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2012

# The Office of Institutional Research Annual Accountability Report Accomplishments and Challenges

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THE OFFICE OF  
**INSTITUTIONAL  
RESEARCH AND  
PLANNING**

ANNUAL ACCOUNTABILITY REPORT  
ACCOMPLISHMENTS AND CHALLENGES

**2012**



## INTRODUCTION

The mission of the Office of Institutional Research and Planning (IRP) is to increase university effectiveness by providing and promoting information to enhance understanding of the institution. In fulfilling this mission, IRP supports assessment, policy formation, and decision-making through its major functions, which are to:

- Collect and preserve data
- Work with other campus offices to ensure data reliability and consistency
- Analyze, and interpret institutional and higher education data, including benchmarking with peer institutions
- Develop systems, methodologies and tools for effective analysis
- Develop print and web-based informational resources with a schedule of periodical institutional analyses and surveys as well as statistical and narrative reports
- Design and produce routine and ad hoc reports for internal constituencies, federal/other external agencies
- Disseminate analyses and reports in a timely and effective manner
- Support assessment and accreditation processes by assisting academic areas in developing measures of educational effectiveness and improvement, providing support in research and survey design, and coordinating accreditation reporting

### SERVICES

- Strategic planning support and institutional metrics
- Survey design, administration and reporting for NPS
- Survey design for students, faculty and staff
- Survey administration assistance through Survey Monkey
- Analyses
- Accreditation support
- Ad hoc data reports

## FY 2012 SUMMARY OF ACCOMPLISHMENTS

### STRATEGIC PLANNING SUPPORT AND INSTITUTIONAL METRICS

IRP supports the four major goals outlined in the university's strategic plan, Vision for a New Century, in the following ways:

### GOAL 1: SUSTAIN CONTINUOUS IMPROVEMENT IN THE QUALITY AND RELEVANCE OF OUR GRADUATE EDUCATION PROGRAMS

- Historical data files are maintained on student enrollments, graduations, demographics and other key indicators
- Benchmarking data are collected for peer institutions on student enrollments, graduation, demographics and other key indicators
- Surveys are conducted on student engagement and program assessment to assess the quality and relevance of NPS educational programs
- Data are obtained on academic scholarship to assess the quality, relevance and scope of NPS research
- Faculty productivity data are gathered for NPS and peer institutions to provide a benchmark for evaluation
- Graduation and time-to-degree rates for resident and distributed learning students are evaluated to measure trends

### GOAL 2: EXTEND EDUCATION TO THE TOTAL FORCE AND TO OUR GLOBAL PARTNERS

- Metrics are provided for NPS print publications and web-based communications that are marketed to external audiences
- Enrollments and degrees for residential and distributed learning courses for international students are tracked to measure trends

### GOAL 3: BROADEN RESEARCH IN NATIONAL SECURITY

- The number of national security-related patents and Cooperative Research and Development Agreements (CRADAs) are tracked to measure trends
- Research dollars by source, category and by school are tracked to measure trends

### GOAL 4: SEEK OPERATIONAL EXCELLENCE IN FINANCIAL, BUSINESS, ADMINISTRATIVE AND SUPPORT AREAS

- Historical data on budget expenditures, research dollars, library and information technology metrics are collected and maintained
- Periodic quarterly and annual reports are produced on student satisfaction with financial, business, administrative and support areas
- A Strategic Planning SharePoint site is updated and maintained

## SURVEYS

IRP supports NPS and its leadership, faculty, staff and students through survey design, administration, reporting and specialized assistance.

### INTERNAL SURVEYS: FY2012 GOALS

- Administer quarterly the Graduating Students Survey
- Develop and produce the Graduating Students Survey item response frequencies for NPS support services (Qtr and AY)
- Administer the Alumni Survey
- Update "Alumni Survey Trends Report" for AY2008–2012
- Administer the Master of Science in Electrical Engineering Surveys to faculty and students
- Administer the New Student and Mid-Program Student Surveys
- Report, as appropriate, results of all internal surveys

As a primary, recurring task of IRP, all surveys noted in the FY2012 goals were issued, analyzed and summarized, except for the New Student and Mid-Program Student Surveys, which, due to personnel changes and shortages within the department, will be moved as a goal to FY2013.

Both the Graduating Students and Alumni Surveys (the latter issued to 2002, 2007 and 2010 graduates only), reflect respondents' opinions about their NPS experience in the areas of curriculum, faculty, classroom/lab facilities, library and support services. Results identified strengths and potential areas of improvement for each category.

