

OFFICE OF THE VICE PRESIDENT FOR RESEARCH**Self-Help Tools for
Proposal Preparation****Postdoctoral Mentoring Plan Template**

The National Science Foundation (NSF) now requires that any proposal requesting funds for postdoctoral researchers must include, as a supplementary document, a description of the mentoring activities provided for such individuals. This mentoring plan must describe in no more than one page the mentoring provided to any postdoctoral researchers regardless of at which organization/institution they reside.

A mentoring plan is not required, however, for postdoctoral fellows who are listed as senior personnel on the NSF budget.

Examples of mentoring activities listed in the NSF Grant Proposal Guide include:

- career counseling;
- training in preparation of grant proposals, publications and presentations;
- guidance on ways to improve teaching and mentoring skills;
- guidance on how to effectively collaborate with researchers from diverse backgrounds and disciplinary areas; and
- training in responsible professional practices.

The proposed mentoring activities will be evaluated as part of the merit review process under the Foundation's broader impacts merit review criterion.

Consider...

Tailoring aspects of the sample paragraphs below to develop a Postdoctoral Mentoring Plan unique to your particular research project or center. Rewrite the sample sections as appropriate for your proposal and do not include the headings. Do not copy verbatim, or you could be flagged for plagiarism by the funding agency.

Sample Paragraphs**Sample introductory paragraph:**

The **[name of project]** will support **[number]** postdoctoral researchers who will play a key role in our project implementation. **[concise sentence or two on what postdocs will do in this project...include research responsibilities as well as, for example, tasks such as oversight of undergraduate students in the laboratory].** Postdoctoral researchers supported by the **[name of proposed project]** will meet at project outset with the supervising PI or co-PI to develop a tailored Individual Development Plan and “research roadmap” as recommended by the National Postdoctoral Association (NPA) and the National Academy of Sciences publication *Enhancing the Postdoctoral Experience for Scientists and Engineers: A Guide for Postdoctoral Scholars*. We will leverage unique institutional resources to augment [project/center] opportunities for both structured and informal mentoring experiences appropriate to field and career goals.

**Initial Self-Assessment**

Postdoctoral researchers will develop goals using a written self-assessment that follows the NPA Individual Development Plan accessible through the Purdue Postdoctoral Association website. The NPA Core Competency checklist will help the postdoctoral fellow to identify career and professional strengths and challenges and to develop plans to address challenging areas.

**Orientation to the Project**

We will provide appropriate laboratory orientations that include a review of institutional policies related to integrity and ethical standards and will require completion of the Responsible Conduct of Research (RCR) online workshop and tutorials. Research group discussions will include general expectations of research independence, laboratory productivity and safety, research documentation and expectations for publishing, meeting schedules, and standard operating procedures. The postdoctoral fellow will be made aware of Purdue Postdoctoral Association membership and resources as well as supplemental online RCR discussion workshops and tutorials available through the Graduate School at Purdue.



Mentors and Meetings

Faculty mentors and co-mentors assigned to postdoctoral researchers will meet regularly for informal advising, to assess progress toward career and professional goals, and to refine the Individual Development Plan as needed. Postdoctoral researchers will present research results in weekly laboratory/team meetings and monthly project thrust meeting and will attend center/project-wide annual meetings. They will be encouraged to participate in larger departmental meetings as well as research seminars and events. Mentors will make sure postdoctoral researchers are aware of key campus and departmental offerings.

Travel funds will be provided for postdoctoral researchers to attend **center\project**-wide annual meetings and site visits as well as appropriate regional, national and international scientific conferences. We will encourage postdoctoral researchers to participate in relevant professional associations such as the [e.g. **IEEE, ACS, and ASEE**]. Wherever possible, mentors will advocate for postdoctoral researchers to present research either formally or informally. In addition, modest funds will be made available to support postdoctoral researcher needs for books, software, and other resources intended solely for professional growth.

Mentors will strongly encourage postdoctoral researchers interested in faculty positions to participate in pedagogy training through the weekly Purdue University Center for Instructional Excellence College *Teaching Workshops Series I: Basics of Teaching*, the *Series II: Expanding Your Teaching Toolkit*, and special workshops that include topics such as scientific teaching and best practices for creating effective posters. Postdoctoral researchers may participate in the campus-wide, for-credit Purdue University Graduate School Preparing Future Faculty or Preparing Future Professionals programs to formally explore faculty roles and responsibilities or diverse professional environments. We will also encourage postdoctoral researchers to participate in the ADVANCE Center for Faculty Success FAST (Faculty Advancement, Success, and Tenure) mentoring institute where newly hired assistant professors network with senior faculty from across the campus.



Publication and Grantsmanship

Postdoctoral researchers will receive training in grantsmanship through events sponsored year-round by the Office of the Vice President for Research and campus groups such as FAST. Typical offerings include *How to Write an NIH Proposal or Resubmission*, *Write Winning Grants Seminar*, *Grant Writing Strategies*, *Data Management*, and *How to Use NIH Data for Your Strategic Advantage*. Postdoctoral researchers will receive assistance in locating appropriate funding opportunities through customized web-based searches. We expect postdoctoral researchers will produce single or lead-author manuscripts and earn publication credit under our team guidance.

**Evaluation**

In addition to informal mentoring, every six months the postdoctoral researcher and PI/Co-PI mentor will conduct a formal review of progress toward milestones outlined in the Individual Development Plan. We will document the review in a written record that notes progress and identifies next steps. We will conduct a final evaluation in year five of the project to assess our effectiveness in fulfilling the mentoring mission.

**Other Ideas to Consider as Appropriate for Your Plan:**

- Include how mentors will advise postdoctoral researchers in working with K-12 students and teachers as well as undergraduate and graduate students in the laboratory
- Include options for encouraging postdoctoral fellows to participate in entrepreneurship activities such as the Purdue Realization and Entrepreneurship Ph.D. and Postdoctoral Fellows (PREPP) Program that allows postdoctoral fellows to learn about the commercialization process as it applies to their research. Postdoctoral researchers can also play prominent roles in business plan competitions at Purdue that team engineers, scientists, and management graduate students.
- Postdoctoral researchers interested in non-academic positions can be assisted by their mentor in developing collaboration opportunities with industry and government partners. Consider formal co-mentoring by industry-affiliated partners and opportunities to rotate through on-site collaborations with national laboratory partners, innovation firms, and international partners .
- Use of mentoring committees that can provide wider perspectives from a diverse community of experts.
- Encourage participation in events such as Science on Tap to gain appreciation for communicating scientific information to a lay public audience. Postdoctoral researchers who have any interaction with K-12 students and teachers as part of your project will also have a built-in avenue for practicing public speaking.
- Examine any unique avenue in your project that you can use to mentor your postdoctoral fellow to mature into an effective and highly collaborative team member.