



National Science Foundation

Graduate Research Fellowships

Guidelines for Submission of Applications

Program Year 2003

**Deadline for entering the
competition:**

November 7, 2002

Information available from:

NSF Graduate Research
Fellowship Program
Oak Ridge Associated Universities
P.O. Box 3010
Oak Ridge, TN 37831-3010
Telephone: (866) 353-0905
(toll-free number)

Electronic Mail: nsfgrfp@orau.gov
Web Site:
<http://www.orau.org/nsf/nsffel.htm>

SUMMARY OF PROGRAM REQUIREMENTS

GENERAL INFORMATION

Program Title: Graduate Research Fellowship Program (GRFP)

Synopsis of Program: The National Science Foundation (NSF) aims to ensure the vitality of the human resource base of science, mathematics, and engineering in the United States and to reinforce its diversity by offering approximately 900 graduate fellowships each year, including awards for women in engineering and computer and information science. Fellowships provide three years of support for graduate study leading to research-based master's or doctoral degrees in the fields of science, mathematics, and engineering supported by the NSF and are intended for students in the early stages of their graduate study.

Applicable Catalog of Federal Domestic Assistance (CFDA) No.:

47.076, Education and Human Resources.

ELIGIBILITY INFORMATION

- **Citizenship:** Applicants must be United States citizens or nationals, or permanent resident aliens of the United States.
- **Field and Degree Program:** Fellowships are awarded for graduate study in fields supported by the NSF, including the mathematical, physical, biological, behavioral and social sciences; engineering; the history of science and the philosophy of science; and for research-based PhD degrees in science education.
- **Earned Graduate Study:** Fellowships are intended for individuals in the early stages of their graduate study. In most cases, an individual has three opportunities to apply: during the senior year of college, prior to or during the first year of graduate school, and at the beginning of the second year of graduate school.

AWARD INFORMATION

- **Anticipated Type of Award:** Fellowships provide three years of support that may be used over a five-year period.
- **Estimated Number of Awards:** 900
- **Amount of funds available:** Currently \$21,500 stipend for a 12-month tenure plus \$10,500 cost-of-education allowance per tenure year; however, an increase in stipend is expected. All award amounts referred to in this publication are pending availability of funds.
- **Anticipated date of award:** New fellowships to be offered in March 2003.

APPLICATION PREPARATION AND SUBMISSION INSTRUCTIONS

A. Application Preparation Instructions

Complete instructions are outlined in these *Guidelines for Submission of Applications*.

B. FastLane Requirements

- Submission via NSF's FastLane GRFP process is expected.
- FastLane Technical Questions can be directed to:
FastLane Help Desk: 1-800-673-6188; fastlane@nsf.gov

C. Application Deadline

Electronic applications must be submitted via FastLane by 5:00 p.m. in the applicant's local time zone on November 7, 2002. Applications submitted via hard copy must be postmarked or delivered in person by November 7, 2002.

PROPOSAL REVIEW INFORMATION

Merit Review Criteria: NSF Merit Review Criteria apply.

AWARD ADMINISTRATION INFORMATION

Award Conditions: Outlined in *Information for Graduate Research Fellows* online booklet
<http://www.nsf.gov/cgi-bin/getpub?nsf0194>.

NATIONAL SCIENCE FOUNDATION GRADUATE RESEARCH FELLOWSHIPS

ACADEMIC YEAR 2003-2004

The National Science Foundation (NSF) aims to ensure the vitality of the human resource base of science, mathematics, and engineering in the United States and to reinforce its diversity. To that end in March 2003, the NSF will award approximately 900 new three-year Graduate Research Fellowships, including awards offered for women in engineering and computer and information science. NSF Fellows are expected to contribute significantly to research, teaching, and industrial applications in science, mathematics, and engineering. These contributions, in turn, will broadly impact society and the community.

So that the nation can draw fully upon the strength and creativity that our diverse society has to offer, the Foundation welcomes applications from all qualified science, mathematics, and engineering students and strongly encourages women, minorities, and persons with disabilities to compete fully in this program.

ELIGIBILITY

All applications will be reviewed for eligibility using the criteria described in the sections below. In some cases this review for eligibility continues through the disciplinary panels convened in February.

Citizenship

NSF Graduate Research Fellowships are open only to individuals who are, at the time of application, citizens or nationals of the United States¹ or permanent resident aliens of the United States.

Field, Degree Program, and Research Topics

Fellowships are awarded for graduate study leading to research-based master's or doctoral degrees in the fields of science, mathematics, and engineering supported by the National Science Foundation listed later in these *Guidelines*. Awards are also made for work toward a research-based PhD in science education that requires a science competence comparable to that for PhD candidates in scientific disciplines.

Support is not provided for study in clinical, counseling, business, or management fields; in other education programs of any kind; or in history (except in history of science) or social work; for work in medical, dental, law, public health, or practice-oriented professional degree programs; or in joint science-professional degree programs such as MD/PhD and JD/PhD programs. Support is not provided for clinical research or for research with a focus on disease, especially applied research on the diagnosis or treatment of physical or mental disease, abnormality or malfunction in humans or animals.

Research involving animal models of such conditions, the development or testing of drugs, or other procedures for their treatment is also not eligible for support. Basic research in fields supported by NSF (listed later in these *Guidelines*) is usually eligible notwithstanding the fact that it may lead to long-term disease-related implications. Research in bioengineering with diagnosis or treatment-related goals that applies engineering principles to problems in biology and medicine while advancing engineering knowledge is eligible for support. Bioengineering research to aid persons with disabilities is also eligible.

Earned Graduate Study

NSF Graduate Research Fellowships are intended for individuals in the early stages of their graduate study in science, mathematics, or engineering. In most cases, an individual has three opportunities to apply: during the senior year of college, prior to or during the first year of graduate school, and at the beginning of the second year of graduate school. Individuals who have completed no more than 12 months of graduate study (or the equivalent in part-time study²) are eligible. Individuals who started full-time graduate study in August/September 2001 and who earned no graduate credit prior to that date will be considered to have completed no more than one full year when applying by November 2002.