The Graduating Students Surveys were administered quarterly and summary reports containing survey response frequencies and support service breakouts were distributed to the appropriate stakeholders and posted on the Strategic Planning SharePoint site. The Graduating Students Survey Trends analyses of residential and distributed learning students' satisfaction/item response frequencies for NPS support services were also updated for AY2007–2012.

The 2012 Graduating Students Survey data file, its modified version (Dudley Knox Library items), and summary reports were completed for resident and distributed learning students by school, item response frequencies and support services breakouts for all (resident) items. The results were posted on the Strategic Planning SharePoint site.

The Alumni Survey for AY2012 was administered to 2,329 alumni in late FY2012; the response rate was 18%. Summary reports for the Alumni Surveys were issued to the appropriate constituents and were posted on the Strategic Planning SharePoint site. The "Alumni Survey Trends Report," distributed to campus leaders and posted on the Strategic Planning SharePoint site, was developed by analyzing answers from 505 alumni from all branches of the services about the relevancy, effectiveness and applicability of a NPS education to respondents' careers.

IRP administered quarterly both the Masters of Science in Electrical Engineering (MSEE) Faculty and Student Surveys, which supported assessments of the MSEE degree program in achieving learning outcomes. Summaries of both surveys were sent to the chair of Electrical and Computer Engineering.

### Additional internal surveys administered by IRP:

- Academic Restructuring Committee Survey, which assessed potential restructuring and/or consolidation of academic and administrative capabilities in the Graduate School of Engineering and Applied Sciences and the Graduate School of Operational and Information Sciences
- Active Duty Spouses Survey, which assessed spouses' interest in obtaining an education from NPS
- Customer Satisfaction Survey 2011 (updated from 2009) with comparative analyses tables for 2009 and 2011
- The Accreditation Board for Engineering and Technology-related MSEE Employers Survey 2012, which gauged the effectiveness of the NPS MSEE degree program by surveying key command supervisors of NPS alumni

### EXTERNAL SURVEYS: FY2012 GOALS

- Complete all external surveys: Integrated Postsecondary Education Database System, the American Society for Engineering Education, and the National Science Foundation Research and Development Expenditures Survey
- Report, as appropriate, results of all external surveys

In FY2012, IRP administered and reported the results of all external surveys listed in their goals. Submitted were an annual series of surveys on Institutional Characteristics, Completions, and 12-Month Enrollments for the federal Integrated Postsecondary Education Database System (IPEDS) fall 2011 through spring 2012 data collections; the American Society for Engineering Education's Faculty Salary Survey 2011, which compared the average, median, upper deciles/quartile and lower deciles/quartile salaries of NPS tenure and tenure-track engineering faculty with peer institutions; and the National Science Foundation's 2011 Research and Development Expenditures Survey.

#### Additional external surveys administered by IRP:

- The Engineering Workforce Commission's Enrollments in Engineering Survey for fall 2011, highlighting the number of peak quarter enrollments for master's, doctoral and post-doctorate degree students at NPS, which was submitted to the American Association of Engineering Societies
- The National Science Foundation and National Institute of Health's survey of Graduate and Postdoctoral Students in Science and Engineering
- The Graduates and Professional Institutions' annual surveys for 2011 and 2012, which measured student enrollments, faculty, NPS resources, and research/development expenditures and peak quarter enrollments for NPS master's, doctoral and certificate students by departments

#### INTERNAL SURVEYS: FY2013 GOALS

- Administer quarterly the Graduating Students Survey
- Develop and produce the Graduating Students Survey item response frequencies for NPS support services (Qtr and AY)
- Administer the Alumni Survey
- Update the "Alumni Survey Trends Report" for AY2008–2012
- Administer the Master of Science in Electrical Engineering Surveys to faculty and students
- Administer the New Student and Mid-Program Student Surveys
- Report, as appropriate, results of all internal surveys

#### EXTERNAL SURVEYS: FY2013 GOALS

- Complete all external surveys: Integrated Postsecondary Education Database System and the National Science Foundation Research and Development Expenditures Survey
- Report, as appropriate, results of all external surveys

## INSTITUTIONAL METRICS

IRP extracts metrics from both historical and current data files that are updated regularly, and/or identified and developed in response to ad hoc requests. Data are made available to campus stakeholders to use for strategic planning, dashboards, and benchmarking purposes.

#### INSTITUTIONAL METRICS: FY2012 GOALS

- Update strategic plan metrics annually

As part of IRP's ongoing functions, metrics for the strategic plan were updated annually.

#### INSTITUTIONAL METRICS: FY2013 GOALS

- Update strategic plan metrics annually
- Increase awareness of IRP and its services

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## REPORTS/ANALYSES

IRP produces standard and customized reports for campus constituents using data derived from survey research, historical data files and institutional metrics. Analyses serve as measures of educational effectiveness, support assessments and decision-making within specific programs and departments, highlight NPS accomplishments, and provide benchmarking data and historical trends.

