

UAR STUDENT GRANTS: Writing the Grant Proposal

Undergraduate Advising and Research sponsors several types of grants designed to support rigorous, independent scholarship. Students undertaking research or creative projects in any field (including engineering, fine arts, humanities, natural sciences, social sciences) with mentorship from Stanford faculty are eligible for this funding.

The information in this handout is designed to help you navigate the often complex independent project process, and better understand how your grant proposals are reviewed.

The **Student Grants website** at <http://studentgrants.stanford.edu> contains detailed information on grant types and deadlines. Follow the link to **How to Apply** for information on eligibility, the grant writing timeline, a checklist for a complete application, and links to the online Grant Application Portal.

Research and creative work taking place off-campus requires thorough and rigorous preparation, including specific methodological coursework and training in the cultural and ethical aspects of conducting projects away from Stanford. See <http://prefield.stanford.edu> for more information. If the project involves interacting with humans, consult the Institutional Review Board's website to determine if human subjects approval is required: <http://humansubjects.stanford.edu>.

I. CONTENTS OF A PROPOSAL

Your original project proposal is the core of your grant application. A good proposal will describe what you hope to accomplish, why those objectives will be important to your chosen field, and how you intend to achieve them. The ideal format and language for your proposal will vary with the disciplinary conventions of your field. Regardless of format, organization, or length, a good proposal addresses the following questions concisely, in a manner clear to both specialists and non-specialists:

- *Objective:* What is the precise goal of your project? What questions will you be answering?

- *Significance:* Why are your questions intellectually important? How is your project of significance to the academic or artistic community in your chosen field?

- *Methodology:* What, precisely, will you do to answer the question you are posing? How is your methodology logically linked to your stated objective? What is the timeline of your project?

- *Resources:* How will you draw on the expertise of your faculty mentor and others? Have you initiated contact with people (at field sites or other institutions) who will be critical to your project's success? Are you seeking, or have you received, any other sources of funding? Are there additional datasets or pieces of equipment that you will rely on?

- *Preparation:* What specific steps have you taken to prepare for this project? Have you taken statistics or methods courses that directly relate to the project design you described above? If you will conduct research off campus, how do you plan to train (in the classroom or otherwise) for the cultural, ethical, and safety challenges associated with research travel? If your project makes use of human subjects, have you submitted a Human Subjects Protocol?

- *Budget:* How much money do you need, and what will it be used for? How does each item in your budget contribute to the logistical demands of your methodology?

II. STRUCTURING YOUR PROPOSAL

Given the above questions, how would you structure your proposal? Here are some examples of how different disciplines structure a typical research proposal.

A. Usual sections of a Creative Arts proposal

- *Overview*: What are the objectives of your project?

- *Medium and technique*: What area or media will you be working in? What is your conceptual approach to this project? What concerns do you address? How do you envision your final product? What techniques will you use? Why and how will you use them?

- *Current Dialogue*: Cite sources of artistic inspiration for the project. Compare the proposed project with past or current work by other artists. Describe how your work relates to analogous works in other artistic *métier*.

- *Preparation*: What formal or informal training have you had? How do your past work and experiences inform this project? Discuss how your mentors' expertise will guide your work.

- *Process*: Provide a detailed timeline with the projected start date, including: pre-production research; production schedule, itemizing tasks and allocating time & delegation for each; post-production, if applicable.

- *Outcomes*: How will this project/product enhance your interests and skills, directions and opportunities for further work? What are your plans for presenting this work?

- *Line-item budget*

B. Usual sections of an Engineering or Science proposal

- *Overview of project topic and objective*: State your general research questions, your hypotheses, or the theoretical predictions that you will test. If your project is part of a larger collaborative research agenda within your mentor's lab or group, describe both the overarching research goal and the particular component(s) that you are focusing on. What recent developments in the field led to your research idea?

- *Literature review*: Select and critique relevant works that situate your research question, to demonstrate your knowledge of what has been done on this topic or in related areas, and show how your project builds on and contributes to this body of knowledge.

- *Design and methodology*: How does each step in your experiments or modeling efforts contribute to your end goals? What statistical analyses will enable you to interpret your observations? Spell out your specific role and responsibilities, or your intellectual ownership of these responsibilities in carrying out these steps. Provide the project timeline, and the projected start date.

- *Preparation*: Describe your relevant field preparation and human subjects training; discuss relevant coursework, prior research experience, and how your mentors' expertise and your field contacts will guide your work.

