FY 2019 UNM NSF CAREER COHORT
Introductory Meeting
October 9, 2018
<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Task</th>
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<tbody>
<tr>
<td>D – 12 months</td>
<td>Start making outreach connections if part of your proposal</td>
</tr>
<tr>
<td>D – 9 months</td>
<td>Identify and make contact with your NSF program officer. Consider sending them a white paper if appropriate.</td>
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<tr>
<td>D – 6 months</td>
<td>Select expert readers to advise on proposal (Internal &amp; External)</td>
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</table>
| D – 2 months | • Talk to your chair about required resources you’ll need to include in department letter  
  • Share a rough draft with readers (non-expert & expert)  
  • Start working with department FRSO or administrator to develop proposal |
| D – 5 weeks | Polished draft to readers (non-expert & expert) |
| D – 3 weeks | Chair should have your draft proposal including their department letter and your CV |
| D – 2 weeks | Proofreading of proposal by readers (non-expert) |
| D – 5 days | Route your proposal with final budget and other non-technical pieces + drafts of technical pieces |
| D – 2 days | OSP should have your final proposal for their review |
| **Due Date** | NSF has your proposal |
Why are we here?
Goals of the Cohort

- Simplify grant writing process into manageable chunks
  - Education Plan
  - Broader Impacts
  - Introduction
- Alleviate the pressure of maintaining a deadline
- Develop a peer support network
# CAREER Cohort Overview

<table>
<thead>
<tr>
<th>FRDO Led Workshop Format</th>
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<tbody>
<tr>
<td>October 2018 Introductory Meeting</td>
<td>Introductory Meeting</td>
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<tr>
<td>November 2018 Broader Impacts Workshop</td>
<td>Broader Impacts Workshop</td>
</tr>
<tr>
<td>December 2018 Building your Dream Budget</td>
<td>Building your Dream Budget</td>
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<tr>
<td>January 2019 (2 sessions)</td>
<td>Developing Administrative Documents</td>
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<thead>
<tr>
<th>Writers Workshop Peer Review Format</th>
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<tbody>
<tr>
<td>February &amp; March 2019 (4 sessions) Designing your Education Plan</td>
<td>Designing your Education Plan</td>
</tr>
<tr>
<td>April 2019 (2 sessions) Developing your Broader Impacts Plan</td>
<td>Developing your Broader Impacts Plan</td>
</tr>
<tr>
<td>May 2019 (2 sessions) Bring it Together – the Introduction</td>
<td>Bring it Together – the Introduction</td>
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</table>
Is it your time to submit?

- Tenure track assistant professor
- Untenured prior to October 1, 2019
- 3 submissions limit – regardless of institution
- Not a training grant
- Tool to help early investigators build a firm foundation for a lifetime of contributions to research, education, and their integration.
Register with Research.gov

- [https://www.research.gov/accountmgmt/#/registration](https://www.research.gov/accountmgmt/#/registration)
  - NSF ID associated with UNM
  - UNM DUNS number - 868853094
Get Started

Make contact with your NSF Program Officer

Establish your Broader Impacts partnerships
Identify Proposal Readers

Expert Reviewers  Non-Expert Reviewers
## CAREER Cohort Schedule

### FRDO Led Workshop Format

<table>
<thead>
<tr>
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<th>Topic</th>
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<tbody>
<tr>
<td>October 9, 2018</td>
<td>Introductory Meeting</td>
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<tr>
<td>November 13, 2018</td>
<td>Broader Impacts Workshop</td>
</tr>
<tr>
<td>December 11, 2018</td>
<td>Building your Dream Budget</td>
</tr>
<tr>
<td>January 15, 2019</td>
<td>Personnel Documents – Biosketch, Current and Pending, Collaborators and Other Affiliates</td>
</tr>
<tr>
<td>January 29, 2019</td>
<td>Data Management Plan, Facilities &amp; Equipment, Bibliographies</td>
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### Writers Workshop Peer Review Format