Most individuals who have completed more than 12 months of graduate study (or the equivalent in part-time study²) prior to the fall 2002 term are too advanced to be eligible for this program. However, some individuals with more than a year of graduate study, including some holding a master's degree in an NSF-supported field, are eligible. When assessing the eligibility of applicants with more than 12 months of graduate study in NSF-supported fields the following question is asked: Is the applicant essentially starting over, for example, because of a significant change in field or an interruption in studies? To be eligible, such an applicant must be judged to be no further along in the proposed program than a student who has completed only one full year in the same program. To judge whether an applicant is no further along than a student who has completed one year in the proposed program, both graduate coursework and research experience conducted during or after the student's prior graduate studies and related to the proposed program are examined. An applicant with more than 12 months of graduate study in NSF-supported fields must address this issue in Question 18 of the *Application Form*. This response will be considered along with the entire application in evaluating eligibility.

There are two principal reasons why an individual with more than 12 months of completed graduate study in an NSF-supported field might be eligible:

- 1.) A significant change of field is proposed. Similarities between the proposed program of study and the previous study or research are examined in detail. Rarely sufficient for eligibility purposes are changes within a given discipline, such as from topology to geometry in mathematics. Changes from quite distinct fields, for

1 The term "national of the United States" designates a citizen of the United States or a native resident of a commonwealth or territory of the United States, such as American Samoa, Guam, Puerto Rico, U.S. Virgin Islands, or the Northern Mariana Islands. It does not refer to a citizen of another country who has applied for United States citizenship.

2 For eligibility purposes assume that 9 semester hours of part-time study is equal to a full-time semester, and that 6 semester hours of part-time study is equal to a summer session. Thus, a part-time student with more than 24 semester hours of graduate credit earned subsequent to a bachelor's degree would be, for eligibility purposes, viewed as having completed more than the equivalent of one year of full-time graduate study. For these purposes 36 quarter hours equals 24 semester hours. A student with no more than 12 months of graduate study completed is not subject to any credit-hour limit. Work begun during Fall 2002 term is not counted because it is not completed.

example, from biology to economics, are generally considered to be sufficient. When the change is between related fields, such as from biology to ecology or from mechanical engineering to bio-medical engineering, the decision usually hinges on the path the student has followed. If there is considerable similarity in the research and the coursework between the previous study and the proposed study, such changes are not enough to make an applicant eligible. The case for eligibility may be strengthened somewhat if the change in field is also accompanied by a change in university.

- 2.) An interruption in studies is demonstrated. Applicants who have interrupted their graduate studies (for example, to gain work experience or for family or medical reasons) may be eligible if the interruption is for a period of more than two years. To be eligible because of such an interruption of studies, the applicant must also not have engaged in research that is akin to academic research and related to the applicant's proposed plan of research. However, an interruption of more than two years to pursue professional work in one's field is generally sufficient to qualify for this exception if no significant part of that work was research related to the applicant's proposed plan of research.

There are two situations in which applicants with graduate study completed are always ineligible:

- Those who earned a PhD in science, mathematics or engineering, or any medical degree, such as the MD, DDS, or DVM, after October 1, 1998.
- Those who have already received and held tenure as an NSF Graduate Research Fellow.

Eligibility for the Women in Engineering and Computer and Information Science Awards

The Women in Engineering and Computer and Information Science (WECS) awards³ are for women who intend to pursue graduate research degrees in Engineering or Computer and Information Science and Engineering. Women who apply in fields listed under "Engineering" or "Computer and Information Science and Engineering" later in these *Guidelines* will be considered for a WECS award. Other eligibility criteria are the same as for applicants in other fields.

EVALUATION OF APPLICATIONS

Applications will be reviewed by disciplinary panels of scientists, mathematicians, and engineers convened in February 2003 for NSF by Oak Ridge Associated Universities (ORAU). Applications are assigned to panels based on the applicant's chosen field(s) of study and are evaluated on the basis of all available information. (The rating sheet can be viewed at <http://www.orau.org/nsf/nsffel.htm>.) In considering applications, reviewers are asked to address two questions that are the basis of NSF's merit review criteria: (1) What is the intellectual merit of the applicant? and (2) What are the broader impacts of supporting the individual's graduate

study? Both intellectual merit and the broader impacts of support are important to the evaluation of applications. Applicants should address activities in their written statements to provide reviewers with information necessary to respond fully to both NSF merit review criteria.

Intellectual Merit Criterion

The intellectual merit criterion includes demonstrated intellectual ability and other accepted requisites for scholarly scientific study, such as the ability (1) to plan and conduct research; (2) to work as a member of a team as well as independently; and (3) to interpret and communicate research findings. Panelists are instructed to consider: the strength of the academic record, the proposed plan of research, the description of previous research experience, the appropriateness of the choice of references and the extent to which they indicate merit, Graduate Record Examinations (GRE) General and Subject Tests scores, and the appropriateness of the choice of institution for fellowship tenure relative to the proposed plan of research.

Broader Impacts Criterion

The broader impacts criterion includes contributions that (1) effectively integrate research and education at all levels, infuse learning with the excitement of discovery, and assure that the findings and methods of research are communicated in a broad context and to a large audience; (2) encourage diversity, broaden opportunities, and enable the participation of all citizens—women and men, underrepresented minorities, and persons with disabilities—in science and research; (3) enhance scientific and technical understanding; and (4) benefit society. Applicants may provide characteristics of their background, including personal, professional, and educational experiences, to indicate their potential to fulfill the broader impacts criterion.

SELECTION OF AWARDEES

The review panels' recommendations for fellowships will be further reviewed by NSF staff. Awards will be made by the NSF on the basis of merit in accordance with Section 10 of the National Science Foundation Act of 1950, as amended. NSF selects among applications of substantially equal merit (as determined by the merit review process) by using other criteria such as geographical region, discipline, or other factors determined to be consistent with policy and legislative intent.

