FY 2019 UNM NSF CAREER COHORT

Introductory Meeting

October 9, 2018

CAREER Proposal Timeline

Time Frame	Task
D – 12 months	Start making outreach connections if part of your proposal
D – 9 months	Identify and make contact with your NSF program officer. Consider sending them a white paper if appropriate.
D – 6 months	Select expert readers to advise on proposal (Internal & External)
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

FRDO Led Workshop Format	
October 2018	Introductory Meeting
November 2018	Broader Impacts Workshop
December 2018	Building your Dream Budget
January 2019 (2 sessions)	Developing Administrative Documents
Writers Workshop Peer Review Format	
February & March 2019 (4 sessions)	Designing your Education Plan
April 2019 (2 sessions)	Developing your Broader Impacts Plan
May 2019 (2 sessions)	Bring it Together – the Introduction

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
  - NSF ID associated with UNM
  - UNM DUNS number - 868853094

Get Started

Make contact with your NSF Program Officer

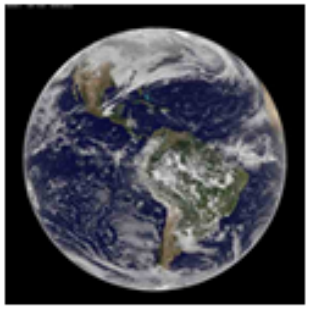
Establish your Broader Impacts partnerships

Identify Proposal Readers

Internal

THE UNIVERSITY OF NEW MEXICO

External



AND

Expert Reviewers

Non-Expert Reviewers

CAREER Cohort Schedule

FRDO Led Workshop Format	
October 9, 2018	Introductory Meeting
November 13, 2018	Broader Impacts Workshop
December 11, 2018	Building your Dream Budget
January 15, 2019	Personnel Documents – Biosketch, Current and Pending, Collaborators and Other Affiliates
January 29, 2019	Data Management Plan, Facilities & Equipment, Bibliographies
Writers Workshop Peer Review Format	
February & March 2019	Designing your Education Plan
February 12, 2019	Develop (What makes the most sense for you?)
February 26, 2019	Build an Appropriate Evaluation Plan
March 5, 2019	Integrate it with your Research Plan
March 19, 2019	Integrate it with Goals of Dept. and UNM in the Letter from your Chair
April 2019	Developing your Broader Impacts Plan
April 9, 2019	Identifying the Right BI for you as the PI
April 23, 2019	Building a Plan within your Budget
May 2019	Bring it Together - Best Introduction Yet
May 7, 2019	Grab the Reviewers Attention
May 21, 2019	Prepare them to be Amazed

Designing the Right Broader Impacts Plan for You

November 15, 2018

Stephanie Tofighi (sctofighi@unm.edu)
Faculty Research Development Office

Agenda

- 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.**

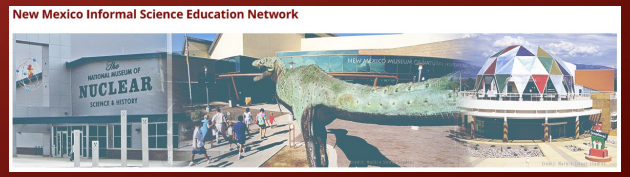
When the Broader Impacts are Supported by, yet Complementary to the Research Project…

