



Goldwater Scholarship Application Guide

This application guide is provided by [FWD: Scholars \(FWD:S\)](#). FWD:S is a volunteer-led organization that seeks to pay forward our knowledge about competitive scholarship experiences. We aim to empower our peers through resources and support to pursue their academic and professional goals. Our ultimate aim is to better reflect the underrepresented identities among us.

To meet these goals, we work to increase the availability of scholarship application resources and match applicants to recent scholarship recipients for mentorship. We recognize that privilege of all kinds must be acknowledged and used to create a more equal and just world.

The FWD:S team is made up of students and alumni recipients of competitive scholarships—many of whom come from underrepresented backgrounds themselves—who are all eager to provide resources and support to prospective applicants. We want to use our privilege and insight to help students to chase their dreams at the undergraduate and graduate levels, both domestically and internationally.

Interested in mentorship? If you'd like to be paired with an alum of this scholarship to support your application process, fill out our [mentorship matching survey](#).

Interested in volunteering with us? If you'd like to help us support prospective applicants, take our [volunteer survey](#).

Partnerships: FWD:S is eager to form mutually beneficial relationships with organizations and individuals who share our commitment to diversifying higher education. If you're interested in partnering with FWD:S, please contact us at fwdscholars@gmail.com.

Have questions about FWD:S and its services? Send us an email at fwdscholars@gmail.com. You can also follow FWD:S on social media for updates on our program and more scholarship tips, tricks, and guides:

- [@fwd_scholars on Instagram](#)
- [@FWDscholars on Twitter](#)
- [FWD: Scholars on LinkedIn](#)
- www.fwdscholars.org

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INTRODUCTION & WHY APPLY?

Hello, future Goldwater Scholar! We are the members of the Goldwater Scholar Council Diversity and Inclusion Committee, and we are excited to help you apply to the Goldwater Scholarship with some tips and information. We've been through this process successfully, and want to ensure that everyone has equal access to information about how to approach the application process.

The Goldwater Scholarship provides aspiring scientists, mathematicians, and engineers recognition for their research and an opportunity to fund their education. Even the process of applying for the scholarship will help shape your research visions and clarify your future academic goals. Winners of the Goldwater Scholarship are recognized as the top undergraduate STEM researchers in the US and are awarded up to \$7,500 per year during their junior and senior years in college. The Scholarship propels many students to top graduate programs and lucrative research positions.

[Testaments from students](#) who went through the application process say everything:

“The magic of the Goldwater application process is that you learn more about yourself and your career goals by working through it!”

“I learned more about my field of research and clarified my career path post-graduation.”

“I learned my own story. Filling out the application forced me to think very carefully about what I have done, what I am doing and what I plan to do. In that process, I recounted all the efforts I had to take to get to where I am. It made me feel proud and satisfied. It is nice to know my own story, and it is nice to know how to tell it.”

“Going through the application process helped me reach a more concrete understanding of what I want my research career to be like and of the steps that I need to take to reach it.”

“Going through the rigorous application process for the Goldwater Scholarship has definitely prepared me for upcoming graduate school applications. It forced me to think critically about how I envision my future and what steps I need to be taking to achieve those goals.”

“Being a first-generation American and the first in my family to pursue a PhD, I credit applying for the Goldwater Scholarship in giving me clarity and gratitude for my past experiences as well as an eagerness and purpose for my future.”



By applying for the scholarship, you will have the chance to share your experiences and research ideas, and by going through the process you will learn and practice important aspects of scientific and technical communication.

DISCLAIMER

We are members of the Goldwater Scholar Community (GSC) Council, a team of leaders who help advance the mission of “scholars helping scholars” within the GSC. We work closely with the Goldwater Foundation, which is the organization that administers the Goldwater Scholarship, but we are not affiliates of the Goldwater Foundation. We think that the perspectives of students who have been through the application process are important in helping inform scholarship applicants. However, because this guide is from the perspective of current scholars/alumni, it provides only a partial view of the application process. It’s important to keep in mind that these were our individual experiences and suggestions that we found helpful, but they are not universal truths about how the program selects scholars. What works for some applicants may not work for others-- each individual is considered holistically, and every applicant is different. Also, while we do our best to keep this guide current, we can’t guarantee that everything remains 100% accurate - please check the [Goldwater Foundation website](#) for up-to-date information on the application process.

Here we will describe how you can apply for the scholarship, and also provide information on how you might approach each of the application questions.

We’re so excited you’re applying!

ADVICE FROM UNDERREPRESENTED CURRENT SCHOLARS

Here are some tips and words of encouragement from current Goldwater Scholars who are themselves members of underrepresented groups.

