

Goldwater Scholarship Info Session

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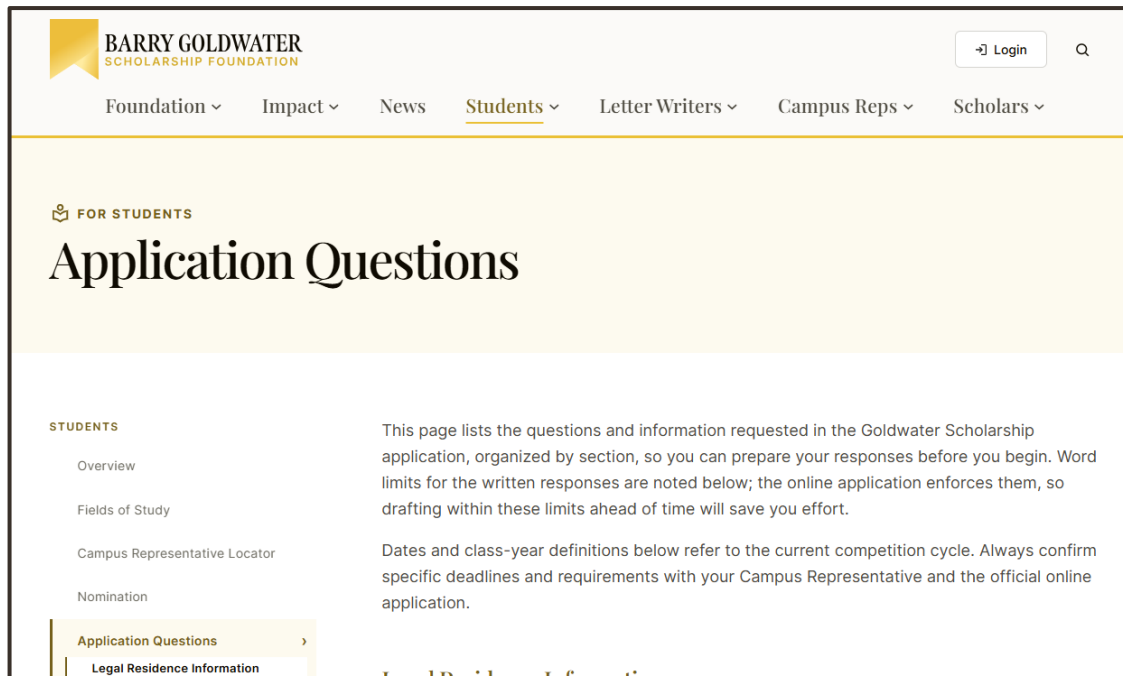
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New for 2027 Competition

- ▶ The website and application portal have been updated!



Barry Goldwater Scholarship and Excellence in Education Foundation

- ▶ Barry M. Goldwater (1909-1998)
- ▶ The Foundation
 - ▶ A history of supporting outstanding scholars
 - ▶ Since 1989, the Foundation has awarded 9456 scholarships
 - ▶ Most Goldwater Scholars hold a PhD, or are working toward one
 - ▶ Many go on to publish in high-impact journals and conferences, become Churchill Scholars, and grow into leading scientists

Program Benefits and Eligibility

Award benefits:

- ▶ \$7500 toward undergraduate educational expenses
 - ▶ 1 or 2 years of scholarship money, depending on when awarded

Eligibility:

- Current sophomores or juniors in STEM
- US citizens or permanent residents
- Plans for Ph.D. & research career

Are YOU a Potential Goldwater Scholar?

The ideal candidate exhibits:

- ▶ Intellectual prowess
- ▶ Potential for leadership and innovation in their field
- ▶ Commitment to a Ph.D. and career in STEM research
- ▶ A track record of research experiences
- ▶ A strong academic record*

*min 3.0 GPA, but avg GPA of winners is ~3.9!

The Goldwater Scholarship Application

- ▶ **Official** transcripts (all colleges/universities attended)
- ▶ **3** letters of recommendation (from researchers in your field)
- ▶ Complete online application form
 - ▶ Including descriptions of up to 5 research experiences
- ▶ Research essay – up to 3 pages

Your Reading Audience

Review panels are organized according to the “Field of Study” in the Current College/University section of the online application:

- Chemistry
- CISE
- Engineering
- Geosciences
- Life Sciences
- Materials Research
- Mathematical Sciences
- Medicine
- Physics and Astronomy
- Psychology

*Applications are **NOT** reviewed by the Areas of Specialization listed under each of the major disciplinary areas.*

Chemistry	Chemistry
Computer & Information Sciences & Engineering	Artificial Intelligence Chemical Catalysis Chemical Measurement and Imaging Chemical Structure, Dynamics, and Mechanism Chemical Synthesis Chemical Theory, Models and Computational Methods Chemistry of Life Processes Computationally Intensive Research Environmental Chemical Systems Macromolecular (including Polymer Chemistry), Supramolecular, and Nanochemistry Quantum Information Science Sustainable Chemistry Other (specify)
Engineering	
Geosciences	
Life Sciences	
Materials Research	
Mathematical Sciences	
Medicine	
Physics & Astronomy	
Psychology	

The Review Process...

