SPONSORED PROGRAMS
RESEARCH
FISCAL YEAR ANNUAL REPORT 2012

PROGRAM OVERVIEW
The Naval Postgraduate School (NPS) has a strong sponsored program that has grown steadily to provide the faculty and staff required for a strong, viable graduate school. In FY12, NPS had available over $280.6M in sponsored program funding. Total expenditures in FY12 exceeded $183.2M.

SPONSORED PROGRAM EXPENDITURES
1 October 2011–30 September 2012
Total Expenditures: $183.2M

SPONSORED PROGRAM PROFILE FY 2001-2012
(FUNDS EXPENDED)

Sponsored programs (research, education, and services) are integral to the Naval Postgraduate School mission. The research program supports graduate education by providing militarily relevant thesis topics that address issues from the current needs of the Fleet and Joint Forces to the science and technology required to sustain long-term superiority of the Navy/DoD. Research varies from the very fundamental to the very applied, at all levels of classification. Sponsored research includes:
- Basic and Applied Research
- Individual and Interdisciplinary Group Projects
- Fleet Support
- Cooperative Research and Development Agreements

Integrated graduate education and research in space systems, total-ship systems engineering, combat systems, systems engineering and homeland security and defense, supplemented by off-campus graduate and certificate programs and short courses, are a few offerings of the sponsored education program.

Service includes “work for others” and NPS management of DoD programs.
SCHOOL OF INTERNATIONAL GRADUATE STUDIES

The School of International Graduate Studies (SIGS) specializes in research and graduate education focused on security studies, international relations, regional security and area studies, international political economy, and U.S. security policy. Programs identify and address security challenges, develop civilian and military interagency alliances, and strengthen multilateral and bilateral defense cooperation between the U.S. and other nations.

SIGS components include the department of National Security Affairs, Defense Resources Management Institute, and Center for Civil–Military Relations. Statistics shown are for National Security Affairs only, which includes the Center for Homeland Defense and Security.

TOTAL EXPENDITURES: $30.2M

BY DEPARTMENT

<table>
<thead>
<tr>
<th>Department</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>Defense Resources Management Institute (DRMI)</td>
<td>$145</td>
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<td>National Security Affairs</td>
<td>$30.2M</td>
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GRADUATE SCHOOL OF OPERATIONAL AND INFORMATION SCIENCES

GSOIS resident programs consist of sixteen technical curricula and award master of science and Ph.D. degrees across four academic departments. Responding to the needs of naval and military customers, graduate education and research are focused in six military important domains: information science and technology; computer science; operations analysis and operational logistics; human-systems integration; systems engineering analysis; and special operations and related defense analyses. The emphasis of sponsored research and studies activities is on the development, integration, and application of mathematical, scientific, and technical skills that contribute to advances and improvement in military systems and operations, and related areas of national defense and security.

TOTAL EXPENDITURES: $49.6M

BY DEPARTMENT

<table>
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<tr>
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<td>Information Sciences</td>
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<td>Operations Research</td>
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BY TYPE OF ACTIVITY

<table>
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<tr>
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<tr>
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<tr>
<td>Research</td>
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<tr>
<td>Service</td>
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BY SPONSOR

<table>
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<td>Army</td>
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<tr>
<td>DoD</td>
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<td>DHS</td>
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<tr>
<td>Joint</td>
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<tr>
<td>Other-Fed</td>
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<tr>
<td>NSF</td>
<td>$1M</td>
</tr>
<tr>
<td>Other</td>
<td>$193k</td>
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</table>
GRADUATE SCHOOL OF ENGINEERING AND APPLIED SCIENCES

GSEAS education leads to the master of science, engineer, and doctor of philosophy degrees and contains seven technical academic departments (applied math, electrical and computer engineering, mechanical and aerospace engineering, meteorology, physics, oceanography, systems engineering) and two interdisciplinary academic groups (space systems and undersea warfare). These entities offer degree programs tailored to the Navy and defense community, while providing technical foundations for student theses and interdisciplinary faculty and student projects. Research centers and unique laboratory facilities (e.g., unmanned and autonomous vehicles, robotics, free-electron lasers, spacecraft research and design, remote sensing, rockets and combustion, signal enhancement, ocean acoustics, interactive digital environment analysis, secure space-systems research, secure computer networks, materials research, cyber warfare and directed energy) add rigor to the resident academic and sponsored programs.

TOTAL EXPENDITURES: $46.7M

BY DEPARTMENT ........................................

- Electrical & Computer Engineering $3.8M 8%
- Mechanical & Aerospace Engineering $5.2M 11%
- Physics $10.3M 22%
- Oceanography $10.1M 22%
- Meteorology $3.3M 7%
- Applied Mathematics $80.1K 2%
- Space Systems Engineering $3.6M 8%
- Systems Engineering $5.8M 12%
- Undersea Warfare Academic Group $7.9M 12%
- Space Systems $278K 1%
- Undersea Warfare Academic Group (UWAG) $36K <1%
- Army Research $216K 1%
- CRADA Education $2.3M 5%
- NSF Education $441K 1%
- Other-FED Education $1.1M 2%
- Joint Education $598K 12%
- Other-FED Research $44.1M 94%
- Other-FED Service $8.2M 19%
- DOD Research $3.6M 65%
- DOD Service $3.3M 5%
- Other-FED Research $999K 12%
- Other-FED Service $444K 9%
- Navy Research $2.0M 19%
- Navy Service $83K 1%
- Air Force Research $598K 12%
- CRADA Research $2.3M 5%
- Air Force Service $598K 12%
- CRADA Service $2.3M 5%
- Other-FED Research $441K 4%
- Other-FED Service $83K 1%