“Don’t be afraid to go for this opportunity and give it your all! Being a minority in the scientific community can seem intimidating at times, but I am reminded that people like myself getting involved and working to change the way the scientific community looks is an important first step. If your drive to do research is embedded in the science itself and to increase diversity in STEM fields because of any challenges you’ve overcome, I would consider speaking about this point in the [‘Career Goals/Professional Aspiration’](#) sections of the application.” - Alexandria Adigun

“The goal of the Goldwater Scholarship is to identify and reward the future leaders of science, engineering, and mathematics. When writing your application, be sure to effectively tell how your experiences have molded you into a promising future researcher in your respective field of interest and do not be afraid to mention how your position as a minority in STEM has influenced your experiences. If you have a drive to increase the representation of minorities and other

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underrepresented populations in your future research career, discuss this thoughtfully in your application! A good place would be the '[Future Academic Plans](#)' section of the application. I mentioned my passion for increasing diversity in biomedical research when I discussed my goals to enter the field of cancer biology and by doing so, I communicated my passion for research—both from a scientific and social justice perspective. I believe if done correctly, writing about your unique experiences as a minority and/or your drive to increase representation in STEM can help set your application apart from many others.” – Eran Maina

“Remember that you write your own story. It is easy to fall into a rut due to stereotypes and the expectation of who you are supposed to be in society, but you create you. Scientific research has a history that is not kind to minority groups and your passion and drive to contribute are important to shaking that foundation and building towards the future. Personally, I did not attend college until the age of 24 and made history at my community college as the first-ever recipient of the Goldwater Scholarship. The opportunity is there, and you have it in you to take it. Don't back down from the challenge.” - Justice Robinson

ELIGIBILITY REQUIREMENTS

In order to apply for the Goldwater Scholarship, you must meet the following criteria:

- Sophomore or junior at an accredited 2- or 4-year institution. If you are not enrolled full-time due to COVID-19, that is okay!
- Intend to pursue a research career.
 - IMPORTANT: That your academic goals align with the [Goldwater Scholarship's Mission](#) is as important as any other eligibility criteria: “The Goldwater Scholarship Program . . . seeks to identify and support college sophomores and juniors who show exceptional promise of becoming this Nation's next generation of research leaders in [the natural sciences, mathematics and engineering].”
- College Grade Point Average above 3.0 on a 4.0 scale. (The 2020 Goldwater competitors had GPAs from 3.3 to 4.0 on a 4.0 scale.)
- Be a U.S. citizen from the 50 states, the District of Columbia; a U.S. national nominated by institutions in Puerto Rico, Guam, Virgin Islands, American Samoa, and Commonwealth of the Northern Mariana Islands; or a permanent resident.

See the [Goldwater Eligibility Criteria](#) for more information about application requirements and modifications to the application process in case of natural disaster, pandemic, or other special circumstances.

GENERAL FELLOWSHIP APPLICATION TIPS

- Read the prompts carefully and make sure to answer EVERY part of each question.
- Develop a strategy for your essay and outline it before starting.
- Use active writing! Avoid passive voice whenever possible.

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- Be specific and concrete. Don't tell, show!
- Reflect! Even when you think that you do not have some particular skill or quality, ask mentors, professors, friends, and family to remind you of the qualities you show that make you a good scientist.
- Your application should be a comprehensive and cohesive story. Make sure your answers are logically consistent with themselves and your other responses.
- Make it *your* story! Use "I" and talk about *your* contributions and actions.

HOW TO APPLY

The Goldwater Scholarship is a marathon! Start exploring your research interests as early as possible in your undergraduate career. Start the application process as soon as the application opens as there are multiple steps to the application process: pre-application, contacting your Goldwater Representative, the application, nomination, and submission.

- Identify the Goldwater Representative at your school.
 - Who is the [Goldwater Representative](#)? According to the Goldwater Foundation, the Representatives are "Individuals who have been selected by their academic institutions to lead the Goldwater nomination process on their campuses". Goldwater Representatives can nominate four students from the school they represent. They can also nominate one more student who transferred to the institution, making a total of five nominees.
 - Check the [Goldwater Campus Representative Locator](#) to see if your school has a Goldwater Representative. There are nearly 2,000 institutions with Goldwater Representatives!
 - If your school does not have a Goldwater Campus Representative, or if you have tried unsuccessfully to contact the named Campus Representative, please contact the Goldwater Help Desk at 507-931-8335 or by email at goldwater@scholarshipamerica.org.
- Follow the Goldwater Scholarship official [timeline for applying for the Goldwater Scholarship](#), which we've summarized below:
 1. Review the Goldwater Eligibility Requirements
 - Recommended by September
 2. Identify Your School's Goldwater Campus Representative (CR)
 - Recommended by September
 3. Complete a Student Profile and Pre-Application and Contact your Goldwater Campus Representative
 - Due date is institution-dependent, usually in October or November
 4. Your Campus Representative will let you know if you can continue onto the complete Goldwater application. If you are allowed to continue, you must Complete the Online Goldwater Application.
 - Due date is institution-dependent, usually in December

