# **Graduate Research Fellowship Program (GRFP)**

## **Program Solicitation**

NSF **04-615** 

Replaces Document NSF 03-050



# **National Science Foundation**

Directorate for Education and Human Resources
Division of Graduate Education

**Application Deadline(s)** (due by 5 p.m. proposer's local time):

# Deadline(s) are dependent on proposed field of study or specialization

November 17, 2004

Life Sciences

November, 18, 2004

Chemistry

November 19, 2004

Computer and Information Science and Engineering

November 29, 2004

Social Sciences

November 30, 2004

Physics and Astronomy

December 2, 2004

**Mathematical Sciences** 

December 3, 2004

Geosciences

December 9, 2004

Psychology

December 10, 2004

## Engineering

The deadline(s) above apply to application information that must be submitted via FastLane.

The following deadlines apply to Supporting Application Materials:

December 10, 2004:

Undergraduate GPA Form and Official Academic Transcript(s) (excluding Fall 2004)

December 31, 2004: GRE Subject and General Test scores (optional) and Reference Letter (required).

### **REVISIONS AND UPDATES**

NOTE: The NSF-Supported Fields of Specialization that comprise the disciplines above are listed here.

- 1. Submission deadlines have changed.
- 2. The following materials constitute the application: FastLane application information, Undergraduate GPA Form, Official Academic Transcripts, and Reference Letter. GRE scores are optional.
- 3. The requirement for Reference Report Forms has been changed to require only one Reference Letter.
- 4. The method for submitting GRE scores via the Educational Testing Service has changed.

### **SUMMARY OF PROGRAM REQUIREMENTS**

#### **General Information**

## **Program Title:**

Graduate Research Fellowship Program (GRFP)

## Synopsis of Program:

The National Science Foundation aims to ensure the vitality of the human resource base of science, technology, engineering, and mathematics in the United States and to reinforce its diversity by offering approximately 1,000 graduate fellowships in this competition. The Graduate Research Fellowship provides three years of support for graduate study leading to research-based master's or doctoral degrees and is intended for students who are at the early stages of their graduate study. The Graduate Research Fellowship Program (GRFP) invests in graduate education for a cadre of diverse individuals who demonstrate their potential to successfully complete graduate degree programs in disciplines relevant to the mission of the National Science Foundation.

## Cognizant Program Officer(s):

• Earnestine Psalmonds, Program Director, Directorate for Education & Human Resources, Division of Graduate Education, 907 N, telephone: (703) 292-5199, email: epsalmon@nsf.gov

## Applicable Catalog of Federal Domestic Assistance (CFDA) Number(s):

• 47.076 --- Education and Human Resources

#### **Eligibility Information**

## • Organization Limit:

Fellowship applications must be submitted by the prospective Fellow. Applicants must register with the FastLane system prior to submitting an application and must affiliate with an accredited United States university, college, or non-profit academic institution or appropriate international institution of higher education offering advanced degrees in science, technology, engineering, and mathematics prior to activating the Fellowship award.

## • Applicant Eligibility Limit:

Applicants must be United States citizens or nationals, or permanent resident aliens of the United States. The term "national" designates 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 U.S. citizenship.

Fellowships are intended for individuals in the earliest stages of their graduate study.

- Applicants must have completed no more than twelve months of full-time graduate study or the equivalent in part-time study.
- Individuals may 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.
- Limit on Number of Applications: Applicants are limited to only one application in this competition.

#### **Award Information**

- Anticipated Type of Award: Fellowship
- Estimated Number of Awards: 1000
- Anticipated Funding Amount: \$40,500 Annually: \$30,000 Stipend and \$10,500 Cost of Education allowance per award.

## **Application Preparation and Submission Instructions**

## A. Application Preparation Instructions

• **Application Preparation Instructions:** This solicitation contains information that deviates from the standard Grant Proposal Guide (GPG) proposal preparation guidelines. Please see the full text of this solicitation for further information.