#### REPORTS/ANALYSES: FY2012 GOALS

- Update the "2012 Command Brief" quarterly
- Provide data for the "NPS Annual Report" for 2012 and 2013, the "NPS Fact Book" and "NPS Fact Book-at-a-Glance"
- Publish the "NPS Fact Book," "NPS Fact Book-at-a-Glance" and "NPS Fact Sheet"
- Update all graduation rate reports
- Update the "Graduating Students Survey Newsletter" AY2007–2012
- Develop and produce an "Alumni Survey Newsletter" AY2008–2011
- Publish periodic reports to the campus on special analyses

In FY2012, IRP met and exceeded its report-related goals. The "2012 Command Brief" was updated quarterly with revised enrollment data for all resident and distributed learning students, and distributed to key stakeholders and posted on the nps.edu site.

Metrics, extracted from current and historical data files, were updated on recurring NPS reports such as the "NPS Annual Report," the "NPS Fact Book" and the "NPS Fact Book-at-a-Glance." The development of the "NPS Fact Book" for 2013 began in FY2012: student enrollment data sections were completed.

IRP updated the "Graduating Students Survey Newsletter" (AY2007–2011) and created the "Alumni Survey Newsletter" (AY2008–2011), which measure details and trends about student satisfaction of NPS support services (Office of Academic Administration, Facilities, Health-Medical Services, Information Technology and Communications Services, Dudley Knox Library, Program Office, and Student Services). The newsletters were distributed to the directors from each area surveyed and posted on the Strategic Planning SharePoint site.

IRP completed the AY2008–2011 Cohort Graduation Rate analysis and data tables for all residential and distributed learning students within each school, and posted them on the IRP website.

#### Additional reports/analyses developed and/or completed by IRP:

- The Office of Institutional Research "Annual Accountability Report" for 2012
- The "General Information Brief," for 2012, an overview of NPS educational and research programs which highlight the value and relevancy of NPS to the Department of Defense and Department of Navy
- A benchmarking report on faculty salary data of NPS' state peer institutions which compared average faculty salaries by discipline for FY2011 and AY2008–2009
- A benchmarking report on faculty salary data of NPS' national peer institutions, derived from the 2010 IPEDS data collection
- A comparative report between the 2009 and 2011 Customer Satisfaction Surveys
- The "Graduation Rate Newsletter" (AY2002–2008), which presents historical data of resident and distance learning student graduation and time-to-degree trends spanning seven AY cohorts
- An analysis of NPS and peer institutions' staffing ratios, providing leadership with required information for assessment and decision-making purposes
- A compilation of publications, analyses, and data reports for Volume 3 of the "NPS Value Book," a quantitative resource which highlights the value of NPS
- Data was provided to the Dudley Knox Library in support of their Association of College and Research Libraries Survey
- Full-time equivalents and class taxonomy codes for resident and distributed learning students were prepared and verified for the "Western Association of Schools and Colleges Annual Report"
- Modeled by Air University and using 2010 data, IRP developed a presentation and analysis on NPS faculty

#### REPORTS/ANALYSES: FY2013 GOALS

- Update the "2013 Command Brief" quarterly
- Provide data for the "NPS Annual Report" for 2013, the "NPS Fact Book" and "NPS Fact Book-at-a-Glance"
- Publish the "NPS Fact Book," "NPS Fact Book-at-a-Glance" and "NPS Fact Sheet"
- Update all graduation rate reports
- Update the "Graduating Students Survey Newsletter" AY2007–2012
- Develop and produce an "Alumni Survey Newsletter" AY2008–2011
- Publish periodic reports to the campus on special analyses

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## DATA FILES

IRP extracts pertinent data covering academic and/or calendar years from Python, the student information system, to capture and create historical and current data files that can be tailored to fit requestors' requirements.

#### DATA FILES: FY2012 GOALS

- Collect and store quarterly student data
- Update degrees conferred by AY and type of enrollment table
- Publish Python Data Element Dictionary document
- Provide support as needed to develop the data warehouse

To help support the need for a secure and consistent data warehouse for student and faculty data, IRP captured and maintained census data for several years. In 2011, IRP began developing procedures for extracting quarterly data from the student data system, allowing for more comprehensive, reliable and efficient data query, analysis and reporting. In addition, AY data files were combined into a historical data file for each major data area: enrollment, degree and survey degree.

In FY2012, IRP collected and stored quarterly all student data, and also compiled the Student Engagement (StE) Analysis data files with weighted response values and an index score from both the 2010–2011 Graduating Students and Alumni Surveys. An analysis of cross-tabulations (curriculum level) for 2 of the 8 StE dimensions and accompanying data files were completed and submitted to the Academic Affairs Office, allowing additional analyses to be conducted.

