



NDSEG, NSF GRFP, & DOE CSGF Fellowships

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Introduction - NDSEG

National Defense Science and Engineering Graduate (NDSEG) Fellowship

- Sponsored by the U.S. Department of Defense (DoD)
- Supports graduate study in science and engineering disciplines relevant to national defense priorities
- Designed to increase the number of highly trained scientists and engineers conducting defense-relevant research
- Highly competitive national fellowship for early-stage Ph.D. students and graduating seniors pursuing doctoral study in STEM fields.

Introduction - NDSEG

Since the program's inception, over 4,400 fellowships have been awarded from over 70,000 applications received.

The three-year Fellowship program will award between 150-350 fellowships annually, and is designed to encourage baccalaureate, masters, and current PhD candidates early in their course of study recipients to enter graduate school and ultimately gain doctorates that align to the DoD services **Broad Agency Announcements (BAAs)** and other strategy documents in research and development.

Overview - NDSEG

- **Federal fellowship supporting doctoral study in STEM**
 - **Supports students at the beginning of their doctoral careers.**
- **Research must align with DoD priority research areas**
 - **Emphasizes research excellence and national defense relevance**
- **Portable to accredited U.S. institutions**

One-time financial award, three-years of support

Three years of fellowship support

- The NDSEG fellowship will pay the fellows' full tuition and required fees (excluding room and board). The monthly stipend is \$3,600 (\$43,200 annually) for fellowship tenure.
- Full tuition and mandatory fees covered
- Annual stipend for living expenses

No military / federal service obligation

Add'l Support:

The NDSEG fellowship will pay for the minimum health insurance coverage offered through the institution or if the institution requires health insurance coverage but does not offer it the fellow may purchase private insurance, up to a total value of \$1,600.

Eligibility - NDSEG

Applicants must:

- Be a U.S. citizen, dual citizen, or U.S. national
- Be applying to, accepted by, **or** enrolled in a U.S. doctoral program
- Be **in the first two years** of graduate study
- Have **at least three years remaining** in their graduate program
- Pursue research **within eligible** science and engineering disciplines relevant to DoD priorities.

Application Components - NDSEG

- Online application
- Academic transcripts
- Research interests and experience
- Personal statement
- Proposed research area
- Letters of recommendation

Selection based on:

- Academic achievement
- Research potential
- Leadership and broader impact
- Alignment with defense research priorities.

<https://ndseg.sysplus.com/NDSEG/>

Timeline - NDSEG

**Application
Opens**

August 15

**Final
Application
Deadline**

November 15

**Graduate
Program
Applications
Due**

Winter

**Fellows
Announced**

Spring

Next Steps - NDSEG

- **Review eligible DoD research areas**
- **Build a strong research-focused CV**
- **Secure strong recommendation letters**
 - best to contact potential letter writers as early as possible, include possible BAA information
- **Draft research and personal statements early**
- **Seek feedback**
 - advisor, PI, peers, FASA, HWC, ect.

Check out the NDSEG FAQ page:

<https://ndseg.sysplus.com/NDSEG/FAQ/Application>

Find the BAA's here:

<https://ndseg.sysplus.com/NDSEG/About/DoD-Agencies>

Introduction - NSF GRFP

Sponsored by the U.S. National Science Foundation, focuses on developing future leaders in science, technology, engineering, and mathematics.

“The purpose of the NSF Graduate Research Fellowship Program (GRFP) is to help ensure the quality, vitality, and strength of the scientific and engineering workforce of the United States. Since 1952, the program recognizes and supports outstanding graduate students who are pursuing full-time research-based master's and doctoral degrees in science, technology, engineering, and mathematics (STEM) fields, including STEM education. NSF GRFP was established to recruit and support individuals who demonstrate the potential to make significant contributions in STEM, including STEM education. NSF encourages applications from the full spectrum of talent that the U.S. has to offer.”

Overview - NSF GRFP

- **Supports graduate students pursuing research-based STEM degrees**
- **Emphasizes:**
 - **Intellectual Merit**
 - **Broader Impacts**
- **Provides flexibility in selecting research topics and institutions**

One-time financial award + programming + alumni network

Award Funding - NSF GRFP

- **Three years of financial support over a five-year fellowship period & annual stipend**
- **Cost-of-education allowance paid to institution**

Fellowships provide the student with a three-year annual stipend of \$37,000 along with a \$16,000 cost of education allowance accepted by the institution as payment in lieu of all tuition and mandatory fees (there is no cost to the student).