GRADUATE SCHOOL OF BUSINESS AND PUBLIC POLICY

The Graduate School of Business and Public Policy (GSBPP) offers unique residential defense-focused MBA and Master of Science in Management programs, plus master’s degrees in four other DoD-relevant areas. Faculty research is an important component of the school and strives to support military decision making, problem solving, and policy setting; improve administrative processes and organizational effectiveness; contribute knowledge to academic disciplines; and advance the mission of graduate education. The research program is fully integrated into the educational process. Curriculum sponsors and other DoD organizations fund faculty research; students participate in these faculty projects, and faculty research results are incorporated into classroom instruction. Topics and issues can be grouped into five broad functional areas: acquisition and contracting; budgeting and financial management; logistics and transportation management; manpower-systems analysis; and policy formulation, analysis, and management.

TOTAL EXPENDITURES: $10.4M

BY DEPARTMENT ........................................

- Electrical & Computer Engineering $1.2M 13%
- Meteorology $3.12M 11%
- Logistics & Transportation Management $4.7M 45%
- Management Programs $6.8M 65%
- Systems Engineering $5.8M 12%
- Undersea Warfare Academic Group $7.9M 12%
- Space Systems $278K 1%
- Applied Mathematics $2.9M 19%
- Space Systems $278K 1%
- Undersea Warfare Academic Group (UWAG) $36K <1%
- Oceanography $2.3M 5%
- Meteorology $3.3M 5%
- CRADA Education $2.3M 5%
- NSF Education $441K 1%
- Other-FED Education $1.1M 2%
- Joint Education $598K 12%
- Other-FED Research $44.1M 94%
- Other-FED Service $8.2M 19%
- DOD Research $3.6M 65%
- DOD Service $3.3M 5%
- Other-FED Research $999K 12%
- Other-FED Service $444K 9%
- Navy Research $2.0M 19%
- Navy Service $83K 1%
- Air Force Research $598K 12%
- CRADA Research $2.3M 5%
- Air Force Service $598K 12%
- CRADA Service $2.3M 5%
- Other-FED Research $441K 4%
- Other-FED Service $83K 1%
RESEARCH AND EDUCATION INSTITUTES AND CENTERS

NPS's research and education institutes apply interdisciplinary research to military challenges, offering or facilitating degree programs, executive and continuing education, student contact with senior naval leadership, and student and faculty research from basic to applied. Research centers emphasize practical application.

The Cebrowski Institute is a hub of innovation for the information revolution in military and security affairs for the Navy, DoD and nation. The CI helps generate ideas for information strategy and tactics and supports the information entrepreneurs who champion these ideas, promoting them in the Navy and DOD and working with leaders and networks to bring them into practice.

The MOVES Institute investigates modeling, virtual environments, and simulation, with projects in 3D visual simulation, networked VE, computer-generated autonomy, computational cognition, human-performance engineering, immersive technologies, gamebased simulation, combat modeling and analysis, and medical modeling and simulation.

The National Security Institute (NSI) is a partnership of NPS, University of California, Santa Barbara, and Lawrence Livermore National Laboratory. Recognizing that future research and development will require the combined expertise of academia, national laboratories, and private enterprise, NSI teams top scientists and institutions in joint service to national, homeland, and global security goals, and engages graduate students in related R&D, field experimentation, and interdisciplinary exploration.

The Center for Interdisciplinary Remotely Piloted Aircraft Studies (CIRPAS) provides manned aircraft, remotely piloted aircraft and ground based radars for scientific research, especially atmospheric and oceanographic observation, payload integration, CONOPS development, flight-safety reviews, logistics, and flight support.

The USSOCCOM–NPS Field Experimentation Cooperative explores SOF solutions for capability gaps, provides a venue to assess, develop, counter, and exploit emerging capabilities, and examines dual capabilities for homeland security, stabilization, reconstruction, and disaster/humanitarian assistance.

TOTAL EXPENDITURES: $46.3M

ADDITIONAL RESEARCH FACTS FOR FY12

21 new Cooperative Research and Development Agreements (CRADAs) or Limited-Purpose CRADAs were executed. Partners were Advanced Concepts and Technologies International; Maxtena, Inc.; Persistent Systems, LLC; University of Maryland, Coraid, Inc.; Inmarsat, Inc.; University of Texas at Austin; Apple Aero, LLC; Lockheed Martin Space Systems Company; InfraGard Los Angeles Members Alliance, Inc.; Woods Hole Oceanographic Institute; California Institute of Technology; Jet Propulsion Laboratory; Exelis Visual Information Solutions, Inc.; Silvus Technologies, Inc.; DynGlobal California Corp.; Instu, Inc.; SDV Tech, LLC.; Northrop Grumman Electronic Systems; University of Miami; University Corporation for Atmospheric Research; General Atomics Aeronautical Systems, Inc.

1,379 degrees were conferred, including:

- 21 Advanced Degrees (Ph.D., Engineer)
- 772 Masters of Science
- 265 Masters of Business Administration
- 277 Masters of Arts
- 44 Masters

- Seven Space and Naval Warfare Systems Center Fellowships were awarded to NPS students.
- 33 National Research Council Research Associates were on tenure at NPS.
- Nine visiting faculty members from the Engineer and Scientist Exchange program were hosted.
- Three patents were issued, 16 patent applications and 14 patent disclosures were filed.