5. Nomination and final application submission
 - The Goldwater Representative will select 4 students (or 4 plus 1 transfer student) who will compete for the Goldwater Scholarship
 - Due on the last Friday in January at 5:00 PM (Central time)

QUESTION-BY-QUESTION GUIDE

Use the searchable [Campus Representative Locator](#) to identify the Goldwater Campus Representative at a particular academic institution. If your institution does not appear on the Locator, or if you are unable to contact your representative, please contact the Goldwater Help Desk at (507) 931-8335 or by email at goldwater@scholarshipamerica.org.

Here we will go through each of the questions on the Goldwater application and provide advice on how to approach your responses. Please note, though, that everything here was written by a small group of recent successful applicants. Our experiences do not represent the experiences of everyone applying to the scholarship, and we cannot claim to have deep insight into the review process. That being said, we believe our advice will be helpful for those applying to the Goldwater Scholarship. You can see a PDF version of the 2020 Goldwater application [here](#).

Career Goals/Professional Aspirations

In one or two sentences, describe your career goals and professional aspirations. (200 characters)

- This statement should be very simple. It should state the degree you intend to obtain and within what field of study. Describe your intended area of research.
- Seeing how other Goldwater Scholarship winners have [stated their “Career Goals”](#) may help you come up with your own UNIQUE statement.

What are your career goals and professional aspirations? Indicate which area(s) of mathematics, science, or engineering you are considering pursuing in your research career and specify how your current academic program and your overall educational plans will assist you in achieving your career goals and professional aspirations. (3000 characters)

- What you need to communicate in this response is that you are serious about a research career, and that you have carefully thought out a plan on how you will get there. Provide some salient examples of what you are currently doing to prepare for this career path. You should state what your long-term (i.e., 10-15 year) career plan is. It is okay if that plan changes in the future.
- Talk with your faculty to better understand what a research career entails. Ask both research mentors and non-mentors, other professionals in the field, and, if possible, post-doctoral research associates and graduate students, about their research and career experiences.
- Describe how your undergraduate research experience supports your future career goals.

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- Provide your specific plans for graduate school and post-doctoral research (if possible).
- This response should set the stage for the rest of the application, which will show how your past activities are all leading you toward the goals outlined here.

Describe an activity or experience that has been important in helping shape or reinforce your desire to pursue a research career in science, mathematics or engineering. (1500 characters)

- Tell a story about a moment that shaped your desire to pursue a career in science, engineering, or mathematics research. How?
- Take the reader INTO your story with a powerful beginning. For example, describe an experience that inspired your interest in science, engineering, or mathematics (i.e., a childhood experience that sparked your life-long interest in STEM, something you witnessed that sparked your interest in research, etc.). If there was not a particular moment or experience that you can describe, discuss the path that brought you to realizing your passion for a research career.
- Take the reader THROUGH your story, providing context and key parts of your story that helped shape your character as a scientist. Hint at how your experience prepares you for a career filled with uncertainties, hard work, mistakes, and long-term rewards.
 - Many people may be inspired to go into STEM research by a similar activity, experience, or range of experiences, but what is important (and often more unique to you) is what you do afterwards. For example, did you seek out a college class on insects because you remember loving to catch insects as a child? Will you join or create a club that goes on field excursions to observe insects? Does reading about a well-known professor's work inspire you to collect and classify insects as a personal project? Here is a chance to show how you have grown in tangible ways since you experienced the initial spark(s) of interest in STEM, and to connect the dots between your research, extracurricular, and personal activities into a larger narrative.
- Take the reader BEYOND by discussing how this experience will help you lead a successful scientific career. Show passion!

Goldwater Scholars will be representative of the diverse economic, ethnic, racial and occupational backgrounds of families in the U.S. Describe any social and/or economic impacts you have personally experienced that have influenced your education – either positively or negatively – and describe how you dealt with them. (1500 characters)

- The tough circumstances we face often build our character, giving us the strengths to pursue a successful career. The key to answering this prompt is focusing on “[How you have dealt with] social and/or economic impacts . . . that have influenced your education - either positively or negatively”. Empower your response by focusing on the ways in which you dealt with the situation and the character you developed, all of which should connect back to your career in STEM.
- If you write about an obstacle or challenge you overcame, do you describe how you have responded and how you succeeded in your education? Reviewers really want to know

how you draw upon your obstacles and challenges to succeed and how it relates to your interest in science, engineering, or mathematics research.