IRP updated the NPS degree list file and data table that identifies all degree and certificate curricula and associated degrees, which was used in the “Western Association of Schools and Colleges Annual Report.”

For ease-of-use within the Python database, IRP developed the “Data Element Dictionary” for that system.

In FY2012, IRP completed its part of the data warehouse project by identifying, developing and extensively testing key data structures and fields within the Python database, thereby supporting the development of a viable NPS data warehouse from which data can be accessed and/or retrieved.

**Additional data files developed and/or completed by IRP:**

- The updated 2011 faculty data file, with enhanced data fields and faculty titles, used for the “NPS Fact Book” and for reporting to IPEDS
- Data provided by Defense Manpower Data Center for flag officers and SES civilians, used to mail quarterly publications

**DATA FILES: FY2013 GOALS**

- *Collect and store quarterly student data*
- *Update degrees conferred by AY and type of enrollment table*
- *Provide support as needed for the data warehouse*

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## AD HOC REQUESTS

IRP is the primary resource for specialized data provided through *ad hoc* requests from various constituents.

**AD HOC REQUESTS: FY2012 GOALS**

- Conduct *ad hoc* analyses

In FY2012, IRP conducted the following *ad hoc* analyses for various NPS stakeholders:

**Naval Postgraduate School**

- Updated student, faculty, and program data for the NPS Today Overview briefing for General Douglas Fraser, USAF, Commander, U.S. Southern Command

**Academic**

- Average on board and peak quarter enrollment data AY2011
- Curricula program start history and number of graduates
- Degrees conferred by curriculum and AY
- Degrees conferred by graduates of Hispanic/Latino race
- Degrees conferred by program for AY2011
- Degrees conferred — PhD AY 2011
- Degrees conferred with thesis titles for AY2011 Qtr4
- Distributed Learning: CQPR by Cohort Year and School
- Dudley Knox Library (licensing): 2011 FTEs for faculty/student/staff by titles and schools
- Information Technology and Communications Services: Faculty FTE (for software licensing)
- German student enrollments AY 2012/3
- Student graduation records prior to AY 2000
- Student enrollments and number of faculty AY 2011

**Alumni Relations Office**

- Alumni transcript requests
- Hall of Fame and Distinguished Alumni AY2011
- NPS degree data on specific alumni
- Turkish alumni student data

**Graduate School of Business and Public Policy**

- Student, faculty, and staff diversity demographics (for accreditation)

**Graduate School of Engineering and Applied Sciences**

- Electrical and Computer Engineering: Data from the Alumni Survey 2011
- Graduates for distributed learning degree program with command name for military, civilian, and contractor students
- Space Systems: Degrees conferred by designator
- Space Systems: Degrees conferred by graduation AY
- Systems Engineering programs: Degrees conferred and demographics

**Graduate School of Operational and Information Sciences**

- Defense Analysis: New student enrollments for curricula 2009–2012

**Information Technology and Communications Services**

- Full-time equivalent data for renewal of software license

**Protocol/Institutional Relations**

- Demographic data for summer quarter graduating students

**Research Office**

- “NPS Fact Book” for 2012 graphs and AY2011 degrees conferred by thesis type

**United States Navy**

- Data on NPS faculty, student, and educational training budget information was provided to OPNAV, N1Z
- Reserve graduates with a Masters in Systems Analysis, PERSCOM

**Other Services**

- United States Air Force: Service and civilian enrollment and graduation data by specific curricula, AY2000–2011
- United States Army: Resident degree enrollments by curriculum, AY2012/3
- United States Coast Guard: Student enrollments
- United States Marine Corps: Resident student enrollments

**AD HOC REQUESTS: FY2013 GOALS**

- *Conduct ad hoc analyses*

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## CONCLUSION

IRP developed new products with high utility to NPS leadership, and met its goal of producing a number of special analyses to help measure, assess and profile critical issues and variables regarding historical data that affect students, faculty, and NPS programs. Through analytical research, IRP helped to promote information which highlights NPS’s ability to produce and provide a unique and valued education, and to provide NPS leaders with concrete, viable data for policy-formation and decision-making.

The requirements of IRP resulted in a heavy workload that increases annually; therefore, establishing a permanent civilian position within the department is critical to meeting the regular and increasing demands for the campus-wide services provided by the department. Due to the impending retirement of IRP staff beginning October 1, 2012, a position for IR Director was posted nationwide within the IR professional and higher education organizations, from which a highly-qualified applicant will be chosen early in FY13.