

**NSF Faculty
Early Career
Development
Program
(CAREER)**

Office of Research
Development

April 9, 2025



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○ “... the National Science Foundation's most prestigious awards in support of **early-career faculty** who have the potential to serve as **academic role models** in research and education and to **lead advances in the mission of their department or organization**. Activities pursued by early-career faculty should build a firm foundation for **a lifetime of leadership in integrating education and research.**”

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NSF CAREER vs. standard grant

- Highly prestigious **Single-PI** projects that include research and education activities that are integrated, innovative, and ambitious
- Program goals include:
 - Fostering the next generation of academic leaders
 - Promoting institutional change
- **Due July 23, 2025**

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NSF CAREER vs. standard grant

- **Eligibility (as of the annual deadline)**
 - Hold a doctoral degree in a field supported by NSF
 - Be engaged in research in an area of science, engineering, or education supported by NSF
 - Hold at least a 50% tenure-track (or tenure-track-equivalent) position as an assistant professor (or equivalent title) at a US institution
 - Be untenured
 - Have not previously received a CAREER award
 - No Co-PIS allowed
 - Less than 3 applications attempts made

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NSF CAREER vs. standard grant

- **Integration of research and education**
 - Must include integrated research and education plan at its core
 - Plans should reflect the PI's own interests and goals as well as the needs and context of their institution and surrounding region
 - Can plug into existing campus activities/programs so long as they are consistent with best practices (see pg. 9 of solicitation for examples)
 - Multi-directional feedbacks are key
 - No single integration approach and expectations will vary across directorates



“This premier program emphasizes the importance the Foundation places on the early development of academic careers dedicated to **stimulating the discovery process** in which the **excitement of research is enhanced by inspired teaching, enthusiastic learning, and disseminating new knowledge.**”



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Considerations before applying

- CAREER awards are a lot of work. Is now the right time?
- Have you been at MSU long enough to align with its mission and needs?
- Have you demonstrated commitment to both research and education?



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NSF CAREER proposal components

- **The Project Description (15 pages):**
 - A description of the proposed research project, including preliminary data where appropriate, specific objectives, methods and procedures to be used, and expected significance of the results
 - A description of the proposed educational activities and intended impact **(3-4 pages)**
 - A description of how the research and educational activities are synergistic
 - A description of other broader impacts, besides the education activities, that will accrue from the project
 - [An evaluation plan]
 - [A timeline]
 - Results of prior NSF support, if applicable.

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Evaluation plan



- Connect to **SMART** objectives laid out in research **and** education plans to define and measure success
 - Can also support project feasibility
- Evaluation can be self, internal or external (all should have time budgeted)

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Departmental letter

- Verifies PI eligibility
- Describes and confirms alignment between PI's goals, CAREER activities, and departmental/ institutional goals
- Ensures appropriate mentoring of PI throughout award

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Budget

- Ask for what you need, consistent with scope of research, education and broader impacts activities
- Minimum budget size, depending on division
- Look at recent award amounts in the division
- Support for other senior personnel, consultants, or subawards is allowed, so long as project role is limited
- Course buy-outs *may* be permissible



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Common mistakes for NSF CAREER

- Proposing incremental research
- Failing to look beyond the award term rather than framing as the basis for a long-term successful career
- Being overly ambitious
- Not taking your education and broader impacts plans as seriously as your research plan
 - Well-justified, well-resourced, well-organized, and well-cited
- Glossing over integration of research and education
- Not telling your unique academic story

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Common mistakes for NSF CAREER

- Not budgeting sufficiently for education activities and broader impacts
- Including an under-developed evaluation plan
- Not exceeding typical expectations of an assistant professor role
- Not contacting the cognizant program officer well in advance
- Not leaning into EPSCoR status



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NSF CAREER application review

- **Merit review criteria**
 - Intellectual Merit: advancing knowledge
 - Broader Impacts: benefitting society
 - [Departmental support]
 - [Integrated research and education plans]
- Co-review is possible
- Reviewed differently across directorates

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Navigating the shifting funding landscape

- Stay current with agency guidance and RFPs
 - You **must** still follow active guidelines and requirements up to submission
- Reframe the motivating problem, writing to the new audience if you need to
 - Focus on the basic science as much as possible; be strategic re: applications
- Broader impacts \neq broadening participation
 - Connect to economic and workforce interests or national security impacts
 - Reference "access and opportunity for all" rather than targeting specific groups
 - Lean into MSU's tripartite land-grant mission: research, education & outreach
- Use the same language included in solicitations if you are unsure about phrasing

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MSU's NSF CAREER Program

- Successful CAREER proposal repository
- Broader Impacts workshop (after this!)
- Dedicated proposal development support from the Office of Research Development (**don't wait on this!**)
 - Checklist, templates, boilerplate
 - MSU Broader Impacts guide
 - Non-technical proposal review for competitiveness and responsiveness
 - Integration sources
 - Budget help



Office of Research Development

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Next steps

- Notify your department chair and RA in OSP
- Identify collaborators/partners
- Talk with successful PIs
- Read examples of successful proposals
- Reach out to listed program officer
- Attend directorate- or division-specific CAREER workshops (or search for recordings)
- Contact ORD!



Questions?



NSF CAREER awardee panel



Dr. Amy Reines
Physics, 2023 awardee

Dr. Rachael Filwett
Physics, 2023 awardee