

WRITING YOUR FIRST PROPOSAL

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The most important question to ask before beginning to write your first proposal is, "Do I have to write a proposal?" Resources can often be obtained with a telephone call, an e-mail message or a visit. A proposal should be considered only for large amounts of money. The time and effort put into writing a proposal must be justified by the likelihood of receiving funding. This paper focuses on proposals to government agencies and private foundations, however, most of the information is applicable to other sources.

IDENTIFYING SOURCES

There are some logical places to look for help in providing resources to provide an pre-college or college program for women in engineering. A guiding principal is the "win-win" situation. Identify sources of funding or in-kind assistance have the same goal as the you—to increase the number of women prepared to assume technical positions.

- ♦ **Corporations.** Find out which corporations employ graduates from your institution, which corporation have a local interest in your college/university and which corporations are under court order or other pressure to make efforts in the area of affirmative action.
- ♦ **Foundations.** Many private foundations have a focus on higher education. Unless they also have a focus on women or girls, you may need to broaden your activity.
- ♦ **Government Agencies.** In recent years, the Department of Education, NSF, the Department of Defense, NASA, and the Department of Energy have funded programs for women in engineering.
- ♦ **SWE Sections.** Professional and student sections of the Society of Women Engineers have complementary goals to most Women in Engineering Programs.
- ♦ **Student Participants.** Charging a fee to participants increases their commitment to attend and helps offset expenses involved with the program.
- ♦ **Alumnae.** Women alums from your institution may have a familiarity and appreciation of programs for women in engineering. They are often generous with their time and money.

- ♦ **Piggyback.** Is there a university or College of Engineering program to which you could add an activity for women in engineering. This is a cost-effective way to implement a pre-college program

Once you have identified some potential sources to obtain the resources you need, take some time to consider which of them give you the highest probability of success. Be creative—you don't always need money. Many potential sources of assistance can provide expertise, equipment, printing capabilities, etc. without requiring a formal proposal.

Here are some publications and web pages for federal agencies to obtain information on potential funding sources:

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| ♦ Corporate Foundation Profiles | ♦ Harris (your state) Industrial Directory |
| ♦ Foundation Reporter | ♦ Placement Office |
| ♦ Chronicle of Philanthropy | ♦ Alumni Office |
| ♦ Directory of Intl. Corporate Giving | ♦ Registrar |
| ♦ Directory of Major (your state) Foundations | ♦ National SWE Office |
| ♦ Corporate Yellow Book | |
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- ♦ NSF - www.nsf.gov
 - ♦ Dept. of Education - www.ed.gov
 - ♦ NASA - www.nasa.gov
 - ♦ NIH- www.nih.gov
 - ♦ Dept. of Defense - www.dtic.dla.mil:80/defenseink
 - ♦ Dept. of Agriculture - www.usda.gov
 - ♦ Dept. of Energy - www.doe.gov
 - ♦ Dept. of Transportation - www.dot.gov
 - ♦ EPA - www.epa.gov

SUCCESSFUL GRANT WRITERS

There are some common characteristics among people who are successful in getting their proposals funded. Here are some things to keep in mind:

- ♦ **Take a long-term view.** Don't become impatient.
- ♦ **Develop partnerships.** Funding agencies like projects that will have an impact in more one institution.
- ♦ **Cultivate relationships** with colleagues and program officers at funding agencies.
- ♦ **Be flexible.** Be willing to modify your project if it improves the chances of receiving funding.
- ♦ **Welcome "in-kind" contributions.** You don't always need money.
- ♦ **Realize that your first steps are the hardest.** Once you have taken the time to complete a good proposal, you can use many pieces of it for the next one

PROPOSAL WRITING STRATEGIES

Some of these suggestions may sound simplistic, but funding agencies regularly receive proposals that are ineligible based on a lack of attention to guidelines. You want to be sure your proposal makes it through the review process as easily as possible.

