

Got an Education Project? How to Write Your Proposal for NSF and Where to Submit It

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Abstract

Many faculty have ideas for new education projects but may not be sure of how to turn that idea into a fundable proposal. This interactive workshop will help engineering faculty understand the elements of a competitive proposal and get them started on preparing a proposal for submission. It will cover key elements of proposals, helpful hints and fatal flaws, and how the submission and review process works. This workshop will also describe current opportunities for funding of engineering education projects available through the National Science Foundation. NSF education programs span the range from foundational to scale-up research, and include opportunities for investigators new to educational research. There are also programs intended to support institutional change efforts.

Keywords

funding, research and development, NSF

Aims and Scope

Engineering faculty are often interested in developing new educational approaches to enhance student learning and development as engineers. While innovations are often developed as part of normal teaching assignments, the time and effort it can take may allow only limited opportunity to pursue these ideas. Support from funding agencies, especially federal funding, can provide the time, resources, and prestige that will allow faculty to develop innovative approaches to engineering education.

The National Science Foundation is the primary federal agency responsible for supporting engineering education activities. The mission of NSF is:

To promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense; and for other purposes. NSF envisions a nation that capitalizes on new concepts in science and engineering and provides global leadership in advancing research and education.

Engineering education supports NSF's mission by advancing the development of new leaders who will address key national needs. Within the Directorate for Engineering, the Professional Formation of Engineers initiatives goes beyond education of students in engineering to consider the holistic formation of engineers. Engineering formation includes introductions to the profession at any age; acquisition of deep technical and professional skills, knowledge, and abilities in both formal and informal settings/domains; development of outlooks, perspectives,

ways of thinking, knowing, and doing; development of identity as an engineer and its intersection with other identities; and acculturation to the profession, its standards, and norms.

NSF has a number of funding opportunities that support the professional formation of engineers. Through this workshop, attendees will become familiar with these programs and the key elements of successful proposal.

Learning Objectives/Outcomes

At the end of this workshop participants will be able to

- Identify a funding opportunity for an engineering education project
- Describe the NSF submission and review process
- Describe the key elements of engineering education proposals

Workshop Agenda/Timeline

Introductions and Preview of Workshop	10 minutes
NSF Funding Opportunities	20 minutes
Proposal Preparation and Review Process	30 minutes
Elements of an Engineering Education Proposal	45 minutes
Questions and Answers	15 minutes

Suggested Reading Prior to Attending Workshop

Common Guidelines for Education Research and Development,
<https://www.nsf.gov/pubs/2013/nsf13126/nsf13126.pdf>

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