

PROGRAM FOR WOMEN AND GIRLS IN SCIENCE, ENGINEERING, AND MATHEMATICS

Program Information and Guidelines

DIRECTORATE FOR EDUCATION AND HUMAN RESOURCES
DIVISION OF HUMAN RESOURCE DEVELOPMENT

- **Implementation and Development Projects for Women and Girls**
- **Information Dissemination Activities**

Proposal Deadlines Vary with Individual Programs



NATIONAL SCIENCE FOUNDATION

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INQUIRES

Questions not addressed in this publication may be directed to the staff by contacting: Program for Women and Girls, Division of Human Resource Development (HRD), Directorate for Education and Human Resources, National Science Foundation, 4201 Wilson Boulevard, Arlington, VA 22230; 703-306-1637; or via email to: hrdwomen@nsf.gov.

GENERAL INFORMATION

The National Science Foundation provides awards for research in the sciences and engineering. The awardee is wholly responsible for the conduct of such research and preparation of the results for publication. The Foundation, therefore, does not assume responsibility for the research findings or their interpretation.

The Foundation welcomes proposals from all qualified scientists and engineers and strongly encourages women, minorities, and persons with disabilities to compete fully in any of the research related programs described here. In accordance with federal statutes, regulations, and NSF policies, no person on grounds of race, color, age, sex, national origin, or disability shall be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving financial assistance from the National Science Foundation. Facilitation Awards for Scientists and Engineers with Disabilities (FASSED) provide funding for special assistance or equipment to enable persons with disabilities (investigators and other staff, including student research assistants) to work on NSF projects. See the program announcement or contact the program coordinator at 703-306-1636.

Privacy Act and Public Burden. The information requested on proposal forms is solicited under the authority of the National Science Foundation Act of 1950, as amended. It will be used in connection with the selection of qualified proposals and may be disclosed to qualified reviewers and staff assistants as part of the review process; to applicant institutions/grantees; to provide or obtain data regarding the application review process, award decisions, or the administration of awards; to government contractors, experts, volunteers, and researchers as necessary to complete assigned work; and to other government agencies in order to coordinate programs. See Systems of Records, NSF 50, Principal Investigators/Proposal File and Associated Records, and NSF-51, 60 Federal Register 4449 (January 23, 1995). Reviewer/Proposal File and Associated Records, 59 Federal Register 8031 (February 17, 1994). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of your receiving an award.

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Programs described in this publication fall under category 47076, Education and Human Resources, in the Catalog of Federal Domestic Assistance.

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PROGRAM FOR WOMEN AND GIRLS IN SCIENCE, ENGINEERING, AND MATHEMATICS

Program Information and Guidelines

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PROGRAM DEADLINES

IDP: Preliminary Proposal Target Dates:

With total budgets:

- under \$100,000: October 1 (For FY 1997 only:
November 1, 1996)
- over \$100,000: January 2

Formal Proposal Deadlines:

With total budgets:

- under \$100,000: February 1
- over \$100,000: May 1

IDA: Proposals accepted at any time

INTRODUCTION

The National Science Foundation's mandate to ensure the vitality of the Nation in the scientific and technical enterprise includes responsibility for the quality, quantity, and composition of the human resource base in science, mathematics, and engineering. NSF is committed to providing strong and continuing leadership and support for the nation's efforts to improve science, engineering, and mathematics (SEM) education and general scientific and mathematical literacy. NSF supports programs that are designed to improve the quality of SEM education at all levels. Its efforts seek to assure that effective programs are implemented in the broadest possible manner to impact the greatest number of people, including professionals, students, and the general public.

The role of science and technology in American society is undergoing dramatic change. In an increasingly technology-oriented society, a basic understanding of science and mathematics is essential to maintain a population prepared to meet the need for a technically competent work force and to exercise the responsibilities of citizenship in a modern democracy. The U.S. Bureau of Labor Statistics projects that, while overall rates of entry into the labor force will decrease between 1994 and 2005, the women's labor force will be growing twice as quickly as the labor force for men. By 2005, nearly two-thirds of all women will be working and they will make up nearly half of the total labor force.¹ Moreover, the jobs facing these new workers will require higher skill levels in science, engineering, and mathematics than ever before. More effective education and human resource initiatives are needed if America is to maintain its technological leadership in the world marketplace.

- The low participation level of women in SEM, particularly in the physical sciences, mathematics, and engineering, is a serious national problem. Several issues of particular concern are:
- the disproportionately high numbers of girls who lose interest in science during elementary and middle school;
- the low numbers of women who enroll in advanced high school science and math courses to prepare for college;
- the disproportionately low numbers of women entering undergraduate studies in SEM, particularly in physical sciences, computer sciences, and engineering;
- the low number of women completing SEM graduate degrees; and
- the slow rate of women's advancement to senior ranks

and leadership positions in academic, industry, business, and government careers.

Change is needed to reverse these trends. At the elementary and secondary levels, there must be significant changes in the ways science and math are taught to girls and young women, including changes in the formal and informal interactions that support and develop their interest, understanding, and skills in science and mathematics. At the undergraduate and graduate levels, there must be changes in the cultures of science, mathematics, and engineering departments to improve support for both the recruitment and retention of women and girls in SEM studies and careers.

PROGRAM FOR WOMEN AND GIRLS IN SCIENCE, ENGINEERING, AND MATHEMATICS

Implementation and Development Projects (IDP) for Women and Girls, and Information Dissemination Activities (IDA) are designed to complement other efforts in the Directorate for Education and Human Resources (EHR). These programs address educational issues from grade school through graduate school. Although the common thread is gender, it is critical for projects to reflect the understanding that all girls and women are not the same. should be considered by all investigators. When appropriate, relevant issues such as educational level, race, ethnicity, and physical disability should be reflected in the selection of target populations, project activities, budget allocations, and evaluation efforts.

