

Faculty Early Career Development (CAREER) Program

Proposals for Fiscal Years 2006, 2007, and 2008
(includes the NSF component of the Presidential
Early Career Awards for Scientists and
Engineers (PECASE))

Program Solicitation

NSF 05-579

(replaces Document NSF 02-111)

<http://www.nsf.gov/career>



NSF CAREER Program

- ◆ Enables the early career development activities of faculty most likely to become academic leaders.
- ◆ Awardees selected on the basis of their plans to develop highly integrative and effective research and education careers.
- ◆ Increased participation of those traditionally under-represented in science and engineering encouraged.



NSF CAREER Grants

- ◆ Five year duration
- ◆ \$400,000 minimum (\$500,000 in Bio)
- ◆ Supports highly integrative and effective research and education careers:

Education activities – curriculum, pedagogy, outreach, mentoring at any level, majors and non-majors, teacher preparation or enhancement, K-12 students, and/or the general public.



FY'06-'08 Eligibility Criteria

- PIs may apply to the CAREER program a total of 3 times
- The PI must hold a doctoral degree, be untenured, and have not previously received an NSF PECASE or CAREER award
- By October 1st following the CAREER deadline in July, the PI must be employed as a tenure-track assistant professor (or equivalent) at an eligible institution.



FY'06-'08 CAREER-Specific Budget Guidelines

- ◆ Academic release time is not permitted, with a few exceptions
- ◆ No Co-PIs or other senior personnel
- ◆ Post-docs, graduate students, technicians are allowed
- ◆ Requesting funds to support educational activities is allowed
- ◆ Cost-sharing not required



Questions about eligibility and program requirements

- ◆ Read FAQs at:

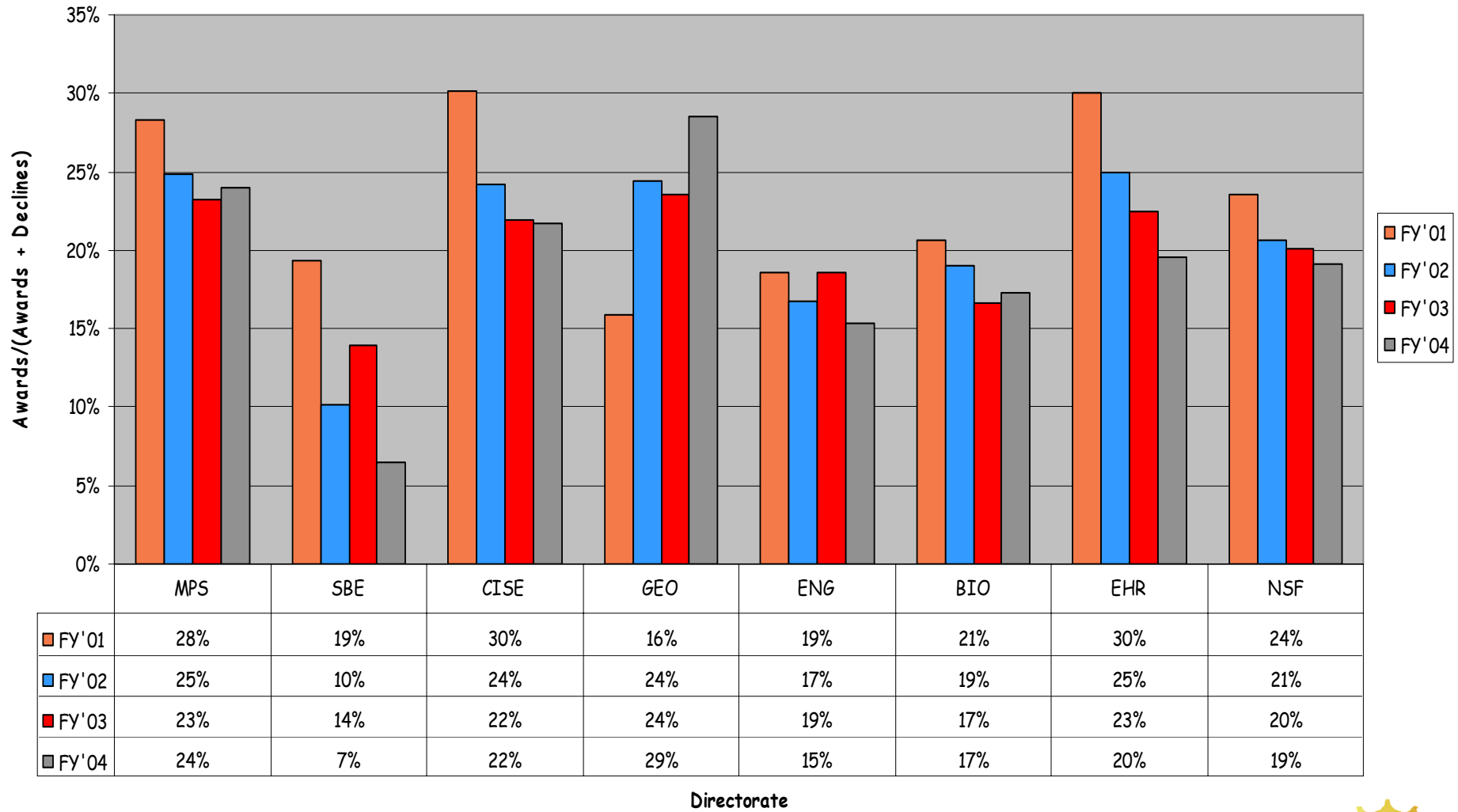
<http://www.nsf.gov/pubs/2005/nsf05027/nsf05027.jsp>