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>February &amp; March 2019</td>
<td>Designing your Education Plan</td>
</tr>
<tr>
<td>February 12, 2019</td>
<td>Develop (What makes the most sense for you?)</td>
</tr>
<tr>
<td>February 26, 2019</td>
<td>Build an Appropriate Evaluation Plan</td>
</tr>
<tr>
<td>March 5, 2019</td>
<td>Integrate it with your Research Plan</td>
</tr>
<tr>
<td>March 19, 2019</td>
<td>Integrate it with Goals of Dept. and UNM in the Letter from your Chair</td>
</tr>
<tr>
<td>April 2019</td>
<td>Developing your Broader Impacts Plan</td>
</tr>
<tr>
<td>April 9, 2019</td>
<td>Identifying the Right BI for you as the PI</td>
</tr>
<tr>
<td>April 23, 2019</td>
<td>Building a Plan within your Budget</td>
</tr>
<tr>
<td>May 2019</td>
<td>Bring it Together - Best Introduction Yet</td>
</tr>
<tr>
<td>May 7, 2019</td>
<td>Grab the Reviewers Attention</td>
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<tr>
<td>May 21, 2019</td>
<td>Prepare them to be Amazed</td>
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What are Broader Impacts?

Establishing your Broader Impacts Identity

How to be a Realistic Planner

Tools Available Online

Campus Resources
WHAT ARE BROADER IMPACTS (BI)?

• Also referred to as Outreach Efforts
• The potential of a sponsored project to benefit society and contribute to the achievement of specific, desired societal outcomes
BROADER IMPACTS GOALS OF THE NSF

• Full participation of women, persons with disabilities, and underrepresented minorities in science, technology, engineering, and mathematics (STEM)
• Improved STEM education and educator development at any level
• Increased public scientific literacy and public engagement with science and technology
• Improved well-being of individuals in society

• Development of a diverse, globally competitive STEM workforce
• Increased partnerships between academia, industry, and others
• Improved national security
• Increased economic competitiveness of the U.S.
• Enhanced infrastructure for research and education
When the Research is the Broader Impact...

Structural Evolution Through the Lifecycle of Hurricane Sandy (2012)  
AGS 1322532

- Operational models of weather systems, storm forecasting and resilience planning

CAREER: Architectural Support for CPU / GPU Hybridization  
CCF 1149539

- Broad potential to improve energy efficiency and battery life and to advance fields that rely on HPC
WHEN THE BROADER IMPACTS ARE DIRECTLY RELATED TO RESEARCH PROJECT...

The LIFE Center: Learning in Informal and Formal Environments
SMA 0835854

- PI collaborates with organizations and policymakers to develop science-based programs that help children maximize their ability to learn.

CAREER: Rationally Designed Conjugated Polymers Based on Benzobisazoles
DMR 0846607

- Interdisciplinary research experiences for undergrad and graduate students and chemistry ambassadors which target underrepresented students grades 8-12.
When the Broader Impacts are Supported by, yet Complementary to the Research Project…

Computational Behavioral Science: Modeling, Analysis, and Visualization of Social and Communicative Behavior
IIS 1029679

- Museum exhibit that integrated computer vision tools developed through this project with robotics tools from another Expedition

Energize New Mexico
IIA 1301346

- The NM EPSCoR project supports an array of outreach and education efforts designed to share the research developed by the project with stakeholders and the broader community.
WHAT IS YOUR BROADER IMPACTS IDENTITY?
HOW TO PLAN REALISTICALLY...

1. Follow the Solicitation
2. Identify a Target Audience
3. Set a Goal for that Audience
4. Develop Appropriate Partnerships
5. Budget Accordingly
6. Include an Evaluation Plan
IDENTIFYING A TARGET AUDIENCE

- Realistically applicable to your proposed project goals
- Fits your personality and qualifications
- Effectively accounts for time, budget, and people constraints
SETTING A GOAL FOR YOUR TARGET AUDIENCE

• Timeline to the Future
• How many people, industries, government agencies, etc. will be affected?
• Do you need to include learning standards?
Budget Resources Accordingly

**MONEY & GOODS**
- Is it included in the proposed budget?
- Is it participant support?
- Is it unfunded collaboration?
- Are you using resources already available at your home or collaborative institution?
- How much will an evaluator cost?

**PEOPLE**
- Do you have enough people?
- Are they qualified to conduct the proposed activities?
- Do you need to hire a consultant?
- Do you have the right contacts?
- How do you start the conversation to develop a broader impacts relationship?

**TIME**
- How long will your broader impact take?
- Does it need to happen during a certain time to meet the goals?
- Do you or your target audience need to travel?
- Is this feasible to both your schedules?

Request support from the Faculty Research Development Network by clicking this [link](#).
The National Science Foundation (NSF) describes Broader Impacts as being the potential of a research project to benefit society and contribute to the achievement of specific, desired societal outcomes. Per the NSF, broader impacts may be accomplished through the research itself, through activities directly related to specific research projects, or through activities supported by, yet complementary to the project. Even though the NSF is the only sponsor that specifically names Broader Impacts as an evaluation measure, this desire to improve the world around us through research and other externally funded endeavors is common to most funding opportunities. As a result, the OVPR and FRDO would like to offer their assistance to faculty looking to develop broader impacts strategies to include in their proposals. Use the button below to request support.