1. **Implementation and Development Projects (IDP)** funds projects that build on existing research about gender and the SEM infrastructure in order to create positive, permanent change in academic, social, and scientific climates. Awards will be granted for up to three years and with budgets up to \$300,000/year. For proposals with budgets over \$100,000, it is required that they: be collaborative efforts; have multiple target populations; effect permanent change; include strategic leverage plans connecting the project with other initiatives; and reflect significant commitment from the collaborating institutions.
2. **Information Dissemination Activities (IDA)** insure that there is widespread dissemination of strategies, research results, and resources that will accelerate efforts to increase women's involvement in SEM. IDA awards provide a mechanism for individuals to interact and exchange both strategies and information related to the participation.

¹ Fullerton, Howard N., Jr. 1995. The 2005 labor force: growing, but slowly. *Monthly Labor Review* 118 (11):29-44.

IMPLEMENTATION AND DEVELOPMENT PROJECTS FOR WOMEN AND GIRLS

GOALS AND OBJECTIVES

The Implementation and Development Projects (IDP) for Women and Girls program has three major goals:

- To encourage the design of innovative activities which will improve the recruitment and retention of women and/or girls in SEM education and careers.
- To encourage the implementation of existing models or research in new settings or with new populations that will enhance the access of women and girls to improved SEM education and/or careers in SEM fields.
- To encourage through either immediate change or a systemic approach, positive and permanent changes in the academic, social and/or scientific climate for more equitable inclusion of girls and women in SEM.

DESCRIPTION

IDPs focus attention on the critical points which can facilitate or hinder the successful participation of women and girls in SEM education from grade school to graduate school and on to careers. *IDPs are not designed to provide continuing or ongoing support for existing programs or activities.*

IDPs must be both instructional and motivational; be based on science, engineering, and/or mathematics activities; and build upon current research and models of how social, learning, and teaching factors facilitate the interest, motivation, and achievement of girls and women in SEM. Activities may include evaluation, refinement and *significant* expansion of a project, or replicating an existing model with a different population or setting. Innovative, highly-focused activities should result in significant and immediate changes. More extensive projects should emphasize a comprehensive, systemic approach to change the climate and infrastructure of SEM to encourage inclusion.

Collaborative partnerships for projects with budgets over \$100,000 must be reflected in the proposal, with the roles *and* commitments of each institutional partner carefully addressed both in the project description and in letters of commitment from authorized institutional representatives. School districts, not individual schools, may be considered as collaborators.

The annual award size for IDP will depend on the nature and scope of the project, with a *maximum* funding level of \$300,000 per year for up to three years. The proposal must justify the requested funding level. Mandated preliminary proposals for projects with a budget over \$100,000 have a

target date of January 2. Formal proposals must be submitted by May 1. Projects with budgets under \$100,000 have a target date of October 1 for preliminary proposals and a deadline of February 1 for formal proposals.

The number of awards will be determined by proposal merit, award size, availability of funds, and priorities among the Program for Women and Girls components. Finalists will be contacted to respond to reviewer and program officer concerns approximately three months after the formal proposal is submitted. Final award decisions will be announced approximately six months after the proposal deadline.

ELIGIBILITY

Organizations eligible to submit proposals include universities and colleges; not-for-profit, nonacademic institutions (*e.g.*, museums, professional associations, private foundations, youth centered community-based organizations); and state and local governments (including school districts, but *not* individual schools). For-profit organizations may be included as collaborators, but only an eligible organization can be the submitter. Further requirements include:

- A preliminary proposal prior to submission of a formal proposal.
- Only one *formal* proposal submitted per institution per competition.
- Collaborative partnership efforts (multiple organizations and/or institutions). While these are encouraged for all proposals, they are mandated for proposals with budgets above \$100,000. Business or industry may be included, but neither can submit the proposal. *Partner institutions/organizations must be involved in the project planning and should be represented in its leadership.* The fact that collaborating investigators or project staff are from different institutions is not adequate.
- Evidence of participating institutional/organizational commitment. This may be reflected through programmatic commitment, release time for project staff, reduced indirect cost rate, provision of special services/resources, direct fiscal contribution, *etc.*
- Multiple *target* populations (faculty, counselors, students, *etc.*) *if* the proposal budget is over \$100,000. Groups with incidental participation (*e.g.*, parents at a culminating event, teachers attending a special faculty meeting) are not considered target populations.

- Evidence of commitment to continue some or all program elements after NSF funding ends is encouraged for all proposals but is required for those with budgets over \$100,000.
- Since preliminary proposals are evaluated relative to the information contained therein, the invited formal proposals must be submitted by the same institution. Extraordinary circumstances should be discussed with the program officer.

- dissemination plan, including products;
- locale(s) of project/activity, including rationale; potential to impact a broad audience and to be replicated.

In addition to the five page narrative, there should be: (1) a cover letter from the prospective PI identifying the submitting organization and the Co-PI(s) and indicating the total approximate budget (no detail) and project duration (months); and (2) a single page with information about the PIs and other proposed project leadership (one paragraph per individual, addressing his/her qualifications and special duties *relative to the project*).

PROPOSAL PREPARATION

Preliminary Proposals

Brief, informal, preliminary proposals are required. They will have a **maximum of five (5) pages**, and should *not* use the NSF standard cover page. NSF staff will review the preliminary proposals to determine proposal eligibility and to comment on the appropriateness of proposal content, focus, and scope. Proposers will be notified in writing within eight weeks of submission deadline whether they are invited to submit a formal proposal. If more than one proposer from the same institution is invited to submit a formal proposal, the institution will decide which one will prepare a formal submission. ***Prospective proposers who do not submit a preliminary proposal are not eligible to submit in the formal competition.***

All proposers should be familiar with the NSF *Grant Proposal Guide* (GPG NSF 95-27) before preparing a preliminary proposal, even though its specific requirements may not apply to the preliminary proposal.