The NSF will publish lists of awardees and Honorable Mention recipients on the Graduate Research Fellowship Program web site at: <http://www.nsf.gov/grfp> in late March 2003. All applicants will be notified in writing of the outcome of their applications. Those applicants who merit receiving Graduate Research Fellowships, but to whom awards cannot be made because funds are not available, will be accorded Honorable Mention. Honorable Mention in the NSF Graduate Research Fellowship Program is considered a significant academic achievement nationwide. All offers and support levels referenced in these *Guidelines* are subject to availability of funds.

³ Funding for these additional awards is provided by the Directorate for Computer and Information Science and Engineering, the Directorate for Engineering, and the Directorate for Education and Human Resources.

CONDITIONS OF AWARDS

All fellowship awards are made subject to the provisions contained in the *Information for Graduate Research Fellows* online booklet (<http://www.nsf.gov/cgi-bin/getpub?nsf0194>), including any subsequent amendments. Only the most basic information contained in that booklet is presented in these *Guidelines*. Three certifications⁴ must, by law, be made before the NSF can authorize funds for a fellowship award.

Graduate Programs

Fellows may choose any appropriate, accredited, non-profit United States institution or appropriate international institution of higher education offering advanced degrees in science, mathematics, or engineering.

Fellows are required to engage in full-time programs leading to graduate degrees in disciplines supported by NSF. Acknowledging the importance of integrating research and education, the NSF permits institutions to assign Fellows to appropriate research and teaching positions that will contribute to the progress of the Fellow toward an advanced degree. Fellows are encouraged to understand policies regarding any such required service before enrolling in any particular institution.

After an award is made, a major change in course of study requires prior NSF approval. The availability of the second and third years of a three-year award is contingent upon certification to NSF by the fellowship institution that the Fellow is making satisfactory academic progress toward an advanced degree in the approved field of study.

Stipend and Allowances

The NSF fellowship stipend is currently \$21,500 for a 12-month tenure, prorated monthly at \$1,791 for lesser periods; however, an increase in stipend is expected for 2003-2004. There is no dependency allowance. At its discretion, each fellowship institution may supplement a Fellow's stipend from institutional funds in such amounts as are in accordance with the policies of the fellowship institution.

In addition to the funds for stipend payments, the NSF provides the fellowship institution, on behalf of each Fellow, a cost-of-education allowance of \$10,500 per tenure year. During tenure, Fellows at U.S. institutions will be exempt from paying tuition and fees normally charged to students of similar academic standing, unless such charges are optional or are refundable.

At international institutions, all tuition and assessed nonrefundable fees will be paid by the Fellow, with reimbursement by the NSF, up to a maximum of \$10,500 per fellowship year.

A one-time International Research Travel Allowance of \$1,000 is available to Fellows who have arranged to conduct full-time advanced study or research at appropriate international sites for at least three continuous months. The activities must contribute to the Fellow's advanced degree objectives and must be approved by the Fellow's institution. Once a Fellow has begun NSF fellowship tenure, this travel allowance may be used at any appropriate time that travel is initiated within the five-year fellowship period.

Except for supplementation as explained in the *Information for Graduate Research Fellows* online booklet (<http://www.nsf.gov/cgi->

[bin/getpub?nsf0194](http://www.nsf.gov/cgi-bin/getpub?nsf0194)), a Fellow may not accept simultaneous remuneration from another major fellowship, assistantship, scholarship or similar award. Under Section 178(a) of Title 38, U.S. Code, educational benefits from the Department of Veterans Affairs may be received concurrently with NSF support.

Tenure

New fellowships to be offered in March 2003 will be for maximum tenure periods of three years usable over a five-year period. Recipients may begin fellowship tenure in the summer or fall term. Tenure must be completed before the beginning of the 2008 fall term. Normal tenure for a Fellow is 9 to 12 months for each fellowship year; funds for unutilized months are forfeited. A Fellow may reserve any two years over the five-year period to use an alternative means of support or to engage in activities other than graduate study. No individual will be eligible for more than three years of NSF Graduate Research Fellowship support.

OTHER OPPORTUNITIES FOR FELLOWSHIP AWARDEES AND HONORABLE MENTION RECIPIENTS

All fellowship awardees and Honorable Mention recipients may apply to use the resources at a Partnership for Advanced Computational Infrastructure (PACI) facility.

Facilitation Awards for Scientists and Engineers with Disabilities (FASSED) provide funding for special assistance or equipment to enable persons with disabilities (students and faculty) to work on NSF-supported projects. All fellowship awardees and Honorable Mention recipients who have disabilities may apply for assistance by contacting: FASSED c/o Graduate Research Fellowship Program, National Science Foundation, 4201 Wilson Boulevard - Room 815, Arlington, VA 22230. See the FASSED program announcement at <http://www.nsf.gov/cgi-bin/getpub?nsf02115>, or contact the program coordinator at (703) 292-4684.

These and other opportunities are explained in the "Additional Fellowship Provisions" section of the *Information for Graduate Research Fellows* online booklet (<http://www.nsf.gov/cgi-bin/getpub?nsf0194>).

GUIDELINES FOR APPLYING

Individuals should read carefully this document before attempting to complete any application forms. Inquiries concerning the application process should be directed to Oak Ridge Associated Universities via e-mail or telephone.

How to Apply

All applicants are expected to use NSF's FastLane Graduate Research Fellowship Program (GRFP) process. With Internet access and a supported World Wide Web browser, an applicant can submit an application electronically using this secure process. With information provided by the applicant, references may submit a *Reference Report*

⁴ These concern: 1) controlled substances; 2) delinquency on Federal debt; and 3) debarment and suspension from certain transactions with Federal, State, or local governments.

Form via FastLane; reference reports may also be submitted via postal mail. Security is provided to ensure that both applications and *Reference Report Forms* can be accessed only by authorized persons.

To access the NSF FastLane GRFP process, click on the Graduate Research Fellowships link on the FastLane Home Page: <http://www.fastlane.nsf.gov>. You will see instructions on how to use the FastLane GRFP process. Applicants should carefully review all information on the FastLane GRFP process for detailed instructions that may not be included in this publication.