- *Line-item budget*

C. Usual sections of a Humanities or Social Science proposal

(In the humanities and social sciences, some projects that involve working with datasets may share features of science projects. Refer to Section B above.)

- *Overview of project topic and objective:* State your general research questions. This can be as specific as stating your hypotheses, or the theoretical predictions that you will test, or you can frame your exploratory research with more open-ended questions. Discuss the project's significance to current knowledge in the field, to policy or social problems.

- *Literature review:* Select and critique relevant works that situate your research question, to demonstrate your knowledge of what has been done on this topic or in related areas, and show how your project builds on and contributes to this body of knowledge.

- *Design and methodology:* What observations or source material will you need to answer your question? Explain your chosen methodology and how it best answers the question. Provide details of your data sources and how you will access, collect, and analyze your data. Where relevant, include sample questionnaires, descriptions of materials available on databases or archives, details of field sites. Provide the project timeline, and the projected start date.

- *Preparation:* Describe your relevant cultural and field preparation, and human subjects training; discuss relevant coursework, prior research experience, and how your mentors' expertise and your field contacts will guide your work.

- *Line-item budget*

D. Usual sections of a Conference Grant proposal

- *Conference abstract:* Insert the scholarly abstract that has been accepted for presentation. Usually, this abstract describes your project's objectives, significance, methods, and conclusions. If you think additional background or explanation on this project would be helpful, include this information succinctly.

- *Your role in the presentation.* Conference Grants are for presentations that you are (co-)leading.

- *The meeting or conference that you are attending:* Include information on the society or association sponsoring it, with dates and location.

- *The session that you are presenting at.* Conference Grants are not available for presentations at meetings or sessions reserved for students.

- *The process whereby your abstract was accepted.* Conference grants are not normally available for invited presentations, but for competitive peer-reviewed selection processes.

- *Goals of attending this conference:* Describe what you would discuss with scholars, what you hope to learn at this conference, which you will not be able to do if you did not participate in this conference.

- *Line-item budget.*

III. TURNING YOUR GOOD PROPOSAL INTO A GREAT ONE

Many students turn in proposals that nominally address the points raised earlier in this handout. But often, reviewers' decisions turn on factors that do not occur to students as important. Paying attention to these details can only improve your chances of getting funded.

- **Focus and scale of the project objectives:** Open your proposal with a crystal clear one- or two-sentence statement of your objective. This helps reviewers orient themselves, and prepares them to read the rest of your proposal more effectively. By carefully articulating a specific and well-honed research goal, you reassure reviewers that your project will meet with success, and that your final product will exhibit real depth and sophistication.
- **Scholarly significance of the project goals:** When we ask about your project's significance, we mean "intellectual significance to members of your discipline". We do not mean "importance to your educational development" or "importance to a humanitarian or ideological cause". These motives actually are important to us, but in the context of your proposal we are only interested in why other researchers in your field will be eager to hear about your work. This is almost always best demonstrated through your literature review.
- **Literature review:** Probably the single most common deficiency in student proposals is the inadequate literature review. There is always peer-reviewed literature that discusses some of the theoretical or methodological background to your research question, and your job is to select and critically analyze these works and show how these have shaped your proposed study and how you will contribute to the developments in your discipline.
- **Balance of independence and collaboration:** Write your methods section in the first person. Reviewers want to see what you will take responsibility for, and what you will be doing with the assistance of others. If you write that "... the data will be gathered and analyzed using a statistical model", you are providing much less information than if you had written "... I will gather the data and analyze them using a statistical model devised by a graduate student in our research group".
- **Preparation:** Give a concise outline of specific courses that directly shaped your approach to your topic, and are foundational to your project's success; or state when you will complete such courses before the start of your project. If your project involves the use of human subjects, state when you submitted your Human Subjects Protocol (at the latest, you would submit the protocol to the IRB at the same time as you submit your grant proposal).
- **Faculty mentoring:** Provide an account of the interaction between you and your faculty mentor to date, and your plan for continued interaction. Describe how your mentor's area of expertise will support your work. Your proposal and the mentor's letter of recommendation should make clear the balance between independence and assistance you can expect from your mentor.
- **Internship vs. research:** Many successful research projects involve interacting with non-profit organizations, government agencies, clinical facilities, or private businesses. It is critical that your proposal draw a clear line between your research agenda and your other responsibilities in the organization. A volunteer internship hastily married to a thin research question is not likely to be funded; a carefully designed, intellectually rigorous study that leverages your contacts in a particular organization is much more compelling. Reviewers will look closely at how you distinguish between these two kinds of projects.