The preliminary proposal narrative must include the following:

- list of *key* collaborating institutions/organizations with brief descriptions of their respective roles;
- list of other cooperating organizations;
- list of specific *targeted* populations with approximate percent of project directed toward each; list of other (incidental) participating populations;
- brief statement of project's specific goals and objectives;
- brief description of anticipated outcomes (*e.g.*, permanent change sought or program void to be filled);
- project description:
 - program design (format, participant recruitment and selection, administrative structure),
 - program content (activities and services and the basis for their selection, training approaches and strategies),
 - unique or innovative aspects,
 - evaluation/assessment plan,
 - plans for continuation after NSF funding ends,.

Formal Proposals

The *Grant Proposal Guide* (GPG, NSF 95-27) discusses proposal preparation, processing, and review and provides award and grant administration information. It contains the basic forms for all NSF proposals. IDP proposals should be prepared in accordance with the GPG instructions, as modified by the guidelines set forth in this document.

Because of the partnership nature of these proposals, particularly those with budgets over \$100,000, multiple PIs representing collaborating organizations are strongly encouraged.

Project Description. As the major component of the formal IDP proposal, the project description must more fully address items included in the preliminary proposal narrative, and include:

- if applicable, results from one prior NSF supported project (within the past 5 years) for the PI or a Co-PI, whether or not that project was relevant to this proposal (GPG, pp. 5-6);
- context of project relative to related research and other projects;
- participant-related outcomes, curriculum content, climate changes, products—if any, *etc.* (in anticipated outcomes);
- systematic evaluation/assessment plan. This information allows investigators to make decisions about progress and, later, the success of the projects and activities. A methodologically sound and realistic evaluation plan should include the objectives or critical evaluation questions, the personnel needed to perform the evaluation tasks, what processes will be used to collect and analyze the information, and a timeline for these activities. Evaluation activities must take place at least annually. The evaluation section of the proposal must describe how the information collected and analyzed will be used for monitoring the progress of the project (*e.g.*, databases and annual report) and for evaluation information;

- strategies for reaching relevant audiences (potential users, decision makers), planned products such as publications, implementation techniques for new approaches, *etc.* (in the dissemination plan);
- timeline for activities reflecting adequate start up and dissemination time;
- organizational roles and managerial arrangements (in project design);
- qualifications and specific roles of each senior staff member *relative to project design/content*;
- description of the participating organizations' commitments, including any direct cost sharing. Commitment may be reflected through programmatic commitment, release time for project staff, reduced indirect cost rate, provision of special services/resources, direct fiscal contribution, *etc.*

BUDGET

IDP budgets are subject to the provisions stated in GPG (pp. 6-9). There are specific NSF guidelines regarding allowable costs for salaries and wages, indirect costs, fringe benefits, equipment purchases, participant support costs, tuition remission, consultant services, subcontracts, *etc.* Please note the following budget parameters:

- equipment is not usually funded in IDP awards;
- funds should be included for the principal investigator (two, if applicable) to attend a two-day principal investigator/project directors' meeting each project year at NSF (Arlington, VA). Follow institutional guidelines regarding per diem allowances. In the absence of such policies, use the current Federal government daily rate;
- indirect costs are *not* paid on participants costs;
- costs of entertainment and social activities are *not* allowable; however, when certain meals are an integral and necessary part of a conference/meeting (*i.e.*, working session), grant funds may be used for such meals. Grant funds may also be used for furnishing a reasonable amount of coffee/soft drinks to conference participants and attendees during periodic "coffee breaks;"
- because one of the goals of IDP and IDA activities is to effect long-term, permanent change in the scientific infrastructure, organizations responding to this announcement are required to contribute to the proposed project. The level of institutional commitment will be a factor in evaluation, as will plans for continuation when external funding ends. Cost sharing specified in the proposal will be referenced and included as a condition of any award resulting from this announcement;

- the costs of evaluation and monitoring activities are to be addressed as a separate item in the justification; and
- support for the project from non-NSF sources (organizations, institutions, or agencies) needs to be identified in the justification, with specific information provided regarding the use of those funds.

SUBMISSION

Informal preliminary proposals for IDP: Projects with budgets at or under \$100,000 have a **target date of October 1**. Projects with budgets over \$100,000 have a **target date of January 2**. In both cases, an original, with *one copy* should be sent to:

PWG/IDP Program Officer
National Science Foundation
4201 Wilson Boulevard Room 815
Arlington, VA 22230

Formal proposals for IDP: Invited formal proposals with budgets at or under \$100,000 must be postmarked by the **deadline of February 1**. Projects with budgets over \$100,000 must be postmarked by the **deadline of May 1**. In the event that the deadline falls on a Sunday or a legal holiday, it will automatically be extended to the next *business* day.

See Appendix B-1 for *IDP/IDA Checklist for Proposal Submission*, and Appendix B-2, *Presubmission Self-Review for Formal Proposals*.

The original signed formal proposal, plus *9 copies*, should be addressed as follows:

**ANNOUNCEMENT NO NSF 96-131, IDP
NATIONAL SCIENCE FOUNDATION
4201 WILSON BLVD ROOM P60
ARLINGTON, VA 22230**

To facilitate recycling, do not include colored paper in the proposal copies.

FORMAL PROPOSAL REVIEW

IDP proposals will be reviewed in accordance with NSF's merit review procedures (GPG, p. 13), with focus upon the following:

Performance Competence

- The proposal is supported by the involvement of qualified staff, adequate facilities and resources, and *documented* commitment of collaborating organizational partnerships. The latter is mandated for larger projects and can include released staff time, provision of or funding for special resources, reduced indirect cost rate, *etc.*

- The proposal shows an awareness of relevant programs and research, and reflects an understanding of factors which affect the interest, motivation, and achievement of girls/women.

Intrinsic Merit

- The goals and objectives, as well as plans and procedures for achieving them, are specific, innovative, well-developed, worthwhile, and realistic.
- The plans for recruitment and selection of *all* participants are realistic and appropriate, and multiple target populations are included in larger projects.
- The project addresses major challenges facing the full participation of women and/or girls in SEM education or careers, and establishes the need for this specific project.
- Activities and their content are up-to-date and appropriate for the targeted audience.
- Plans for assessing progress and evaluating results of the project are appropriate and adequate.