For questions concerning the FastLane GRFP process, please contact the FastLane Graduate Research Fellowship support staff at e-mail: fastlane@nsf.gov or telephone the FastLane Help Desk at: 1-800-673-6188.

How to Obtain Application Forms in Hard Copy

Application forms may be retrieved using the following methods. Note that applications submitted via hard copy must be postmarked or delivered in person to ORAU by November 7, 2002.

a. NSF Web Site: <http://www.nsf.gov/grfp>

Via the Internet, you can download the application forms as either a PDF printable blank form or a Microsoft Word 97 (or newer version) on-line form. To view the PDF forms you must have the Adobe Acrobat Reader installed, which is a free product and can be downloaded at this site. If your browser does not automatically launch the Microsoft Word 97 on-line form, a message will appear to prompt you to save the Word file to a local disk drive.

b. Information via E-Mail: You can have application forms sent to you via e-mail. Application forms are available in two versions: a PDF printable blank forms kit and a Microsoft Word 97 (or newer version) on-line forms kit.

Send an e-mail message to: getpub@nsf.gov

Leave the subject line blank. In the body of the message enter:

get fmgfkit.pdf (for the PDF Application Forms Kit)
get fmgfkit.doc (for the Word 97 Application Forms Kit)

c. Printed application forms may be obtained by direct request from:

NSF Graduate Research Fellowship Program
Oak Ridge Associated Universities
P.O. Box 3010, Oak Ridge, TN 37831-3010
or telephone (866) 353-0905 (toll-free number)
or fax (865) 241-4513
or e-mail to: nsfgrfp@ornl.gov

Graduate Record Examinations

General Test

All NSF Graduate Research Fellowship applicants are recommended to have scores from the GRE General Test to support the review of their application. If the applicant will not have GRE General Test scores earned since October 1, 1997, the applicant should notify ORAU at the time of submission of the application. If you plan to take the GRE General Test in support of your application, you should make arrangements to take it no later than December 31, 2002. General Test scores from tests taken after December 31, 2002 will not be accepted.

Subject Test

All applicants are recommended to have scores from the Subject Test in their proposed field of graduate study, if a test is offered. The Educational Testing Service (ETS) offers Subject Tests in the following NSF-supported fields: Biochemistry, Cell and Molecular Biology; Biology; Chemistry; Computer Science; Mathematics; Physics; and Psychology. If the applicant's proposed field of graduate study is listed above and the applicant will not have Subject Test scores earned since October 1, 1997, the applicant should notify ORAU at the time of submission of the application. If you plan to take a Subject Test in support of your application, you should make arrangements to take it no later than December 14, 2002.

How to Obtain GRE Information for Test Registration

You are responsible for obtaining your own *GRE Information and Registration Bulletin* and registration form either on your campus, or directly from the Educational Testing Service, P.O. Box 6000, Princeton, New Jersey 08541-6000, telephone (609) 771-7670, fax (609) 771-7906 or Internet <http://www.gre.org>. Complete test registration instructions are given in the *GRE Information and Registration Bulletin* and on the web site.

Reporting of GRE Scores

To have your scores reported, indicate "Yes" for Questions 13 and 14 on the Information Form and provide the requested information. If you indicate "Yes", according to ETS policy all GRE General and Subject Tests scores in the GRE database from tests administered since October 1, 1997 (and prior to the fellowship application test date cutoff of December 31, 2002) will be reported directly to ORAU. Only GRE scores from tests taken between October 1, 1997 and December 31, 2002 will be accepted for the 2003 NSF Graduate Research Fellowship competition. Applicants should not request score reports from ETS for their fellowship application and should not submit scores directly to ORAU. There is not an active "Fellowship Sponsor Code" for this program.

Payment of Subject Test Fee

NSF will pay Subject Test registration fees for applicants who register for the December 14, 2002 administration provided that (1) NSF Fellowship application is the primary purpose, and (2) the GRE registration form for the December test has been received at ETS no later than November 8, 2002. The registration form and *Request for Payment of GRE Subject Test Fee* form must be submitted via postal mail (but no payment is required). The *Request for Payment of GRE Subject Test Fee* form is available at <http://www.nsf.gov/grfp>. NSF fee sponsorship cannot be requested using the ETS on-line registration process.

The following condition is imposed on the reporting of December 14, 2002 GRE Subject Test scores when the test fee is paid by NSF: Prior to May 1, 2003 these scores will be reported only to Oak Ridge Associated Universities for the NSF Graduate Research Fellowship Program, to the fellowship applicant, and to the applicant's undergraduate institution. Exception: If you are an applicant in the NSF Graduate Research Fellowship Program and an applicant in the Howard Hughes Medical Institute Predoctoral Fellowship Program, your GRE Subject Test score will be reported to both programs and the test fee shared by the National Science Foundation and the Howard Hughes Medical Institute. If you want to have your NSF-funded GRE scores reported elsewhere (e.g., graduate institutions and other fellowship programs) before May 1, 2003, you must make arrangements with ETS to pay the registration and additional score reporting fees.

Application Status

It is the applicant's responsibility to ensure that all materials are received by ORAU; applicants will be notified about a secure web site where they may access application status information.

Applicants should consult the ORAU/NSF web site <http://www.orau.org/nsf/nsffel.htm> throughout the months following the November deadline for current program information and announcements.

Where to Submit Application Materials

- Applications and *Reference Report Forms* should be submitted electronically using FastLane; other supporting materials should be submitted in hard copy via postal mail or special messenger or delivery.

Application materials are not accepted via fax or e-mail.

- Mailing address:
NSF Graduate Research Fellowship Program
Oak Ridge Associated Universities
P.O. Box 3010
Oak Ridge, TN 37831-3010
- Overnight delivery or courier address:
NSF Graduate Research Fellowship Program
Oak Ridge Associated Universities
702 South Illinois Avenue, Suite B-102
Oak Ridge, TN 37830

DEADLINES

Application Materials

A complete application consists of all the materials listed below, including GRE General and Subject Tests scores. An incomplete application is at a disadvantage in the competition and may not be evaluated. An application submitted without the Proposed Plan of Research will not be accepted for the competition.