**NSF Perspectives on Broader Impacts**

NSF values the advancement of scientific knowledge and activities that contribute to the achievement of societally relevant outcomes. Such outcomes include, but are not limited to:

- Full participation of women, persons with disabilities, and underrepresented minorities in science, technology, engineering, and mathematics (STEM)
- Improved STEM education and educator development at any level
- Increased public scientific literacy and public engagement with science and technology
- Improved well-being of individuals in society
- Development of a diverse, globally competitive STEM workforce
- Increased partnerships between academia, industry, and others
- Improved national security
- Increased economic competitiveness of the US
- Enhanced infrastructure for research and education

Each year, the National Science Foundation (NSF) receives about 50,000 proposals for funding. Because there are many more worthy proposals than NSF is able to fund, the foundation distinguishes among them through a merit review process that incorporates two criteria: intellectual merit and broader impacts. Read about more broader impacts examples from the NSF here.
NM STEM Connection

Managed by the UNM STEM-H Connection for Outreach, Research and Education with support from the NM Experimental Program to Stimulate Competitive Research (NM EPSCoR), the NM STEM Connection provides information about STEM resources for K-12 students, teachers, parents, counselors, and administrators as well as higher education faculty/staff and community members in New Mexico.

UNM STEM University

STEM University is a collection of free outside-of-class activities related to science, technology, engineering and mathematics disciplines (STEM) run by the STEM Collaboration Center. These events connect UNM students with STEM research, scientists, technology and leadership. Faculty can post STEM events by following this link. Click here to access the current list of STEM University events.

UNM Outreach Organizations

Organizations on campus devoted to the recruitment, retention, and education of students from minority and underrepresented groups.

African American Student Services
American Indian Student Services
El Centro de la Raza
Native Americans in STEM (NASTEM)
Project for NM Graduates of Color
Ronald E. McNair Scholars Program
Student Support Services
UNM Division of Equity and Inclusion

Mission: Graduate

Mission: Graduate is a partnership that brings together educators, employers, educational support providers, government leaders, and citizens to design collaborative projects and align organizational practice and policy toward achieving common goals. They seek partners with interest, experience, and expertise needed to successfully realize their seven core outcomes.

Girls in STEM Groups

These New Mexico groups are devoted to engaging primarily K-12 girls in STEM. The NM Girls Connection Programs and NM Out-of-School Time Network links includes an assortment of programs.

NM Girls Connection Programs
NM Out-of-School Time Network
Girl Scouts of New Mexico Trails
Expanding Your Horizon (EYH): ABQ
STEM Santa Fe

Industries in NM

Industry collaborations are positive outcomes of some broader impacts. Below are links to some industries in New Mexico already working to improve STEM education and may be productive partners in your proposal.

Key Albuquerque industries
Boeing
Honeywell
Intel
Northrop Grumman
Raytheon

UNM College Based Outreach

A number of schools and colleges at UNM offer outreach opportunities. These are excellent places to begin your own outreach effort, either as an example to follow or as a collaborative partner. Check out the links to their outreach pages below.

College of Arts & Sciences
College of Education
College of Fine Arts
School of Architecture & Planning
School of Engineering

New Mexico EPSCoR

One mission is to cultivate a well-qualified and diverse Science, Technology, Engineering and Mathematics (STEM) workforce and develop a strong culture of innovation and entrepreneurship. Through collaborations with organizations ranging from afterschool programs to colleges and universities, from museums to business startup accelerators, NM EPSCoR Education and Outreach programs serve a wide range of audiences across the state.

New Mexico EPSCoR

Government Labs in NM

Miliary and National Labs in New Mexico participate in a variety of outreach efforts. Some of them may provide examples to follow while others will include opportunities for partnerships. Check out the links to their outreach pages below.

Air Force Research Lab
Los Alamos National Laboratory
Sandia National Laboratories

Girls in STEM Groups

These New Mexico groups are devoted to engaging primarily K-12 girls in STEM. The NM Girls Connection Programs and NM Out-of-School Time Network links includes an assortment of programs.