#### **B. Budgetary Information**

• Cost Sharing Requirements: Cost Sharing is not required. • Indirect Cost (F&A) Limitations: No indirect costs are allowed. • Other Budgetary Limitations: Other budgetary limitations apply. Please see the full text of this solicitation for further information. C. Due Dates • Application Deadline(s) (due by 5 p.m. proposer's local time): Deadline(s) are dependent on proposed field of study or specialization November 17, 2004 Life Sciences November, 18, 2004 Chemistry November 19, 2004 Computer and Information Science and Engineering November 29, 2004 Social Sciences November 30, 2004 Physics and Astronomy December 2, 2004 **Mathematical Sciences** December 3, 2004 Geosciences December 9, 2004 Psychology December 10, 2004 Engineering

The deadline(s) above apply to application information that must be submitted via FastLane.

The NSF-Supported Fields of Specialization that comprise disciplines above are listed here.

The following deadlines apply to Supporting Application Materials:

December 10, 2004:

Undergraduate GPA Form and Official Academic Transcript(s) (excluding Fall 2004)

December 31, 2004:

GRE Subject and General Test scores (optional) and Reference Letter (required).

## **Application Review Information**

• Merit Review Criteria: National Science Board approved criteria apply.

#### **Award Administration Information**

- Award Conditions: Additional award conditions apply. Please see the full text of this solicitation for further information.
- Reporting Requirements: Additional reporting requirements apply. Please see the full text of this solicitation for further information.

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#### I. INTRODUCTION

The purpose of the Graduate Research Fellowship Program (GRFP) is to ensure the vitality of the scientific and technological workforce in the United States and to reinforce its diversity. The program recognizes and supports outstanding graduate students in the relevant science, technology, engineering, and mathematics (STEM) disciplines who are pursuing research-based master's and doctoral degrees. NSF Fellows are expected to become knowledge experts who can contribute significantly to research, teaching, and innovations in science and engineering. These individuals will be crucial to maintaining and advancing the nation's technological infrastructure and national security as well as contributing to the economic well being of society at large.

The Graduate Research Fellowship Program is designed to provide opportunities for advanced education that prepares students for a broad range of disciplinary and cross-disciplinary careers through its strategic investments in intellectual capital. Applicants, therefore, are urged to visit the NSF web page at <a href="http://www.nsf.gov">http://www.nsf.gov</a> for more information and guidance about current and emerging themes for the NSF directorates.

#### II. PROGRAM DESCRIPTION

The Graduate Research Fellowship Program awards fellowships for graduate study leading to research-based master's or doctoral degrees in the fields of science, technology, engineering, and mathematics (STEM) relevant to the mission of the National Science Foundation (NSF-Supported Flelds of Specialization). Awards are made also for study toward a research-based Ph.D. in science education that requires a competence comparable to that of Ph.D. candidates in scientific disciplines.

NSF Graduate Research Fellowships are intended for individuals in the early stages of their graduate study. All applicants are expected to have adequate preparation to begin graduate level study and research by Summer or Fall of 2005. In most cases, this will be demonstrated by a bachelor's degree earned prior to Fall 2005.

Applicants may pursue graduate study at an institution in the United States or affiliate with a foreign institution. Prospective Fellows are responsible for all logistical arrangements required for affiliation with the foreign institution, including living arrangements and securing any necessary passports or visas.

The Graduate Research Fellowship Program supports a comprehensive holistic plan for graduate education and takes into account the individual interests and competencies of the Fellows. Thus, an applicant needs to provide a detailed profile of his or her relevant experiences and plans for graduate education in such a way as to demonstrate the potential to become an emerging knowledge expert in STEM disciplines.

#### III. ELIGIBILITY INFORMATION

Fellowship applications must be submitted by the prospective Fellow.

### Citizenship

Applicants must be United States citizens or nationals, or permanent resident aliens of the United States. The term "national" designates 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 U.S. citizenship.

## **Degree Requirements**

Applicants are expected to have adequate preparation to begin graduate study and research by Summer or Fall 2005. In most cases, this will be demonstrated by receipt of a bachelor's degree earned prior to Fall 2005.

Individuals in joint BS/MS programs are eligible if the application is submitted prior to the completion of any other graduate study as stipulated below. In four-year joint programs, applicants may apply in the fourth year and after the completion of the program (prior to the completion of any other graduate study); in five-year joint programs, applicants may apply in the fourth and fifth years of the program, and after the completion of the program (prior to the completion of any other graduate study).

