NSF CAREER Awards

Guide to the NSF CAREER Application Grant process

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Housekeeping Items

Mute Button	• Please stay muted unless asking a question or entering a discussion
Chat Box	• I'll address questions at stopping points in the presentation
Recording	• We are recording the workshop • We will post it online for your reference
Slides	• We will email PDF of slides to everyone after the workshop

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Research Development Services

Funding Related Services

- Funding searches and strategy
- Pivot trainings
- Internal funding programs coordination

Proposal Services

- Checklists and templates
- Critiques and copy edits
- Guidance on solicitations

Other Services

- Oversee limited submissions – internal competitions
- Institutional support coordination and letters

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NSF CAREER SOLICITATION

Basic Information and Links

▶ [Solicitation 20-525](#) and [FAQs](#)

▶ Due Date: Fourth Monday of July

▶ Project Time Period: 5 years

▶ Project Costs:

  ▪ Min. of $500K for BIO, ENG, Polar Programs

  ▪ Min. of $400K for all other programs

▶ Apply to any appropriate NSF division

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Eligibility

▶ Hold a doctoral degree

▶ Untenured as of the submission deadline

▶ At least 50% tenure track position or equivalent

▶ Assistant professor or equivalent

▶ Must work at US organization (citizenship not required)

▶ No co-PIs allowed

▶ Only 3 chances to apply

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Purpose: Career Development

Fostering Next Generation of Leading Researchers and Educators

Features:

Promote institutional change in teaching and research

Holistic & integrated education and research plans

Highly prestigious

Eligible for PECASE

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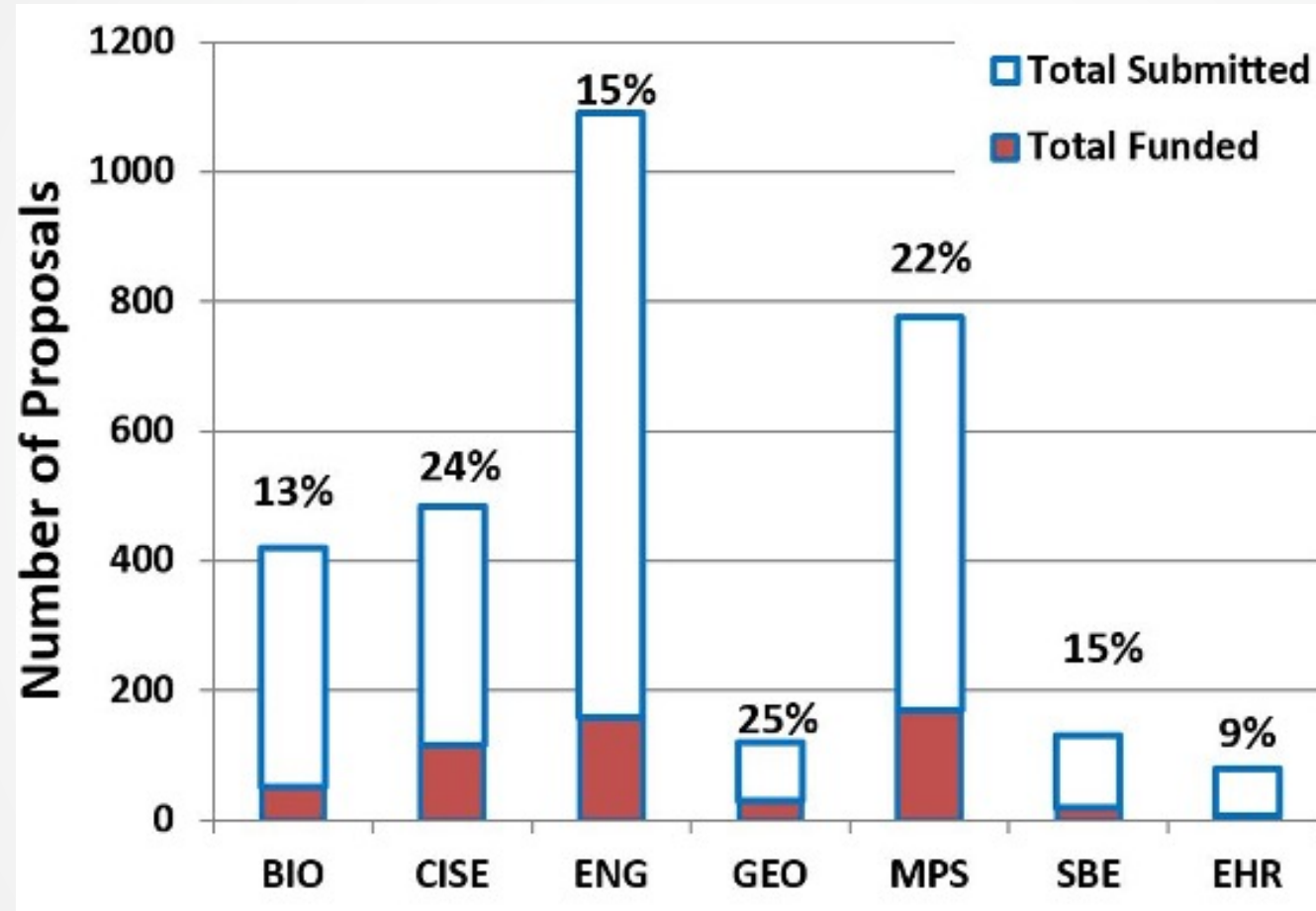
PROPOSAL PREPARATION