NM Girls Connection Programs
NM Out-of-School Time Network
Girl Scouts of New Mexico Trails
Expanding Your Horizon (EYH): ABQ
STEM Santa Fe

Research Data Support

Effective open source software and data sharing can be incorporated into broader impacts. The Research Data Services provides a variety of services in support of effective research data planning, management, preservation, discovery and use. In addition, the IDS team also provides support for several key research data infrastructure capabilities that are maintained by the Library for use by UNM's research community.

CSTA New Mexico

The Computer Science Teachers Association (CSTA) supports and promotes the teaching of computer science. CSTA provides opportunities for K-12 teachers and their students to better understand computer science and to more successfully prepare themselves to teach and learn. The NM chapter offers a way to get involved with CS teachers helping to shape CS education in New Mexico.

Albuquerque Museums

Below are links to contact information for local museums. UNM has a broader impacts design partnership with the Explorers Science Center, Anthony Salcino is our direct contact there.

Albuquerque Museum
Explorers Science Center
Indian Pueblo Cultural Center
International Balloon Museum
Museum of Natural Science & History
NM Natural History Museum
CAMPUS RESOURCES

• New Course Development
• K-12 Specialists
• Undergraduate Specialists
• Underrepresented/Minority Groups Specialists

Request support from the Faculty Research Development Network by clicking this link.
NEW COURSE DEVELOPMENT

- UNM Curriculum Forms & Resources - https://registrar.unm.edu/faculty--staff-resources/index.html
- Head of your department
  - Departmental letters are required for NSF CAREER proposals
- Associate Provost for Curriculum & Assessment
  - Pamela Cheek
- Center for Teaching and Learning - http://ctl.unm.edu/
- Graduate Interdisciplinary Studies
K-12 SPECIALISTS

- NM STEM-H Center
  - Karen Kinsman (Director)
  - [http://nmstemh.org/](http://nmstemh.org/)

- NM MESA
  - Kim Scheerer (UNM Contact)

- Engineering Student Success Center
  - Elsa Castillo (Asso. Director)
  - [https://ess.unm.edu/index.html](https://ess.unm.edu/index.html)

- ABQ Math Teachers’ Circle
  - Michael Nakamaye (UNM Prof.)
  - [http://www.unm.edu/~mathtc/index.php](http://www.unm.edu/~mathtc/index.php)
UNDERGRADUATE SPECIALISTS

• STEM Collaborative Center
  - Tim Schroeder (Director)
  https://stem.unm.edu/

• STEM University
  https://stemuniversity.unm.edu/

• Engineering Student Success Center
  - Steve Peralta (Director)
  https://ess.unm.edu/index.html
UNDERREPRESENTED/MINORITY GROUPS SPECIALISTS

- Student Support Services
  [http://ssstrio.unm.edu/](http://ssstrio.unm.edu/)

- Ronald E. McNair Scholars Program
  - Ricardo Romero (Program Specialist)
  [https://mcnair.unm.edu/](https://mcnair.unm.edu/)

- Project for New Mexico Graduates of Color
  [http://pnmgc.unm.edu/](http://pnmgc.unm.edu/)

- El Centro de la Raza
  - Rosa Isela Cervantes (Director)
  [https://elcentro.unm.edu/](https://elcentro.unm.edu/)

- Native Americans in STEM (NASTEM)
  - Douglas Williams (Program Coordinator)
  [https://ess.unm.edu/ess-programs/nastem/index.html](https://ess.unm.edu/ess-programs/nastem/index.html)

- African American Student Services
  - W. Scott Carreathers (Director)
  [http://afro.unm.edu/](http://afro.unm.edu/)

UNM Spring 2018 Total Enrollment by Ethnicity*

- Hispanic 43%
- White 36%
- Native American 5%
- Asian 4%
- African American 2%
- Native Hawaiian 0%
- Two or More Races 3%
- Unknown 2%
- Foreign 5%

**Main Broader Impacts Take Aways**

- Make it meaningful and applicable.
- Try to incorporate it into your long-term personal goals.
- You’re not alone.
QUESTIONS?
REALISTICALLY ESTABLISHING YOUR BROADER IMPACT

December 11, 2018

STEPHANIE TOFIGHI (sctofighi@unm.edu)
FACULTY RESEARCH DEVELOPMENT OFFICE
AGENDA

How to Plan Realistically

On Campus BI Example: STEM Collaborative Center

Off Campus BI Example: Explora Science Museum

Identifying your Impact Capacity and Assets
HOW TO PLAN REALISTICALLY...

