

Caltech Undergraduate Research Opportunities

FUTURE IGNITED 2021

STUDENT-FACULTY PROGRAMS OFFICE

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Introduction

What is Undergraduate Research?

Overview of WAVE Fellows program

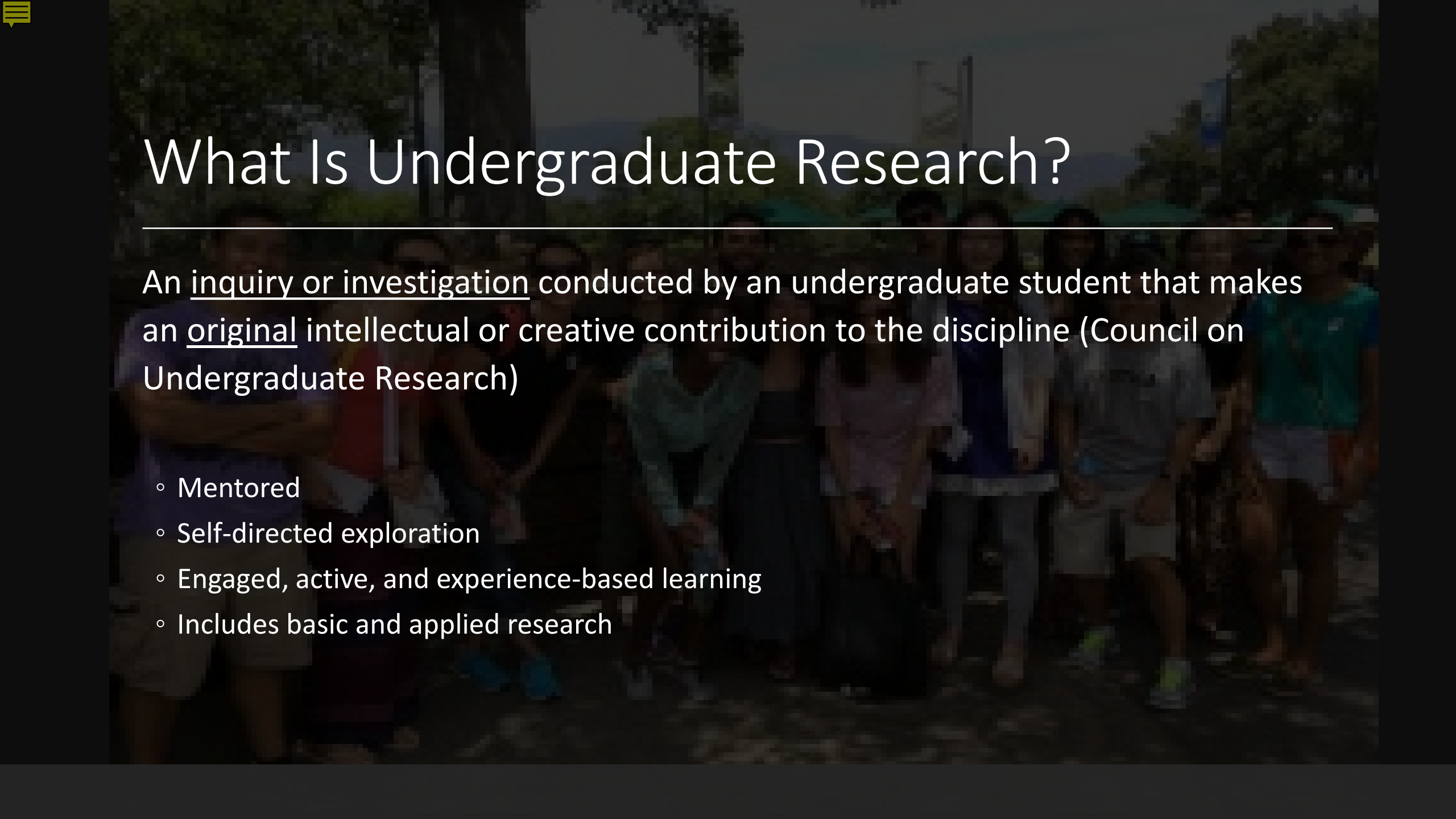
The application process

Research overview and identifying
possible mentors

Timeline

Questions





What Is Undergraduate Research?

An inquiry or investigation conducted by an undergraduate student that makes an original intellectual or creative contribution to the discipline (Council on Undergraduate Research)

- Mentored
- Self-directed exploration
- Engaged, active, and experience-based learning
- Includes basic and applied research

Why is it important?

- Opportunity to put classroom learning into practice
- Academic and career path clarification
- Provides an academic community of faculty, scholars, grad students and other undergraduates
- Improves your oral and writing communication skills
- Opportunity to make an original contribution to your field
- Impacts academic success—retention, engagement, persistence

(NSF; Boyer Commission, 1995; AACU, 2008)



Real and Perceived Barriers

- Inexperience
- I don't know where to start
- Not enough academic background
- Family or work responsibilities/Lack of time
- Financial constraints

(NSF; Boyer Commission, 1995; AACU, 2008)



How to get Started?

- Use your academic network: faculty, advisor, and peers!
- Search online at schools of interest
 - REU's
 - McNair program
- Search online for clearinghouse
- Pathways to Science
- Directly contact faculty of interest
- Be assertive, but not aggressive or entitled
- Do not spam faculty! Choose wisely and demonstrate an interest.
- YOU are here!



Our Mission

Caltech's WAVE Fellows Program aims to foster diversity by increasing the participation of underrepresented students in science and engineering Ph.D. programs and to make Caltech's programs more visible and accessible to students not traditionally exposed to Caltech.

The program is extended, but not limited to

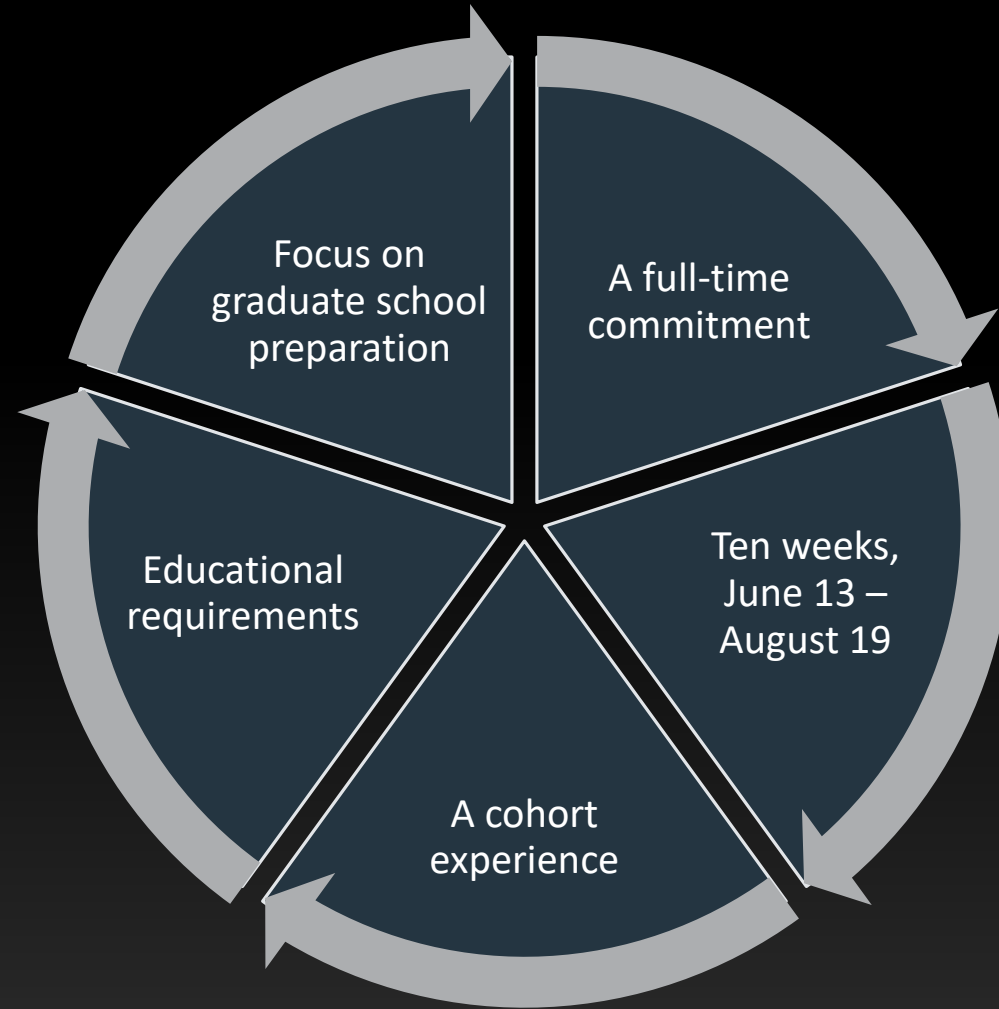
- Underrepresented minorities
- Women
- First-generation college students
- Geographically underrepresented students
- Educationally and financially disadvantaged students
- Students with disabilities



Eligibility

- Be sophomore junior, or non-graduating senior
- Have a cumulative GPA of at least 3.2
- Have an interest in pursuing a PhD or joint MD/PhD
- Must be U.S Citizen, permanent resident, or have DACA status
- Most competitive applicants have prior research experience

The summer program



The summer program

Faculty research
seminars

Small student-faculty
dinners

Writing and effective
communication
workshops

Weekly WAVE cohort
lunches

The WAVE Council

Campus engagement
with

- Center for Diversity and Inclusion
- Graduate Dean's Office



The 2022 WAVE award

\$6,620 for 10 weeks

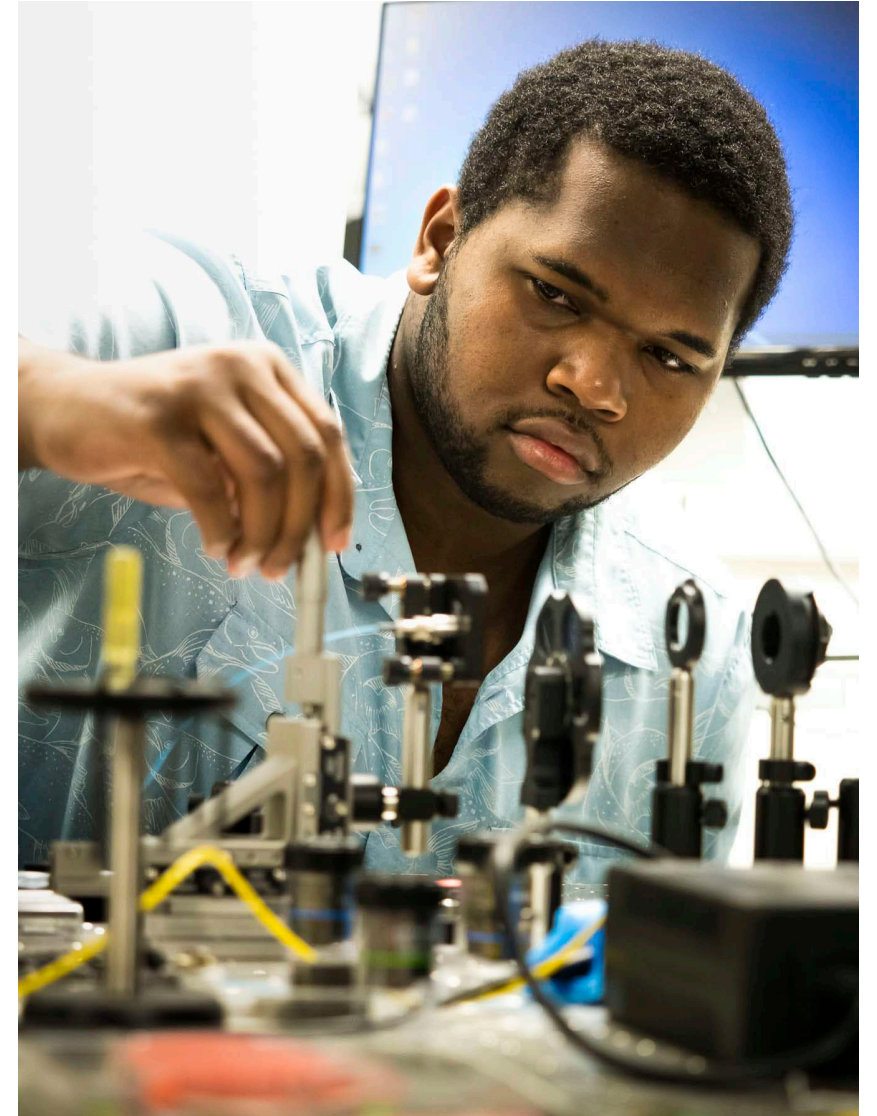
\$2,000 supplement to live in Caltech housing

Round-trip travel to/from Caltech and home/school

The application process

- General information about your academic background, goals, and experience
- Short essay questions on research interests and how you will benefit from being in the program
- Three letters of recommendation
- Unofficial transcript
- Names of three potential research mentors and why

www.wave.caltech.edu



Identifying potential mentors

Divisions, research
areas, and research
centers and institutes

2020 Abstract Book

2020 Final
Presentations

Summer

Fall



Timeline

Fall

- Seek Research Interest and Potential Mentors
- Cultivate your Academic Network
- Start Summer Research Applications

Winter

- Applications are due
- Thank and/or remind your recommenders

Spring

- Summer plans should be in place
- Share with your network/recommenders what you will be doing in the summer

Next



Questions



Follow up

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