- November 7, 2002 – Submission Deadline
 - Information Form
 - Application Form
 - Proposed Plan of Research Form
 - Previous Research Experience Form

The application materials listed above must be submitted via FastLane by 5:00 p.m. in the applicant's local time zone. Postal mail applications must be postmarked or delivered in person to ORAU by November 7, 2002. Late applications, including those postmarked or submitted later than November 7, 2002, will not be accepted.

- November 7, 2002 – Preferred Submission Date
 - Undergraduate GPA Form
 - Official Academic Transcripts (excluding fall 2002)

The Undergraduate GPA Form and transcripts should be submitted in hard copy. These items may be mailed in the same envelope.

- December 5, 2002 – Preferred Submission Date
 - Reference Report Forms (four are recommended)

Requests for Reactivation of Official Academic Transcripts and/or Undergraduate GPA Forms

- November 7, 2002 – Submission date for requests for reactivation of Official Academic Transcripts and/or Undergraduate GPA Forms from the 2002 competition. Send requests via e-mail to nsfgrfp@orau.gov.

Graduate Record Examinations

- November 8, 2002 - Receipt deadline for GRE registration forms at the ETS for NSF applicants for the December 14, 2002 Subject Test.
- December 14, 2002 - Last date for GRE Subject Test for NSF applicants.
- December 31, 2002 - Last date for GRE General Test for NSF applicants.

INSTRUCTIONS FOR COMPLETING A FELLOWSHIP APPLICATION

Instructions for completing all forms are provided in the following sections.

Inventory List:

Use this sheet when submitting your NSF Graduate Research Fellowship application materials via postal mail. (The Inventory List will automatically be created for applicants applying via FastLane.) List the materials and page count on the form as indicated.

Information Form (NSF Form 289):

1. **Social Security number.**
2. **List your complete permanent address.** Check if the address is U.S. (including Puerto Rico, Guam, American Samoa, U.S. Virgin Islands and the Northern Mariana Islands) or international. Do not use APO or FPO addresses, college department addresses, or abbreviated names of streets or cities.
3. **The mailing address** will be used in late March 2003 to notify you of the outcome of this year's competition. Check if the address is U.S. (including Puerto Rico, Guam, American Samoa, U.S. Virgin Islands and the Northern Mariana Islands) or international. Notify ORAU immediately of any change in mailing address.
4. **List one telephone number (daytime).**
5. **List one e-mail address.** The e-mail address will be used to notify you of application materials received on your behalf, of eligibility concerns, and for other correspondence through February 2003. It is your responsibility to ensure the accuracy and currency of this information. Notify ORAU immediately of any change in e-mail address.
6. **Date of birth and place of birth.** Check if the location is U.S. (including Puerto Rico, Guam, American Samoa, U.S. Virgin Islands and the Northern Mariana Islands) or international.
7. **Gender.**
8. **List the city and state or country of the high school from which you graduated.** Check if the location is U.S. (including Puerto Rico, Guam, American Samoa, U.S. Virgin Islands and the Northern Mariana Islands) or international. If you received a high school equivalency certificate rather than a diploma, indicate the name of the state through which it was granted.
9. **Ethnicity. Using the following description, select the group with which you most closely identify.** Hispanic or Latino. A person of Mexican, Puerto Rican, Cuban, South or Central American, or other Spanish culture or origin, regardless of race.
10. **Race. Use the following descriptions to select the group or groups with which you most closely identify.** American Indian or Alaska Native. A person having origins in any of the original

peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment. Asian. A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam. Black or African American. A person having origins in any of the black racial groups of Africa. Native Hawaiian or Other Pacific Islander. A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands. White. A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.

11. **All applicants must be citizens or nationals of the United States, or permanent resident aliens of the United States at the time of application.** If you are a permanent resident alien, enter the date your permanent resident status was granted. Indicate country of citizenship if not U.S.
12. **Indicate if you have a disability that limits a major life activity.**
13. **All applicants are recommended to have scores from the GRE General Test** to support the review of their applications. If you want the Educational Testing Service to report your GRE General Test scores to ORAU, answer "yes" to this question. A positive response will result in all GRE General Test scores in the GRE database (for tests taken between October 1, 1997 and December 31, 2002) reported to ORAU for inclusion in your applicant file. A negative response will result in no GRE General Test scores being included in your applicant file. Failure to respond to this question will be treated as a negative response and will result in no GRE General Test scores being included in your applicant file.

For positive responses, supply as much information as possible to assist ETS in reporting your scores, including the test dates and registration numbers for each test taken. Include name, Social Security number and date of birth information only if different from what you provided earlier on the Information Form. Do not enter "same," "see above," or "not applicable" in any of the fields.
14. **All applicants are recommended to have scores from the GRE Subject Test** in their proposed field of graduate study, if a test is offered. (See the section on "Graduate Record Examinations" earlier in these *Guidelines* for more information.) If you want the Educational Testing Service to report your GRE Subject Test scores to ORAU, answer "yes" to this question. A positive response will result in all GRE Subject Test scores in the GRE database (for tests taken between October 1, 1997 and December 14, 2002) reported to ORAU for inclusion in your applicant file. A negative response will result in no GRE Subject Test scores being included in your applicant file. Failure to respond to this question will be treated as a negative response and will result in no GRE Subject Test scores being included in your applicant file.

For positive responses, supply as much information as possible to assist ETS in reporting your scores, including the test dates, registration numbers, and Subject Test code for each test taken. Include name, Social Security number and date of birth information only if different from what you provided earlier on the Information

Form. Do not enter “same,” “see above,” or “not applicable” in any of the fields.

15. **In addition to publishing the names of applicants to whom awards will be offered, NSF also publishes the names of applicants who qualify for honorable mention designation.** See <http://www.nsf.gov/grfp> for previous lists. Honorable Mention in the NSF Graduate Research Fellowship Program is considered a significant achievement nationwide. Failure to respond to this question will be treated as a negative response, and your name will not be published.
16. **The lists of awardees and honorable mention recipients that NSF publishes are frequently used by universities to recruit graduate students.** To assist those universities in contacting individuals on the lists, NSF publishes mailing addresses. See <http://www.nsf.gov/grfp> for previous lists. Failure to respond to this question will be treated as a negative response, and your address will not be published.
17. **Indicate how you learned about the program.**
18. **If applying via postal mail, respond to this question regarding FastLane,** NSF’s Internet/Web based system for electronic applications. Your answer to the question is for administrative use. In the future NSF intends to require submission of applications using FastLane.

