



**National Science Foundation**

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Frequently Asked (and Unasked) Questions on Interdisciplinary Research (IDR) NSF 10-011

1. Why has the Directorate for Engineering created a separate review mechanism for interdisciplinary proposals?

The subject matter of some proposals doesn't fit well into any of NSF's disciplinary programs. These programs may lack the critical reviewer expertise needed to provide fair and accurate review. As a result, breakthrough ideas may be missed or fundamentally flawed ideas may be funded. The NSF would like to avoid both types of errors.

2. How can I decide if I should submit my proposal to a disciplinary program or to IDR?

If the reviewers in an established disciplinary program are familiar enough with the state of the art to understand the importance of the problem and the proposed research approach, the proposal probably should be submitted to that program. The IDR Program is intended for proposals for which the other programs don't include the wide range of disciplinary expertise needed to evaluate the merits of the work. Since it is virtually impossible to include broad disciplinary coverage and deep knowledge in an interdisciplinary panel, proposals that can be appropriately reviewed in a disciplinary program will usually receive a more in-depth evaluation there.

3. Can I just submit my proposal to both a disciplinary program and IDR?

NSF prohibits the submission of substantially identical proposals, even if they are not submitted at the same time. Disciplinary program directors will be consulting on the review of the IDR proposals and will see both proposals. This is not an opportunity to submit the same idea to more than one program. If you cannot decide then the proposal should probably be submitted to the disciplinary program. You may contact the Division IDR Coordinators if you have any questions.

4. I've read the definition of interdisciplinary in the program description and it seems that most engineering research would satisfy the definition to some extent. How can I tell if my proposal should be submitted to the IDR Program?

This is a critical question for both proposers and for the NSF, since the vast majority of the proposals we receive in the Directorate for Engineering are interdisciplinary to some extent. Unfortunately, there is probably no mechanical criterion that can be applied to make this decision. NSF is trying to find the best possible projects for our country and you are trying to secure funding to pursue your ideas. Think about where your proposal will receive the fairest review. Disciplinary experts may feel comfortable evaluating the work, even if it has substantial content outside the discipline. If not, the balance may shift toward IDR.

5. My proposal has collaborating investigators from multiple departments/disciplines and/or applications that cut across multiple fields/disciplines. Should I submit it to IDR?

The question is not so much whether there are investigators from different disciplines involved or the problem affects multiple disciplines, but whether there is a significant opportunity to:

- produce fundamental research breakthroughs (as distinct from, but beneficially including, eventual important applications) in multiple disciplines or in important research areas not yet recognized by any single discipline.
- transfer well-known theory, knowledge, methodology, or analytical methods from one discipline to another discipline where it promises to produce breakthrough results.

The potential for such breakthroughs is the most critical aspect of the evaluation of IDR proposals. Therefore, IDR proposals should convincingly describe what the expected breakthroughs are, the contributions of each of the investigators, and the breakthrough aspects of the proposed research on each of the included disciplines.

6. Who decides if my proposal undergoes disciplinary review?

Ultimately, NSF decides. The IDR process is time-consuming for both the NSF and the review community. Some significant number of PIs who submit IDR proposals may be asked to withdraw them and resubmit them to disciplinary programs for the regular February submission window. The December 7 IDR submission deadline has been chosen to allow time for withdrawal, revision, and resubmission.