Utility or Relevance

- The project has *potential* to impact a broader audience through replication in other settings or with other targeted participants.
- The project is cost effective in terms of its actual impact, *e.g.*, number of participants.
- The project is complementary to and connected with other efforts.
- The project takes into consideration the developmental needs, background, preparation, and experience of the target audience.
- The project reflects ongoing commitment of the organizational/institutional partners.

Effect on the Infrastructure of Science, Engineering, and Mathematics

- The dissemination plan for project results (including publications or products) is appropriate, adequate, realistic, and can lead to replication/application elsewhere.
- The project has potential for improving the access, retention, and/or climate of SEM education/careers for women and/or girls.
- Evaluation and dissemination are designed to facilitate maximum project impact.
- There is evidence of organizational commitment to continue some or all program elements after NSF funding ends.
- As appropriate, the project gives attention to populations underrepresented by virtue of race/ethnicity, socio-economic status, disability, or educational level, within the general focus on gender.

Proposals will be reviewed by experts selected from the SEM education and research communities. Special efforts

will be made to secure individuals with strong records of achievement in the proposed area. Finalists will be asked to address reviewer and program officer concerns before final award decisions are made. Final award determination will be made by NSF program staff and will reflect both reviewer comments and program priorities. In addition, secondary criteria may be considered in the final decision process, *e.g.*, disciplinary or geographic distribution, racial/ethnic affiliation, and/or type of institution/organization. Review and processing of proposals require approximately six months.

AWARD ADMINISTRATION

- PIs have a window for project start dates. If an award is made in the fall, for example, it could start at a more convenient date up through the following summer, *if* that date was specified on the proposal or requested prior to the award process.
- Any change in objective or scope, PI, or a substantial change in PI level of effort, or *substantial* budget rearrangement, or reallocation of funds for participant support, must have prior written authorization from NSF (GPG, p.21). Contact the cognizant Women and Girls program officer.
- For information about a no-cost extension, see GPG, p. 2. NSF policy requires that the institution include the supporting reasons and revised expiration date as part of an institution approved no cost extension.
- Investigators with multi-year awards must submit a signed *Annual NSF Grant Progress Report* to the program director. (NSF Form 1328; GPG, p.31). If there is incremental funding, see GPG, p.21.
- For large awards with incremental funding, continuation of funding after the first year will be contingent on satisfactory progress of the project as described in the proposal, as reported to NSF, as well as on the availability of funds, and, possibly, a site visit.
- Upon completion of the project, a Final Project Report (NSF Form 98A) must be submitted (GPG, pp. 33-35). *Applicants should review this form prior to proposal submission so that appropriate tracking mechanisms are included in the proposed plan to ensure that complete information will be available at the conclusion of the project.*

Awards made as a result of this announcement are administered in accordance with the terms and conditions of NSF GC-1, "Grant General Conditions," FDP-II, "Federal Demonstration Project General Terms and Conditions," depending on the grantee organization. Copies of these documents are available at no cost from the NSF Forms and Publications Unit, phone 703-306-1130, or via e-mail at

pubs@nsf.gov. More comprehensive information is contained in the NSF *Grant Policy Manual* (NSF 95-26, August 1995), for sale through the Superintendent of Documents, Government Printing Office, Washington, DC 20402. The telephone number at GPO is (202) 783-3238 for subscription information.

INQUIRIES

Programs for Women and Girls, Division of Human Resource Development, Directorate for Education and Human Resources, National Science Foundation, 4201 Wilson Boulevard, Arlington, VA, 22230, (703) 306-1637. Internet users should send requests to: hrdwomen@nsf.gov.

RESEARCH PROPOSALS RELATIVE TO GENDER

While proposals submitted to IDP may have a research component, they usually are focused upon implementation and/or development. Proposals which are essentially research oriented might be considered in the Division of Research, Evaluation and Communication (REC), or by one of the NSF disciplinary programs.

Prospective investigators wishing to submit a research proposal relative to young women in science education, examining gender aspects of teaching and learning, for example, could talk with a program officer in the Research Section of REC (703/306-1656). A researcher focusing upon sociological, psychological, or other aspects might contact the Division of Social, Behavioral and Economic Research: Sociology (703/306-1756); Cognitive, Psychological, and Language Sciences (703/306-1731); or Science, Technology and Society (703/306-1743).

INFORMATION DISSEMINATION ACTIVITIES (IDA)

GOALS AND OBJECTIVES

The Information Dissemination Activities (IDA) program has two major goals:

- to facilitate the widespread dissemination of strategies, research results, and/or resources which: (a) improve the interest, retention, and advancement of women and girls in science, engineering and mathematics, or (b) reduce barriers to participation and achievement of this target population in education and careers to those capable of broader implementation of the successful strategies;
- to facilitate the dissemination of information related to the interest, retention, and advancement of women and girls in SEM to groups of teachers, faculty, administrators, and/or the general public.

DESCRIPTION

Wide spread dissemination of information and strategies will accelerate efforts to increase women's involvement in SEM. Presently there is not adequate opportunity for individuals to interact and share both strategies and information related to the participation and achievement of women and girls in SEM. IDA provides a mechanism for these types of interactions, thus creating a synergy which might not otherwise occur. Examples of eligible activities include but are not limited to: conferences, workshops, symposia; videotapes, brochures, and other media which could have widespread use; and electronic networks. Conferences will be supported only if equivalent results cannot be obtained at regular meetings of professional societies. Meetings must be accessible to participants with disabilities. It is expected that many activities will be cooperative and collaborative with multiple organizations.

IDA projects should: be national in scope, or designed to stimulate dialogue and action on a regional basis; meet specific needs in the SEM and/or educational community; and catalyze future action by participants.

Awards normally are for one year. Funding decisions will be announced approximately six months after submission of the *formal* proposal. In any given year, approximately five to six IDA awards are expected to be made, contingent upon proposal merit, award size, and availability of funds.

