

## 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
- 1” margin
- Allowed fonts: Arial, Courier new, Palatino Linotype at 10points or larger; Times New Roman at 11point or larger.
- No urls allowed except in the references
- Avoid passive voice whenever possible
- Include quality graphics and figures with clear captions

### 1. Significance and Rationale (~1 page)

- Compelling storyline that excites your reviewers with the 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?
- vision for how this will launch you into novel contributions in your career
  - you must be proposing novel work rather than incremental
- state both research and education goals
- concisely state what will be the impact on the field when you are successful with your proposed CAREER

#### 1.1 Intellectual Merit

- state potential to advance

#### 1.2 Broader Impacts

- Read NSF Grant Proposal Guide for instructions on this required section. How is your research benefiting society? In what ways are you broadening accessibility?
- Refer to Broader Impacts resources on Research Development website at: [https://www.purdue.edu/research/vpr/rschdev/proposal\\_prep\\_resources.php](https://www.purdue.edu/research/vpr/rschdev/proposal_prep_resources.php)
- Entrepreneurship activity?

### 2. Approach

- provide an overview of your overall approach to the research plan before you go into details on your plan
- if you have any collaborators, clearly explain their roles in the appropriate section
- if you will need special equipment or instruments, include text on how you will acquire these resources or gain access to existing ones

#### 2.1 Background

- this is not a literature review for your dissertation. Cite key references strategically particularly in light of “what has been done already to address this problem?”
- can include your relevant preliminary studies within this section or have separate section

## **2.2 Preliminary Data**

- can include your preliminary data with background section instead of a separate section
- can include per objective if more appropriate

## **2.3 Research Objectives**

- concise few sentences on objectives

### ***Objective 1/Phase 1 title***

- Methods and procedures
- Potential problems and alternative solutions
- Expected outcomes
  - State significance

### ***Objective 2/Phase 2 title***

- Methods and procedures
- Potential problems and alternative solutions
- Expected outcomes
  - State significance

### ***Objective 3/Phase 3 title***

- **Etc**

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

- Specifically state the education problem/gap you are addressing and how this motivates your plan
- Include an education goal
- 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 you have chosen particular education activities. Need to demonstrate that you are aware of best practices in education.
  - Be creative. If you have existing or basic educational initiatives, show how you are expanding in new ways
  - If you plan to involve undergraduate students or K-12 teachers, talk to your identified program officer about the Research Experiences for Undergraduates/Research Experiences for Teachers (REU/RET) supplements vs building into CAREER budget.
- Describe how your work uniquely integrates research and education
- If you will need to recruit students, include your recruitment mechanisms. Include awareness of diversity needs.
- Clear assessment/evaluation plan

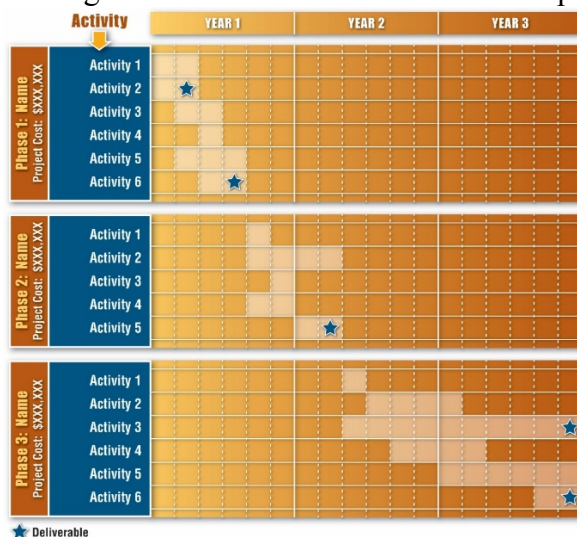
#### 4. Prior NSF Support

- If you have received NSF funding (as PI, co-PI, senior personnel) in the past five years, you must report on the 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:** Julio Ramirez. Purdue University, through a cooperative agreement, 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 a wealth of experimental data from work at NEES Laboratories and from international partners, extensive simulation resources, and a rich set of 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.

#### 5. Task Management

- Timeline of activities (research and education)
- Consider using an advisory board
  - Feedback and risk mitigation
  - 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. RD Services can help you with this, e.g.



## **6. Dissemination**

- For both research and education results

## **7. Career Development and Success Factors**

- 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



[illegible]