- **Flexible tenure and reserve options**
- **Provides significant independence for graduate research.**

Fellowships may only be used for an eligible graduate degree program at a non-profit academic institution accredited in, and having a campus located in, the US, its territories, possessions, or the Commonwealth of Puerto Rico.

Eligibility - NSF GRFP

Applicants must:

- Be a U.S. citizen, national, or permanent resident
- Pursue an eligible research-based STEM master's or doctoral degree
- Be a **senior undergraduate, bachelor's degree holder** not yet enrolled in graduate school, or a **first-year graduate student** in their first graduate program
- Not have previously accepted a GRFP award.

Application Components - NSF GRFP

<https://www.nsfgrfp.org>

- **Online application**
 - Personal information and educational history
 - Proposed field of study
- **Personal, Relevant Background, and Future Goals Statement**
- **Graduate Research Plan Statement**
- **Three letters of recommendation**
- **Evaluation based on:**
 - Intellectual Merit
 - Broader Impacts

Timeline - NSF GRFP

**Application
Opens**

Late Summer

**Final
Application
Deadline**

October (typically)
Reference Letter Deadline
October (typically)

**Review
Period**

Fall–Spring

**Fellows
Announced**

April

Next Steps - NSF GRFP

- **Begin drafting essays several months before deadlines**
 - Develop a compelling research vision
 - Learn the Intellectual Merit and Broader Impacts criteria
 - Connect past experiences to future research goals
- **Seek feedback from faculty and previous recipients**
- **Request recommendation letters early**
 - provide relevant information about the fellowship

Review the FAQ page:

<https://www.nsfgrfp.org/reviewers/faqs-2-org.html>

Introduction - DOE CSGF

- **Sponsored by the U.S. Department of Energy**
 - **Administered by the Krell Institute**
- **Supports Ph.D. students using advanced computational methods to solve scientific and engineering challenges**
- **Builds leaders in computational science, high-performance computing, and interdisciplinary research.**

“The Department of Energy Computational Science Graduate Fellowship (DOE CSGF) provides outstanding opportunities to students pursuing doctoral degrees in fields that use high-performance computing to solve complex science and engineering problems. The program fosters a community of energetic and committed Ph.D. students, alumni, DOE laboratory staff and scientists who want to have an impact on the nation while advancing their research.”

Overview - DOE CSGF

- **Supports doctoral study in computational science**
- **Integrates:**
 - Scientific or engineering discipline expertise
 - Applied mathematics
 - Computer science
 - High-performance computing
- **Includes a practicum at a DOE national laboratory**
- **Strong emphasis on interdisciplinary training.**

One-time financial award

Award Funding - DOE CSGF

- Up to four years of fellowship support (renewable)
- Full tuition and required fees
- Annual stipend
 - \$45,000 annual stipend
- Yearly professional development allowance, \$1000
- A 12-week practicum experience at one of 21 DOE national laboratories or sites, including access to DOE supercomputers
- Access to a national network of fellows and alumni.

annual program review for fellows, alumni and university and DOE laboratory staff, held each summer in the Washington, D.C., area

Eligibility - DOE CSGF

Applicants must:

- Be U.S. citizens or lawful permanent residents
- **Plan** full-time Ph.D. study at an accredited U.S. university
- Be **undergraduate seniors, first-year graduate students, master's students** transitioning to a Ph.D. program, or **eligible professionals returning** to graduate study
- Work in fields **involving** computational science and high-performance computing

Application Components - DOE CSGF

Online application

- Program of Study (POS)
- Academic transcripts
- Three letters of recommendation
- Research and academic background information
- Computational science preparation and interests

Review focuses on:

- Academic excellence
- Computational science potential
- Research preparation
- Alignment with DOE mission areas.

Timeline - DOE CSGF

**Application
Opens**

October

**Final
Application
Deadline**

January

(Recommendation Deadline,
January)

**Review
Period**

Winter–Spring

**Fellows
Announced**

April

Next Steps - DOE CSGF

- **Explore DOE computational science research areas**
- **Develop experience in modeling, simulation, and computing**
- **Draft a strong Program of Study**
 - Highlight interdisciplinary preparation in science and computing
- **Secure recommenders**

Review the application FAQs here:

<https://www.krellinst.org/csgf/how-apply/frequently-asked-questions>



Take this
survey to
give
feedback!

Questions?

We're here to help you navigate the process.

FASAOffice@caltech.edu

fasa.edu/fellowships

Rm 319, CSS Building