ELIGIBILITY

Organizations eligible to submit IDA proposals include universities and colleges; not-for-profit, nonacademic institutions and organizations (including museums, professional associations, private foundations, and youth centered and/or community-based organizations); and state and local governments (including school districts, but *not* indi-

vidual schools). NSF encourages proposals which serve to build or strengthen alliances among such eligible institutions/organizations. Business and/or industry may be included; however, only an *eligible* organization may submit the proposal.

Only one IDA award per organization per year will be made.

PROPOSAL PREPARATION

Brief, informal preliminary proposals are required. They will have a **maximum of five (5) pages**. In addition, a cover letter should: (1) identify the submitting organization and the PI and Co-PIs, and (2) state the amount of total budget request (no detail). *Do not* use the NSF standard cover page. Review of these preliminary proposals will provide an opportunity for NSF staff to determine proposal eligibility and to comment on the appropriateness of proposal content, focus, and scope. Proposers will be notified in writing within eight weeks whether they are invited to submit a formal proposal. *Prospective proposers who do not submit a preliminary proposal are not eligible to submit a formal proposal.*

There is no deadline for IDA proposals. However, **for conferences and workshops only**, NSF policy suggests that initial requests for conferences should be made at least 12 months in advance of the proposed date.

All proposers should be familiar with the NSF *Grant Proposal Guide* (GPG, NSF 95-27) before preparing a preliminary proposal, even though its specific requirements may not apply to the preliminary proposal.

Preliminary Proposals

The *preliminary proposal narrative* should include the following:

- list of collaborating institutions with brief descriptions of their respective roles;
- project goals and objectives;
- a statement of need;
- list of specific targeted populations;
- project description, including its unique or innovative aspects:
 - program design (format, participant recruitment and selection, administrative structure),
 - program content,
 - evaluation plan;

- a brief description of anticipated outcomes as well as potential to impact a broad audience;
- information about the proposed project leadership and individuals' qualifications relative to the project; and
- locale of project/activity including rationale.

Formal Proposals

The *Grant Proposal Guide* (GPG) discusses proposal preparation, processing, and review, and provides award and grant administration highlights. It contains the basic forms for all NSF proposals. IDA proposals should be prepared in accordance with the instructions described in GPG, as modified by the guidelines set forth in this document.

As the major component of the proposal, the project description for all Information Dissemination Activities proposals must include:

- if applicable, results from one prior NSF supported project (within the past 5 years) for the PI or a Co-PI whether or not the project was relevant to this proposal (see GPG, pp. 5-6);
- project goals and objectives;
- program design, (*e.g.*, format, participant recruitment and selection);
- program content;
- related research and projects;
- anticipated outcomes, including the potential to impact a broad audience;
- evaluation;
- specific dissemination strategies, including planned products or publications;
- timeline for activities;
- specific locale of project/activity, including rationale;
- qualifications of senior project staff relative to project design/content; and
- evidence that sponsoring institution is committed to administrative and financial support of the project.

Specific circumstances which have additional special requirements:

- When multiple organizations are involved, the project description should clearly explain the role to be played by the submitting and other organizations, and specify the managerial arrangements contemplated.
- For conferences, workshops, *etc.*(GPG, p. 16):
 - list recent meetings on the same subject, including dates and places;
 - explain the value of the event and its probable outcome;
 - note target date(s) and location of the activity;
 - give estimated number of participants and method of announcement ;
 - list proposed speakers and topics, if any;
 - include funds and/or funds available from other sources. Cost sharing is strongly encouraged;
 - show how the format will enhance interactions among presenters, participants, and the audience;
 - describe how meetings will be conducted; and
 - give names of chairpersons and members of organizing committees and their organizational affiliation.
- For publications, establish a clear need for a publication on the topic.

BUDGET

In general, support for symposia, workshops, conferences, *etc.* will not exceed \$75,000. The award size for other types of projects will relate to the nature of the effort, but usually will not exceed \$100,000.

NSF has specific provisions regarding allowable costs for salary and wage indirect costs, fringe benefits, participant support costs, tuition remission, consultant services, sub-contracts, *etc.* In general, the Information Dissemination Activities are subject to these provisions as stated in GPG. Note especially the GPG guidelines for group proposals and for conferences, symposia, and workshops. Also, please note the following budget parameters:

- equipment is not usually funded in IDA awards;
- funds should be included for the principal investigator to attend a two-day principal investigator/project directors' meeting each project year at NSF (Arlington, VA). Follow institutional guidelines regarding per diem allowances. In the absence of such policies, use the current Federal government daily rate;
- indirect costs are *not* paid on participants costs;
- publication costs are allowable;
- costs of entertainment and social activities are *not* allowable; however, when certain meals are an integral and necessary part of a conference/meeting (*i.e.*, working session), grant funds may be used for such meals. Grant funds may also be used for furnishing a reasonable amount of coffee/soft drinks to conference participants and attendees during periodic "coffee breaks;"
- the costs of evaluation and monitoring activities are to be addressed as a separate item in the budget justification.

- tion;
- support for the project from non-NSF sources (organizations, institutions, or agencies) needs to be identified with specific information provided regarding the use of those funds; and
 - because one of the goals of IDA activities is to effect long-term, permanent change in the scientific infrastructure, organizations responding to this announcement are required to contribute to the costs of the proposed project. The level of institutional commitment, over that specified in GPG, will be a factor in evaluation, as will plans for continuation when external funding ends. Cost sharing specified in the proposal will be referenced and included as a condition of any award resulting from this announcement.

SUBMISSION

Information Dissemination Activities preliminary proposals may be submitted at any time.

Preliminary proposals should be mailed to:

PWG/IDA Program Officer
National Science Foundation
4201 Wilson Boulevard Room 815
Arlington, VA 22230

See Appendix B-1 for *IDP/IDA Checklist for Proposal Submission*, and Appendix B-2, *Presubmission Self-Review for Formal Proposals*.