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

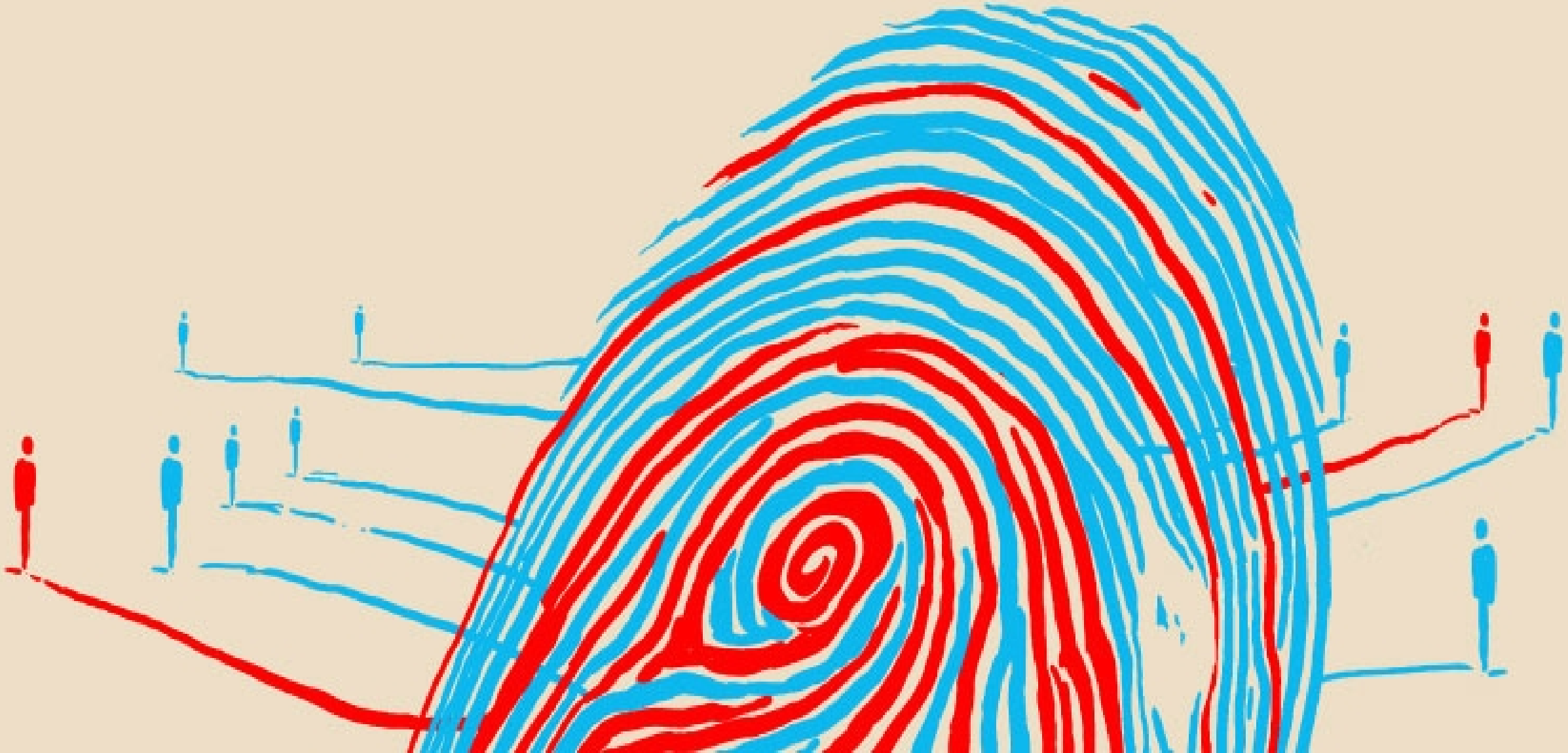
- **Museum exhibit that integrated computer vision tools developed through this project with robotics tools from another Expedition**

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.

Tools for Preparing your Broader Impact

- Developing a Broader Impacts Plan
- NABI Broader Impacts Guiding Principles and Questions for NSF Proposals
- NSF Merit Review Broader Impacts Criterion: Representative Activities
- Journal of STEM Outreach
  - Journal for researchers who develop and implement programs connecting formal and informal educators with STEM professionals.

Examples of Broader Impacts

- Publications with undergraduate or minority student authors
- Community or workforce engagement
- K-12 education and outreach
- Undergraduate research experience
- Industry engagement
- Instances of improving societal well-being or public awareness
- Transformative discovery
- Data sharing

UNM BROADER IMPACTS

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.

Submit a Request for Proposal 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**.

Tools Available Online

- NSF Perspectives on Broader Impacts - https://www.nsf.gov/od/oia/publications/Broader_Impacts.pdf
- National Alliance on Broader Impacts (NABI) - https://broaderimpacts.net/
- Broader Impacts at UNM - http://frdo.unm.edu/unm_broader_impacts

NM STEM Connection

Managed by the UNM STEM-H Center 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) put on 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

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.

Government Labs in NM

Military 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

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, & 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

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 RDS 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 ways to get involved with CS teachers helping to shape CS education in New Mexico.

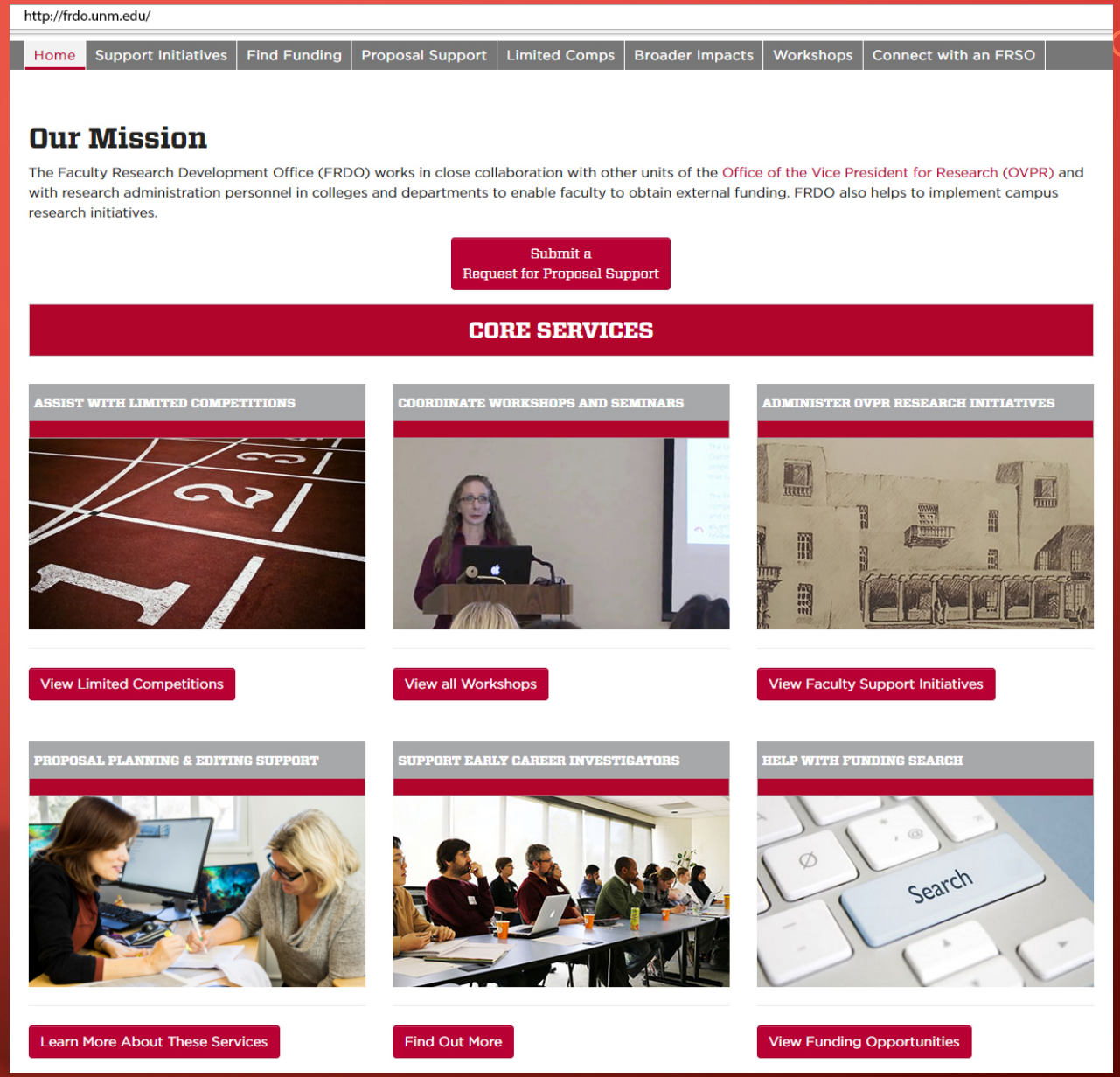
Albuquerque Museums

Below are links to contact information for local museums. UNM has a Broader Impacts Design partnership with the Explora Science Center. Anthony Salvagno is our direct contact there.

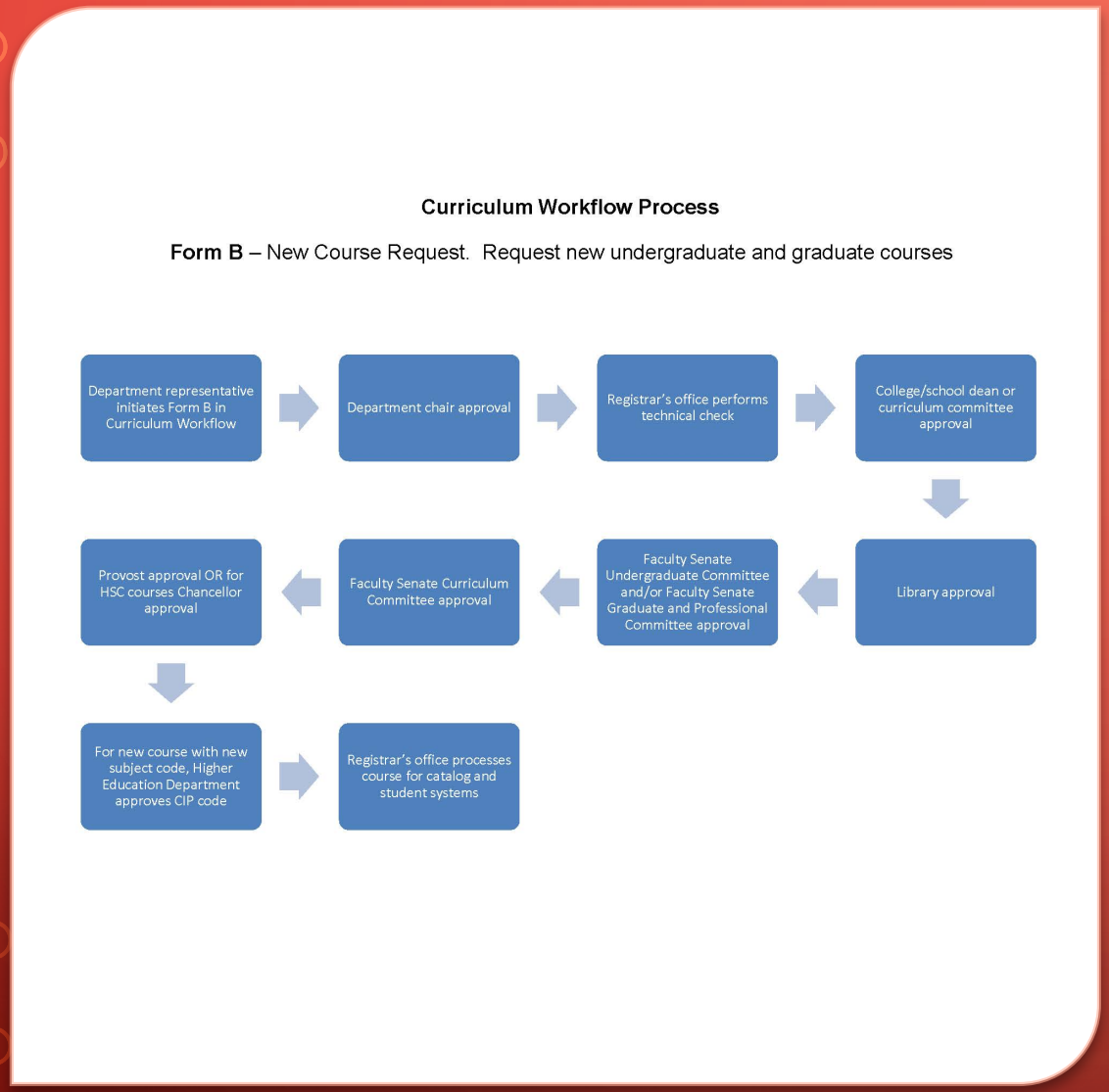
Albuquerque Museum
¡Explora!
Indian Pueblo Cultural Center
International Balloon Museum
Museum of Nuclear Science & History
NM Natural History Museum

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

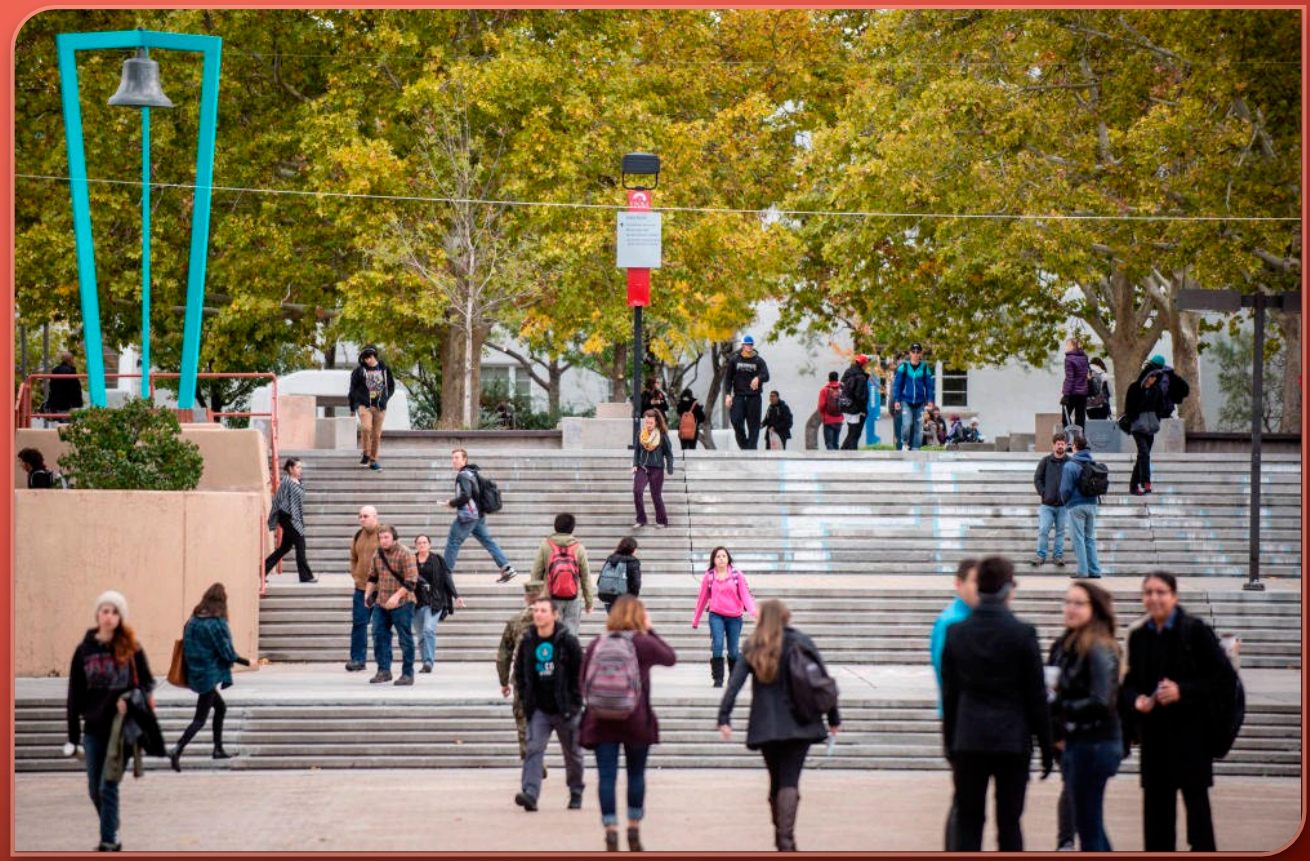
- UNM Curriculum Forms & Resources - https://registrar.unm.edu/faculty--staff-resources/index.html
- Head of your department
  - Departmental letters are required for NSF CAREER proposals
- Associate Provost for Curriculum & Assessment
  - Pamela Cheek
- Center for Teaching and Learning - http://ctl.unm.edu/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