Application Form (NSF Form 289):

1. **Major field of specialization:** Select only one major field. Refer to the “NSF-Supported Fields of Specialization” list in the back of these *Guidelines*. (The major field will be automatically selected for FastLane applicants based on selection of specialized sub-field.)
2. **Specialized sub-field(s) within major field:** From the “NSF-Supported Fields of Specialization” list, select your proposed field and enter the code number and name on the designated line. If your field is not specified, list the appropriate “other” code number and enter the name of your specialized field.
3. **Multidisciplinary programs:** If your graduate program is multidisciplinary, indicate your primary field of study and the percent of effort in your overall program. Likewise, indicate your other or secondary fields and the percent of effort. Refer to the “NSF-Supported Fields of Specialization” list. If a field is not contained in this list, please list the field and the percent of effort.
4. **Degree goal:** Enter the name of the highest level degree toward which you expect to work while on your proposed fellowship tenure and the field. For example, if two years of your fellowship tenure will be spent earning a master’s degree and one year of your tenure in a PhD program, list the PhD as your ultimate degree goal.
5. **Proposed graduate institution:** Indicate your first choice of a graduate institution. Reviewers consider the appropriateness of the choice in reviewing your application. You need not have been accepted at this institution before listing its name. If, after submitting the application, you decide to change the institution you wish to attend, notify ORAU immediately. Also list your

proposed department within the institution, the city where the institution is located, and the state or country. Do not abbreviate.

6. **Baccalaureate institution:** List the institution from which you will receive or have received your bachelor’s degree. If you have or will have more than one bachelor’s degree, list the institution of your most recent science or engineering degree; if no science or engineering degree, list the institution of your most recent bachelor’s degree. Also list the degree, the year of completion, the city where the institution is located, and the state or country.
7. **Colleges or universities attended:** Starting with the current or most recent college/university (including its location), indicate the beginning and ending dates of attendance, degree awarded or expected and date, and the major field of study. For dates, use the “mm/yyyy” format.
8. **Current enrollment (as of fall 2002):** If currently enrolled in a college or university, indicate whether full-time or part-time. Also indicate the level (undergraduate or graduate). Indicate the institution where you are currently enrolled along with the city and state or country.
9. **Five-year Program:** Indicate if you are or have been enrolled in a five-year joint baccalaureate-master’s degree program.
Four-year Program: Indicate if you are or have been enrolled in a four-year joint baccalaureate-master’s degree program.
10. **Completed graduate courses in any field since receipt of your bachelor’s degree:** List the institution, department, dates attended, and number of graduate hours (including individual courses, research, seminars, and independent study) completed since receipt of your bachelor’s degree. For the dates, use the “mm/yyyy” format.
11. **Individuals chosen to submit Reference Report Forms:** Choose individuals, preferably faculty members in science or engineering fields, whose knowledge of your academic and/or professional experience and ability is current. See “Reference Report Form” later in these instructions for further information.
12. **List your native language.**
13. **List up to five fellowships, scholarships, teaching and work experiences** relevant to your field held since entering college/university. Begin with the most recent.
14. **List significant academic honors** you have received relevant to your major field of study.
15. **Describe any personal, professional, or educational experiences or situations** that have contributed to your desire to pursue advanced study in science, mathematics, or engineering. Review the instructions for the *Previous Research Experience Form* to avoid duplicating information. Type single-spaced using 10-point font size or larger. There is a 1-page limit.
16. **Describe your experiences in the following, or describe how you would address the following in your professional career:** Integrating research and education (for example, participating in

and encouraging discovery at various levels); advancing diversity in science (for example, contributing to the participation of underrepresented groups); enhancing scientific and technical understanding (for example, sharing scientific knowledge with the general community); or otherwise benefiting society. Type single-spaced using 10-point font size or larger. There is a 1-page limit.

17. **Mark the choice that most appropriately describes your current status.** If you have been a part-time graduate student, assume that 9 semester hours of part-time study is equal to a full-time semester, and that 6 semester hours of part-time study is equal to a summer session. Thus, a part-time student with more than 24 semester hours of graduate credit earned subsequent to a bachelor's degree would be viewed as having completed more than the equivalent of one year of full-time graduate study. For these purposes 36 quarter hours equals 24 semester hours. Work begun during Fall 2002 term is not counted because it is not completed.
18. **If you have completed more than one year of full-time graduate study or the equivalent** (as reflected in your response to Question 17), explain the circumstances that you believe demonstrate that you are in the early stages of your proposed graduate program. Be sure to read the passage on "Earned Graduate Study" in the *Guidelines*. Type single-spaced using 10-point font size or larger. There is a 1-page limit.

Proposed Plan of Research Form (NSF Form 306):

In a clear, concise, and original statement, describe research topics you may pursue while on fellowship tenure, and include how you became interested in these topics. Your statement should reflect your own thinking and work, demonstrate your understanding of research principles necessary to pursue these interests, and explain the relationship to your previous research, if any. Present your plan with a clear hypothesis or questions to be asked by the research. If you have not yet formulated a plan of research, your statement should include a description of one question that interests you and an analysis of how you think the question may best be answered. A listing of courses alone is not sufficient. Research topics discussed in your proposed plan may be used in determining eligibility. Type single-spaced using 10-point font size or larger. There is a 2-page limit, including references.

Previous Research Experience Form (NSF Form 1259):

Describe any scientific research activities in which you have participated, such as experience in undergraduate research programs, or research experience gained through summer or part-time employment or in work-study programs, or other research activities, either academic or job-related. Explain the purpose of the research and your specific role in the research, including the extent to which you worked independently and/or as part of a team, and what you learned from your research. In your statement, distinguish between undergraduate and graduate research experience. If you have had no direct research experience, describe any activities that you believe have prepared you to undertake research. At the end of your statement, list any publications and/or presentations made at national and/or regional professional meetings. Type single-spaced using 10-point font size or larger. There is a 2-page limit, including references.