...seeks to identify students who show exceptional promise of becoming this Nation's **next generation of research leaders** in science, engineering, and mathematics. Nominees are reviewed on their **potential to advance knowledge in their chosen fields** throughout their careers. Reviewers evaluate applications **holistically**, giving balanced consideration to all elements of the application. Important elements include a student's **academic record, research experience/research essay, career goals and professional aspirations, social and/or economic factors** that have influenced the applicant's education, activities/accomplishments, recognitions, leadership, and recommendations.

Research Experiences

- ▶ List your research experiences/projects
- ▶ Remember to include *your* unique role/involvement, and contribution
- ▶ Do they show progression over time?
- ▶ Do they show cohesion?
- ▶ Any informal/side projects?

Research Projects: Skills Gained

- ▶ Briefly describe research skills that you developed while working on this project that will be important going forward in your research career
- ▶ These can be technical and/or non-technical skills (e.g., Western Blots, determining model inputs)

Career Goals/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 overall educational plans will help you achieve those goals.

In other words: What do you hope your BIG contribution will be (intellectually/scientifically speaking)? How are you getting there?

Research Career Motivation

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

Hints: Did you have an “epiphany” moment? Or has your career inspiration developed over time? How can you put a narrative on it?

Personal Background

(Optional Question)

Goldwater Scholars will be representative of the diverse economic, ethnic, racial and occupational backgrounds of families in the United States. Describe any socioeconomic impacts you have personally experienced that influenced your education - either positively or negatively - and how you dealt with them.

Research Essay

3-page essay. Focus on one project — the one that best shows your ownership, your results, and your scientific thinking. It may be completed, in progress, or, if you have not yet had a research experience, a proposed project laid out with a problem statement, protocol, methodology, and anticipated results.

- ▶ Strongest essays are on prior/ongoing research
- ▶ Draft on your own, then get help from your PI
- ▶ Convey what is innovative or cutting-edge about your work
- ▶ Be clear about your specific role/contributions (use “I” statements!)
- ▶ Use ~5-7 citations, *not* all from your own lab

Research Essay

Whatever the project, your essay should:

- Open with a short paragraph on **why the research matters** and what motivated it.
- Describe the **problem**, your **methodology**, and your **findings** (or anticipated results).
- Make your **personal contribution unmistakable** — write “I,” not “we,” and give concrete examples of initiative you took, ideas you contributed, and setbacks you worked through.
- Discuss the **skills you brought to the project and the skills you gained**, both technical (instrumentation, software) and scientific (data analysis, critical thinking, collaboration).
- Close with **next steps or new questions** the work suggests — evidence that you think beyond the current project.



Research Essay

Requirement	Rule
Length	No more than 3 pages, including references and bibliographic information
Spacing and font	Single-spaced, 12-point or larger Arial (figure captions and citations may be 10-point Arial)
Margins	One inch on all sides, measured to the text
Header	Your name and your nominating institution on every page; the essay must have a title
Layout	Single or double column; graphs, tables, and figures are permitted, in color if you wish — reviewers see the essay in color; use LaTeX or similar for equations
File	Save and upload as a PDF
Hyperlinks	Do not include hyperlinks — materials hyperlinked to your essay will not be read

Letters of recommendation

- ▶ 3 letters required
- ▶ From faculty/researchers in your field

Recommenders should:

- ▶ Know you very well
- ▶ Be able to speak to your intellectual strengths, contributions to research and/or the classroom, and potential to be a future leader in the field

Some notes on AI...

- ▶ **AI question:** they will ask if AI was used in developing any part of an application
 - ▶ This information will be provided to the Goldwater reviewers. Goldwater reviewers will continue to evaluate applications based on the Foundation's selection criteria, not on whether an applicant used or did not use AI in developing the application.

AI may help with spelling, grammar, and sentence structure, with finding related research, and with brainstorming. It may not be used to fabricate, falsify, or plagiarize anything. Your institution's AI rules apply — if your school prohibits AI, do not use it — and you are responsible for everything you submit. The application asks whether you used AI, but AI use is not part of the scoring.

Some tips from Goldwater Scholars

- ▶ The Goldwater application process is a **marathon--not a sprint!**
- ▶ Leave plenty of time to reach out to your mentors and get feedback on your essay from people not directly in your research group.
- ▶ *“It would have been helpful if I had all the information for my past research projects organized previously. I had to spend a lot of time organizing this information for the scholarship.”*

Application/Campus Nomination Process

- ▶ **October 21st, 5 PM:** Pre-apps due
- ▶ **Now- October 30th:** one-on-one pre-application meetings
 - ▶ After pre-app meeting, start preparing full application
- ▶ **November 19th, 12 PM:** Campus deadline
- ▶ **Early December:** Campus committee meets to nominate *FOUR* applicants as Goldwater Nominees
- ▶ **December – January:** Nominees work with OURSD to revise application
- ▶ **January 28th, 2027, 5 PM:** Goldwater Nominee Final Deadline