

# 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.

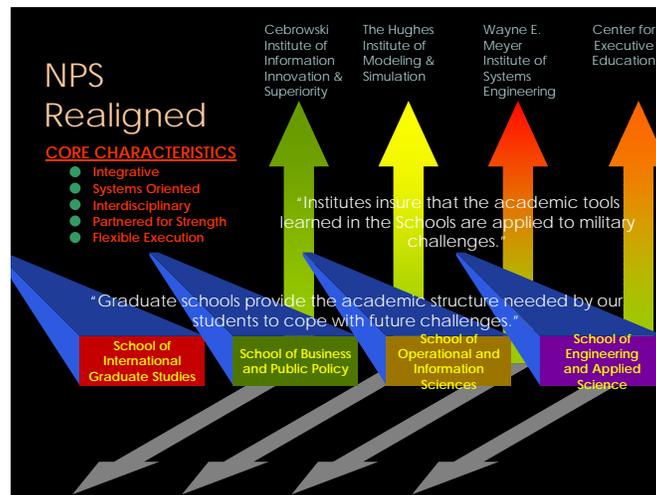
The research program at NPS exists to support the primary mission of graduate education. Research at NPS:

- 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 Operational and Information Sciences**

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

## **Graduate School of Engineering and Applied Sciences**

- Aeronautical Engineering
- Aeronautical Engineering Avionics
- Combat Systems Science and Technology
- Electronic Systems Engineering
- Meteorology
- Meteorology and Oceanography
- Operational Oceanography
- Oceanography
- Reactors/Mechanical Engineering
- Naval/Mechanical Engineering

## **Graduate School of Business and Public Policy**

- Systems Acquisition Management
- Resource Planning and Management for International Defense
- Financial Management
- Transportation Management
- Defense Systems Analysis
- Systems Acquisition Management
- Information Systems Management
- Defense Systems Management (International)
- Contract Management
- Manpower Systems Analysis
- Transportation Management
- Leadership Education and Development
- Acquisition and Contract Management
- Program Management
- Material Logistics Support Management
- Supply Chain Management

## **School of International Graduate Studies**

- National Security and Intelligence
  - Middle East/Africa/South Asia
  - Far East/South-East Asia/Pacific
  - Western Hemisphere
  - Europe/Russia/Central Asia
- Civil-Military Relations
- Defense Decision Making and Planning
- Homeland Security Leadership Development
- International Security: Post Conflict Security Building

## **Interdisciplinary Curricula**

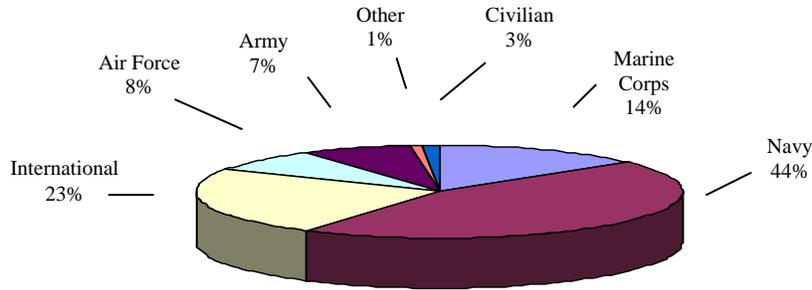
- Modeling, Virtual Environments, and Simulation
- Product Development
- Systems Engineering and Analysis
- Undersea Warfare
- Space Systems Engineering
- Space Systems Operations
- Systems Engineering Management

## **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 December 2003 is shown in Figure 1 on the following page.

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**Figure 1: Resident Degrees/Subspecialty Student Population for December 2003  
(Total Enrollment: 1,443)**

\*National Guard, U.S. Army Reserve, U.S. Coast Guard

## **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**

National Security Affairs  
Security Studies

### **Master of Business Administration**

### **Master of Science Degrees**

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

Software Engineering  
Space Systems Operations  
Systems Analysis  
Systems Engineering  
Systems Engineering Management  
Systems Technology