1. Follow the Solicitation
2. Identify a Target Audience
3. Develop Appropriate Partnerships
4. Set a Goal for that Audience
5. Budget Accordingly
6. Include an Evaluation Plan
IDENTIFYING A TARGET AUDIENCE

• Realistically applicable to your proposed project goals
• Fits your personality and qualifications
• Effectively accounts for time, budget, and people constraints
DEVELOP APPROPRIATE PARTNERSHIPS

- Faculty Research Development
  Office Broader Impacts Page
- STEM NM Ecosystem
- Office of Community Engagement
  Learning and Research
SETTING A GOAL FOR YOUR TARGET AUDIENCE

• Remember to include your BI partners in this discussion to incorporate their goals
• Timeline to the Future
• How many people, industries, government agencies, etc. will be affected?
• Do you need to include learning standards?
# Budget Resources Accordingly

## Money & Goods
- Is it included in the proposed budget?
- Is it participant support?
- Is it unfunded collaboration?
- Are you using resources already available at your home or collaborative institution?
- How much will an evaluator cost?

## People
- Do you have enough people?
- Are they qualified to conduct the proposed activities?
- Do you need to hire a consultant?
- Do you have the right contacts?
- How do you start the conversation to develop a broader impacts relationship?

## Time
- How long will your broader impact take?
- Does it need to happen during a certain time to meet the goals?
- Do you or your target audience need to travel?
- Is this feasible to both your schedules?

Request support from the Faculty Research Development Network by clicking this [link](link).
Evaluator Options

Internal Options
- Institute of Social Research
- Cradle to Career Policy Institute
- Develop your own Evaluation Plan
- FRDO Website Resources

External Options
- New Mexico Evaluators
- Professional Evaluator
  - Lynn Nordstrom
ON CAMPUS BI EXAMPLE:
STEM COLLABORATIVE CENTER

• Director: Tim Schroeder, timschroeder@unm.edu

• Assistant Director: Cameron Goble, camerong@unm.edu
OFF CAMPUS BI EXAMPLE: ¡EXPLORA! SCIENCE MUSEUM

- Broader Impacts Design Contact: Anthony Salvagno, asalvagno@explora.us
IDENTIFYING YOUR IMPACT CAPACITY AND ASSETS
Main Broad Impact Take Aways

- Make it meaningful and applicable.
- Try to incorporate it into your long-term personal goals.
- You’re not alone.
### QUESTIONS?

**FACULTY RESEARCH DEVELOPMENT NETWORK DIRECTORY**

<table>
<thead>
<tr>
<th>FACULTY RESEARCH DEVELOPMENT OFFICE STAFF</th>
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<tbody>
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<table>
<thead>
<tr>
<th>COLLEGE EMBEDDED FACULTY SUPPORT TEAM</th>
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<tbody>
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| **Elizabeth Nocella**                      |
| Sr. Contract & Grant Administrator         |
| Email: enocella@unm.edu                    |
| Phone: (505) 277-2218                      |
| College of Fine Arts Research              |
SEE YOU NEXT YEAR!

January 15, 2019
Building Your Dream Budget
NSF CAREER Cost Guidelines

- Total Costs (TC) = Direct (DC) + Indirect (IC)
- UNM Indirect Cost Rate = 51.5%
  - Excludes tuition, participant support, & equipment
- $400,000 TC minimum for 5-year duration
  - Exceptions include:
    - Directorate of Biology (BIO) - $500,000 TC minimum
    - Directorate of Engineering (ENG) - $500,000 TC minimum
    - Office of Polar Programs (OPP) - $500,000 TC minimum
NSF Proposal Requirements

- **Annual budget for lead institution and subawards**

- **Budget justification**
  (5 page maximum for each institution)

  - Lead institution
  - Each subaward
CAREER Specific Restrictions

- PI salary ✓
  - NSF restricts faculty PI salary to 2 months for all NSF funding
- Co-PIs
- Other Senior Personnel ✓
- Postdocs, Grad Students, Undergrads, High School Students ✓
- Subawards ✓
- Education and/or Outreach Activities ✓
- External Evaluators ✓
- Foreign Travel to Work with Collaborates ✓
  - For PI + U.S. participants

Primary support for a CAREER award **must** be for the PI and his/her research efforts.
Budgeting to Work with Explora

Educational Programs

- Field Trips
- Semester Programs
- Camps
- Youth Intern Program
- Educator Workshops
- Outreach Programs
What will your research plan accomplish in 5 years and how much will it cost?