K-12 Specialists

- NM STEM-H Center
  - Karen Kinsman (Director)
  http://nmstemh.org/
- NM MESA
  - Kim Scheerer (UNM Contact)
  http://www.nmmesa.org/
- Engineering Student Success Center
  – Elsa Castillo (Asso. Director)
  https://ess.unm.edu/index.html
- ABQ Math Teachers' Circle
  - Michael Nakamaye (UNM Prof.)
  http://www.unm.edu/~mathtc/index.php

Undergraduate Specialists

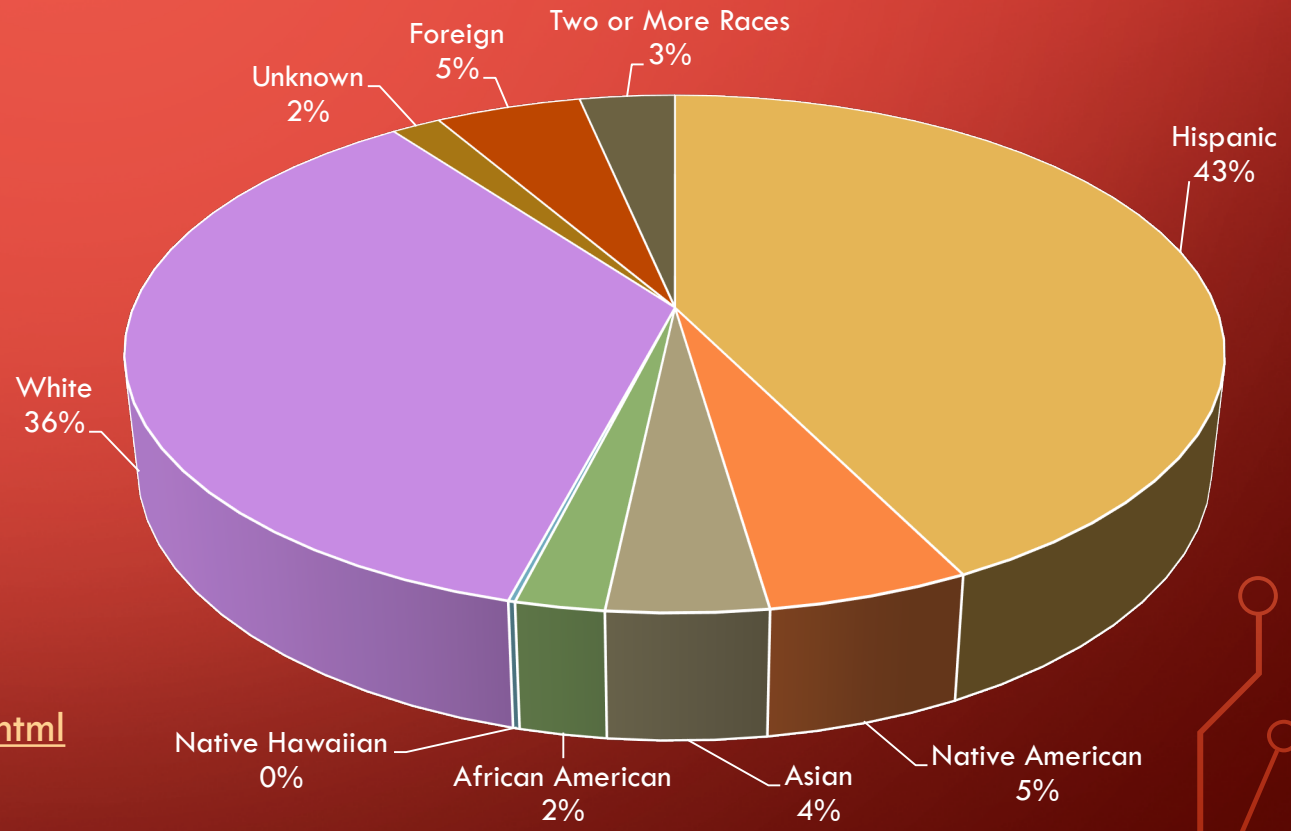
- STEM Collaborative Center
  - Tim Schroeder (Director)
  https://stem.unm.edu/
- STEM University
  https://stemuniversity.unm.edu/
- Engineering Student Success Center
  -Steve Peralta (Director)
  https://ess.unm.edu/index.html