- ✦ **Read the program guidelines** carefully. Use a highlighter to emphasize points.
- ✦ **Read a successful proposal.** Previously funded proposals are often available from the funding agency, but can often be obtained more quickly by writing or calling the principal investigator (P.I.) of a funded project.
- ✦ **Develop boilerplates.** There are usually many parts of a proposal which can be used verbatim in future proposals (background, institutional information, qualifications of the principal investigator, etc.)
- ✦ **Make an outline**
- ✦ **Add text**
- ✦ **Develop a budget** (see worksheet). Your budget should be realistic, but not padded. Don't underestimate the amount of time or resources you need to implement the proposed project. The funding agency may ask you to cut a budget during negotiation, so it is good to have thought about what might be eliminated or curtailed.
- ✦ **Check the format.** Have you been consistent in headings, bulleted lists, etc. and have you included every portion requested in the guidelines.
- ✦ **Review your proposal like a reviewer.** Ask a colleague to review your proposal critically. It is difficult for you to differentiate between the words you "actually" wrote and the words you "intended" to write. Someone unfamiliar with your project can identify things which are confusing or conflicting within your proposal.
- ✦ **Be realistic.** If you anticipate problems, don't pretend like they don't exist. State them and describe how you plan to manage them.

PROPOSAL CONTENT

The proposal content is dependent on the guidelines from the funding agency, however, there are some typical components which should be considered: **1) Letter of transmittal** **2) Title page** **3) Table of contents**—many word processing packages will prepare one automatically, eliminating the possibility of errors or inconsistencies **4) Summary or Abstract** **5) Introduction** **6) Problem or need** **7) Content or design** **8) Evaluation** **9) Timetable** (see worksheet) **10) Project management.** Be specific. Tell who will be doing what part of the project and give their credentials. **11) Capability of your institution.** Most funding agencies consider that they are funding an institution as much an individual. Clearly articulate why your institution is the appropriate place for the funding and outline any facilities and services which will be provided. **12) Budget.** Be sure to line up tabs using a decimal tab, not a left or right justified tab. **13) Appendices.** Check guidelines carefully. Many funding agencies put a limit on what can be submitted in appendices and reviewers are often told they do not need to read appendices.

CRITERIA FOR EVALUATING PROPOSALS

Specific evaluation criteria can often be found in the proposal guidelines, however, there are some typical areas of evaluation:

- ♦ **Clarity of language and format.** Don't use run-on sentences that are complex and confusing. The proposal should be easy to read (large enough type so that reviewers don't get eye strain on their twelfth proposal of the day) and easy to understand. Don't use jargon or abbreviations. Bulleted lists, graphs, and timelines are often easier to understand than paragraph after paragraph of descriptive text.
- ♦ **Completeness.** Your proposal must include everything required by the guidelines.
- ♦ **Responsiveness.** Is your proposed project responsive to the focus of the funding agency's program? If the program is for mentoring, don't propose tutoring and explain how tutors will mentor students while they are tutoring. You should be passionate about your project. If you have had to alter your "baby" too much to fit the proposal guidelines, you should probably seek a different funding source.
- ♦ **Internal Consistency.** Watch the words to use throughout the proposal. If you have called a set of items "goals" in the introduction, don't refer to the same items as "objectives" later in the proposal. Also be attentive to the format. Have you used the same style of headings, subheadings, indentations, etc. throughout the proposal?
- ♦ **External Consistency.** Be sure your project consistent with recent research findings and the direction of other activities focusing on the same problem.
- ♦ **Understanding the Problem.** You should show through your proposal that you have knowledge of related research and an understanding of the complexities associated with gender equity in education.
- ♦ **Capability.** Present your credentials and related experience without modesty. If there are skills needed to successfully implement the project which you do not have, be sure you have identified who will provide them.
- ♦ **Accountability.** Describe how you will demonstrate accountability for the funds you will be given.
- ♦ **Realism.** If you anticipate problem areas or obstacles, you should identify them and describe your plan for managing them.

