

# INTRODUCTION

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## Mission

The Naval Postgraduate School (NPS) was established to serve the advanced educational needs of the Navy. The broad responsibility of the school is reflected in its stated mission:

Increase the combat effectiveness of U.S. and allied armed forces and enhance the security of the U.S.A. through advanced education and research programs focused on the technical, analytical, and managerial tools needed to confront defense related challenges of the future.

To fulfill its mission, the Naval Postgraduate School strives to sustain excellence in the quality of its instructional programs, to be responsive to technological change and innovation in the Navy, and to prepare officers to introduce and utilize future technologies.

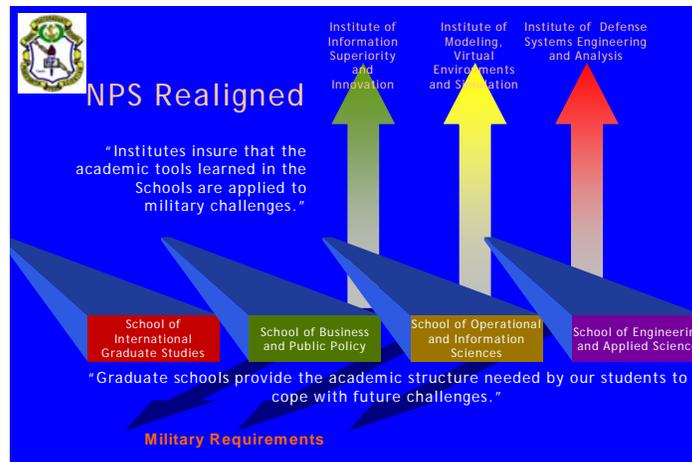
The research program at NPS exists to support the primary mission of graduate education. Research at NPS:

- maintains upper division course content and programs at cutting edge;
- challenges students with creative problem solving experiences on DoD relevant issues;
- advances DoN/DoD technology;
- solves warfare problems; and
- attracts and retains quality faculty.

## Academic Programs

To meet its educational requirements, the Navy has developed a unique academic institution at the Naval Postgraduate School through the use of specially tailored academic programs, and a distinctive organization trying academic disciplines to naval and joint warfighting applications.

The Naval Postgraduate School has realigned its education and supporting research programs to achieve three major goals: 1) academic programs that are nationally recognized and support the current and future operations of the Navy and Marine Corps, our sister services, and our allies; 2) institutes that focus on the integration of teaching and research in direct support of the four pillars of Joint Visions 2010 and 2020 and their enabling technologies; and, 3) executive and continuing education programs that support continuous intellectual innovation and growth throughout an officer's career.



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Programs of Graduate Studies at NPS are grouped as follows:

## Graduate School of Operations and Information Sciences

- Computer Science
- Electronic Warfare International
- Information Systems and Operations
- Information Systems Technology
- Information Warfare
- Operations Analysis
- Operations Logistics
- Software Engineering
- Special Operations

## Graduate School of Engineering and Applied Sciences

- Aeronautical Engineering
- Aeronautical Engineering Avionics
- Combat Systems
- Electronic Systems Engineering
- Meteorology and Oceanography
- Test Pilot School Co-Op

## Graduate School of Business and Public Policy

- Defense-Focused MBA
- Acquisition Management
- Financial Management
- Logistics Management
- Defense Management
- Information Management
- Executive MBA
- NPS/University of MD MBA
- Leadership Education and Development
- Manpower Management
- Contract Management
- Program Management

## School of International Graduate Studies

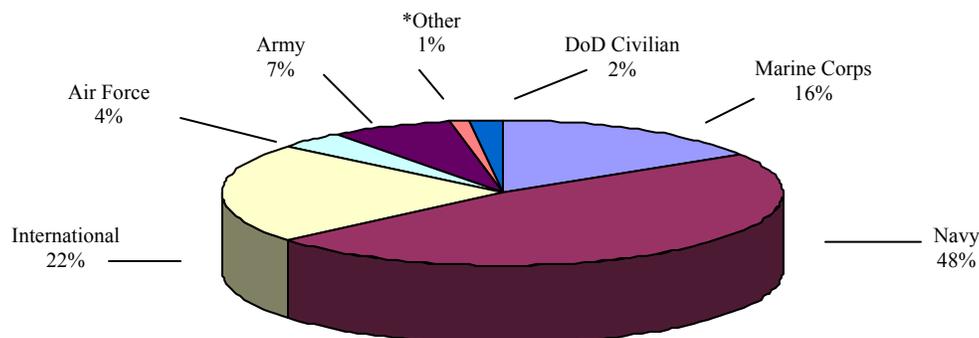
- Area Studies
- Middle East/South Africa/Asia
- Far East/South-East Asia/Pacific
- Western Hemisphere
- Europe/Russia/Central Asia
- International Security and Civil Military Relations
- Resource Planning Management for International Defense