- **People**
  - Salary
  - Fringe
  - Tuition
- **Equipment ($>5000)**
- **Materials and Supplies**
  - Computers and/or Wearables
  - Consumables
- **Evaluations**

- **Travel**
  - Collaborate
  - Field work
  - Conferences
  - Workshops

- **Outreach and Education**
  - Materials and Supplies
  - PI and team travel
  - Participant Support
What resources are available to you?

- Administrative Support
  - Budget development
  - Grant management for post award
- Equipment to borrow or rent?
- Available facilities on and off campus
- Outreach collaboration = shared evaluation
- Other financial support, i.e. start-up $, internal awards, other external funds
- Department paid RA or TA
- UNM Student Services Organizations - provide funding for certain underrepresented student groups
What to do next?

- Play around with the budget template provided
- Make an appointment to visit with your department grant support personnel
  - Find more at [http://frdo.unm.edu/dept_frdo_support](http://frdo.unm.edu/dept_frdo_support)
- Start getting equipment quotes and/or facility use rates
- Develop hypothetical travel plans
- Start finding out what supplies, travel, and participant support your education and outreach efforts will need
- Develop your evaluation plan or get quotes from external evaluators
  - Keep in mind that the NSF says, “Meaningful assessment and evaluation of NSF funded projects should be based on appropriate metrics... If the size of the activity is limited, evaluation of that activity in isolation is not likely to be meaningful. Thus, assessing the effectiveness of these activities may best be done at a higher, more aggregated, level than the individual project.”
NSF Administrative Documents

January 30, 2019
required documents for all NSF proposals plus 2 that may be required depending on proposal

Post doc Mentoring Plan

Supplementary Docs (Letters of collaboration)

CAREER has 12 required documents

2 pg. Department support letter uploaded as 1st Supplementary Doc

PROPOSAL DOCUMENTS

1 Proposal Cover Sheet

2 Proposal Summary Abstract

3 Table of Contents

4 Project Description

5 Literature Cited

6 References

7 Budget

8 Current and Pending Support

9 Facilities, Equipment, and Other Resources

10 Data Management Plan

11 Post Doc Mentoring Plan

12 Supplementary Documentation

13 Collaborators and Other Affiliation Information

NSF Proposal Checklist

Please review program specific checklist for compliance and completeness.

Internal deadline* OIST - 5 business days prior to sponsor or lead institution deadline

Award notification At least 6 months after sponsor deadline

*If the project has collaborative partners (subawards or consultants), deadlines will need to be extended accordingly to gather the necessary documentation for these partners.

Formatting Instructions

Document format PDF only

Font type/size Times New Roman - 11 or larger

Line spacing Single spaced

Page size 8.5 x 11

Margins 1.0 all sides

Required Administrative NSF CAREER Documents

- **Biographical Sketch**
  - 2 pg. abbreviated CV
  - Must follow NSF format
    - Professional Preparation (institute, location, major, degree, year)
    - Appointments (in reverse chronological order)
    - Products (10 total = 5 most relevant + 5 more)
    - Synergistic Activities (5 examples)

- **Change to Synergistic Activities this year**
  - Up to 5 individual examples that demonstrate the “broader impact of the individual’s professional and scholarly activities that focuses on the integration and transfer of knowledge as well as its creation”.
  - Do not list instances of your example, i.e. “Reviewed articles for journals”
    - Journal A
    - Journal B
    - Journal C
  - Instead, include details about five individual examples, i.e. “Organized the 2018 UNM/PNM Math Contest which engaged 7th-12th grade students and teachers across the state of New Mexico. The event was intended to help improve student math scores thus making them more competitive for college scholarships.”
Required Administrative NSF CAREER Documents

- Biographical Sketch
  - Current & Pending Support
    - Similar to NIH JIT Other Support
    - Submitted with the proposal
    - Must include proposal being submitted as pending
  - Current support from NSF cannot exceed 2 month of your time
    - If current NSF support = 2 months, include the line that if this proposal is funded, you will adjust the amount of time on other projects accordingly in your project description or budget justification
Required Administrative NSF CAREER Documents

- Biographical Sketch
- Current & Pending Support
- Collaborators & Other Affiliates
  - Not seen by reviewers but is used by NSF to identify CoIs of potential review panel
  - Follow NSF Template
  - If more than 10 senior personnel are on a proposal upload to Fastlane as a csv file
Required Administrative NSF CAREER Documents

- Biographical Sketch
- Current & Pending Support
- Collaborators & Other Affiliates
- Facilities, Equipment, and Other Resources
  - Follow NSF Template
  - Great place to expand on resources already available to you both at home institution and other research locations not included in budget
    - No page limit
    - Especially effective since Collaborator’s letters are so minimal now
Required Administrative NSF CAREER Documents

