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Space Systems Academic Group

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Monterey, California; Naval Postgraduate School

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Space Systems Academic Group

The Space Systems Academic Group (SSAG) along with eight academic departments is an integral part of the Graduate School of Engineering and Applied Sciences. As an interdisciplinary association of professors it provides direction and guidance for two in-residence curricula: Space Systems Engineering and Space Systems Operations and for the Space Systems Distance Learning program.

Officer students in the Space Systems curricula fulfill degree requirements for a Master of Science in Space Systems Operations or an engineering or scientific field of their choice. A space-oriented thesis is mandatory as well as course work to fulfill the requirements of a space billet. Officer graduates are prepared to manage the technical aspects of a space system life cycle including requirements definition and analysis, design, development, installation, operations and maintenance of spacecraft, space payloads, supporting ground stations, terminals, and C3 connectivity.

The SSAG serves as the focal point for all space-related research performed at NPS. A major goal is to couple NPS space research efforts with the graduate education of military officers. This is typically accomplished through space-related thesis research in several areas and includes small satellite projects created specifically as an educational tool for officer students.

The SSAG has established working relationships with many government space systems research, development and acquisition organizations and industry partners. The group oversees classified and unclassified student involvement in research activities and helps facilitate their placement in follow-on tours.

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NAVAL POSTGRADUATE SCHOOL

Space Systems Academic Group

School of Engineering and Applied Sciences

Monterey - California
Degrees

- Master of Science in Space Systems Operations
- Master of Science in Astronautical Engineering
- Master of Science in Electrical Engineering
- Master of Science in Mechanical Engineering
- Master of Science in Applied Physics
- Master of Science in Computer Science
- Engineer’s Degree
- Doctor of Philosophy

Students

- Joint Services (Navy, Marine Corps, Air Force, Army)
- International Community

Curricula

- Space Systems Engineering (591)
- Space Systems Operations (366)
- Space Systems Operations International (364)
- Space Systems Certificate (273)
- Space Systems Operations Distance Learning (316)

Unique Courses

- Spacecraft Design and Integration
- Space Technology and Applications
- Military Application of Space
- Space Systems and Operations
- Military Satellite Communications
- Military Space Systems and Architecture
- Physics of Space-based Sensor Systems
- Technology Review and Update Short Course
- Space Maneuvers and Astrodynamic Optimization

Facilities

- Spacecraft Robotics Laboratory
- Satellite Ground Station Facility
- Space Warfare Computer Laboratory
- FLTSATCOM Satellite Operations
- Simulation and Test Laboratory
- Spacecraft Attitude Dynamics and Control Laboratory
- Spacecraft Environmental Simulation and Test Laboratory
- Radiation Effects Laboratory
- Solar Simulation Facility
- NPS-AFRL Optical Relay Spacecraft Laboratory
- Flash X-Ray Facility
- Electron Linear Accelerator
- Small Satellite Test and Development Laboratory
- Smart Structures Laboratory

Faculty and Technical Staff

  - Aerospace Engineer
  - Computer Engineer
  - Electronics Engineer
  - Communications Engineer
  - Model Maker

Areas of Concentration

- Military Applications for Space
- Space Reconnaissance and Remote Sensing
- Radiation Hardened Electronics for Space
- Design, Construction and Operations of Small Satellites
- Classified (SCI level) Research
- Satellite Communications Systems
- Military Space Systems and Architectures
- Spacecraft Control and Optimization

Research

Research Centers of Excellence

- Spacecraft Research and Design Center
- Center for Reconnaissance Research
- Center for Radiation Hardened Electronics
- Cryptologic Research Center
- Remote Sensing Center

Research Sponsors

- Space and Naval Warfare Systems Center
- National Aeronautics and Space Administration
- Strategic Systems Programs
- Naval Network Warfare Command
- Office of Naval Research
- National Reconnaissance Office
- Space and Missile Systems Center
- Naval Engineering Logistics Office
- Air Force Research Laboratory