Underrepresented/Minority Groups Specialists

- Student Support Services
  http://ssstrio.unm.edu/
- Ronald E. McNair Scholars Program
  -Ricardo Romero (Program Specialist)
  https://mcnair.unm.edu/
- Project for New Mexico Graduates of Color
  http://pnmgc.unm.edu/
- El Centro de la Raza
  -Rosa Isela Cervantes (Director)
  https://elcentro.unm.edu/
- Native Americans in STEM (NASTEM)
  -Douglas Williams (Program Coordinator)
  https://ess.unm.edu/ess-programs/nastem/index.html
- African American Student Services
  W. Scott Carreathers (Director)
  http://afro.unm.edu/

UNM Spring 2018 Total Enrollment by Ethnicity*



*http://oia.unm.edu/facts-and-figures/documents/spring-2018-official-enrollment-report.pdf

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?

FACULTY RESEARCH DEVELOPMENT NETWORK DIRECTORY

FACULTY RESEARCH DEVELOPMENT OFFICE STAFF

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School of Architecture+Planning Research

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College of Fine Arts Research

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?
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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

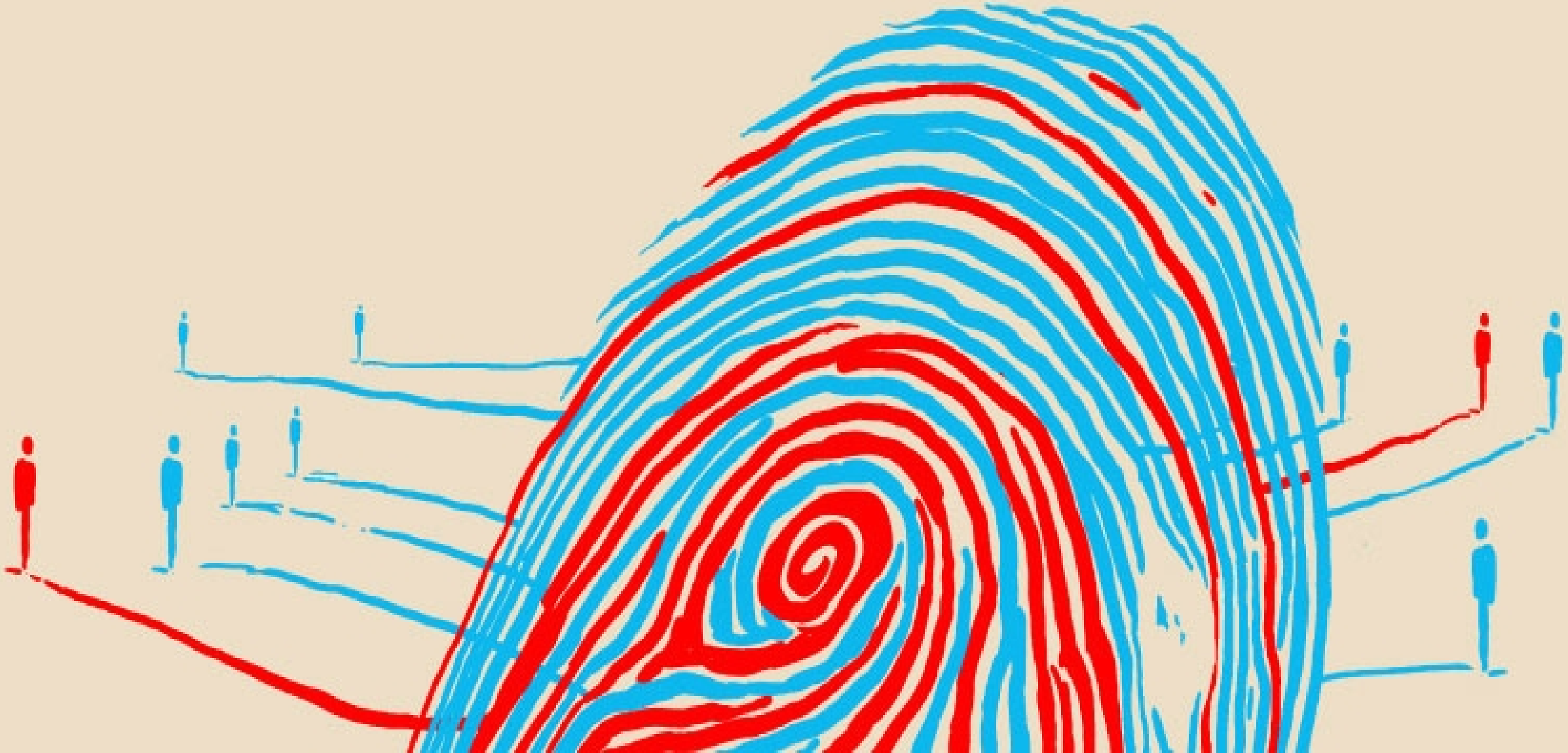
¡explora!