The original signed *formal proposal*, plus 9 copies, should be addressed as follows:

**ANNOUNCEMENT NO NSF 96-131, IDA
NATIONAL SCIENCE FOUNDATION
4201 WILSON BLVD ROOM P60
ARLINGTON, VA 22230**

PROPOSAL REVIEW

IDA proposals will be reviewed in accordance with NSF's merit review procedures (GPG, p. 13), with focus upon the following:

Performance Competence

- The proposal is supported by the involvement of qualified staff, adequate facilities and resources.
- The proposal shows an awareness of other relevant programs and research, and reflects an understanding of factors which affect the interest, motivation, and achievement of girls/women.

Intrinsic Merit

- The goals and objectives, as well as plans and procedures for achieving them, are innovative, well-developed, worthwhile, and realistic.
- The plans for recruitment and selection of any participants are realistic and appropriate.
- The project addresses major challenges facing the full participation of women and/or girls in SEM education or careers, and establishes the need for this specific project.
- The content is up-to-date and appropriate for the targeted audience.
- As appropriate, the project displays technical excellence.
- Plans for assessing progress and evaluating results of the project are appropriate and adequate.

Utility or Relevance

- The project has potential to impact a broad audience and it is cost effective. Magnitude of impact relative to cost effectiveness is demonstrated.
- The project is complementary to and connected with other efforts.
- The project takes into consideration the developmental needs, background, preparation, and experience of the target audience.

Effect on the Infrastructure of Science, Engineering, and Mathematics

- The dissemination plan is appropriate, adequate, and realistic.
- The project has potential for improving the access, retention, and/or climate of SEM education/careers for women and/or girls.
- Evaluation and dissemination are designed to facilitate maximum project impact.
- As appropriate, the project gives attention to populations underrepresented by virtue of race/ethnicity, socio-economic status, or disability, within the general focus on gender.

Proposals will be reviewed by experts selected from the SEM education and research communities, and, as needed, with special technical expertise. Special efforts will be made to secure individuals with strong records of achievement in the proposed area. Finalists will be asked to address reviewer and program officer concerns before final award decisions are made. Final award determination will be made by NSF program staff and will reflect both reviewer comments and program priorities. In addition, secondary criteria may be considered in the final decision process, *e.g.*, disciplinary or geographic distribution, racial/ethnic affiliation, and/or type of institution/organization. Review and processing of proposals require approximately six months.

AWARD ADMINISTRATION

- Any change in objective or scope, PI, or a substantial change in PI level of effort, or *substantial* budget rearrangement, or reallocation of funds for participant support, must have prior written authorization from NSF. Contact the cognizant Women and Girls program officer. (GPG, p.21).
- For information about a no-cost extension, see GPG, p. 2. NSF policy requires that the institution include the supporting reasons and revised expiration date as part of an institution approved no cost extension.
- Upon completion of the project, a Final Project Report (NSF Form 98A) must be submitted (See GPG, p. 33-35). Applicants should review this form prior to proposal submission so that appropriate tracking mechanisms are included in the proposed plan to ensure that complete information will be available at the conclusion of the project.

Awards made as a result of this announcement are administered in accordance with the terms and conditions of NSF GC-1, "Grant General Conditions," FDP-II, "Federal Demonstration Project General Terms and Conditions," depending on the grantee organization. Copies of these documents are available at no cost from the NSF Forms and Publications Unit, phone 703-306-1130, or via e-mail at pubs@nsf.gov. More comprehensive information is contained in the NSF *Grant Policy Manual* (NSF 95-26), for sale through the Superintendent of Documents, Government Printing Office, Washington, DC 20402. The telephone number at GPO is (202) 783-3238 for subscription information.

INQUIRIES

Programs for Women and Girls, Division of Human Resource Development, Directorate for Education and Human Resources, National Science Foundation, 4201 Wilson Boulevard, Arlington, VA, 22230; (703) 306-1637. Send email requests to: hrdwomen@nsf.gov.

APPENDIX A-1

IDP/IDA CHECKLIST FOR PROPOSAL SUBMISSION

- Information about Principal Investigators/Project Directors** - NSF Form 1225 (*Only one copy should be sent—clipped to original signature copy*).
- Proposal Cover Sheet including Certification Page** - NSF Form 1207:
 - The title should inform the public, identify the project, and be reasonable in length.
 - Educational projects generally are exempt from human subjects regulations. Therefore, *do not* check the human subjects box without talking with your institution's grants office.
- Summary Data Worksheet** - NSF Form 1325 A: (Appendix B-2) This provides critical data for NSF.
- Project Summary** - NSF Form 1358: self-contained description of 200 words or less, suitable for *publication*.
- Table of Contents** - NSF Form 1359, with page numbers listed.
- Project Description** - NSF Form 1360: may not exceed 15 pages (30 double-spaced pages are not acceptable). See GPG (p.3) for information regarding proposal format, *e.g.*, font size, spacing, margins. When applicable, the narrative *must* include results from prior NSF support to Principal Investigator *or* Co-PI (within the last five years), whether or not that award was germane to the current proposal (GPG, pp. 5-6).
- Bibliography** - NSF Form 1361
- Biographical Sketches** - NSF Form 1362
- Detailed Budget** - NSF Form 1030:
 - Projects exceeding 12 months will need a summary budget, as well as **separate budget pages for each year or portion thereof**, and for any sub-contract(s);
 - Number of participants supported must be listed on Form 1030, line F - Total Participant Costs.
- Budget Justification** (narrative): maximum - three pages; *budget requests must carefully justify the need for funding at the requested level, as well as the categories/items therein*;
- Current and Pending Support** - NSF Form 1239
- Supplemental Information:**
 - letters of **commitment** documenting collaborative and other arrangements. *Do not include letters of general support.*
 - descriptions of or brochures about any participating organizations which might be unknown to the reviewers, *e.g.*, museum, science center.
 - list of advisory board members, if applicable.
 - do not include extraneous materials since NSF leaves to the individual reviewer's discretion what part of the supplemental materials should be read. Excess items will not be sent to the reviewers.

