies that apply to them. Academic policies for undergraduate students can be found in the Undergraduate Studies Catalog; graduate students should review the Graduate Studies Catalog.

[Undergraduate Studies Catalog](#)

The Undergraduate Studies Catalog contains academic policies that apply to all undergraduate students. The *academic policies and information* section of the catalog contains important information related to **attendance, conduct, academic honesty, grades, and more**. If you are an undergraduate student, please review the catalog each academic year. The current Undergraduate Studies Catalog is at:

<http://www.webster.edu/catalog/current/undergraduate-catalog/> (<http://www.webster.edu/catalog/current/undergraduate-catalog/>).

Graduate Studies Catalog

The Graduate Studies Catalog contains academic policies that apply to all graduate students. The *academic policies* section of the catalog contains important information related to **conduct, academic honesty, grades, and more**. If you are a graduate student, please review the catalog each academic year. The current Graduate Studies Catalog is at:

<http://www.webster.edu/catalog/current/graduate-catalog/> (<http://www.webster.edu/catalog/current/graduate-catalog/>).

Grading

The Grades section of the academic catalog outlines the various grading systems courses may use, including the information about the final grade reported for this class.

Undergraduate

<http://www.webster.edu/catalog/current/undergraduate-catalog/academic-policies.html#grading>
(<http://www.webster.edu/catalog/current/undergraduate-catalog/academic-policies.html#grading>).

Graduate

<http://www.webster.edu/catalog/current/graduate-catalog/academic-policies.html#grades>
(<http://www.webster.edu/catalog/current/graduate-catalog/academic-policies.html#grades>).

Incomplete

There are important policies that govern grades of Incomplete (I), including the circumstances under which Incomplete grades are granted, deadlines for completion, and consequences should the remaining course work not be completed. It is the responsibility of a student who requests an Incomplete to ensure that he/she understands and follows the policies.

Grade Appeals

Instructors are responsible for assigning grades, and student should discuss grade issues with the instructor. Policies and procedures for appealing grades are available in the appropriate catalog.

Academic Honesty Policy

Webster University is committed to academic excellence. As part of our Statement of Ethics, we strive to preserve academic honor and integrity by repudiating all forms of academic and intellectual dishonesty, including cheating, plagiarism and all other forms of academic dishonesty. Academic dishonesty is unacceptable and is subject to a disciplinary response. Students are encouraged to talk to instructors about any questions they may have regarding how to properly credit others' work, including paraphrasing, quoting, and citation formatting. The university reserves the right to utilize electronic databases, such as Turnitin.com, to assist faculty and students with their academic work.

The University's Academic Honesty Policy is published in academic catalogs:

Undergraduate

<http://www.webster.edu/catalog/current/undergraduate-catalog/academic-policies.html>
(<http://www.webster.edu/catalog/current/undergraduate-catalog/academic-policies.html>).

Graduate

<http://www.webster.edu/catalog/current/graduate-catalog/academic-policies.html>
(<http://www.webster.edu/catalog/current/graduate-catalog/academic-policies.html>).

As a part of the University commitment to academic excellence, the Academic Resource Center provides student resources to become better acquainted with academic honesty and the tools to prevent plagiarism in its many forms:

http://www.webster.edu/arc/plagiarism_prevention/ (http://www.webster.edu/arc/plagiarism_prevention/).

Statement of Ethics

Webster University strives to be a center of academic excellence. The University makes every effort to ensure the following:

- The opportunity for students to learn and inquire freely
- The protection of intellectual freedom and the rights of professors to teach
- The advancement of knowledge through scholarly pursuits and relevant dialogue

To review Webster University's statement of ethics, see the Undergraduate Studies Catalog and the Graduate and Studies Catalog:

Undergraduate

<http://www.webster.edu/catalog/current/undergraduate-catalog/overview.html#ethics>
(<http://www.webster.edu/catalog/current/undergraduate-catalog/overview.html#ethics>)

Graduate

<http://www.webster.edu/catalog/current/graduate-catalog/ethics.html> (<http://www.webster.edu/catalog/current/graduate-catalog/ethics.html>)

Contact Hours for this Course

It is essential that all classes meet for the full instructional time as scheduled. A class cannot be shortened in length. If a class session is cancelled for any reason, the content must be covered at another time.

Important Academic Resources

Academic Accommodations

Webster University makes every effort to accommodate individuals with academic/learning, health, physical and psychological disabilities. To obtain accommodations, students must identify themselves and provide documentation from a qualified professional or agency to the appropriate campus designee or the Academic ADA Coordinator at the main campus. The Academic ADA Coordinator may be reached at 314-246-7700 or disability@webster.edu (<mailto:disability@webster.edu>).

If you have already identified as a student with a documented disability and are entitled to classroom or testing accommodations, please inform the instructor of the accommodations you will require for this class at the beginning of the course.

Academic Resource Center

Additional support and resources may be accessed through the Academic Resource Center (ARC). Support and resources include academic counseling, accommodations, assistive technology, peer tutoring, plagiarism prevention, testing center services, and writing coaching. Visit www.webster.edu/arc (<http://www.webster.edu/arc>) or Loretto Hall 40 on the main campus for more information.