Fellowships are intended for individuals in the early stages of their graduate study. Applicants must have completed no more than twelve months of full-time graduate study at the time of their application. For eligibility purposes for part-time students, assume that nine (9) semester hours of part-time study are equal to a full-time semester and that six (6) semester hours of part-time study are equal to a summer session.

Exceptions to these time-related restrictions can be made for extenuating circumstances such as significant change of field, interruption in study to gain work experience, or career interruption due to family or medical reasons. The interruption must be for a period of more than two years prior to November 2004.

There are two categories of applicants that are always ineligible:

- Those who earned a Ph.D. in science, mathematics, or engineering or any medical degree, such as an M.D., D.D.S. or D.V.M. after October 1, 1999.
- Those who have already received and held tenure as an NSF Graduate Research Fellow.

### Field of Study

Fellowships are awarded for graduate study leading to research based master's or doctoral degrees in the fields of science, technology, engineering, and mathematics supported by the National Science Foundation (NSF-Supported Fields of Specialization). Awards are made also for work toward a research based Ph.D. in science education that requires a science competence comparable to that for Ph.D. candidates in scientific disciplines.

Support is not provided for study in clinical, counseling, business, or management fields; in other education programs of any kind; 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 or in the abnormality or malfunction in humans or animals. Support is not provided also for research involving animal models of such conditions, the development or testing of drugs, or other procedures for their treatment.

Basic research in fields (NSF-Supported Fields of Specialization) are usually eligible notwithstanding the fact that the research may lead to long-term disease-related implications. Research in bioengineering with diagnosis or treatment related goals is eligible for support if it applies engineering principles to problems in biology and medicine while advancing engineering knowledge. Bioengineering research to aid persons with disabilities is also eligible.

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

The Women in Engineering and Computer and Information Science (WECS) awards -- with additional funding provided by the Directorates for Computer and Information Science and Engineering (CISE), Engineering (ENG), and Education and Human Resources (EHR) -- 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" in this solicitation will be considered for a WECS award. Other eligibility criteria are the same as for applicants in other fields.

#### IV. AWARD INFORMATION

NSF expects to award 1,000 Graduate Research Fellowships under this solicitation.

The Graduate Research Fellowship stipend is currently \$30,000 for a 12-month tenure period, prorated monthly at \$2,500 for shorter periods. At its discretion, the affiliated institution may supplement a Fellow's stipend from institutional funds as allowable according to the policies of the institution.

NSF will provide the affiliated institution, on behalf of the Fellow, a cost of education allowance of \$10,500 per tenure year. If a Fellow affiliates with a foreign institution, tuition and assessed fees will be reimbursed to the Fellow up to a maximum of \$10,500 per tenure year.

All awards will be for a maximum of three years usable over a five-year period. The anticipated award date is late March 2005.

#### **Honorable Mention**

The NSF accords Honorable Mention to meritorious applicants who do not receive fellowship awards. Honorable Mention is considered a significant academic achievement nationwide.

## V. APPLICATION PREPARATION AND SUBMISSION INSTRUCTIONS

# A. Application Preparation Instructions

### **Application Instructions:**

Complete applications include information that must be submitted electronically using NSF's FastLane Graduate Research Fellowship Program application module at <a href="http://www.fastlane.nsf.gov">http://www.fastlane.nsf.gov</a> and supporting materials that must be submitted in hard copy. See the Applicant Users Guide for instructions on completing and submitting an application as well as supplemental information about the GRFP.

The **FastLane Application Information** includes the following: Personal Profile, Education and Work Experience, Planned Graduate Program, Reference Letter, Personal Statements, Proposed Plan of Research, and Previous Research Experience. Applicants are advised to submit applications early to avoid possible FastLane system delays on the deadline date for their field of specialization.

Supporting Application Materials are described below.