- The advice from a former Goldwater Scholar encapsulates how to answer this question: “In order to effectively answer most of the questions in the application, I had to reflect on my life and how it led me to this application process. I had to **identify the key struggles within my life and identify why I remain motivated to pursue my interests**. Placing these ideas on paper in the form of an application only **solidified my motivation to pursue a career in academic research.**”
- If your background and experiences are such that you did not face adversity, this is an opportunity for the reviewers to get to know more about you. Describe how you challenged yourself and took advantage of opportunities to succeed in your career.

Research Projects and Skills

1. Research project (list up to 5)
 - Don't be too intimidated by this question. You do not need to have 5 research projects, and the activities do not need to involve groundbreaking research. That being said, be sure to display any activities that demonstrate your interest in research.
 - This question supplements the question about career goals and professional aspirations. There, you described what steps you'll take in the future to become a professional researcher. Here you describe the steps you've already taken.
 - This question should be considered in relation to your [research essay](#). If you describe an activity or skill here, you can reference it in the essay to help stay within the character limits of both. That also helps create continuity throughout the application.
 - You should certainly include any research programs you've participated in. Note that if you were involved in different research projects within the same program, you could add those as two separate “Research Projects”. However, do not split a single research project within the same program into two different activities. Reviewers can easily identify when applicants seem like they are trying to ‘stretch’ their work. Successful Goldwater scholars with one or two projects listed.
 - As high school research projects do not generally arise to the level of work expected, do not include those unless they evolved into long-term research projects, especially the kind that required constant collaboration with a faculty mentor.
 - Did you ever participate in a club or academic competition that helped develop your research skills? Include this, especially if you were mentored on the research or experimental design process by a faculty or other research advisor. However avoid describing activities that developed ‘soft skills’ (e.g., science communication). That information should be included in the Activities/Accomplishments section below.

2. Average hours/week
 - Make sure to accurately account for the amount of time you spent on your project. Any especially high numbers of hours should be corroborated by letters of recommendation.
3. Description of the research project (1000 characters). Include a discussion of your role in and contributions to the research and the skills you acquired by working on this project.
 - This is where you lay everything on the table. Describe in detail what your daily work involved, how much time you committed to the project, and what skills you learned.
 - If there were particular components of the research project that you struggled with, feel free to include details about this struggle and how you worked to overcome it. It is important to show that you understand that research is not an easy and straightforward process, and that you are willing to do what it takes to overcome these challenges. This may be an opportunity to demonstrate your knowledge and application of the scientific process (or related processes in mathematics and engineering).
 - If appropriate, this section can highlight that you were a true researcher, providing intellectual contribution, as opposed to a technician that just carried out the research protocols assigned to them. Do not oversell your work as your letters of recommendation need to be consistent with what you said you did. A conversation with your research mentor about your work and how best to describe it may be very fruitful.
4. Publication citation(s)
 - This is not necessary if the research activity did not result in any publications, and you are not required to have any publications in order to win the Goldwater!
 - If you do have a publication, write it in APA style. The Goldwater Foundation does not specify the citation style to use in this section, but this is the most common style for scientific publications.
5. Skills
 - Here, you can highlight a mix of technical and “soft” skills that you think are most relevant to your research and scientific development that you gained from this project.
 - If you have space, try to mention how it might be useful for your future projects.

Other Activities/Accomplishments

- You can list up to 5.
- Here you can divert a bit from the scientific focus of the rest of the application. If you’ve done activities with scientific relevance, be sure to include them, but you can also list volunteer groups, sports, musical activities, etc.
- If the work you did was done independently, simply write “Independent” in the “Organization” section.

Recognitions

These are usually one-time awards (e.g. other scholarships, research awards at conferences like 'Best Poster Award', project grants won, membership in a university honors society) that you have been awarded through either a competitive or non-competitive process. Definitely include if they're scientifically relevant, but they do not need to be. And again, no pressure to list 5 entries!