APPENDIX A-2

IMPLEMENTATION AND DEVELOPMENT PROJECTS INFORMATION DISSEMINATION ACTIVITIES

PRESUBMISSION SELF-REVIEW FOR FORMAL PROPOSALS

Prior to submission, applicants may wish to review their proposals relative to some areas of concern noted by reviewers, namely:

- 1. Does the cover sheet (NSF Form 1207) identify the program and its component to which you are submitting, *i.e.* PWG: IDP or IDA?
- 2. Does the proposal meet *all* eligibility criteria?
- 3. Does the title accurately describe the project?
- 4. Is the project summary a succinct description suitable for publication?
- 5. Are the goals and objectives within the program scope, and do they really reflect what this program is trying to achieve? Are they specific, worthwhile, realistic, well-developed?
- 6. Are the activities described appropriate for achieving the projects objectives?
- 7. Are the proposed activities age appropriate, and; if applicable, do they reflect implementation of relevant standards (*e.g.*, state curricular SEM framework; Scout merit badge program)?
- 8. Is the project cost effective for the number of participants and potential impact?
- 9. Does the proposal reflect awareness of the existence of related projects, activities, and materials? Are they used or adapted, with permission and when appropriate, to prevent “reinventing the wheel”?
- 10. Are findings which have been reported in relevant literature reflected in the proposal and its activities?
- 11. Is institutional/organizational commitment reflected in the proposal?
- 12. Is documentation of *commitments* and special arrangements, both by organizations and by individuals, included in the Supplemental Information section of the proposal? (Do **not** include letters of general support.)
- 13. Are participant recruitment and selection plans fully addressed?
- 14. Is *appropriate* experience and training reflected in the background of those leading the specified activities?
- 15. Is evaluation addressed as an integral part of the project, and incorporated into initial planning? Are its costs reflected in earmarked budget item(s) or identified in the budget justification?
- 16. Is the dissemination plan likely to really impact the *appropriate* audience(s)?
- 17. If the PI or a Co-PI had any NSF prior support within the last five years, is it addressed within the project description, per pages 5-6 of the GPG?
- 18. Does the proposal answer the what, when, where, and how questions about the project?

- 19. Is it likely that the project will achieve the stated objectives?
- 20. Is it likely that there would be continuation of at least some aspects after termination of NSF funding—if an IDP award is made?
- 21. Is it likely that this project could lead to permanent changes in the climate for women and girls (IDP awards over \$100,000)?
- 22. Are all budget items appropriate, reasonable, and justified, and do they follow NSF and Women and Girls Program guidelines? Are there budget forms for each year, or portion thereof, as well as a cumulative one? Are the number of *person-months* listed for paid personnel?
- 23. Is it likely that the project will be successfully completed with the designated staff, and in the requested time frame?
- 24. Is the Summary Data Worksheet (Form 1325A) appropriately completed and included?
- 25. Is the mailing address for proposals correct?
- 26. Is the postmarked deadline being observed for formal proposals?

APPENDIX A-3

IMPLEMENTATION AND DEVELOPMENT PROJECTS AND INFORMATION DISSEMINATION ACTIVITIES

SUMMARY DATA WORKSHEET

Submitted to: IDP _____ IDA _____

Type all entries. See the reverse side for instructions and codes to be used in filling out this form.

1. Name of **Submitting Institution:** _____
2. Name of **Principal Investigator:** _____
3. Project **Title:** _____
4. **Names of participating institutions/organizations collaborating** in project, including school district:
 1. _____ 4. _____
 2. _____ 5. _____
 3. _____ 6. _____
5. **Project activities** (please check as appropriate):
 - Teacher Enhancement
 - Student Enrichment (Classroom)
 - After School/Saturday/Summer Activities
 - Curriculum Development/Modification (academic)
 - Activities/Materials Development (informal programs)
 - Youth Leader Training
 - Career/Academic counseling
 - Mentoring
 - Student "Hands-On" Research
 - Seminars/Colloquia
 - Other (please specify): _____

6. **Participants** : Enter Numbers and Descriptions on appropriate lines

<u>A. By Academic/Age Level Group</u>	<u>Primary Targeted Participants</u>		<u>Incidental Participants</u>	
	<u>Number</u>	<u>Role Description</u>	<u>Number</u>	<u>Role Description</u>
• <u>Youth/Young Adults</u>				
Elementary School	_____	_____	_____	_____
Middle School	_____	_____	_____	_____
High School	_____	_____	_____	_____
Undergraduate	_____	_____	_____	_____
Graduate	_____	_____	_____	_____
Total	_____	_____	_____	_____
• <u>Adults</u>	<u>Number</u>	<u>Role Description</u>	<u>Number</u>	<u>Role Description</u>
Teachers/Faculty	_____	_____	_____	_____
Youth Group Leaders	_____	_____	_____	_____
Other	_____	_____	_____	_____
Other	_____	_____	_____	_____
Total	_____	_____	_____	_____
<u>B. By Special Population Group</u>	<u>Number of Targeted Participants</u>		<u>Number of Incidental Participants</u>	
Ethnic Minorities	_____		_____	
Persons with Disabilities	_____		_____	
Females	_____		_____	
Males	_____		_____	

7. **Target Population** Level(s): (a) code: _____ , _____ % (b) code _____ , _____ % (c) code: _____ , _____ %
8. **Major Discipline:** _____
9. **Awardee Code:** _____
10. **Scope:** _____
11. **Activity Period:** _____
12. Project **Site(s):** _____ Other: _____
13. Project **Status:** _____
14. Project **Length:** _____ months (requested duration)
15. Total **Amount of Funding Requested** \$ _____

For numbers 7 through 15, enter the appropriate Proposal Description Codes (*see pages 17–18 for instructions*)