• Official Academic Transcript(s)

Applicants are required to have official transcript(s) from all undergraduate and graduate academic institutions attended, excluding Fall 2004 submitted to the GRF Operations Center in hard copy via postal mail, express service, or courier *to:* 

GRF Operations Center Suite T-50, 1818 N Street NW Washington, DC 20036

# Undergraduate GPA Form

Applicants are required to have a single GPA Form submitted to the GRF Operations Center in hard copy via postal mail, express service, or courier to:

GRF Operations Center Suite T-50, 1818 N Street NW Washington, DC 20036

## • Graduate Record Examinations (GRE) Test Scores

It is recommended that applicants have both the GRE General and Subject Test scores reported, but GRE scores are optional. To have GRE scores reported, applicants should use the Fellowship Sponsor Code **5140.** Only GRE scores from tests taken between October 1, 1999 and December 31, 2004 submitted by ETS will be accepted for the 2004-05 NSF Graduate Research Fellowship competition. Applicants should NOT submit scores themselves directly.

## **Graduate Record Examination Registration**

NSF will pay Subject Test registration fees for applicants who register for the December 11, 2004 administration under two conditions: (1) the NSF Fellowship application is the primary purpose, and (2) the GRE registration form for the December test is received at ETS no later than November 5, 2004.

The following condition is imposed on the reporting of the December 11, 2004 GRE Subject Test scores when the test fee is paid by NSF. Prior to May 1, 2005 these scores will be reported only for the NSF Graduate Research Fellowship Program, to the fellowship applicant, and to the applicant's undergraduate institution.

Mail the Request for Payment of GRE Subject Test Fee form along with the GRE Subject Test registration form to:

Educational Testing Service P.O. Box 6000 Princeton, NJ 08541-6004

### **Application Completion Status**

The FastLane GRFP Application module will display the completion status of the FastLane Application Information. Applicants will be notified by the GRF Operations Center of the status of supporting application materials such as transcripts and GRE scores.

#### **B. Budgetary Information**

### **Cost Sharing:**

Cost sharing is not required in proposals submitted under this Program Solicitation.

## Indirect Cost (F&A) Limitations:

No indirect costs are allowed.

# Other Budgetary Limitations:

The Graduate Research Fellowship Program fellowship stipend is currently \$30,000 for a 12-month tenure period, prorated monthly at \$2,500 for shorter periods. At its discretion, the affiliated institution may supplement a Fellow's stipend from institutional funds as allowable according to the policies of the institution.

The NSF provides the affiliated institution, on behalf of each fellow, a cost-of-education allowance of \$10,500 per tenure year. At foreign institutions, all tuition and assessed fees will be reimbursed to the Fellow up to a maximum of \$10,500 per tenure year.

### C. Due Dates

Application Deadline(s) (due by 5 p.m. applicant's local time):

# Deadline(s) are dependent on proposed field of study or specialization

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#### VI. APPLICATION REVIEW INFORMATION

## A. NSF Application Review Process

Applications will be reviewed by disciplinary panels of scientists, mathematicians, and engineers. 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. 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.

#### VII. AWARD ADMINISTRATION INFORMATION

#### A. Notification of the Award

Notification of the fellowship award is made to the applicant by the Director, Division of Graduate Education. Applicants whose applications are declined will be advised as promptly as possible.

#### **B. Award Conditions**

An NSF Fellowship award consists of the award letter that includes the applicable terms and conditions and fellowship management instructions. All Fellowship awards are made subject to the provisions (and any subsequent amendments) contained in the document Information for Graduate Research Fellows.

NSF Graduate Research Fellowship Program applicants will be notified by late March 2005 of their selection. The applicant must accept or decline the Fellowship within 30 days of notification by logging into the Graduate Research Fellowship Program link at (http://www.fastlane.nsf.gov/) with the same userid and password as used with the application.

# Other Opportunities for Fellowship Awardees and Honorable Mention Recipients

Fellows and Honorable Mention recipients may request computer time at one of the NSF supported Supercomputer Centers. The Centers consider requests for supercomputer use in support of the research project that is undertaken toward completion of the graduate program of study. (Refer to the Information for Graduate Research Fellows for additional guidance.)

Facilitation Awards for Scientists and Engineers with Disabilities (FASED) 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 with disabilities may apply for assistance by contacting: FASED c/o Graduate Research Fellowship Program, National Science Foundation, 4201 Wilson Boulevard - Room 815, Arlington, VA 22230. See the FASED program announcement.