Undergraduate GPA Form (NSF Form 314):

Complete the applicant's portion of the *Undergraduate GPA (Grade Point Average) Form* and submit it to the Registrar of the institution you listed in Question 6 of the *Application Form*. Submit only one Undergraduate GPA Form. The form is available at <http://www.nsf.gov/grfp>.

Transcript Request Form (NSF Form 316):

You should submit a single complete copy of each **official** transcript from all academic institutions attended, undergraduate and graduate, excluding fall 2002, by the preferred submission date. Submit a fall 2002 transcript or grade report as soon as it is available. Duplicate the *Transcript Request Form* as required and submit to all appropriate institutions. The form is available at <http://www.nsf.gov/grfp>.

Reference Report Form (NSF Form 299):

You are expected to submit or have submitted on your behalf four *Reference Report Forms*. Scientists or faculty members who have current knowledge of your academic and/or professional experience and ability should be selected as references, since they will be able to give meaningful answers to the questions asked. NSF suggests that at least two of the four should be persons with whom you have worked in your present (or most recent) department, including the thesis adviser if applicable.

Only the NSF *Reference Report Form* should be used for an NSF Graduate Research Fellowship application. The student reference statements on file at colleges and universities will not be accepted in lieu of the NSF *Reference Report Form*. The form is available at <http://www.nsf.gov/grfp>.

If you submit your application via FastLane, references may send *Reference Report Forms* either via FastLane, if you provide your reference code, or via postal mail. *Reference Report Forms* submitted to ORAU directly by the reference should be submitted or postmarked by December 5, 2002.

If you have applied before and find it necessary to use some of the same people as references, request that the references prepare new reports. In most cases they will be able to provide additional and more up-to-date information concerning your ability and training. *Reference Report Forms* submitted for a prior year's application cannot be transferred to a current application.

Request for Payment of GRE Subject Test Fee:

If you wish to have NSF pay your GRE Subject Test registration fee, send the *Request for Payment of GRE Subject Test Fee* form with your GRE Subject Test registration form for the December 14, 2002 GRE Subject Test to ETS by November 8, 2002. Refer to the passage on "Graduate Record Examinations" in the *Guidelines*. The form is available at <http://www.nsf.gov/grfp>.

Self-Addressed Stamped Postcard:

If you submit an application via postal mail, and wish to be notified that your application packet has been received, include a self-addressed stamped postcard (3½" x 5½" minimum) with the initial packet.

IMPORTANT POINTS

- Observe the deadlines. Only data changes to the Information Form and Application Form will be accepted after the deadline.
- Submit electronic applications early to avoid possible system delays on the deadline day.
- Submit only one application. Do not submit duplicate applications via FastLane and postal mail.
- Retain a copy of all application materials submitted. Material submitted in support of an application will not be returned.
- Obtain a Certificate of Mailing from the post office or a receipt from the special delivery service for all application materials mailed.
- Type all application information in no smaller than 10-point font size. Leave adequate margins and space between paragraphs.
- Observe the indicated page limits. Reviewers are not expected to read beyond the indicated limits.
- Do not reformat the application materials. Do not use application materials from a previous year, or from other programs.
- Do not submit GRE tests scores, off-prints, manuscripts, video tapes, slides, photographs, or other extraneous materials. These will not be included in your application file.
- Put your name on all attachments and additional sheets.
- Applicants should submit all application materials in one large envelope if submitting via postal mail. Indicate “application” on the outside of the envelope.
- If any application materials are submitted separately, indicate the contents on the outside of each envelope.

NATIONAL SCIENCE FOUNDATION GRADUATE RESEARCH FELLOWSHIPS
NSF-Supported Fields of Specialization

CHEMISTRY

5230 Analytical
 5250 Bio-inorganic
 5240 Bio-organic
 5260 Biophysical
 9994 Environmental
 5290 Inorganic
 5330 Organic
 5350 Physical
 5331 Polymer
 5370 Theoretical
 5399 Chemistry, other (specify)

**COMPUTER AND INFORMATION
 SCIENCE AND ENGINEERING (CISE)**

7240 Artificial Intelligence
 (including Robotics and Expert Systems)
 7210 Computer Science - Languages and Systems
 7200 Computer Science - Theory
 7270 Computer Systems Design
 (including Signal Processing)
 7230 Database Systems
 7261 Graphics
 7260 Human Computer Interaction
 7250 Information Technology and Organizations
 7290 Networks and Communications
 7280 Scientific Computing
 7220 Software Engineering
 7299 CISE, other (specify)

ENGINEERING

6210 Aeronautical and Aerospace
 6240 Agricultural
 6250 Bioengineering and Biomedical
 6330 Chemical
 6350 Civil
 6388 Computer Engineering
 6390 Electrical and Electronic
 6741 Energy
 6470 Engineering Mechanics
 6532 Engineering Science
 9996 Environmental
 6580 Industrial
 6476 Materials
 6620 Mechanical
 6660 Metallurgical
 6740 Nuclear
 6245 Ocean
 6716 Petroleum
 6480 Polymer
 6585 Systems Engineering
 6799 Engineering, other (specify)

GEOSCIENCES

5710 Aeronomy
 5720 Atmospheric Chemistry
 5750 Chemical Oceanography
 5770 Climate Dynamics
 5740 Geochemistry
 5780 Geology
 5800 Geophysics
 5810 Hydrologic Sciences
 5820 Large-scale Dynamics Meteorology
 5830 Magnetospheric Physics
 5840 Marine Geology and Geophysics
 5850 Mesoscale Dynamic Meteorology
 5870 Paleoclimate
 5860 Paleontology
 5880 Physical Meteorology
 7799 Physical Oceanography
 5890 Solar-Terrestrial
 5889 Geosciences, other (specify)