- Biographical Sketch
- Current & Pending Support
- Collaborators & Other Affiliates
- Facilities, Equipment, and Other Resources
- Data Management Plan

- 2 pg. limit
- Description of how proposal will support NSF dissemination and data sharing policies
  - Include sections from NSF template
- Type of data produced and format of files
- How it will be accessed, shared, and archived
## Required Administrative NSF CAREER Documents

- **Biographical Sketch**
- **Current & Pending Support**
- **Collaborators & Other Affiliates**
- **Facilities, Equipment, and Other Resources**
- **Data Management Plan**
- **Department Support Letter**
  - Must come from Dept. Chair
  - Confirms PI’s eligibility and department’s support
  - Uploaded as 1st Supplementary Document in the CAREER proposal
- **More discussion to come during March 20th meeting**

### References Cited
- **Required Administrative NSF CAREER Documents**
  - Biographical Sketch
  - Current & Pending Support
  - Collaborators & Other Affiliates
  - Facilities, Equipment, and Other Resources
  - Data Management Plan
  - Department Support Letter

<table>
<thead>
<tr>
<th>References Cited</th>
<th>0 page limit</th>
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<tbody>
<tr>
<td>Include names of all authors (no et al., article &amp; journal title, book title, volume number, page numbers &amp; year of publication</td>
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<th>Biographical Sketch</th>
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<th>Budget</th>
<th>Each proposal must contain a budget for each year of support requested.</th>
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<tbody>
<tr>
<td>Current and Pending Support</td>
<td><strong>No page limit</strong></td>
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<td>Must include the proposed project as pending</td>
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<tr>
<td>- Facilities, Equipment, and Other Resources</td>
<td>- No page limit</td>
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<tr>
<th>Data Management Plan</th>
<th>2 page limit</th>
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<tbody>
<tr>
<td>Describe how the proposal will conform to NSF policy on the dissemination and sharing of research results.</td>
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<tr>
<th>Post Doc Mentoring Plan</th>
<th>1 page limit</th>
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<tr>
<td>Required if funding is requested to support postdoctoral researchers</td>
<td></td>
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<tr>
<td>Describe the mentoring that will be provided to all postdoctoral researchers supported by the project, irrespective of whether they reside at the submitting organization, any subawardee organization, or at any organization participating in a simultaneously submitted collaborative project</td>
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<td>Format: Alphabetical order by last name.</td>
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<td>- Collaborators and Co-Editors. On a project, book, article, report, abstract or paper during the 48 months preceding this proposal. Also, co-editors of a journal, compendium or conference proceedings during the 24 month preceding this proposal.</td>
<td></td>
</tr>
<tr>
<td>- Graduate Advisors. Individual’s own graduate advisor(s) and current organizational affiliation if known.</td>
<td></td>
</tr>
<tr>
<td>- Ph.D. Advisor. All persons with whom the individual has had an association as a Ph.D. advisor. (special template)</td>
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</tbody>
</table>
Post Doc Mentoring Plan

- *Required* if proposed funding will directly support a postdoc researcher
- 1 page limit
- Description of mentoring postdoc will receive through research project participation
- NSF template and sample available at http://frdo.unm.edu/?q=proposal_support

5 References Cited – no page limit
- Include names of all authors (no et al.), article & journal title, book title, volume number, page numbers & year of publication
- If no references, a statement to that effect should be uploaded

6 Biosketch(es) – 2 page limit per investigator
- Required for all senior project personnel
- Must follow a specific format:
  - Professional Preparation – including location of undergrad, grad and postdoc institution
  - Appointments
  - Products (10 total- 5 products closely related and 5 other significant products)
  - Synergistic Activities (Up to 5 examples that show broader impact)

7 Budget - Each proposal must contain a budget for each year of support requested.
- Budget Justification – 5 page budget justification limit for the prime and each sub award.
- Current and Pending Support – **no page limit
  - Must include the proposed project as pending

9 Facilities, Equipment, and Other Resources – no page limit
- If no facilities, a statement to that effect should be uploaded

10 Data Management Plan – 2 page limit
- Describe how the proposal will conform to NSF policy on the dissemination and sharing of research results.

