

Berkeley

UNIVERSITY OF CALIFORNIA

Transfer-to-Excellence Research Experiences for Undergraduates (TTE REU) *2018 Summer Research Program at UC Berkeley*

Research Information & Application Packet

Please note ONLY ONLINE APPLICATIONS SUBMITTED THROUGH SUBMITTABLE WILL BE ACCEPTED. This application is being provided so that you can prepare and draft your responses before submitting them online.



Program funded by



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Testimonials and advice from Community College students who have participated in TTE REU Program:



I learned a lot about the different aspects of research. I got some experience designing, troubleshooting, and actually performing my experiments. I learned a multitude of skills and techniques which are fundamental to any micro or molecular biology lab. I was also able to become familiar with the dynamic of a research laboratory. I improved my ability to speak, specifically, my ability to communicate science effectively.



This research experience has helped me improve my problem-solving skills, gain knowledge about how to conduct research. Aside from that, it helped me work on my public-speaking ability and writing a scientific research paper. I also got to work with different people with various backgrounds and working with them collaboratively made doing things a lot easier for everybody.



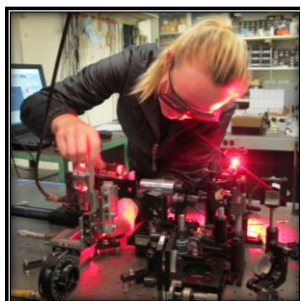
This experience has really reinforced my knowledge of my own love for learning. It's also shown me that I can go into a lab and do the work.



This program went above and beyond my expectations. I had expected to come in and learn some new skill, but it was so much more than that, it inspired me to follow my passions to end up doing research in something I love.

I knew that this program would be a life changing experience, but I didn't exactly know how. My ideas of research were pretty abstract - "pure science", something people kept telling me I needed to go to grad school, something people do at big universities - but I didn't understand the pacing, the process, etc. The research itself exceeded my expectations. I feel like I got to work on a project that really mattered...

This program exceeded my expectations. I never thought that I would have such an amazing experience. I truly enjoyed my time in the lab and my time with my new friends. I have met such a diverse group of people also interested in engineering and have found people that I connect with. I expected to learn a lot in the lab and about research this summer. But I never expected to have such close friends from this program.



I would tell them to definitely apply for the program because it will be worth their time. I would tell them to prepare to work very hard but that they will have a lot of support.

This has been the most life changing experience of my life. I have so much more confidence in myself and my abilities to succeed at a four year institution. I also had little desire to peruse a graduate degree before coming to this program and I am now completely certain that I will attend graduate school after I finish my bachelor's degree

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The TTE Program also collaborates with UC Berkeley's Transfer Alliance Project (TAP). TAP is a highly successful academic advising and enrichment program that prepares low-income and otherwise educationally disadvantaged community college students throughout California to be competitive transfer applicants to UC Berkeley and other four-year colleges. TAP succeeds by providing one-to-one personalized advising including design and monitoring of individual academic course plans and assistance with transfer applications, required personal essays, financial aid forms and scholarships applications.

⌘ All Interested Eligible Students are Strongly Encouraged to Apply ⌘
Online Applications, Transcripts, Sample Work, & Recommendation Letters
must be received by Friday, January 26, 2018

I. Program Eligibility

California Community college students who

- Have completed nearly all the requirements for transfer to a 4-year institution in your intended major
- Will continue at community college this Fall and subsequently apply for junior standing transfer admission to 4-year institution from community college. ***Please do not apply to this program if you applied for and/or intend to enroll in any four-year institution in the 2018-2019 academic year (except through concurrent enrollment)***
- Are fully intending and academically prepared to apply to a 4-year institution as a community college transfer student in Fall 2018 in order to enroll in Fall 2019
- Are planning to major in a science or engineering at a 4-year institution after transfer

II. Program Basics

- Spend nine weeks at Berkeley pursuing independent research *full-time* on a topic related to your intended major under the one-to-one mentorship of a Berkeley faculty member.
 - Attend a 2-day Research Orientation to prepare you for your work
 - Attend a 5-day Lab Fundamentals Training to prepare you for your work
 - Receive on-going support from your faculty mentor and research program staff to successfully complete your work
 - At the end of the summer you will deliver an oral PowerPoint and Poster presentation on your research in a closing symposium and submit a 2-page report of your work
 - Receive a Certificate of Program Completion
- Receive free housing and meals on the UC Berkeley campus. The program will also cover transportation costs to and from Berkeley (up to \$300).
- Receive a summer stipend of \$3,600.
- Receive Berkeley course credit for your work. The program will pay for course fees.
 - Your grade will appear on a Berkeley transcript, which you can submit with your transfer application.
- Meet and share your experience with research students like yourself from community colleges across California including through planned social events.
- Attend seminars on preparing for science and engineering careers and applying to 4-year institutions.

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III. Program Benefits

- You will be able to truly participate in the wonderfully diverse Berkeley intellectual, social and cultural community and familiarize yourself with issues related to your prospective major and with the world-class faculty and resources on campus.
- You will be able to speak from authority and experience about your interest in your major in your transfer application.
- You will develop research skills and abilities that will impress admissions officers, faculty and departments.
 - *Imagine being able to describe the research you did in the lab of the chairperson of the department you are applying to!*
- Assuming you do well, you will gain a faculty advocate who can attest to your abilities.

IV. Selection Criteria

- Currently enrolled at a California community college
- Academic preparation
 - 3.25 grade point average or higher
 - You must have completed two calculus courses & three science or engineering courses, one of which has a laboratory component, before the start of the summer research program. *These courses must be completed by June 2018.*
- Plan to apply for transfer admission to a 4-year institution in fall 2018 to major in science or engineering
- Interest and maturity to conduct independent research at least 40 hours/week
- US citizen, national, or permanent resident
- Availability of faculty mentor and program funding

Note: No prior research experience is required. In fact, we especially encourage applications from eligible students who have not conducted research.

V. Dates

- June 8th to August 11th
- All students are expected to attend a required orientation on Friday, June 8th.

VI. Frequently Asked Questions

Who should I ask for my letters of recommendation? Recommendations should be from faculty members and mentors. It's important for you to know what a weak letter of recommendation is: a weak letter is one that says you are a good student and nothing else. A strong letter of recommendation will be: this student is great, and then go into detail about why the recommender believes that you are so good based off of your previous interactions. Be sure to let your recommenders know that faculty and graduate students review the applications, so that they can gear their letter towards that audience.

Do I need research experience to apply? No! We strongly encourage you to apply regardless of past research experience, especially if you are an underrepresented student in science and engineering (underrepresented minorities, women, veterans, and persons with a disability). One of the goals of this program is to give research experience to students who would not otherwise be able to at their community colleges.

What majors will be considered? All science and engineering majors, including but not limited to: biochemistry, bioengineering, biophysics, chemical biology, chemical engineering, chemistry, civil engineering,

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computer science, electrical engineering, engineering math & statistics, engineering physics, environmental engineering, genetics, materials science, mechanical engineering, molecular and cell biology, molecular toxicology, and physics.

I am planning to transfer to a 4-year institution next fall; can I apply to the TTE REU program? No. All students must be planning to return to a California community college in the fall after participating in the TTE REU program.

I am an international student; can I apply to the TTE REU program? No. Unfortunately, we cannot accept international students for our research programs as we are funded by the National Science Foundation, a federal agency, which allows us to only fund US citizens, nationals, & permanent residents.

I am an undocumented (dreamer/AB-540) student; can I apply to the TTE REU program? No. Unfortunately, we cannot accept AB-540 students for our research programs as we are funded by the National Science Foundation, a federal agency, which allows us to only fund US citizens, nationals, & permanent residents.

What is sample work? Sample work is an excerpt of your academic or career related work (lab, computer program, test, paper, homework, etc.) that demonstrates your best work in the area you want to conduct research (no more than 5 pages). If the sample work is graded, please ensure that the grade is included.

What is the application deadline? Applications are due: January 26, 11:59 P.M. PST. Applications are accepted from early-October until January 26, 2018. It is to your advantage to submit your application early to ensure all requirements arrive in time.

When are the applications reviewed? Complete applications will be reviewed when they are turned in. The earlier an application is submitted, the earlier it will be reviewed. There are a very high number of applications received in the last days before the deadline, therefore it is to the advantage of the student to turn in their application well in advance.

How do I apply? Only online applications will be accepted. Transcripts, sample work, and letters of recommendation should be submitted through the online application portal.

Where do I send my transcripts and sample work? On the application form, through *Submittable*, you will be able to upload your transcripts and sample work directly.

Can I submit an unofficial transcript? Yes, unofficial transcripts are accepted and preferred. If admitted, you will be expected to provide an official copy of your transcript.

How long before the deadline should things be submitted? All application materials must be RECEIVED by January 26, 2018. We do not accept late application documents.

How will I know when my application is complete? The application portal will allow you to check the status of your application.

What research topics are available? Research projects are available in engineering projects. Specific projects will be assigned based on the student's technical background and interests.

What topics have past summer interns researched? See 2017 Projects on TTE REU website: <https://e3s-center.berkeley.edu/education-diversity/education/undergraduate/tte-transfer-excellence-summer-research-program/tte-program-archive/2016-2/>

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I have more than one area of interest, should I include them all? Yes. Provide as much information as you can to aid TTE REU in the selection process. It is also best to be as specific as possible in order to appropriately match you with a faculty mentor.

How are applications chosen? The selection process is primarily based on academic merit and technical preparation. A selection committee will also take into account the applicant's attributes, like technical interests, academic and career aspirations, and life experiences. Finally, UC Berkeley faculty members who have research projects for community college students select from a short list of applicants recommended by the selection committee.

How are research mentors chosen? Students are matched to a research mentor who does research in the area of the student's interest. On your application, applicant identifies research areas/centers of interest. If admitted into the program, the admissions committee does its best to place interns in one of their top choice, or in the closest area of research.

How are research projects chosen? Projects are chosen for the students based on the interests they list on their applications. We try to match the student's interests to a project that a mentor has for the summer. These projects change yearly and are dependent upon the mentor's needs. If chosen to be a part of a project, the mentee and mentor will work out between them what the project will entail.

When will I find out if I am accepted into the program? Students are notified of their acceptance into the program by March 31st.

How long do I have to accept an offer? Once you are notified of admission into TTE REU, you will have one week to accept.

If accepted into TTE REU, does that guarantee admission into UC Berkeley as a transfer student? No. All TTE REU interns have an opportunity to interact with a number of UC Berkeley faculty, administrators, and students. However, acceptance into TTE REU does NOT guarantee admission into UC Berkeley as a transfer student.

How long does TTE REU Program run? TTE REU is a nine-week program. In 2018 it will run from June 8th – August 11th. Students are expected to participate for the entire duration of the program.

What if my final exams conflict with the program dates? Students are required to participate for the entire duration of the program. If your final exams conflict with the program start date, you should arrange to take your exams earlier.

Can I take classes at UC Berkeley while participating in TTE REU? No. TTE REU interns cannot take classes while participating in the program. They are expected to spend the majority of their time in lab as well as completing their TTE REU deliverables.

Is it possible for me to live at home while I do research? If accepted into the TTE REU Program you will be required to live in the dorms on campus as this is a residential program.

Can I bring a car? No. Parking is limited on campus and there is no campus overnight parking.

Other questions? Please contact Lea Marlor at tteprograms@e3s-center.org or (510) 664-4882.

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VII. How to Apply?

Application Requirements

- Completed online application form
- Two recommendations: at least one from current faculty in science or engineering
- Unofficial academic transcript from all colleges attended
- Sample work

To apply to the TTE REU program, follow these steps:

Step 1.

Complete the on-line application through the Submittable portal

(<https://e3s.submittable.com/submit/93508/2018-tte-transfer-to-excellence-summer-research-program>)

Step 2.

Ask your recommenders for a letter of recommendation and inform your recommenders their letters must be RECEIVED by our office no later than January 26, 2018. In the application, you will be asked for who your recommenders email addresses. In order to have your recommenders receive the link to submit recommendations, you will need to submit an application. Please note, that you will still be able to edit your application, even after you submit.

Step 3.

Submit an *unofficial* copy of your transcript(s) through the Submittable portal. Please note you must send a transcript for *every institution you have attended*. Admitted applicants will be asked to submit an official transcript at the time of acceptance.

Step 4.

Submit your sample work (maximum 5 pages) through the Submittable portal. Sample work can be a test, homework, lab, or other project that demonstrates your best work in the area you would like to conduct research. If sample work is graded, please be sure it is included.

Step 5.

All applications and letters of recommendations must be received by January 26, 2018. Late and incomplete applications will not be reviewed. Decisions should be emailed by March 31st.

Questions can be addressed to:

Lea Marlor:

Email: tteprograms@e3s-center.org

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Please note ONLY ONLINE APPLICATIONS SUBMITTED THROUGH SUBMITTABLE WILL BE ACCEPTED. This application is being provided so that you can prepare and draft your responses before submitting them online.

Instructions: (Please Read)

- ALL applicants should complete sections I -VII and submit transcript(s) and sample work.
- Tips for a Successful Application:
 1. Be confident that we are eager to read your application; our questions are there to help us get to know you better, not to make you stumble.
 2. Carefully Read and Follow all instructions. Read through the entire application once before filling it out.
 3. Make sure you save plenty of enough time to complete the application -- to research what you want to study or research, and in terms of your essay(s) to think about what you want to write and then to write and revise. All essays should be written/revise at least 3 times and shown to teachers/academic advisors that you trust.
 4. Double-check to make sure you have followed all instructions and completed all the Required Sections and provided all the requested documents. Incomplete applications will not be reviewed.
 5. Answer all questions honestly.



I. Personal Information

Name: _____
First Last

Address: _____
Street City State Zip

Email Address: _____ Birthday: _____
Month Day Year

Cell Phone: _____ Alternate Phone: _____

Demographic Information: Why is this information being requested? Collection of this information is authorized by the NSF Act of 1950, as amended, 42 U.S.C. 1861, et seq. Demographic data allows NSF to gauge whether our programs and other opportunities in science and technology are fairly reaching and benefiting everyone regardless of demographic category; to ensure that those in under-represented groups have the same knowledge of and access to programs and other research and educational opportunities; and to assess involvement of international investigators in work supported by NSF (E3S National Science Foundation Cooperative Agreement No. 0939514).

Citizenship Status: U.S. Citizen ; U.S. Permanent Resident ; Other (Specify) _____

Gender: Male ; Female ; Decline to Answer

Ethnicity: Are you of Hispanic, Latino, Chicano, or Spanish origin? Yes No ; Decline to Answer

Race (Check all that apply): African American or Black
Asian (e.g., Asian Indians, Chinese, Filipino, Japanese, Korean, Vietnamese, other Asian)

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Caucasian or White

Native American or Alaska Native

Native Hawaiian or Other Pacific Islander (e.g., Guamanian, Chamorro, Samoan)

Decline to Answer

Other (Specify) _____

Disability: Yes ; No ; Decline to Answer ; If yes, please specify: _____

Veteran: Yes ; No ; If yes, please specify branch and dates served: _____

Highest Education Level of Mother/Parent-Guardian I: Less than Middle School ; Middle School High School/GED ; Some College ; AA/AS ; BA/BS ; Graduate School ; Other (Specify) _____

Highest Education Level of Father/Parent-Guardian II: Less than Middle School ; Middle School High School/GED ; Some College ; AA/AS ; BA/BS ; Graduate School ; Other (Specify) _____

Educational Information:

Are you currently receiving, or have you recently received a Pell grant? Yes No

Current Community College: _____

Cumulative G.P.A.: _____ Intended major: _____

Intended transfer year to a 4-year institution: _____

Select the organization or groups you are involved with as a community college student (check all that apply):

- Center for Science Excellence (CSE), Mathematics, Engineering, Science Achievement (MESA),
 Transfer Alliance Project (TAP), UCLA Center for Community College Partnerships (UCLA CCCP),
 Puente Project (Puente) Other, please specify: _____

II. Statement of Program Eligibility

I will be enrolling in Fall 2018 at community college before applying to a 4-year institution as community college transfer student with junior standing. I will not be enrolling at any 4-year institution during the 2018-2019 academic year (except through concurrent enrollment): True False

III. Transcripts

- Please submit transcripts from all colleges you have attended. Your transcripts must include the classes you are taking currently.
- Did you ever take any Advanced Placement (AP) courses or International Baccalaureate (IB) courses? If yes, please list:

IV. Personal and Academic Experience (all sections are required)

A. Essays

- 1) Please explain why you wish to conduct summer research and how this relates to your overall interests and goals, including intended 4-year institution major and future career. Please be specific about how you think this research opportunity will benefit you. (300-500 words)

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- 2) Past summer program participants have found the program to be both the most rewarding and yet most challenging experience of their life -- please describe a major challenge you have encountered in your life, how you overcame it, and what you learned about yourself and others as a result of the experience. (The experience can be taken from any aspect of your life; it does not need to be related to academics) (300-500 words)

B. Research Interests

To help us best understand your research interests and match you with a faculty mentor, please answer the following questions. Please note, we will try to place you in a research experience that most closely matches your interests, but we cannot promise that you will work with any particular person or department.

The TTE REU program is a collaboration among Berkeley engineering faculty members. Please indicate which research area(s) sounds most interesting to you and why? (see Past Projects and Exciting Research Areas on the TTE REU website) (Maximum: 100 words)

C. Sample Work

- Please submit an excerpt of the academic work (lab, computer program, test, paper etc.) that demonstrates your best work in the area you want to conduct research (no more than 5 pages).

V. Letter of Recommendation

Two letters of recommendation are required. Complete the Letter of Recommendation Forms (pages 13 and 14) and inform your recommenders that their letters must be RECEIVED by Friday, January 26, 2018.

List below the names and contact information of your recommenders whom you will contact for a letter of recommendation.

1. _____
Name Phone Email Address
2. _____
Name Phone Email Address

VI. Program Expectations

1. The Research program will take place for 9 weeks from June 8th to August 11th. Students accepted into the program will be expected to conduct research full-time, by this we mean a minimum of 40 hours per week.

Are there any dates from June 8th to August 11th when you are not available? Yes No . If yes, please list and explain why this absolutely cannot be avoided.

2. Are you able and willing to devote a minimum of 40 hours per week on your research project? Yes No .

3. Research Program participants cannot work or be enrolled in courses, including community college courses, unless there are extenuating circumstances. Do you plan to work or enroll in courses while you are in the Research program? Yes No . If yes, please explain the circumstances that require you to do this and how you will still be able to devote yourself to intensive research full-time.

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4. All research participants are expected on to live on the UC Berkeley campus in provided housing during the entire summer program, including weekends, unless there are extenuating circumstances and you receive prior permission. Can you live on the Berkeley campus for the entire program? Yes No . If no, please explain.

5. Are you applying to any other summer programs? (*This answer will in no way affect your admission prospects in the TTE Program*) Yes No . If yes, please list these programs and when you will find out about these opportunities. What program is your first choice?

6. I understand that as part of the application process applicants may need to speak/meet with prospective faculty mentors and/or Summer Research Program staff. Yes No

7. TTE works in collaboration with other organizations in and around UC Berkeley's campus. Some of these collaborators offer research positions to community college students over the summer. If your application is not selected for the TTE program, would you like to be considered for a REU position with one of our collaborators? Yes No

8. How did you learn about the TTE REU Program? _____

VII. Statement of Verification (to be read and signed by all applicants)

I hereby certify to the best of my knowledge that all information submitted on this application and in the attached required documents including essay(s) is accurate, complete and my own work. I also certify that the Transcript(s) accurately reflects my grades.

I understand that if I knowingly provide incorrect information, I will, if accepted, be immediately removed from the Summer Research Program (as applicable) and required to reimburse all costs of services provided to me.

Signature _____ Date _____

IS YOUR APPLICATION COMPLETE?

1. Have you submitted the following application material?

- A. Online application
- B. Provided your recommenders the letter of recommendation form and informed your recommenders that their letters are due by Friday, January 26, 2018

2. Have you submitted the following required documents?

- A. Transcripts from all colleges you have attended
- B. Sample work

Completed Applications with required documents must be received by our office on or before January 26, 2018:

Transfer-to-Excellence Program
Questions can be addressed to Lea Marlor:

Email: tteprograms@e3s-center.org