NSF CAREER Proposals Submitted & Awarded in 2017

Credit to Academic Research Funding Strategies, LLC for this slide.

Find the Appropriate Division

Look up <u>CAREER program contacts</u>	Send email to contact with research plan
Schedule phone call to talk over idea	Ask for referral to other Division if not a fit
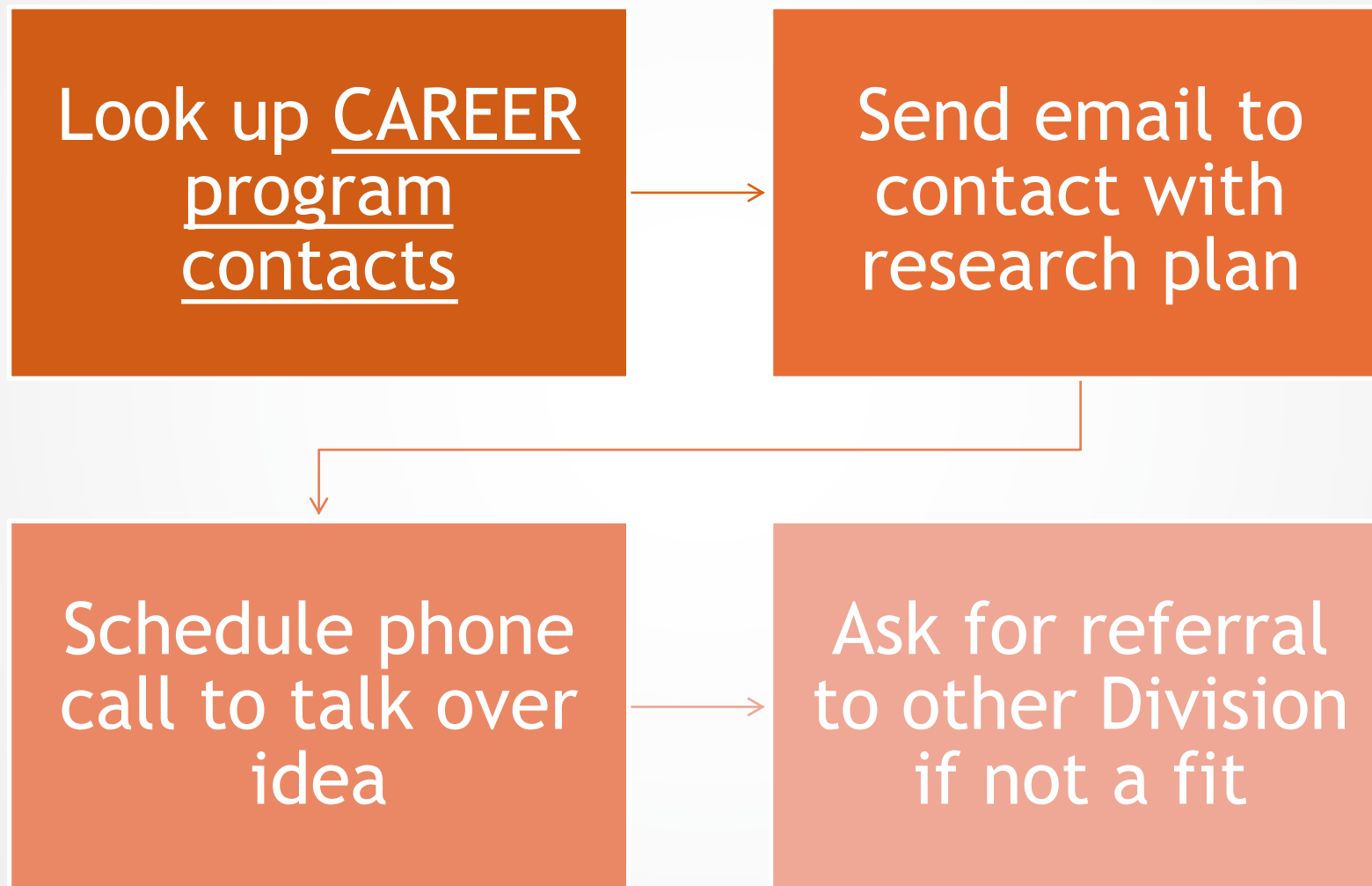
Identify and Communicate with Partners