11 Post Doc Mentoring Plan – 1 page limit
- Required if funding is requested to support postdoctoral researchers
- Describe the mentoring that will be provided to all postdoctoral researchers supported by the project, irrespective of whether they reside at the submitting organization, any subawardee organization, or at any organization participating in a simultaneously submitted collaborative project

12 Supplementary Documentation (If applicable)
- Collaboration letters must only state the intent to collaborate and not contain endorsements or evaluation of the project

13 Collaborators and Other Affiliations Information
- Collaborations and other affiliation information must be provided, separately, on the NSF excel template for each individual identified as senior project personnel
- Format: Alphabetical order by last name.
  - Collaborators and Co-Editors. On a project, book, article, report, abstract or paper during the 48 months preceding this proposal. Also, co-editors of a journal, compendium or conference proceedings during the 24 month preceding this proposal.
Letters of Collaboration

- Upload as Supplementary Documents after Department Support Letter
- Confirmation of named individuals or groups within proposal not in the budget
- *Must* follow this format

[Organization Letterhead]

[Date]

To Whom It May Concern:

If the proposal submitted by Dr. [PI's Name] entitled “CAREER:[Title of Proposal]” is selected for funding by NSF, it is my intent to collaborate and/or commit resources as detailed in the Project Description or the Facilities, Equipment or Other Resources section of the proposal.

[Signature]

[Collaborator Name]

[Organization]
Campus Resources

Data Management Plan
Research Data Services
Center for Advanced Research Computing

Facilities, Equipment, and Other Resources
Applicable Start-up Details
Lab and Office equipment and resources
Department or College specific resources
Ask FRSOs or Department Administrators for help
Next Steps for CAREER Cohort

<table>
<thead>
<tr>
<th>Writers Workshop Peer Review Format</th>
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<tbody>
<tr>
<td><strong>February &amp; March 2019</strong></td>
<td><strong>Designing your Education Plan</strong></td>
</tr>
<tr>
<td>February 13, 2019</td>
<td>Develop (What makes the most sense for you?)</td>
</tr>
<tr>
<td>February 27, 2019</td>
<td>Build an Appropriate Evaluation Plan</td>
</tr>
<tr>
<td>March 6, 2019</td>
<td>Integrate it with your Research Plan</td>
</tr>
<tr>
<td>March 20, 2019</td>
<td>Integrate it with Goals of Dept. and UNM in the Letter from your Chair</td>
</tr>
<tr>
<td><strong>April 2019</strong></td>
<td><strong>Developing your Broader Impacts Plan</strong></td>
</tr>
<tr>
<td>April 10, 2019</td>
<td>Identifying the Right BI for you as the PI</td>
</tr>
<tr>
<td>April 24, 2019</td>
<td>Building a Plan within your Budget</td>
</tr>
<tr>
<td><strong>May 2019</strong></td>
<td><strong>Bring it Together - Best Introduction Yet</strong></td>
</tr>
<tr>
<td>May 8, 2019</td>
<td>Grab the Reviewers Attention</td>
</tr>
<tr>
<td>May 22, 2019</td>
<td>Prepare them to be Amazed</td>
</tr>
</tbody>
</table>

- Feb 13 – Guests Susan Atlas, Rob Miller, and Elizabeth Dirk to contribute to discussion about CAREER research and education integration
- Feb 27 and Mar 6 – Peer review discussion of drafts of Education Plans
- Mar 20 – Guests Steve Cabaniss and Abhaya Datye to contribute to discussion about Department Support Letter
- Apr 10 and 24 – Peer review discussion of drafts of Broader Impacts Plans
- May 8 and 22 – Peer review discussion of drafts of Introduction
Peer Review Assignments

- NSF Review Panel Format
  - 1st Reviewer Leads Discussion of one draft
  - 2nd Reviewer Speaks Next
  - 3rd Reviewer Adds Anything Not Already Discussed
  - Process will repeat for each draft of the week with reviewers holding different positions
  - 3-4 drafts will be reviewed each “Peer Review Discussion” meeting depending on the week
  - Meeting draft submitters will NOT be discussion leaders but they will receive all drafts to read and are encouraged to contribute to the discussion

Draft Schedule

February 18
- 1st set of Education Plan drafts due & Reviewers assigned

February 25
- 2nd set of Education Plan drafts due & Reviewers assigned

April 1
- 1st set of Broader Impacts Plan drafts due & Reviewers assigned

April 15
- 2nd set of Broader Impacts Plan drafts due & Reviewers assigned

April 29
- 1st set of Introduction drafts due & Reviewers assigned

May 13
- 2nd set of Introduction drafts due & Reviewers assigned
Questions or Comments?