Ideas You Can Touch

Ideas que puedes tocar

- Broader Impacts Design Contact: Anthony Salvagno, asalvagno@explora.us

IDENTIFYING YOUR IMPACT CAPACITY AND ASSETS



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College of Fine Arts Research

SEE YOU NEXT YEAR!

January 15, 2019

Building Your Dream Budget

Developing your Dream NSF CAREER Budget

January 15, 2019

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.

Educational Programs

Field Trips

Semester Programs

Camps

Youth Intern Program

Educator Workshops

Outreach Programs

Budgeting to Work with Explora

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?

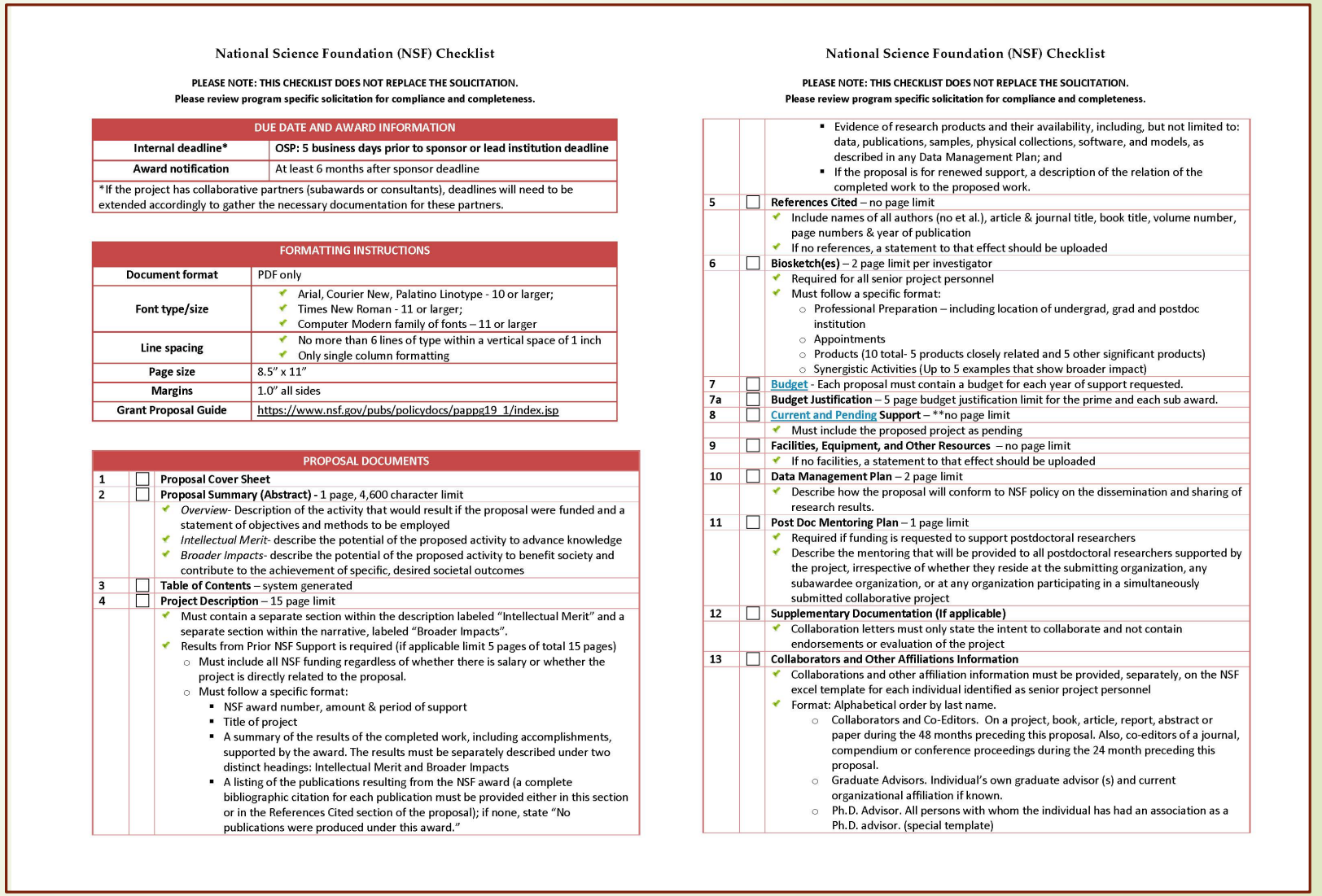
- Play around with the budget template provided
- Make an appointment to visit with your department grant support personnel
  - Find more at http://frdo.unm.edu/dept_frdo_support
- Start getting equipment quotes and/or facility use rates
- Develop hypothetical travel plans
- Start finding out what supplies, 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