#### **C. Reporting Requirements**

Fellows are required to use NSF's FastLane electronic fellowship reporting system for preparation and submission of annual reports. The system permits electronic submission and updating of activity reports, including information on research accomplishments and findings, presentations, publications, awards and recognitions, and other accomplishments. Fellows will not be required to re-enter information previously provided in the fellowship application.

Fellows must submit a *Declaration to Utilize*, *Reserve or Terminate a Subsequent Year of a Three-Year Graduate Fellowship Award* annually each spring. Failure to declare intent at this time results in the fellowship being considered as *Resigned*.

Fellows must submit an Activities Report annually within 30 days after the end of each tenure period describing experiences and accomplishments during the past year.

### **Fellows Abroad**

The Fellowship Starting Certificate must be submitted to begin stipend payments and annually thereafter. The Starting Certificate must indicate the contact information for the Science Advisor at the affiliated institution.

The ACH Vendor/Miscellaneous Payment Enrollment Form (SF 3881) must be submitted to the Division of Financial

Management at NSF in order for the U.S. Treasury Department to transmit payment data electronically to the Fellow's U.S. bank account.

An annual Fellowship Termination Certificate and Grant Fiscal Report must be submitted upon completion of each tenure period. The Science Advisor must verify the end date for each fellowship year.

#### VIII. CONTACTS FOR ADDITIONAL INFORMATION

General inquiries regarding this program should be made to:

• Earnestine Psalmonds, Program Director, Directorate for Education & Human Resources, Division of Graduate Education, 907 N, telephone: (703) 292-5199, email: epsalmon@nsf.gov

General inquiries regarding this program solicitation should be directed to:

Graduate Research Fellowship Operations Center: Toll Free 866-NSF-GRFP (866-673-4737), International Phone 202-331-3542, E-mail: help@nsfgradfellows.org

FastLane Help Desk: Phone - 800-673-6188, E-mail: fastlane@nsf.gov

For questions related to the use of FastLane, contact:

Yvette Jackson, yjackson@nsf.gov.

#### IX. OTHER PROGRAMS OF INTEREST

The NSF *Guide to Programs* is a compilation of funding for research and education in science, mathematics, and engineering. The NSF *Guide to Programs* is available electronically at <a href="http://www.nsf.gov/cgi-bin/getpub?gp">http://www.nsf.gov/cgi-bin/getpub?gp</a>. General descriptions of NSF programs, research areas, and eligibility information for proposal submission are provided in each chapter.

Many NSF programs offer announcements or solicitations concerning specific proposal requirements. To obtain additional information about these requirements, contact the appropriate NSF program offices. Any changes in NSF's fiscal year programs occurring after press time for the *Guide to Programs* will be announced in the NSF E-Bulletin, which is updated daily on the NSF Web site at <a href="http://www.nsf.gov/home/ebulletin">http://www.nsf.gov/home/ebulletin</a>, and in individual program announcements/solicitations. Subscribers can also sign up for NSF's Custom News Service (http://www.nsf.gov/home/cns/start.htm) to be notified of new funding opportunities that become available.

- International Research Fellowship Program (NSF 02-149)
- Louis Stokes Alliances for Minority Participation (LSAMP) Program (NSF 03-520)
- Discovery Corps Fellowships (NSF 04-591)
- CEDAR, GEM, and SHINE Postdoctoral Research (NSF 04-573)

- NSF Directors Award for Distinguished Teaching Scholars (NSF 04-594)
- Integrative Graduate Education and Research (IGERT) (NSF 04-550)
- Research Experiences for Undergraduates (NSF 04-584)
- International Opportunities for Scientists and Engineers (NSF 03-559)
- Minority Postdoctoral Research Fellowships and Supporting Activities (NSF 00-139)
- GK-12: NSF Graduate Teaching Fellows in K-12 Education (NSF 04-533)

#### ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) funds research and education in most fields of science and engineering. Awardees 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, although some programs may have special requirements that limit eligibility.

Facilitation Awards for Scientists and Engineers with Disabilities (FASED) 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 GPG Chapter II, Section D.2 for instructions regarding preparation of these types of proposals.

The National Science Foundation promotes and advances scientific progress in the United States by competitively awarding grants and cooperative agreements for research and education in the sciences, mathematics, and engineering.