Identify collaborators

Find peers to review your draft

Notify your Department Chair

Notify Research Development Services

Notify Sponsored Project Services

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Understand What Success Looks Like

Talk with successful PIs

Read examples of successful proposals

Serve as a review panelist

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UO NSF CAREER RESOURCES

<u>RDS - Checklist and Templates</u>

<u>RDS - Facilities and Resources Boilerplate</u>

<u>RDS – External Review of Proposals</u>

<u>UO Libraries - Data Management Plan Tool</u>

<u>UO STEM CORE – Grant Support</u>

PROPOSAL COMPONENTS

Unique Application Components

▶ Project title must begin with "CAREER"

▶ Narrative: Career Development Plan

  ▶ Research Plan

  ▶ Education Plan

  ▶ Integrated Research and Teaching

▶ Departmental Letter

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Department Chair Letter

▶ Verifies PI eligibility

▶ States that CAREER activities advance educational and research goals of department and organization

▶ Describes relationship between CAREER project, PI's career goals, and mission of department and university

▶ Ensures appropriate mentoring of PI throughout award

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Project Description

▶ Introduction, overview, objectives, significance

▶ Background (including lit review)

▶ Preliminary results/prior work

▶ Experimental plan/research plan/methodology

▶ **Education plan (3-4 pages)**

▶ **Broader impacts**

▶ Timeline

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RESEARCH PLAN

Research Idea

▶ Identify a 5-year idea focused on *basic research*

▶ Envision the idea as a *project*

▶ Is it novel and cutting edge?

▶ Does it address important questions in your field?

▶ Will it lead to a fertile lines of research?

▶ Will it contribute to your research agenda and career goals?

▶ Will it contribute to your department's goals?

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Project Readiness

Background & Resources for Project

Questions: Do you have publications on topic?

Does your lab have right staff and equipment?

Do you have preliminary data ready?

How many years until you lose eligibility?

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Research Plan

Need/Motivation	• Goals • Gaps in Knowledge
New Knowledge	• Hypotheses • Research Questions
Approach	• Objectives • How is it Different
Significance	• Outcomes • Impact

EDUCATION PLAN

Education Idea

▶ Select one main idea

▶ Develop clear goals

▶ Think through logistics

▶ Leverage current infrastructure and activities

▶ Link plan to career goals and department's goals

Strong Plans…

▶ Match your true interests

▶ Connect with your research area

▶ Connect to current educational goals/activities

▶ Fit your students, department, institution, discipline

▶ Address diversity as defined in solicitation

Effective Plans…

▶ Clearly describe goals and objectives

▶ Are informed by literature

▶ Build on prior related work

▶ Include a plan for activity with details and logistics

▶ Include assessment and disseminations plans

▶ Include associated costs in budget

REVIEW CRITERIA

CAREER Review Criteria

▶ Intellectual Merit: The potential to advance knowledge

▶ Broader Impacts: Advance desired societal outcomes

▶ Departmental support for candidate

▶ Integrated research and education plans

▶ Education plan goes beyond typical expectations for assistant professor

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NSF CBET Mock Panel

COMMON MISTAKES

Reasons for Declined CAREER Proposals #1

▶ Not finding the right directorate

▶ Treating CAREER proposal like as a regular proposal

▶ Failing to get out of the Ph.D./Postdoc advisors' shadow

▶ Failing to express a compelling scientific question

▶ Failing to provide a clear, reasonable research plan answering this question

Raj Muthasarasan, NSF Program Director, Nano-BioSensing circa 2017

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Reasons for Declined CAREER Proposals #2

▶ Repeating words like "novel" or "innovative" without substantiating them

▶ Proposing incremental research

▶ Making the proposed work too broad or too narrow

▶ Proposing an impossibly large amount of work

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Reasons for Declined CAREER Proposals #3

► Overlooking that education, mentoring, teaching, outreach are part of a successful academic career

► Failing to integrate education/outreach activities in a meaningful and sensible way to research activities

► Failing to include an assessment of educational activities

► Ordinary, uninspired education plans

Raj Muthasarasan, NSF Program Director, Nano-BioSensing circa 2017

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RESUBMITTING

Addressing Reviewer Feedback

Carefully Read Reviewer Remarks

Questions:

Were the reviewers confused?

Did they express particular concerns?

Was your research idea significant?

Was the topic not a good fit for program?

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Moving Forward

▶ Ask the Program Officer for clarification of remarks you do not understand

▶ Attend directorate or division specific workshops on the CAREER program

▶ Volunteer to be a reviewer yourself

QUESTIONS?

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