Future Academic Plans

- What is the highest degree you plan to obtain?
 - Those seeking terminal degrees in their fields will have the strongest applications.
- If you are planning to attain an M.D., M.D./Ph.D., D.O., D.O./Ph.D., D.V.M. or D.V.M./Ph.D. degree, explain why a medical or veterinary degree is necessary for you to achieve your research goals? (2000 characters)
 - Explain the kind of research your medical degree will solicit or enable you to do that you would not be able to do otherwise.
 - Historically, students on this path have been less likely to end up in a research career as compared to scholars not on this path. Reviewers are aware of this and are more skeptical of this pathway.
 - Many applicants find it useful to talk to real physician-scientists to see how they combine clinical medicine and research. If your university does not have any physician-scientists, try finding public webinars with MD-PhD speakers or reach out to physician-scientists at a hospital near you.
 - Think about what the MD curriculum and exposure provides that a traditional graduate school experience wouldn't and how that could enhance a research career. The Goldwater Scholarship is best for students who are primarily focused on research, and applicants should communicate that the medical training will be an important supplement to that goal.
 - Consider how your research interests and plans intersect with medicine and why pursuing an MD might help you better address these topics.

RESEARCH ESSAY

- The research essay is one of the most important portions of the Goldwater Application. This is where you describe in detail either a research project you were involved in or a proposed research project. See the [Goldwater Essay Guidelines](#) for additional help.
- For this essay, it is important to understand what reviewers are looking for.
 - "Reviewers are simply attempting to determine who among the nominees are the most likely to pursue a research career in the natural sciences, engineering and mathematics and trying to identify the best from among this group The reviewers are trying to identify individuals who demonstrate a passion for doing

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research and the creative spark that will make them leaders in their fields in the years to come.” - Dr. Mateja, President of the Goldwater Scholarship Foundation

- If you haven't had traditional research experience, or if your research plans were significantly disrupted by the COVID-19 pandemic, developing a Research Proposal on a “proposed” project that is of your interest is a welcome approach. If you take this path, be sure to get in contact with researchers or faculty in your field either at your school who can help you better understand what a realistic and compelling project proposal looks like. Read peer-reviewed published papers to also develop a sense of what compelling research projects look like.
- Text formatting: 12-point Arial, 1-inch margins, at most 3 pages long. Essay must include your name and the name of your academic institution in the header at the top of each page. Format the essay with one or two columns per page. Figures, table captions, and figures may use 10-point Arial font. Send document as PDF.
- Essential content that all essays MUST include:
 - Describe research questions (in the form of an introduction), methodology, results and analysis, discussion, and future work, and bibliography. If appropriate for your field, the research question should be posed as a testable hypothesis. In the discussion, make sure to circle back to your research question to clarify how it was answered. It is okay to acknowledge that due to a variety of limitations it was not fully answered. Doing so can demonstrate that you can think critically about research.
 - The bibliography should normally include APA citations of a few relevant articles. Including articles demonstrates your familiarity with current research, but citations of too many articles can take up space that is better spent describing the project. If you have been a co-author on relevant work, consider including it.
 - Note: Click on the links provided to [MIT's CommKit](#), a guide to successful scientific communication, if you'd like to have a more in-depth guide on these aspects of your research essay.
 - The following information about your role in the research project is ESSENTIAL. Include it in the different parts of your essay. Use “I” to emphasize on the work that YOU were responsible for.
 - Explain your specific contribution or expected contribution to the work (as opposed to those with whom you may have worked). In doing this, you may tie back to the research activities section so that the two parts of your application are complimentary.
 - Describe the skills you brought to the work from prior research or course experiences
 - Talk about the skills you have or expect to obtain from participation in the project.
- Be specific, concise, and clear. Keep in mind that the **reviewers are scientists and they may not specialize in your specific research area**. Reviewers have broad knowledge of



engineering, science, and mathematics. Therefore, write your essay in a way that someone who has a general knowledge of STEM would understand.

ADDITIONAL RESOURCES

Please take a look at the following publicly available Goldwater application resources to make sure that you have a clear understanding of how to successfully apply for the scholarship! We consulted these sources in creating this guide, and we hope that you will find them as helpful as we did.

1. [Steps in the Nomination Process \(Official Goldwater Website\)](#)
2. [Sample Responses to Select Questions \(Penn State\)](#)
3. [Tips/advice \(Carnegie Mellon\)](#)
4. [Information about scholarship and preparation timeline \(Washington State University\)](#)
5. [Tip sheet \(Bowdoin College\)](#)
6. [Essay tips \(University of New Mexico\)](#)

CONNECT WITH FORMER SCHOLARS

Have questions about the Goldwater Scholarship in general? Fill out the survey on [this page](#) of the FWD:S website, and we can try to connect you with a current scholar or alum who can answer them!

Have questions about the specific contents of this document? Reach out to us at fwdscholars@gmail.com.

Have questions about FWD:S and its services? Send us an email at fwdscholars@gmail.com. You can also follow FWD:S on social media for updates on our program and for more scholarship tips, tricks, and guides:

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- www.fwdscholars.org