LIFE SCIENCES

0399 Agriculture⁵
 0140 Agronomy⁵
 4510 Anatomy⁶
 4530 Animal Behavior
 4531 Animal Science⁵
 0999 Biochemistry⁶
 1870 Biological Oceanography
 1899 Biology
 1299 Biophysics
 1599 Botany (including Plant Physiology)
 1820 Cell Biology⁶
 1860 Computational Biology
 1840 Developmental Biology
 1830 Ecology
 4570 Entomology
 9992 Environmental Sciences
 1850 Evolutionary Biology
 4590 Fish and Wildlife⁵
 0250 Forestry⁵
 2499 Genetics⁶
 0300 Horticulture⁵
 3293 Immunology⁶
 1874 Marine Biology
 3299 Microbiology⁶
 1880 Molecular Biology⁶
 1829 Neurosciences⁶
 1890 Nutrition⁵
 2970 Pharmacology⁶
 3899 Physiology⁶
 1545 Plant Pathology
 4540 Soil Science
 1822 Structural Biology
 3290 Virology⁶
 4699 Zoology
 2299 Life Sciences, other (specify)⁶

⁵ Warning: Fellowships are awarded only for study leading to research-based master's or doctoral degrees. Practice-oriented master's programs are not eligible for support in this program. PhD programs must be science-based.

⁶ Warning: Research with disease-related goals is not eligible for support by NSF. Applicants in this field will be judged ineligible if their Proposed Plan of Research has disease-related goals and/or is insufficiently focused on basic research questions.

MATHEMATICAL SCIENCES

- 7010 Algebra or Number Theory
- 7030 Analysis
- 7050 Applications of Mathematics
(including Biometrics and Biostatistics)
- 7110 Geometry
- 7130 Logic or Foundations of Mathematics
- 7140 Operations Research
- 7150 Probability and Statistics
- 7170 Topology
- 7199 Mathematics, other (specify)

PHYSICS AND ASTRONOMY

- 4999 Astronomy
- 4930 Astrophysics
- 8040 Atomic and Molecular
- 8050 Condensed Matter Physics
- 8160 Nuclear
- 8180 Optics
- 8110 Particle Physics
- 8200 Physics of Fluids
- 8210 Plasma
- 8220 Solid State
- 8260 Theoretical Physics
- 8299 Physics, other (specify)

PSYCHOLOGY

- 4125 Cognitive
- 4120 Cognitive Neuroscience
- 4130 Developmental
- 4150 Experimental or Comparative
- 4189 Industrial/Organizational
- 4155 Neuropsychology
- 4165 Perception and Psychophysics
- 4170 Personality and Individual Differences
- 4158 Physiological
- 4162 Quantitative
- 4190 Social
- 4199 Psychology, other (specify)⁷

SOCIAL SCIENCES

- 0693 Biological Anthropology
- 0695 Cultural Anthropology⁸
- 0694 Linguistic Anthropology
- 0696 Medical Anthropology
- 0697 Physical Anthropology
- 0699 Anthropology, other (specify)
- 0610 Archaeology⁸
- 9818 Demography
- 8599 Economics
(Business Administration not eligible)
- 8799 Geography
- 9099 History of Science
- 9499 International Relations⁵
- 9299 Linguistics
- 9098 Philosophy of Science
- 9399 Political Science
- 9799 Public Policy⁵
- 9599 Sociology (Social Work not eligible)
- 9699 Urban and Regional Planning⁵
- 9899 Social Sciences, other (specify)⁸

Note: For further clarification of research areas supported by the NSF, see the *National Science Foundation Guide to Programs* at <http://www.nsf.gov/pubsys/ods/getpub.cfm?nsf0203>.

⁷ Warning: Clinical and counseling psychology are generally not supported in this program; applicants in this field will be judged ineligible if their Proposed Plan of Research focuses on mental disease, abnormality or malfunction.

⁸ Warning: Applicants in these fields may be judged ineligible if the Proposed Plan of Research does not demonstrate a scientific approach.

NOTES

NOTES

ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) funds research and education in most fields of science and engineering. Grantees are wholly responsible for conducting their project activities and preparing the results for publication. Thus, the Foundation does not assume responsibility for such findings or their interpretation.

NSF welcomes proposals from all qualified scientists, engineers and educators. The Foundation strongly encourages women, minorities, and persons with disabilities to compete fully in its programs. 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 subjected to discrimination under any program or activity receiving financial assistance from NSF (unless otherwise specified in the eligibility requirements for a particular program).

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-supported projects. See the program announcement or contact the program coordinator at (703) 292-8636.

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Relay Service (FRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation regarding NSF programs, employment, or general information. TDD may be accessed at (703) 292-5090 or through FRS on 1-800-877-8339.

PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

The information requested on the application materials 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 applicants and may be disclosed to qualified reviewers and staff assistants as part of the review process; to the institution the nominee, applicant or fellow is attending or is planning to attend or is employed by for the purpose of facilitating review or award decisions, or administering fellowships or awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies needing data regarding applicants or nominees as part of the review process, or in order to coordinate programs; and to another Federal agency, court or party in a court or Federal administrative proceeding if the government is a party. Information from this system may be merged with other computer files to carry out statistical studies the results of which do not identify individuals. Notice of the agency's decision may be given to nominators, and disclosure may be made of awardees' names, home institutions, and fields of study for public information purposes. For fellows or awardees receiving stipends directly from the government, information is transmitted to the Department of the Treasury to make payments. See System of Records, NSF-12, "Fellowships and Other Awards," 63 Federal Register 265 (January 5, 1998). Submission of the information is voluntary; however, failure to provide full and complete information may reduce the possibility of your receiving an award.

Public reporting burden for this collection of information is estimated to average 12 hours per response, including the time for reviewing instructions. Send comments regarding this burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to: Suzanne H. Plimpton, Reports Clearance Officer; Division of Administrative Services; National Science Foundation; Arlington, VA 22230.

The National Science Foundation is committed to making all of the information we publish easy to understand. If you have a suggestion about how to improve the clarity of this document or other NSF-published materials, please contact us at plainlanguage@nsf.gov.

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