

Possible Outline for CAREER Project Description

- Use “I” instead of “we” or “our” because this is about YOUR five-year career path. (However, one-page summary is required to be third person.)
- 15 pages for project narrative
- No urls allowed except in the references. No et als in references.
- Avoid passive voice whenever possible
- Include quality graphics and figures with clear captions. Do not just label but use the caption to walk the reviewers through the visual and/or provide the take away point.

1. Significance and Rationale (~1 page)

- Provide a compelling storyline that excites your reviewers. Use logic flow of:
 - What is the problem?
 - What has been done already to address this problem?
 - What is the gap that still remains?
 - How do you propose to address this gap?
- State your vision for how this will launch you into novel contributions in your career
 - you must be proposing novel work rather than incremental
- Include both research and education goals
- Include summary sentence on impact of your project success

2. Broader Impacts (at least ½ page)

- Put this section early on instead of the end. Reviewers read more carefully at outset, and this BI text builds a case for the significance of your proposed work. You want them to read it early as a lens for the rest of your proposal.
- Cover both how your project will benefit society and how you will broaden participation. Can include translational potential.
- Refer to Broader Impacts resources on the grant writing website at: <https://www.purdue.edu/research/oevprp/funding-and-grant-writing/grant-writing-support/broader-impacts.php> for BI ideas

3. Approach

- Provide a short paragraph overview of your research plan approach before describing details of your plan

3.1 Background

- **not** a literature review. Cite key references strategically particularly in light of “what has been done already to address this problem?”

3.2 Preliminary Data

- Three options for where to describe preliminary data: embedded within background section, a separate subsection such as this 3.2 (most common), or per objective.

3.3 Research Objectives

- Include 2-4 sentences providing roadmap for objectives and how they integrate.

- Note: If you have any collaborators, clearly explain their roles in the appropriate section
- Note: If you will need special equipment or instruments, include text on how you will acquire these resources or gain access to existing ones, e.g. national labs

Objective 1/Phase 1 title

- Technical gap or research questions addressed
- Methods and procedures
- Potential problems and alternative solutions (e.g. risk mitigation)
- Expected outcomes
 - State significance

Objective 2/Phase 2 title

- Technical gap or research questions addressed
- Methods and procedures
- Potential problems and alternative solutions (e.g. risk mitigation)
- Expected outcomes
 - State significance

Objective 3/Phase 3 title

- **Etc**

4. Integration of Education and Research [~ 3 pages long]

- State the education problem/gap you are addressing and how this motivates your plan
- Include an education goal (see section 1)
- Include a description of your preliminary work in the educational arena. Have you already revised or created a new course? Have you led a workshop for undergraduates or high school students? Include text regarding your experience and motivation.
- Activities
 - Be sure to cite key educational documents as rationale for why these activities are a best practice.
 - Be creative. If you have existing or basic educational initiatives, show how you are expanding in new ways
 - Leverage institutional resources and expertise. Do not reinvent the wheel.
 - Budget for activities. 10% is common.
- Describe how your work uniquely integrates research and education
- Include student/participant recruitment mechanisms that will ensure broad/diverse participation
- Include a clear assessment/evaluation mechanism for each activity

5. Prior NSF Support

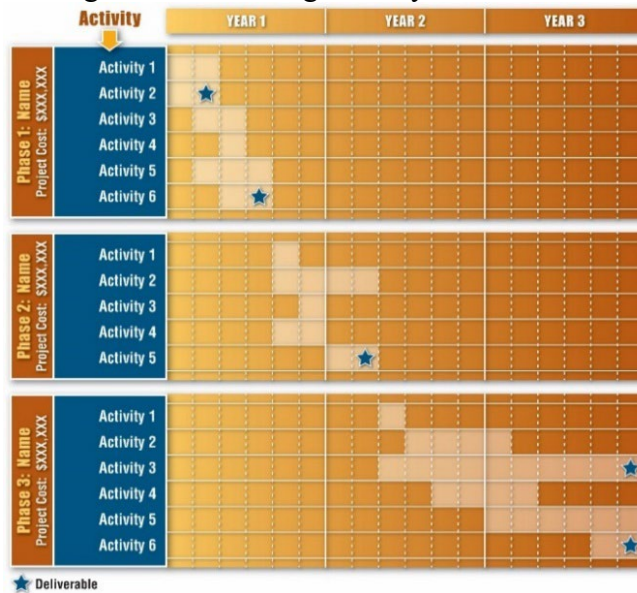
- If you have received NSF funding (as PI, co-PI, senior personnel) in the past five years, you must report on one award most relevant to this CAREER proposal.

- use prescribed format given in the NSF Grant Proposal Guide, especially in regard to separate subheadings of *intellectual merit* and *broader impacts* and referencing resulting products/publications from this previous award. Here is an example:

NEES Operations (0927178; \$81,761,788; 10/2009-9/2014). PI: J. Ramirez. Purdue University will lead, manage, operate, and maintain George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES) with 14 earthquake engineering and tsunami experimental facilities locally operated by universities across the U.S. and NEEShub cyber platform for collaboration, NEEShub. **Intellectual merit:** NEES Community and Communication Center’s four-year tenure as headquarters for NEES Operations has facilitated an unprecedented cultural change in how research is performed in earthquake engineering in a new outside-the-university collaboration model using improved data sharing capabilities and tool co-location at NEEShub. Serves as both as an intellectual and practical model for all disaster-related fields that involve distributed sites. **Broader impacts:** Diverse group of PIs and professional staff bring a new level of management innovation and capacity building to NEES network-wide operations. NEEShub provides broader access to experimental data, extensive simulation resources, and research-grade inquiry tools and streamlined data sharing capabilities. NEEShub now has 5700 registered users, thousands of data downloads from the Project Warehouse per quarter, and more than 55,000 contributors from over 182 nations. Example publications, products, tools from this effort: NEEShub platform for cyber collaboration; Buckle and Ramirez, 2010, Ramirez, 2010; and Browning et al, 2013.

6. Task Management

- Include a timeline of activities (research and education)
- Consider using an advisory board
 - Provide feedback on your progress and offer risk mitigation input
 - Could include representation for research, education, as well as diversity
- If you include names of people who have agreed to serve on your board, you must have letters of commitment from them
- Consider using a Gantt chart e.g. this style:



7. Dissemination

- For both research and education results

8. Career Development and Success Factors (optional)

- Could include a five-year overview of your career development and deliverables
- Briefly state where you see your teaching, research, and service in 5, 10, and 20 years
- Make a summary statement about how well-positioned you are to build on a record of success as a researcher and educator, align with institutional strategic plans, and leverage significant institutional resources
- Build a case for why you are an outstanding researcher/educator who will use this CAREER as a launching pad to potentially transformative work
- Describe how institutional capacity (infrastructure etc) is here at Purdue to help you succeed
- Describe how award will help you to collaborate better
- Describe ultimate impact on your career path and contributions to the field