CORPORATE PROPOSAL WRITING

Many of the suggestions made in the previous sections also apply to writing a proposal to a corporation, but there are a few important differences: 1) Printed material is often not available, although information on websites is becoming more frequent 2) The guidelines are often less detailed 3) A corporate "angel" or "advocate" can be crucial. Corporations receive so many requests that yours may be disregarded unless someone internal is pushing it 4) Proposals should be no more than 5 pages if a page limit is not defined 5) Budget categories should be less detailed - stick to the major headings in the draft budget shown in this paper 6) Ask if overhead is allowed. The grant is often considered a "gift" not a "contract".

WORKSHEET

This worksheet is an abbreviated version of the one given to session participants.

Summary/Abstract. Follow proposal guidelines, but usually one or two. Consider writing it after you have written the body of the proposal. The abstract should summarize your project and expected outcomes. Guidelines may specify length and content)

Introduction/Background. Explain why your proposed project is needed - include statistics on the continuing under representation of women in engineering, literature references that substantiate the need, a statement of the problem your project addresses.

Project Design and Content. The main body of the proposal—what you are planning to do, how specifically you will do it, how you will recruit participants, where you will perform the work of the project and why.

Anticipated Outcomes/Project Evaluation. Describe what you hope to accomplish and specifically outline how you will know that you have been successful. Measurable outcomes are important to funding agencies. Tell who will manage the evaluation of your project and give their qualifications for your specific project.

Project Management. Define who will manage each part of the project and what their responsibilities will be. Include everyone will play a major role in the project.

- (Name, institutional title, role within project)
- (responsibilities)
- (responsibilities)
- (Name, institutional title, role within project)
- (responsibilities)
- (responsibilities)

Capability of Organization/Project Director. Explain how you and your organization are qualified to do the work outlined in the proposal. Describe space, equipment, etc.

Time Line. Give name of month (June) or number of month after funding is received (1*). A table with tasks and Xs or lines showing inclusive time is useful.

TASK	MONTH											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
(*month 1 may be June not January)	1	2	3	4	5	6	7	8	9	10	11	12
Advisory Board			X						X			
Mailing #1				X								
Training												

DRAFT BUDGET

(Write in names of people you need to implement the project and try to think of every cost associated with your project. Don't underestimate, but don't pad.)

PERSONNEL, SALARIES AND WAGES (project staff, student assistants)	XXX,XXX
Name, role, %FTE	xx,xxx
Name, role, % FTE	xx,xxx
FRINGE BENEFITS @ xx% (typically 25-35%, itemize if different for different classifications)	XX,XXX
EQUIPMENT (Often not allowed - read guidelines carefully)	X,XXX
TRAVEL (For Project Staff)	X,XXX
Purpose (break down only if required - check for maximums)	
Think of meetings to disseminate results, project director's meetings required at funding agency, etc.	
PARTICIPANT SUPPORT COSTS	XX,XXX
Number of participants, locations, etc. (break down only if required)	
OTHER DIRECT COSTS	XX,XXX
A. Materials (supplies, printing, phone, postage)	x,xxx
B. Publication Costs (manual, directory, etc.)	x,xxx
C. Consultation (graphics, computers, expertise, etc. - include consultant fees and travel costs)	xx,xxx
D. Evaluation (detail may be required)	xx,xxx
Total Direct Cost	\$XXX,XXX
Indirect Cost (factor)	<u>XX,XXX</u>
GRAND TOTAL	\$XXX,XXX

Your institution's cost sharing can be itemized in a separate table or as a column to the right of the requested amount. Don't forget to include your institution's indirect rate in its cost sharing and any difference between the rate allowed by the funding agency for indirect costs and your institution's usual rate. Your business office will usually do the "official" budget, but you should do a draft to be aware of the approximate amount of your project as you prepare your proposal.