

Personal, Relevant Background and Future Goals Statement

Please outline your educational and professional development plans and career goals. How do you envision graduate school preparing you for a career that allows you to contribute to expanding scientific understanding as well as broadly benefit society? Page limit - 3 pages

Describe your personal, educational and/or professional experiences that motivate your decision to pursue advanced study in science, technology, engineering or mathematics (STEM). Include specific examples of any research and/or professional activities in which you have participated. Present a concise description of the activities, highlight the results and discuss how these activities have prepared you to seek a graduate degree. Specify your role in the activity including the extent to which you worked independently and/or as part of a team. Describe the contributions of your activity to advancing knowledge in STEM fields as well as the potential for broader societal impacts (See Solicitation, Section VI, for more information about Broader Impacts).

NSF Fellows are expected to become globally engaged knowledge experts and leaders who can contribute significantly to research, education, and innovations in science and engineering. The purpose of this statement is to demonstrate your potential to satisfy this requirement. Your ideas and examples do not have to be confined necessarily to the discipline that you have chosen to pursue.

If you have completed more than 12 months of graduate or post-baccalaureate study or a professional degree and an interruption of at least two consecutive years (fourth option under Completed Study in the NSF GRFP Program Information section), please address the reasons for the interruption in graduate study here. Please refer back to that section for details.

Important questions to ask yourself before writing the statement:

- Why are you fascinated by your research area?
- What examples of leadership skills and unique characteristics do you bring to your chosen field?
- What personal and individual strengths do you have that make you a qualified applicant?
- How will receiving the fellowship contribute to your career goals?
- What are all of your applicable experiences?
- For each experience, what were the key questions, methodology, findings, and conclusions?
- Did you work in a team and/or independently?
- How did you assist in the analysis of results?
- How did your activities address the Intellectual Merit and Broader Impacts criteria?

Graduate Research Plan Statement

Present an original research topic that you would like to pursue in graduate school. Describe the research idea, your general approach, as well as any unique resources that may be needed for accomplishing the research goal (i.e., access to national facilities or collections, collaborations,

overseas work, etc.) You may choose to include important literature citations. Address the potential of the research to advance knowledge and understanding within science as well as the potential for broader impacts on society. The research discussed must be in a field listed in the Solicitation (Section X, Fields of Study).

Important questions to ask yourself before writing the statement:

- What issues in the scientific community are you most passionate about?
- Do you possess the technical knowledge and skills necessary for conducting this work, or will you have sufficient mentoring and training to complete the study?
- Is this plan feasible for the allotted time and institutional resources?
- How will your research contribute to the "big picture" outside the academic context?
- How can you draft a plan using the guidelines presented in the essay instructions?
- How does your proposed research address the Intellectual Merit and Broader Impacts criteria?

Intellectual Merit Criterion

The Intellectual Merit criterion encompasses the potential to advance knowledge.

For example, panelists evaluating applications submitted to the Graduate Research Fellowship Program may consider the following with respect to the Intellectual Merit Criterion: the potential of the applicant to advance knowledge based on a holistic analysis of the complete application, including the Personal, Relevant Background, and Future Goals Statement, Graduate Research Plan Statement, strength of the academic record, description of previous research experience or publication/presentations, and references.

Broader Impacts Criterion

The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

Panelists may consider the following with respect to the Broader Impacts Criterion: the potential of the applicant for future broader impacts as indicated by personal experiences, professional experiences, educational experiences and future plans.

Both Criterion

The following elements should be considered in the review for both criteria:

- What is the potential for the proposed activity to:
- Advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and
- Benefit society or advance desired societal outcomes (Broader Impacts)?

- To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
- Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
- How well qualified is the individual, team, or organization to conduct the proposed activities?
- Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities?