

## Benefits

Knowledge and analytical skills acquired in the Space Systems Fundamentals Certificate Program will prepare you to:

- Advocate USN/DoD interests in significant National Security Space Organizations
- Drive participation in joint processes for space system architecture and requirements development
- Prioritize the resources necessary to formulate and defend operational requirements for space
- Engage in partnerships with other military services and agencies, such as the National Reconnaissance Office (NRO), National Security Agency (NSA), the National Geospatial- Intelligence Agency (NGA), and Defense Information Systems Agency (DISA), to achieve naval space goals
- Compete for leadership positions in space programs and organizations

Navy students will:

- Gain knowledge required in corresponding fundamentals section of Space Cadre PQS
- Upon completion of the certificate, be awarded the 6206-L subspecialty code



## Contact

**Program Coordinator**

[SSAGCertificatePrograms@nps.edu](mailto:SSAGCertificatePrograms@nps.edu)

## Space Systems Fundamentals Certificate Information

**Certificate Description**

[my.nps.edu/web/dl/cert\\_ss](http://my.nps.edu/web/dl/cert_ss)

**Certificate Application Information**

[www.nps.edu/Academics/Admissions/  
ApplyOnline/ApplyNow.html](http://www.nps.edu/Academics/Admissions/ApplyOnline/ApplyNow.html)

## Careers for Graduates Include:

USSPACECOM Staff Officer

NAVWAR Space Systems Project Officer

National Reconnaissance Project Officer

NETWARCOM Staff Officer

Combined Space Operations Center  
(CSPOC) Staff Officer

VERSION DATE 11/21/2019

SPACE SYSTEMS ACADEMIC GROUP  
CERTIFICATE PROGRAM

# SPACE SYSTEMS FUNDAMENTALS



NAVAL  
POSTGRADUATE  
SCHOOL

# Space Systems Fundamentals Certificate Program

The Naval Postgraduate School offers a certificate program in Space Systems Fundamentals via distributed learning (DL) and/or in-residence.

## Purpose of Certificate

Space assets are essential to modern warfare. This certificate provides the foundation to understand the integration of space capabilities across combined armed forces, involving networks, sensors, and weapons.

## Areas of focus include:

- Orbital Mechanics
- Global Positioning System (GPS)
- Space Control
- Satellite Communication
- Network Centric Warfare
- Remote Sensing
- The Space Environment
- Missile Warning

## Certificate Courses Include:

- **SS3011**  
Space Technology and Applications
- **SS3613** (FOUO)  
Military Satellite Communications (MILSATCOM)
- **PH3052**  
Physics of Space and Airborne Sensor Systems

Students must also choose one of the following courses:

- **PH2514** (Unclassified Option)  
Intro to the Space Environment
- **SS3051** (Classified Option)  
Military Applications of DoD and Commercial Space Systems Classified Option (SECRET)

## Program Eligibility

Active U.S. military officers and enlisted personnel, as well as DoD employees and contractors with Command endorsement (Tuition is paid for USN/USMC students).

## Prerequisites

Baccalaureate degree with completion of college-level algebra, geometry, trigonometry, logarithms, and physics (including electricity and magnetism).

## Additional Space Systems Programs

### Certificates

These certificate programs comprise four courses each. Upon successful completion of the course work, students will be awarded a certificate of completion.

### Space Systems Design

Targeted primarily at providing DoD space employees with top-level knowledge in spacecraft design.

### Space Nuclear Command, Control and Communications (NC3)

Supports objectives corresponding to required space, ground, and classified elements of USAF Global Strike Command's strategic nuclear education components

### Space Control Tactics and Operations

Targeted primarily at providing DoD space employees with a technical education in rendezvous and proximity operations and space control.

### Degrees

Upon successful completion of the degree requirements, students will be awarded an M.S. degree.

### Space Systems Operations

This degree is intended to provide an organization with personnel who can plan and manage the operation, tasking, and employment of space surveillance, intelligence collection, communications, navigation and sensing systems throughout the mission lifecycle.

### Space Systems Engineering

This degree is intended to provide an organization with personnel who have the technical knowledge to plan and manage the development, design, acquisition, operation, tasking and employment of space surveillance, communications, navigation and sensing systems throughout the mission lifecycle.

### Find out more about our programs:

[nps.edu/web/ssag/degrees-and-curriculum](https://nps.edu/web/ssag/degrees-and-curriculum)