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**Office of the Provost
and University Vice President**

TO: Principal Investigators; Department Chairs; Deans of the Schools of Engineering and Science, Howe School of Technology Management, Systems and Enterprises; and the College of Arts and Letters

FROM: Dr. George Korfiatis, Provost and University Vice President

SUBJECT: NSF Post-doctoral Mentoring Plan

DATE: June 10, 2009

Since February, 2009 the National Science Foundation consistently represents more than 50% of our proposal activity, so any change in their proposal process can have significant impact for us.

In Public Law 110-69, NSF was charged to develop and implement a process whereby post-doctoral fellows supported through NSF research awards would receive training in the Responsible Conduct of Research. Further, principal investigators on these awards must devise a Mentoring Plan that remains in force throughout the life of the project.

Stevens endorses the professional and scientific development of this next generation of scientists and leaders. To that end we are providing guidance and assistance with the implementation of this new requirement, as well as proactively assessing the impact of another major change that is anticipated this fall.

Attached to this memo you will find three documents meant to help as you consider how to implement this new requirement. Please contact Barbara DeHaven in the Office of Sponsored Research at x8762 if you have any questions.

- "NSF Letter to the campus"
- "Example of a Postdoctoral Researcher Mentoring Plan"
- "Checklist of Activities for Postdoctoral Researcher Mentoring Plan"

NSF Research Proposals
and
Support of Undergraduate, Graduate and Postdoctoral Research Fellows

Recently, NSF announced two changes that have (and will have) substantial implications for the research community.

First, in the new *"Proposal and Award Policies and Procedures Guide"* that was published and effective April, 2009, the requirement for inclusion of a mentoring plan has become agency regulation when support for postdoctoral research fellows is a part of the proposal budget. The change requires that:

- **"...each proposal...must include, as a supplementary document, a description of the mentoring activities that will be provided...in no more than one page..."**

[NSF PPG at "Special Information and Supplementary Documentation"](#)

As finally implemented, the requirement is somewhat less onerous for the principal investigator initially, but will ultimately require more monitoring and tracking to ensure compliance with the intent. To that end OSR will assist in the following ways:

- Develop a template that can be used as the core of the required one page Mentoring Plan that must be included in the Supplementary Documentation section of the NSF proposal (**template is attached**)
 - ✓ areas highlighted in yellow will reflect individual proposal and budget construction
- Review proposals to ensure that required Mentoring Plan is included in the Supplementary Documentation section
- Develop a Checklist of Mentoring Plan Activities that can be used by the PI to track progress toward the stated objectives included in the proffered Mentoring Plan
- Develop training and education programs that provide information to the postdoctoral community on various items of interest, i.e., the mentioned 'monthly brown bag' series
- Develop a slate of potential funding opportunities for the postdoctoral community

- Develop and provide the institutionally required RCR Program through the OSR website
- Develop surveys for annual dissemination to the postdoctoral community that gathers information about the execution of their Mentoring Plans and provides suggestions for refinement and improvement
- Share aggregate information from surveys with the Provost and Deans in order to continually improve the postdoc mentoring experience
- Develop and maintain an RCR site on the OSR webpage that provides:
 - ✓ The template for the suggested “Postdoctoral Research Fellow Mentoring Plan”
 - ✓ The Checklist of Mentoring Plan Activities
 - ✓ Suggested websites that offer discipline specific information on postdoctoral mentoring objectives
 - ✓ The ingress portal for the university required RCR annual certification program
 - ✓ Data and analysis of surveys collected from the postdoc community as part of the Mentoring Plan
 - ✓ Dates and venues of training and education opportunities

Second, in February 2009 a period of public comment was announced in the Federal Register regarding NSF’s intent to ultimately expand the requirement for RCR training to the undergraduate and graduate communities as well. As currently written this expansion will be effective in October 2009 and will require verification by the university that all supported undergraduate, graduate and postdoctoral fellows have engaged in and completed some course of RCR training and education. To that end OSR is reviewing several highly recommended RCR certification programs and will advise the research community shortly regarding the selection. OSR will:

- Maintain the program in concert with input and comment from the Provost and Deans
- Ensure that each undergraduate, graduate or postdoctoral fellow supported on an NSF award engages in the required annual RCR certification
- Work with the Provost, Deans and Chairs to develop a compliance plan that identifies sanctions and enforcement if the targeted individuals do not engage in the annual certification program

