

Graduate Certificate - Space Studies

The graduate certificate in Space Studies explores critical space topics, including orbital mechanics, past and current space exploration endeavors, remote sensing, and the role of space in support of modern warfare. This certificate also teaches advanced laws of planetary motion and gravitation, and how to evaluate the political and commercial significance of national, international, and commercial space missions and joint operations. The curriculum for this online program was originally designed by former NASA astronaut and Dean of Science and Technology, Dr. James Reilly, veteran of three shuttle missions and five spacewalks. You will have the opportunity to learn from industry leaders in space and aerospace in this 6-course space studies program.

Note: Completion of college algebra is highly recommended for coursework in this program.

Certificate Objectives

Upon successful completion of this certificate, the student will be able to:

- Assess the laws of planetary motion and gravitation illustrating the effects that gravity has on two-body mechanics and analyze spacecraft maneuvers including transfer orbits and rendezvous.
- Distinguish organizations that are critical to the success of the technological advance of space infrastructure in the United States.
- Evaluate the political and commercial significance of major national and international space missions, projects, and operations.

Certificate Requirements (18 semester hours)

Code	Title	Semester Hours
SPST500	Research Methods in Space Studies	3
SPST501	Introduction to Space Studies	3
SPST502	Introduction to Orbital Mechanics	3
SPST504	Remote Sensing Satellites	3
SPST621	Current and Emerging Space Powers	3
SPST623	National Space Organization	3
Total Semester Hours		18