### **Engineer Degrees**

Astronautical Engineer  
Electrical Engineer  
Mechanical Engineer

### **Doctor of Philosophy**

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

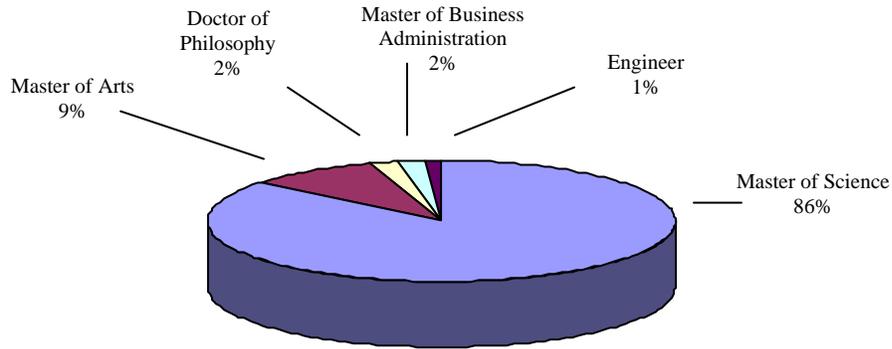
### **Doctor of Engineering**

Astronautical Engineering  
Engineering Acoustics  
Mechanical Engineering

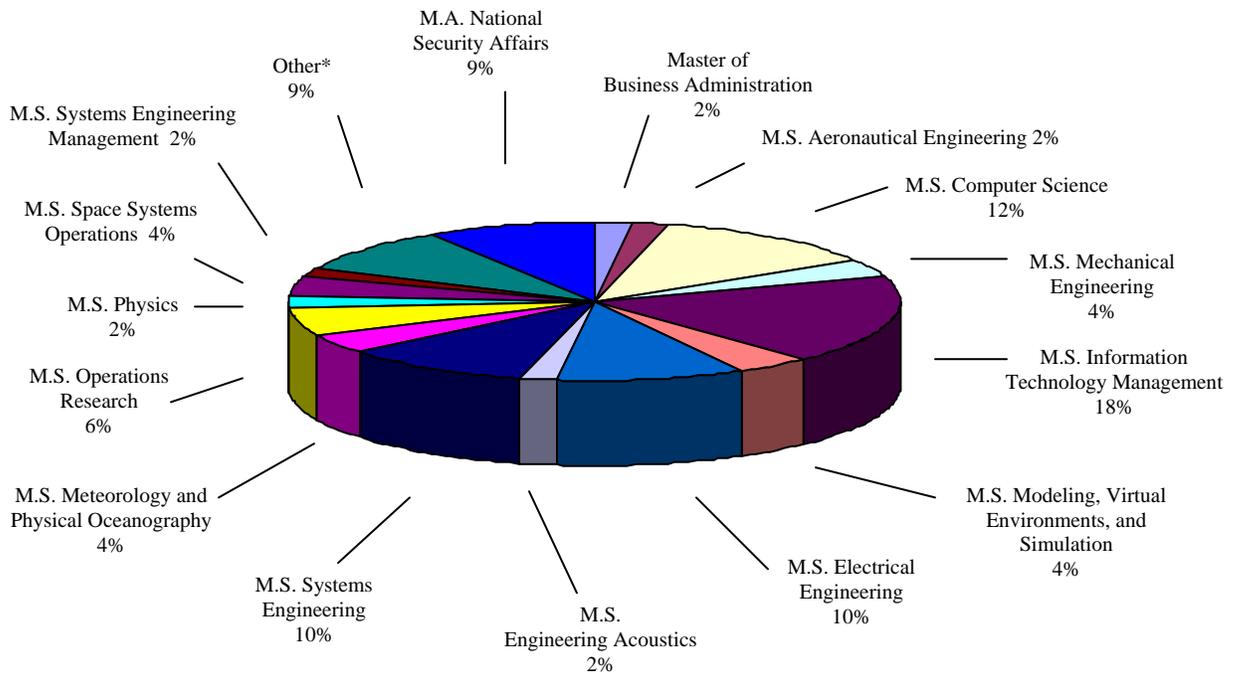
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There were 160 degrees conferred in December 2003. Figure 2 indicates the distribution of degree type; Figure 3 indicates the degree conferred.



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



**Figure 3. Degrees Conferred in December 2003  
(160 Degrees Conferred)**

\*Ph.D. Modeling, Virtual Environments, and Simulation (1); Ph.D. Physical Oceanography (1); Ph.D. Software Engineering (1); Mechanical Engineer (1); M.S. Applied Science (2); M.S. Contract Management (1); M.S. Engineering Science (2); M.S. Information Systems and Operations (2); M.S. Management (2); M.S. Meteorology (1); M.S. Systems Technology (1)

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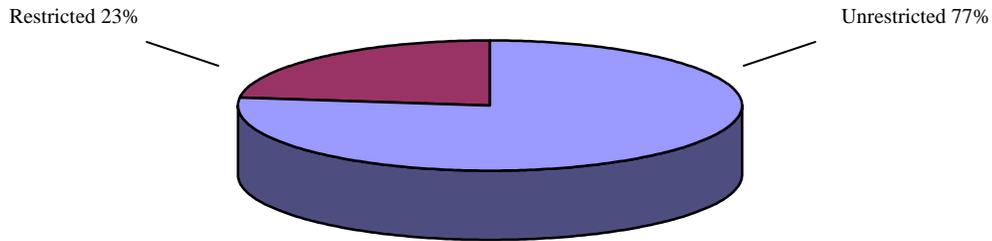
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## Thesis

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.

NPS is unique in its ability to conduct classified research. Restricted theses are available on the NPS SIPRNET.



**Figure 4. Classification of Theses**