- ◆ Contact CAREER program directors:

<http://www.nsf.gov/crssprgm/career/contacts.jsp>



CAREER Success Rates



General NSF Review Criteria

- ◆ What is the **intellectual merit** of the proposed activity?
- ◆ What are the **broader impacts** of the proposed activity?



Broader Impacts...

- ◆ How well does the activity advance discovery and understanding while promoting teaching, training and learning?
- ◆ How well does the proposed activity broaden the participation of underrepresented groups?
- ◆ To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks and partnerships?



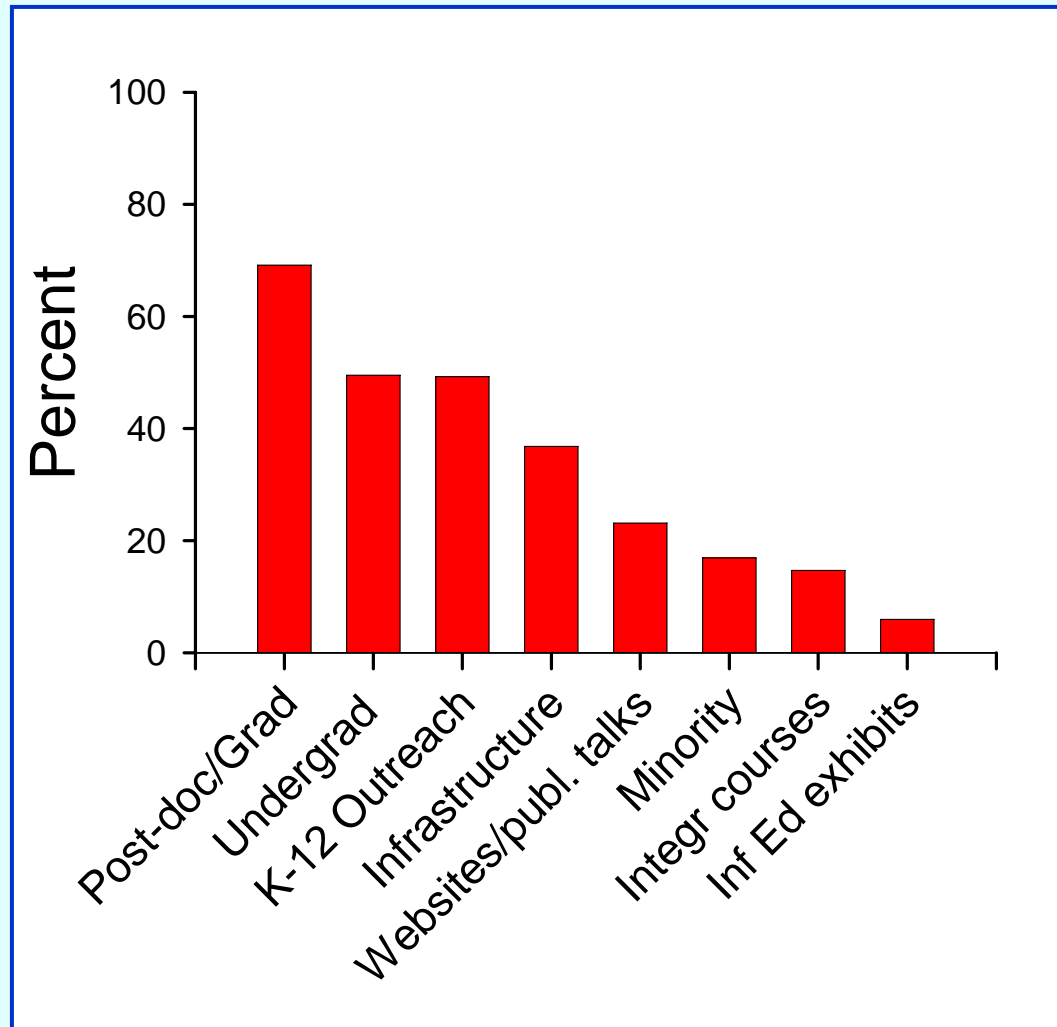
Broader Impacts

- ◆ Will the results be disseminated broadly to enhance scientific and technological understanding?
- ◆ What may be the benefits of the proposed activity to society?
- ◆ Examples of types of activities described in:

<http://www.nsf.gov/pubs/gpg/broaderimpacts.pdf>



A snapshot of education & outreach activities in NSF Ocean Sciences research proposals (n = 402)



NSF CAREER Review

Criteria also include:

- ◆ Effective integration of research and education.
- ◆ Chair Endorsement Letter.

(see “**Note to Reviewers of CAREER Proposals**” on CAREER Web page:
<http://www.nsf.gov/career>)



CAREER Project Description

- ◆ The objectives and significance of the proposed research and education activities.
- ◆ The relation of the research to the current state of knowledge in the field and of the education activities to the current state of knowledge on effective teaching and learning in one's field of study.



CAREER Proposal should also describe:

- ◆ The relation of the plan to the PI's career goals and job responsibilities and the goals of her/his institution.
- ◆ A summary of prior research and education accomplishments.



How many pages for research and how many for education?

- ◆ No number specified. These can be listed in separate sections within the 15-page limit, or they can be fully integrated into your CAREER Proposal.
- ◆ Create a well-argued and specific proposal for a lifetime of integrated contributions to research and education.



Chair's Endorsement Letter

- ◆ Description of PI's responsibilities to the department
- ◆ Endorsement of the CAREER Project description:
 - The fit with dept. & institutional plans
