

NSF Graduate Research Fellowship Program Best Practices & Resources

In 2017, we completed a survey of 27 current Caltech students who have received awards and/or honorable mentions in the prestigious NSF Graduate Research Fellowship Program. Here, we summarize their “best practice” advice to colleagues who are preparing an application, and a list of resources they found particularly valuable.

Best Practices

Look at sample essays!

- Nearly 90% of respondents examined applications from previous awardees before starting their own application. Most often, these were from labmates and colleagues. Other sources of samples included Caltech’s Fellowships Advising and Study Abroad Office, and the websites listed below. A few students recommend doing Google searches for “NSF essay advice” and “NSF GRFP sample,” especially if you are looking for applications in your own field of study (FOS).

Ask for reviews!

- Over 80% of respondents asked for written critiques and reviews of their applications. And 85% of respondents discussed their application with someone and/or requested verbal advice and feedback regarding their application. Most reported that labmates and fellow graduate students were the most helpful, with advisors and other faculty members running a close second. Students also requested application reviews from postdocs and previous mentors from undergraduate institutions. A few students reported discussing their applications with Caltech’s FASA office staff.
- Many of our survey respondents have volunteered to speak with their Caltech peers and provide informal advice regarding their NSF graduate fellowship applications. Current Caltech graduate students may contact the Rosen Center for a list of their names and contact information.
- Dr. Kim Mayer, Executive Director of the Rosen Center, will provide reviews of essays and research plans (upon request) for current Caltech students applying for the NSF GRFP in a bioengineering-related field of study (FOS).
- Use the NSF GRFP Experienced Resource List to find reviewers at Caltech:
 - https://www.nsfgrfp.org/applicants/tips_for_applying/experienced_resource_list#C

Resources

- NSF’s GRFP funding page
 - https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=6201
 - This is the source for all deadlines, contacts and the most current solicitation.
- NSF’s GRFP website
 - <https://www.nsfgrfp.org>
 - This site describes the GRFP in more detail and is a valuable resource for applicants and awardees. There are tips for applying and tips for reference writers.

- NSF GRFP Award Offers and Honorable Mentions List
 - <https://www.fastlane.nsf.gov/grfp/AwardeeList.do?method=loadAwardeeList>
 - Names, baccalaureate institution, field of study (FOS), and current institution are available for all students who have received awards and/or honorable mention in the NSF GRFP program. The list can be narrowed by year and award type, and the results can be sorted by any of the tags.
- Alex Lang's Website – NSF Fellowship
 - <http://www.alexhunterlang.com/nsf-fellowship>
 - Provides insight from his experience as a successful applicant in 2010. He includes examples of successful essays and allows others to submit their own successful essays to the site. He also includes links to the NSF GRFP site, as well as a few other blogs and websites run by other NSF awardees. As of 5/1/17, the Google Doc lists 23 examples from 2015-2017 (5 in Life Science-related FOS, 6 in Chemistry-related FOS). Several of these include their ratings from reviewers.
- Mallory Ladd – Think Like a Postdoc
 - <http://www.malloryladd.com/nsf-grfp-advice.html>
 - Provides detailed advice on the application process, as well as a suggested timeline for completing the application. Several essay examples are available, many with reviewer feedback (5 in Life Science-related FOS, 3 in Chemistry-related FOS). The site also has examples of Annual Activities Reports, which will be useful for awardees. Links to additional sites are provided.
- GRFP Essay Insights – University of Missouri
 - <http://grfpessayinsights.missouri.edu/index.php>
 - A comprehensive site that describes the program in detail, offers advice on the review criteria and explains the review process, and gives advice on how to select and inform your reference writers. Outlines for the research plan and essays are provided, as well as a “self-assessment rubric” to guide your thinking as you move through drafts of your application. The site also includes general advice from previous GRFP panel reviewers.
- *Scientific writing and communication: papers, proposals, and presentations*
 - Angelika H. Hofmann, Ph. D., Yale University
 - Available at the Caltech library.
- Caltech's Fellowships Advising and Study Abroad Office
 - <https://fasa.caltech.edu>
 - Staff in the FASA office can discuss the GRFP and provide reviews and advice on applications for Caltech students. The office also maintains a file of essay examples that are available for review. FASA staff have also offered a lunchtime workshop on the GRFP, typically held shortly after classes begin in the Fall (students are notified via email).
- Caltech's Hixon Writing Center
 - <http://writing.caltech.edu/resources>
 - Offers links to a number of academic writing resources. The office also has a number of writing specialists and peer tutors available to discuss scientific writing (but not fellowship proposals).