INSTRUCTIONS AND CODES FOR COMPLETING SUMMARY DATA WORKSHEET

1. Enter the **name of the submitting organization or institution**, including the branch or campus, if applicable.
2. Enter the **name of the lead principal investigator**.
3. Enter the **project title**.
4. Enter the **names of all colleges/universities, school districts, and other institutions that are actively collaborating** in the project. *Involvement must be substantiated by letters of commitment from authorized organizational representatives.*
5. Check the **types of project activities** included in the project and list on form other major activities proposed.
6. Enter the **numbers of participants and their descriptions** on the appropriate lines. Role descriptions:
 - Youth - *e.g.*, student, scout, 4-H member
 - Adult - *e.g.*, elementary teacher, scout leader, college faculty, parent*Each group claimed must be substantiated in the proposal narrative.*
7. Enter the **Target Population Code(s)** for the project, and percentage of participants in each code group (e.g., 9177, 60% and 9178, 40%; or 9177, 100%). The total should equal 100% of participants.
 - 9177** = Precollege
 - 9178** = Undergraduate
 - 9179** = Graduate
 - 9180** = Other
8. Select the two-digit **Major Discipline Code(s)** that correspond to the field(s) most descriptive of your proposal area focus:

12 = Chemistry	13 = Physics	21 = Mathematics
49 = Earth Science	59 = Engineering	69 = Life Science
31 = Computer Science	89 = Social Sci/Psych	99 = SEM disciplines not otherwise classified
9. Enter the **Awardee Category Code**:
 - SD** = School district
 - C** = College: 2-year
 - U** = College/university: 4-year +
 - CB** = Community-based organization (e.g., museum, youth group)
 - P** = Professional organization (e.g., American Chemical Society)
 - O** = Other private, non-profit organization
10. Enter the project's **Scope Code**: **I** = Institutional; **L** = Local; **S** = State; **R** = Regional; **N** = National.
11. Enter the **Activity Period Code** for the Project:
 - S** = Summer only
 - A** = Academic year only
 - SA** = Both summer and academic year;
 - MS** = Multiple summers
 - MA** = Multiple academic years
 - MSA** = Multiple summers and academic years.
12. Select the **Site Code** that corresponds to the site(s) where the majority of the proposed activities will occur.

S = School (K-12) Facilities	C = Community-Based Facilities
U = College / University Campus	O = Other (please specify)

13. Enter the **Project Status Code** (*enter as many codes as applicable*):

N = New/to be developed

A = Adapted from other (earlier) successful efforts or programs

E = Evaluation of an ongoing or previously developed effort or project

O = Other

14. Enter the **number of months** for which funding is requested.

15. Enter the **total amount of funding** requested.

APPENDIX B

OTHER NSF PROGRAMS AND PUBLICATIONS OF INTEREST

Directorate for Education and Human Resources

Existing EHR programs offer significant opportunities for influencing the educational and career success of women and girls in SEM. All programs within EHR encourage activities designed to impact the participation and/or achievement of women, minorities, and persons with disabilities in SEM. Therefore, NSF encourages committed individuals and institutions to explore carefully the possibility of effecting long-range change affecting women and girls through proposals that are appropriate for submission to established EHR programs. Depending upon the particular program, projects may specifically target girls or women, or may be for all students with a clear sensitivity to gender issues. Proposals in response to this invitation should fall within the context of the particular EHR program, and will be accepted and reviewed in the appropriate EHR division. This effort does not represent new or set-aside funds within these programs.

Division of Elementary, Secondary, and Informal Science Education

- *Elementary, Secondary, and Informal Education: Program Announcement and Guidelines* (NSF 95-150)
 - Informal Science Education
 - Teacher Enhancement
 - Instructional Materials Development
 - Advanced Technological Education
 - Cross Program Projects
 - Young Scholars

Division of Undergraduate Education

- *Undergraduate Education* (NSF 96-010)
 - Instrumentation and Laboratory Improvement
 - Course and Curriculum Development
 - Institution-Wide Reform of Undergraduate Education
 - Advanced Technological Education
 - Undergraduate Faculty Enhancement
 - Collaboratives for Excellence in Teacher Preparation

Division of Research, Evaluation and Communication

- *A Brief Program Guide*

Division of Graduate Education

- *Graduate Research Fellowships* (NSF 95-121)

Division of Educational System Reform

Division of Human Resource Development

- *Human Resource Development for Science, Mathematics, and Engineering Education and Research*
 - Comprehensive Partnerships for Mathematics and Science Achievement
 - Alliances for Science and Engineering Education
 - Centers of Research Excellence in Science and Technology
- *Facilitation Awards for Scientists and Engineers with Disabilities* (NSF 91-54)
- *EHR Activities in SEM for Persons with Disabilities* (NSF 96-88)
 - Model & Experimental Projects for Persons with Disabilities
 - Information Dissemination Activities
- *Program for Women and Girls* (NSF 96-131)
 - Academic Advancement in Research and Education
 - Implementation and Development Projects
 - Information Dissemination Activities

Office of Experimental Program to Stimulate Competitive Research

Other NSF Research Directorates

The following cross-directorate programs are handled by the cognizant disciplinary area:

- *Faculty Early Career Development - CAREER* (NSF 96-115)
- *Research Planning Grants and Career Advancement Awards for Women Scientists and Engineers* (NSF 93-130)
 - Research Planning Grants provide limited funding for doctoral women scientists and engineers in NSF-funded disciplines to facilitate preliminary studies and other activities related to the development of more competitive research proposals/projects by women who have not previously had independent Federal research funding. (These awards are not intended as substitutes for post-doctoral fellowships.) The investigator is expected to submit a full research proposal to NSF subsequent to completion of the RPG.
 - Career Advancement Awards (CAA) support research-related activities of experienced women investigators for the purpose of expanding their research skills, or conducting exploratory or pilot work. The award is for one year.

- *Research Experiences for Undergraduates* (NSF 96-102)
- *Research in Undergraduate Institutions* (NSF 94-79)
 - Research in Undergraduate Institutions
 - Research Opportunity Awards
- *Small Grants for Exploratory Research* (NSF 94-2)

General NSF Information

- *Grant Proposal Guide* (GPG) (NSF 95-28)
- *Guide to Programs, Fiscal Year 1996* (NSF 95-138)

Program announcements and other publications may be obtained electronically through STIS (see inside back cover), or requested from the NSF Forms and Publications Unit, by telephone (703/306-1130), or via e-mail (Internet: pubs@nsf.gov).