 - How the department will provide support
- ◆ Verification of PI's eligibility for the CAREER program



How to integrate research and education?

- ◆ Review **existing** education resources, use successful ones creatively
- ◆ **Balance** between different activities
- ◆ **Evaluation** should be an integral part of the plan and begin in Year 1; focus on the **process** (program effectiveness), not only on the **end products**

(NSF Evaluation Guide:

www.nsf.gov/pubs/2002/nsf02057)



Integrating research and education in research proposals

- **Decision: Direct involvement in outreach or delegation** (colleagues, students and technicians)
- Can include **your education**: professional development - workshops on learning methods, collaborations with educators
- Include letters of support from school districts and organizations involved in education outreach



Education component:

- ◆ Take advantage of available resources:
 - Science Education Program
 - University evaluation and assessment resources
 - If appropriate, justify educational collaborators



This is a 5-year plan. You need to clearly show:

- A timeline for research and education activities.
- How your teaching and research will develop and continue to be integrated during this period.



The Chair's letter: extremely important

- ◆ Make sure she/he writes a fully informed and supportive letter that includes all of the required elements.
- ◆ The more detailed the better.
- ◆ It's your job to “coach” your Chair!



Chair's Endorsement Letter

- ◆ Should discuss your CAREER development plan and how it fits with department's plans and your responsibilities. What kind of departmental support can you expect?
- ◆ Make sure your Chair's letter addresses the items listed above.
- ◆ Ask your Chair to include a description of your current teaching and research contributions to the department, and an assessment of your future contributions.



NSF CAREER Proposal Evaluation Criteria

- ◆ Scientific quality and importance of the proposed research and education activities.
- ◆ Objectives and significance of these activities.
- ◆ Capability of the applicant to make an integrative contribution in both education and research.
- ◆ Consideration of the Departmental Endorsement Letter.