## Interdisciplinary Curricula

- Modeling, Virtual Environments, and Simulation
- Product Development
- Systems Engineering and Analysis
- Undersea Warfare
- Space Systems Engineering
- Space Systems Operations

## Students

The student body consists of U.S. officers from all branches of the uniformed services, civilian employees of the federal government and military officers and government civilian employees of other countries. Resident degree/subspecialty student population for September 2002 is shown in Figure 1.



**Figure 1: Resident Degrees/Subspecialty Student Population for September 2002  
(Total Enrollment: 1285)**

\*National Guard/Coast Guard

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## Academic Degrees

Although the curricula are tailored to address defense requirements, they are developed within the framework of classical academic degrees, meeting the highest academic standards. Each curriculum leads to a master's degree; however, additional study can lead to either an engineer's degree or the doctor's degree. Below is a listing of the degrees offered at NPS:

### **Master of Arts Degrees**

International Security and Civil-Military Relations  
National Security Affairs

### **Master of Science Degrees**

Aeronautical Engineering  
Applied Mathematics  
Applied Physics  
Applied Science  
Astronautical Engineering  
Computer Engineering  
Computer Science  
Contract Management  
Defense Analysis  
Electrical Engineering  
Engineering Acoustics  
Engineering Science  
Information Systems and Operations  
Information Technology Management  
International Resource Planning and Management  
Leadership and Human Resource Development  
Management  
Materials Science and Engineering  
Mechanical Engineering  
Meteorology  
Meteorology and Physical Oceanography  
Modeling, Virtual Environments, and Simulation  
Operations Research  
Physical Oceanography  
Physics  
Product Development

Program Management  
Software Engineering  
Space Systems Operations  
Systems Engineering  
Systems Technology

### **Engineer Degrees**

Aeronautical and Astronautical Engineer  
Electrical Engineer  
Mechanical Engineer

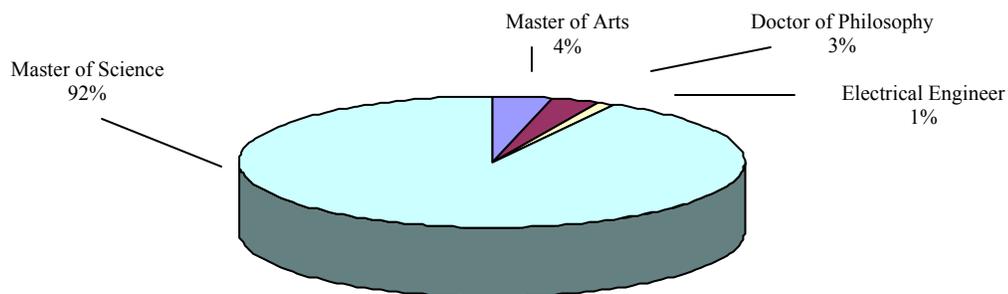
### **Doctor of Philosophy**

Aeronautical and Astronautical Engineering  
Applied Mathematics  
Applied Physics  
Computer Science  
Electrical Engineering  
Engineering Acoustics  
Mechanical Engineering  
Meteorology  
Modeling, Virtual Environments, and Simulation  
Operations Research  
Physical Oceanography  
Physics  
Software Engineering

### **Doctor of Engineering**

Aeronautical and Astronautical Engineering  
Engineering Acoustics  
Mechanical Engineering