NSF Proposal Checklist

- 11 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



National Science Foundation (NSF) Checklist

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Please review program specific solicitation for compliance and completeness.

DUE DATE AND AWARD INFORMATION	
Internal deadline*	**OSP: 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	✔ Arial, Courier New, Palatino Linotype - 10 or larger; ✔ Times New Roman - 11 or larger; ✔ Computer Modern family of fonts – 11 or larger
Line spacing	✔ No more than 6 lines of type within a vertical space of 1 inch ✔ Only single column formatting
Page size	8.5" x 11"
Margins	1.0" all sides
Grant Proposal Guide	https://www.nsf.gov/pubs/policydocs/pappg19_1/index.jsp

		PROPOSAL DOCUMENTS
1	☐	**Proposal Cover Sheet**
2	☐	**Proposal Summary (Abstract) -** 1 page, 4,600 character limit
		✔ *Overview*- Description of the activity that would result if the proposal were funded and a statement of objectives and methods to be employed
		✔ *Intellectual Merit*- describe the potential of the proposed activity to advance knowledge
		✔ *Broader Impacts*- describe the potential of the proposed activity to benefit society and contribute to the achievement of specific, desired societal outcomes
3	☐	**Table of Contents** – system generated
4	☐	**Project Description** – 15 page limit
		✔ Must contain a separate section within the description labeled "Intellectual Merit" and a separate section within the narrative, labeled "Broader Impacts".
		✔ Results from Prior NSF Support is required (if applicable limit 5 pages of total 15 pages)
		○ Must include all NSF funding regardless of whether there is salary or whether the project is directly related to the proposal.
		○ Must follow a specific format:
		▪ NSF award number, amount & period of support
		▪ Title of project
		▪ A summary of the results of the completed work, including accomplishments, supported by the award. The results must be separately described under two distinct headings: Intellectual Merit and Broader Impacts
		▪ A listing of the publications resulting from the NSF award (a complete bibliographic citation for each publication must be provided either in this section or in the References Cited section of the proposal); if none, state "No publications were produced under this award."

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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.
7a	☐	**Budget Justification** – 5 page budget justification limit for the prime and each sub award.
8	☐	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.
		○ Graduate Advisors. Individual's own graduate advisor (s) and current organizational affiliation if known.
		○ Ph.D. Advisor. All persons with whom the individual has had an association as a Ph.D. advisor. (special template)

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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."

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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

National Science Foundation (NSF) Checklist

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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

National Science Foundation (NSF) Checklist

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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

National Science Foundation (NSF) Checklist

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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

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Required Administrative NSF CAREER Documents

- Biographical Sketch
- Current & Pending Support
- Collaborators & Other Affiliates
- Facilities, Equipment, and Other Resources
- Data Management Plan
- Department Support Letter
  - 2 pg. limit
  - 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

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

		described in any Data Management Plan; and ▪ If the proposal is for renewed support, a description of the relation of the completed work to the proposed work.
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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]

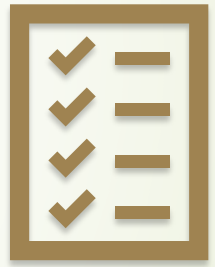
[Organization]

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

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

- 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?