Student Success Portal

Webster University's Student Success Portal, powered by Starfish, is a communications tool to connect students with faculty members and campus support services. It allows faculty and staff members to communicate with you regarding academic achievements as well as areas where support may be helpful. You may use the portal to contact faculty and staff members for assistance and to arrange meetings. Activity in the portal will be communicated to your Webster University email account. The Student Success Portal is available via your course home page in WorldClassRoom or via Connections. Learn more about the Student Success Portal at <http://www.webster.edu/success/students.html> (<http://www.webster.edu/success/students.html>).

University Library

Webster University Library is dedicated to supporting the research needs and intellectual pursuits of students throughout the University's worldwide network. Resources include print and electronic books, journal articles, online databases, DVDs and streaming video, CDs and streaming music, datasets, and other specialized information. Services include providing materials at no cost and research help for basic questions to in-depth exploration of resources. The gateway to all of these resources and services is <http://library.webster.edu> (<http://library.webster.edu>). For support navigating the library's resources, see <http://libanswers.webster.edu/> (<http://libanswers.webster.edu/>) for the many ways to contact library staff.

Drops and Withdrawals

Drop and withdrawal policies dictate processes for students who wish to unenroll from a course. Students must take proactive steps to unenroll; informing the instructor is not sufficient, nor is failing to attend. In the early days of the term or semester, students may DROP a course with no notation on their student record. After the DROP deadline, students may WITHDRAW from a course; in the case of a WITHDRAW, a grade of W appears on the student record. After the WITHDRAW deadline, students may not unenroll from a course. Policies and a calendar of deadlines for DROP and WITHDRAW are at:

Undergraduate

<http://www.webster.edu/catalog/current/undergraduate-catalog/enrollment.html>
(<http://www.webster.edu/catalog/current/undergraduate-catalog/enrollment.html>)

Graduate

<http://www.webster.edu/catalog/current/graduate-catalog/enrollment.html> (<http://www.webster.edu/catalog/current/graduate-catalog/enrollment.html>)

Academic Calendar - <http://www.webster.edu/academics/academic-calendar/> (<http://www.webster.edu/academics/academic-calendar/>).

Current tuition rates, policies, and procedures, including details of pro-rated tuition refunds, are available in the "Tuition, Fees, and Refunds" section of Webster's Academic Catalogs:

Undergraduate

<http://www.webster.edu/catalog/current/undergraduate-catalog/tuition.html>
(<http://www.webster.edu/catalog/current/undergraduate-catalog/tuition.html>).

Graduate

<http://www.webster.edu/catalog/current/graduate-catalog/tuition.html> (<http://www.webster.edu/catalog/current/graduate-catalog/tuition.html>).

Student Handbook and Other Important Policies

Student handbook and other non-academic policies may apply to you and may impact your experience in this class. Such policies include the student code of conduct, privacy, technology and communications, and more. Please review the handbook each year and be aware of policies that apply to you. The handbook is available at:

<http://www.webster.edu/student-handbook/> (<http://www.webster.edu/student-handbook/>).

Sexual Assault, Harassment, and Other Sexual Offenses

Webster University makes every effort to educate the community to prevent sexual assault, harassment, and other sexual offenses from occurring, and is committed to providing support to those affected when this behavior does occur. To access information and resources or to review the Policy on Sexual Assault, Harassment, and Other Sexual Offenses, visit:

<http://www.webster.edu/sexual-misconduct/> (<http://www.webster.edu/sexual-misconduct/>).

Research on Human Subjects

The Webster University Institutional Review Committee (IRB) is responsible for the review of all research on human subjects. The IRB process applies to all Webster University faculty, staff, and students and must be completed prior to any contact with human subjects. For more information on the IRB, visit:

<http://www.webster.edu/irb/index.html> (<http://www.webster.edu/irb/index.html>).

Course Evaluations

At the end of this course, you will have the opportunity to provide feedback about your experience. Your input is extremely valuable to the university, your instructor, and the department that offers this course. Please provide your honest and thoughtful evaluation, as it helps the university to provide the best experience possible for all of its students.

Important Technology Information

Connections Accounts

Webster University provides all students, faculty, and staff with a University email account through Connections. Students are expected to activate their Connections account and regularly check incoming University email. Students may choose to have their University email forwarded to an alternate email address. Connections account holders can call the Help Desk (314-246-5995 or toll free at 1-866-435-7270) for assistance with this setup. Instructions are also provided on the Information Technology website at:

<http://www.webster.edu/technology/service-desk/> (<http://www.webster.edu/technology/service-desk/>).

WorldClassRoom

WorldClassRoom is Webster's Learning Content Management System (LMS). Your instructor may use WorldClassRoom to deliver important information, to hold class activities, to communicate grades and feedback, and more. WorldClassRoom is available using your Connections ID at:

<https://worldclassroom.webster.edu/> (<https://worldclassroom.webster.edu/>).

Webster Alerts

Webster Alerts is the University's preferred emergency mass notification service, available free to current students, faculty and staff at all US campuses. By registering a valid cell phone number and email address, you will receive urgent campus text, voice mail and email communications. Valuable information concerning a range of incidents affecting you - from weather-related campus closures, class

delays and cancellations, to more serious or life-threatening events - are immediately and simultaneously delivered through multiple communication channels. To register for Webster Alerts, visit:

<http://www.webster.edu/technology/services/webster-alerts/> (<http://www.webster.edu/technology/services/webster-alerts/>).

Campus Information