Postdoctoral Research Fellow Mentoring Plan

Funds are requested to support **one** postdoctoral research fellow on this project. The postdoc researcher's development will be enhanced through a program of structured mentoring activities with the **goal** of the mentoring program to provide the skills, knowledge and experience to prepare the fellow to excel in his/her career path. To accomplish this goal, the mentoring plan will follow the guidance of recognized scientific and professional societies^{1,2} on how to enhance the postdoctoral experience. Although not meant to be an exhaustive list, some objectives of mentoring plans are to offer career planning assistance, and opportunities to learn a number of career skills such as writing grant proposals, teaching students, writing articles for publication and communication skills. Specific elements of the mentoring plan will include:

- Working with the postdoctoral researcher to establish and implement an **Individual Development Plan** based on discipline-specific standards and individual postdoctoral researcher objectives
- Seminars, workshops and individual consultations on **how to identify research funding opportunities and write competitive proposals**, offered by Stevens' [Office of Sponsored Research](#)
- Opportunities to **network with visiting scholars who are leaders in our field** by having lunch or dinner with them when they participate in the University and/or department visiting speaker series
- Participation in a **journal club** for graduate students and postdocs, in which participants meet monthly, along with a faculty facilitator, to discuss and critique recent journal articles in the field and to discuss how to write and submit journal articles
- Travel to at least **one conference each year [name conferences here]** for which travel funds are included in the budget of this proposal, with the goal that the postdoctoral fellow present a poster or paper at the conference.
- **Certification on an annual basis that the university's RCR training requirement** for all undergraduate, graduate and postdoctoral fellows supported on research projects has been fulfilled.³
- **Participation in a monthly brown bag lunch series for postdoctoral fellows and graduate students** at Stevens, in which speakers will be invited to discuss subjects related to career development such as how to apply for a faculty position, career paths outside of academia, tips for negotiating salary and start-up funds, how to plan and independent research agenda, etc.
- **Participation in the PI's weekly research group meetings**, in which members will be expected to present their research regularly, and feedback and coaching will be given to help all members to develop their communication and presentation skills.

Success of this mentoring plan will be assessed by tracking the progress of the postdoctoral fellow through her/his Individual Development Plan, interviews of the postdoctoral fellow to assess satisfaction with the mentoring program, and tracking of the postdoctoral fellow's progress toward his/her career goals after finishing the postdoc.

¹ National Academy of Science, National Academy of Engineering, Institute of Medicine, ["Enhancing the Postdoctoral Experience for Scientists and Engineers: A Guide for Postdoctoral Scholars, Advisers, Institutions, Funding Organizations, and Disciplinary Societies."](#) *National Academies Press, 2000* **(copies of this publication are available in the Office of Sponsored Research)**

² The Federation of American Societies for Experimental Biology, "Individual Development Plan for Postdoctoral Fellows." <http://opa.faseb.org/pdf/idp.pdf>

³ Access to the university's required RCR Program for all undergraduate, graduate and postdoc research fellows is located on the [Office of Sponsored Research website](#) at "Training and Education."

Checklist of Activities for Postdoctoral Research Fellow Mentoring Plan

Principal Investigator:

SIT Account Number:

Postdoc fellow name:

This Checklist is meant to be an assistance tool for both the Principal Investigator and the postdoc fellow. The following items are suggestions. Other aims can, and should, be incorporated to reflect the individual postdocs stated objectives. Whatever mechanism and items are finally developed, the plan should be maintained throughout the course of the research project.

This is created in a MS Word table so the individual cells can be expanded to include as much information as needed. Include dates, comments, observations and any other data that will be helpful in assessing the fellow's progress toward their goals and objectives.

Activity	Year 1	Year 2	Year 3	Year 4	Year 5
Develop an "Individual Development and Mentoring Plan"		XXXXXX	XXXXXX	XXXXXX	XXXXXX
Review progress toward objectives of "Individual Development and Mentoring Plan"					
Annual RCR Certification – training and education					
Network with visiting scholars					
Attend conference – was a paper or poster presented?					
Regular participation in PI group meetings					
Regular participation in university developed training and education events					
Development of grant-writing skills					
Counsel with the Faculty Support Center to identify potential funding opportunities					