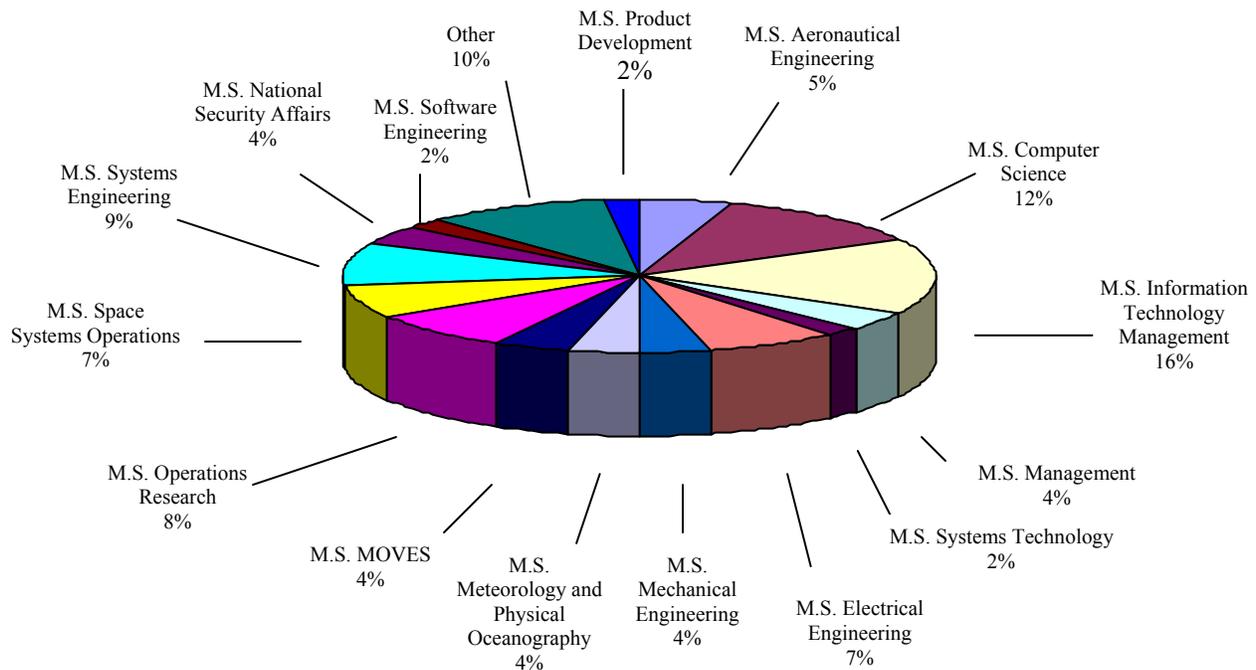
There were 201 degrees conferred in September 2002. Figure 2 indicates the distribution of degree type; Figure 3 indicates the degree conferred.



**Figure 2. Distribution of Degree Type  
(201 Degrees Conferred)**

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**Figure 3. Degrees Conferred in September 2002  
(201 Degrees Conferred)**

\*Ph.D. Computer Science (1); Ph.D. Mechanical Engineering (1); Ph.D. Meteorology (1); Ph.D. Operations Research (2); Ph.D. Software Engineering (1); Electrical Engineer (2); M.S. Applied Mathematics (1); M.S. Applied Physics (1); M.S. Astronautical Engineering (2); M.S. Engineering Science (1); M.S. Contract Management (1); M.S. Information Systems and Operations (2); M.S. Leadership and Human Resource Development (1); M.S. Meteorology (1); M.S. Physical Oceanography (2); M.A. International Security and Civil Military Relations (1)

## **Thesis**

The thesis is the capstone achievement of the student's academic endeavor at NPS. Thesis topics address issues from the current needs of the Fleet and Joint Forces to the science and technology that is required to sustain long-term superiority of the Navy/DoD.

Students, with their faculty advisors, provide a very unique capability within the DoD for addressing warfighting problems. This capability is especially important at the present time when technology in general, and information operations in particular, are changing rapidly. Our officers must be able to think innovatively and have the knowledge and skills that will let them apply technologies that are rapidly being developed in both the commercial and military sectors. Their unique knowledge of operations, when combined with a challenging thesis project which requires them to apply their focused graduate education, is one of the most effective methods for both solving Fleet/Joint Force problems and instilling the life-long capability for applying basic principles to the creative solution of complex problems.