To get the latest information about program deadlines, to download copies of NSF publications, and to access abstracts of awards, visit the NSF Web site at http://www.nsf.gov/

Location: 4201 Wilson Blvd. Arlington, VA 22230

• For General Information (703) 292-5111

(NSF Information Center):

• TDD (for the hearing-impaired): (703) 292-5090

To Order Publications or Forms:

Send an e-mail to: pubs@nsf.gov

or telephone: (703) 292-7827

To Locate NSF Employees:	(703) 292-5111
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### PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

The information requested on proposal forms and project reports is solicited under the authority of the National Science Foundation Act of 1950, as amended. The information on proposal forms will be used in connection with the selection of qualified proposals; project reports submitted by awardees will be used for program evaluation and reporting within the Executive Branch and to Congress. The information requested may be disclosed to qualified reviewers and staff assistants as part of the proposal review process; to applicant institutions/grantees to provide or obtain data regarding the proposal review process, award decisions, or the administration of awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies needing information 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 about Principal Investigators may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See Systems of Records, NSF-50, "Principal Investigator/Proposal File and Associated Records," 63 Federal Register 267 (January 5, 1998), and NSF-51, "Reviewer/Proposal File and Associated Records," 63 Federal Register 268 (January 5, 1998). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

An agency may not conduct or sponsor, and a person is not required to respond to an information collection unless it displays a valid OMB control number. The OMB control number for this collection is 3145-0058. Public reporting burden for this collection of information is estimated to average 120 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 Plimpton, Reports Clearance Officer, Division of Administrative Services, National Science Foundation, Arlington, VA 22230.

OMB control number: 3145-0058.

# 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

	9
0140	Agronomy <sup>1</sup>
4510	Anatomy <sup>2</sup>
4530	Animal Behavior
4531	Animal Science <sup>1</sup>
0999	Biochemistry <sup>2</sup>
1870	Biological Oceanography
1899	Biology
1299	Biophysics
1599	Botany (including Plant Physiology)
1820	Cell Biology <sup>2</sup>
1860	Computational Biology
1840	Developmental Biology
1830	Ecology
4570	Entomology
9992	Environmental Sciences
1850	Evolutionary Biology
4590	Fish and Wildlife <sup>1</sup>
0250	Forestry <sup>1</sup>
2499	Genetics <sup>2</sup>
0300	Horticulture <sup>1</sup>
3293	Immunology2

Agriculture<sup>1</sup>

1874	Marine Biology
3299	Microbiology <sup>2</sup>
1880	Molecular Biology <sup>2</sup>
1829	Neurosciences <sup>2</sup>
1890	Nutrition <sup>1</sup>
2970	Pharmacology <sup>2</sup>
3899	Physiology <sup>2</sup>
1545	Plant Pathology
4540	Soil Science
1822	Structural Biology
3290	Virology <sup>2</sup>
4699	Zoology
2299	Life Sciences, other (specify) <sup>2</sup>

# **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) <sup>3</sup>

#### **SOCIAL SCIENCES**

0693	Biological Anthropology
0695	Cultural Anthropology <sup>4</sup>
0694	Linguistic Anthropology
0696	Medical Anthropology
0697	Physical Anthropology
0699	Anthropology, other (specify)
0610	Archaeology <sup>4</sup>
9818	Demography
8599	Economics
	(Business Administration not eligible)
8799	Geography
9099	History of Science
9499	International Relations <sup>1</sup>
9299	Linguistics
9098	Philosophy of Science
9399	Political Science
9799	Public Policy <sup>1</sup>
9599	Sociology (Social Work not eligible)
9699	Urban and Regional Planning <sup>1</sup>
9899	Social Sciences, other (specify)4

Note: For further clarification of research areas supported by the NSF, see the *National Science Foundation Guide to Programs* at <a href="http://www.nsf.gov/pubsys/ods/getpub.cfm?nsf04009">http://www.nsf.gov/pubsys/ods/getpub.cfm?nsf04009</a>.

- <sup>1</sup> 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.
- <sup>2</sup> 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.
- <sup>3</sup> 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.
- <sup>4</sup> Warning: Applicants in these fields may be judged ineligible if the Proposed Plan of Research does not demonstrate a scientific approach.

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