

Tips for Preparing Interdisciplinary Research Proposals to Submit to NSF



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Give Yourself Plenty of Time!

- Anticipate.
- Be prepared.
- Recognize that it takes time to prepare a competitive proposal under the best circumstances.
- Preparation of interdisciplinary proposals pose special challenges because of the nature of interdisciplinary research.
- Don't expect to be successful by "throwing something together at the last minute."

Explore the Possibilities

- Consider theoretical foundations and prospective theoretical contributions.
- Consider the journals where you plan to publish and the audiences who read those journals.
- Map the communities to whom you will most strongly communicate against the programs and/or competitions you are considering.
- Sound out possibilities with relevant program officers well in advance of proposal due dates.

Read Announcements and Solicitations Carefully

- Determine how well what you want to aligns with what the funder is seeking.
- If the alignment isn't great, carefully assess the option of "stretching" or changing what you plan to do.
- Look carefully for specification of who must be involved.
- Watch for special qualifications or guidelines.
- If you have questions, contact POs well in advance of due dates.

Learn How Proposals Will Be Evaluated; Think Like Those Who Will Review and Make Decisions

- External "ad hoc" reviewers tend to be more focused.
- Panel members tend to be more general in perspective.
- Multiple program panels will have different perspectives than a single multidisciplinary panel.
- You'll want to get details correct but appeal to as broad an audience as possible.

General Outline for a Competitive NSF Research Proposal

- A broader theoretical framework that works down to one or a few focal questions.
- A well-specified, scientifically sound research plan to test answers to the focal questions.
- Clear and believable statements regarding prospective intellectual merit and broader impacts.
- A sound management plan and descriptions of who will do what work.

Other Tips for Proposal Writing

- Write in a single voice, so the proposal is a coherent, well-integrated essay, not an anthology.
- Assume the audience is well educated, but don't assume extensive topical knowledge.
- Be sparse in the use of jargon, and make sure terms are well defined when you use them.
- Format the proposal so it is easy to read.
- If appropriate, use graphics and photos to complement text.

Thoughts Regarding Budgets

- Budget requests should be driven by research and related project needs.
- Don't be greedy, and don't imply that an award would be an entitlement.
- Seek to have the "bang-for-the-buck" ratio as high as possible.
- Assess every line in the budget with one or both of two questions:
 - *Is this expenditure necessary at this level to complete the project?*
 - *Would the research be diminished substantially if this expenditure is not made or is significantly reduced?*

A Few Miscellaneous Tips

- Competitive proposals take lots of time -- so give yourselves lots of time to prepare them.
- Competitive proposals take lots of work -- so use the contributions of team members effectively while maintaining team rapport.
- Comply with all requirements specified in the solicitation/announcement and NSF *Grant Proposal Guide*. If in doubt, contact a PO.
- Work with your organization's sponsored research office, and give them plenty of time to do their work.

Thoughts Regarding Multi-Organizational Proposals

- Two options remain viable:
 - One proposal with subawards
 - Multiple proposals linked in a collaborative set
- In theory, either works well.
- Recent changes in NSF policies regarding movement of funds across organizations have meant that there now is much less flexibility for dealing with problem situations with collaborative awards.

Thoughts Regarding "Principal Investigators"

- To NSF, a PI (whether the lead PI or a co-PI) is a person who will assume administrative responsibility for an NSF award.
- Awardee organizations can determine who is "qualified" to be a PI.
- Proposals can have different names on the cover sheet than the project leaders described in the proposal.
- Avoid "name-dropping" and the use of PI status as a means for bestowing formal credit.

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