# NSF PROPOSAL SECTIONS

# Required Sections of a Career Proposal

Project Summary (1 page) Handout

* Intellectual Merit
* Broader Impacts

Project Description (15 pages)

References Cited

* Provide references in support of both research and education aspects of the proposal

Facilities Equipment and Other Resources

Biosketch

Other Supplementary Documents

* Departmental Letter (Department Chair)
* Acknowledges institutional commitment to the professional development and mentoring of the PI in both research and education

Letters of Collaboration

* Include short letters from collaborators, the letter(s) must be limited to describing the nature of the collaboration and should not include a recommendation of the person. Letters of recommendation are not permitted.

Budget & Budget Justification

Current and Pending Support

# Suggested Components of an NSF Career Proposal Project Description

Introduction

Research Plan

* Goals & Objectives
* Background and significance
* Preliminary supporting data
* Methods and procedures
* Expected significance of results

Education Plan

* Specific objectives
* Proposed activities
* Integration into research plan

Results of Prior NSF support (if applicable)

Project Management

* Personnel & organizational structure
* Planned collaborations
* Project implementation schedule

Assessment

* Criteria for assessing that the goals and objectives of the research plan are met
* Describe how the impact of the educational activities will be assessed or evaluated.

# Guiding Questions

* Where do you want your research to be five years from now? Ten years from now?
* Do you have any preliminary data for the research you are proposing?
* How transformative or innovative is your research?
* How does your research align to UTEP’s Strategic Plan and contribute to the Department and College plans?
* What resources do you need to complete your research goals?
* How do you intend to build your expertise? Connect to your scientific community (national and international)?
* What is your plan to integrate your research and education?
* How will you share your research with the broader community, including K-12 teachers and students and the general public?
* How will your educational plans broaden participation in STEM?
* If you plan to work on curricula, are you working with your Chair and the College’s curriculum committee?
* How can you build on existing K-12 and broadening participation programs at the University or in the community?

# Guiding Tasks

**Research Plan**

* Describe where you want your research to be five years from now.
* Outline your preliminary data and results for the research you are proposing.
* Prepare your intellectual merit statement.
* Map your research and education plan to UTEP’s Strategic Plan, to your College’s and/or department’s strategic plan.
* Describe your research beyond the project you are working on right now.
* Provide a brief description of the resources you need to take your research where you want it to go (e.g. equipment).
* Describe your plan to build your expertise. Include how you will connect to your scientific community (national and international) and your efforts to build a new research group or link to an existing group.

**Education Plan**

* Describe your plan to integrate your research into your teaching.
* Describe how you plan to share your research with the broader community, including K-12 teachers and students (if appropriate) and the general public.
* Describe your educational plans to broaden participation in STEM.
* If you are creating new or altered curricula, describe your plans to work with your Chair and the College’s curriculum committee to ensure that your plans contribute to the Department and College plans for the future.
* Do you need help linking to K-12 and broadening participation programs at the University or in the community so that your educational plan isn’t reinventing the wheel?

**Strategies for Integrating Research & Education**

* Incorporate educational objectives into the research plan
* Include students in the research activities
* Develop collaborations and outreach activities with the community college or K-12 schools
* Establish mentoring programs
* Integrate research results into courses & curriculum
* Disseminate results to broad audiences to include formal and informal learning sites
* Link to education and outreach programs on campus

# Three Guiding Principles

1. NSF Projects should be of the highest quality and have the potential to advance, if not transform, the frontiers of knowledge.
2. NSF Projects, in the aggregate, should contribute more broadly to achieving societal goals.
3. Meaningful assessment and evaluation should be based on appropriate metrics, keeping in mind the likely correlation between the effect of broader impacts and the resources provided to implement projects.

# Two Review Criterion

1. **The Intellectual Merit criterion** encompasses the potential to advance knowledge

Supported by addressing the following issues

* Extent of creative, original, or potentially transformative concepts suggested and explored
* The contribution to your field, your discipline, and any related disciplines
* Qualifications of PI(s)
* Quality of prior work
* Strong collaborations you may have built
* Level of organization and development
* Sufficient access to resources

1. **The Broader Impacts criterion** encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

**Supported by answering the following questions**

* What are the broad reaching impacts of this research if successful?
* How well does the activity advance discovery and understanding while concurrently promoting teaching, training, and learning?
* How well does the activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)?
* To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships?
* Will the results be disseminated broadly to enhance scientific and technological understanding?
* What may be the benefits of the proposed activity to society?

# Five Review Elements

The following elements should be considered in the review for both criteria:

1. What is the potential for the proposed activity to:
   * Advance knowledge and understanding within its own field or across different fields (IM); and
   * Benefit society or advance desired societal outcomes (BI)?
2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
4. How well qualified is the individual, team, or organization to conduct the proposed activities?
5. Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities?