

Space Studies (SPAC)

SPAC 500 Overview of the Space Ecosystem 3 Credits (3,0)

Strategic analysis of the global space economy. Evaluation of space market segments, industry growth, and business fundamentals.

Course Offered at: Worldwide

SPAC 505 The Launch Industry 3 Credits (3,0)

In-depth analysis of the launch industry. Focused perspective on industry dynamics and adjacent sectors.

Course Offered at: Daytona Beach, Worldwide

SPAC 510 The Satellite Communications Industry 3 Credits (3,0)

Detailed examination of the communications satellite industry. Overview of technology, operations, and business interfaces.

Course Offered at: Daytona Beach, Worldwide

SPAC 511 Geospatial Analytics 3 Credits (3,0)

Overview of the satellite remote sensing industry, including history, technology, and operations. Application of satellite data to environmental and resource exploration.

Course Offered at: Daytona Beach, Worldwide, Asia

SPAC 512 Human Spaceflight Industry 3 Credits (3,0)

Examination of crewed and uncrewed spaceflight operations at U.S. and foreign sites. Exploration of mission control, systems, and launch facility operations.

Course Offered at: Daytona Beach, Worldwide, Asia

SPAC 514 Commercial and Governmental Space Infrastructure 3 Credits (3,0)

Overview of the commercial and civil satellite industry. Examination of markets including commercial, civil government, and national security.

Course Offered at: Worldwide

SPAC 515 Cybersecurity Applications in Space 3 Credits (3,0)

Cybersecurity for military and civilian space systems. Review of cybersecurity principles, threats, mitigation strategies, and regulations for space applications.

Course Offered at: Daytona Beach, Worldwide

SPAC 520 Principles of Space Systems 3 Credits (3,0)

Fundamental principles of space systems including spacecraft subsystems, satellite payloads, and space environment interactions.

Course Offered at: Daytona Beach, Worldwide, Asia

SPAC 525 Space Law and Policy 3 Credits (3,0)

Examination of the geopolitical, legal, and national innovation systems underlying space activities. Geopolitical history, space law principles, and space innovation systems.

Course Offered at: Worldwide

SPAC 530 Earth Observation Systems 3 Credits (3,0)

Management of complex space transportation programs. Emphasis on evolving structures from government to private sector ownership, segmentation of markets, and the shift from government to private sector customers. Leadership skills to manage Earth observation programs.

Course Offered at: Worldwide

SPAC 540 Human Spaceflight Systems 3 Credits (3,0)

Management of complex human spaceflight (HSF) systems, the highest profile and most complex space programs. Emphasis on safety, crew/passenger considerations, and the shift of risk from government to private sector. Development of skills for future HSF programs.

Course Offered at: Worldwide

SPAC 550 Space Transportation Systems 3 Credits (3,0)

Management of space transportation systems, the foundation for all space programs. Emphasis on unique challenges of cost, engineering, and operations. Development of leadership skills to manage transportation programs and reduce barriers to future space endeavors.

Course Offered at: Worldwide

SPAC 560 SATCOM Systems 3 Credits (3,0)

Management of Satellite Communications (SATCOM) programs, the most successful sector in the space economy. Focus on technical, political, and economic challenges as the industry grows. Development of leadership skills for future SATCOM programs.

Course Offered at: Worldwide

SPAC 570 Space Science Systems 3 Credits (3,0)

Management of complex space science systems. Focus on steady progress in space science despite budget constraints and competition. Development of leadership skills for space science programs.

Course Offered at: Worldwide

SPAC 599 Special Topics in Space Studies 1-6 Credit (1-6,0)

Individual, independent, or directed studies of selected topics in space studies

Course Offered at: Daytona Beach, Prescott, Worldwide