

“Can you See Yourself Doing Research This Summer?”

Dear Undergraduate Students,

Congratulations on your desire to pursue a degree in a STEM Discipline. STEM or Science, Technology, Engineering, and Math degrees are considered by many to be the most difficult to pursue yet most will agree that they are among the most satisfying and can be the most lucrative. As you are probably already aware, your major will require more critical thinking skills, study time, more units, and sometimes more time in college. Summer Research and/or Summer Enrichment Programs are an excellent way to gain hands on research experience to prepare for graduate school and the world of academia in the scientific community. Therefore, I encourage you to peruse the programs listed and apply to more than one in case your top pick is not available. Also, please encourage your classmates to also apply because today's classmates will be tomorrow's colleagues.

Good Luck!

MESA Staff

P.S. If you used this resource and were accepted into a program, MESA would love to hear from you!

BEFORE YOU BEGIN

Important Tips for Successful Applications:

1. Apply *only* to programs that you are eligible for.
2. If you have any uncertainties about applying for the program e-mail the contact person *before* you apply to the program.
3. Once you've submitted your application you may want to email the program coordinator to let them know that you've applied.
4. Meet all the deadlines posted. Late applications reflect poorly and may jeopardize your chance of being selected.
5. Make sure to give your recommender(s) adequate time to write a polished letter of recommendation for you. Give them as much information as possible about you, the program you are applying to and how you see this program as beneficial to your academic and career goals. If possible, send your recommender a copy of your resume and personal statement or essay questions. It is preferable that your recommender is someone who knows of your potential to succeed in research. Letters from STEM Faculty are preferable.
6. Allow yourself enough time to gather required documentation such as official transcripts, medical insurance coverage forms, if needed. Some residential programs require that you have medical insurance in order to participate. If this is the case make sure you have this complete well before you begin the program.
7. Apply to more than one program. Many of these programs get hundreds of applications for less than a dozen slots so apply to about five programs minimum.

8. Decide whether or not you can commit time to this program. If you are taking a summer course, decide how much time you will need to study and commute to class. Will this take time away from your research? Some programs have mandatory attendance at programs such as GRE Prep courses. Make sure that your schedule permits you to fully participate in all aspects of the program.

9. Familiarize yourself with the program. Avoid blanket statements such as, "I want to be accepted to a summer research program at MIT because it's a good school." Instead, talk about specific research being done at that institution and in this program. Give the names of faculty that you would like to work with.

10. Last but definitely not least, bring your applications to an advisor/faculty/mentor so they can review.

QUICK TIPS:

US Citizens and Permanent Residents Criteria

The majority of REU Programs are funded by the National Science Foundation and thus most of the funding sources are limited to funding US Citizens and Permanent Residents. However, there are some exceptions. In my experience, Ivy League and Private Schools can often fund students that are not US Citizens and Permanent Residents and may have additional funding streams that do not have this restriction. If you are not certain than email the program coordinator before you apply.

Underrepresented and Underserved Populations, Broadening Participation

First Generation College Student *means that neither of your parents have graduated from a four-year institution in the United States.* Sometimes students neglect to mention this and as you will see there are several sites that specifically are looking for first generation students. There are also a number of sites that are looking to recruit veterans, returning students, non-traditional students, and low income students. They will typically list this in the call for participants. There are also a significant number of programs that are looking to broadening participation in engineering by reaching out to underrepresented populations. The National Science Foundation's definition of underrepresented is the following: African American (Black) Hispanics (Latinx), and American Indians or Alaska Natives. Women and LGBTQ students are also underrepresented as well as disabled students. Pacific Islanders are also underrepresented in Science and Engineering and several programs specific list Pacific Islanders.

Rising Juniors and Rising Seniors

This typically means that when you apply to the apply you are a sophomore or junior but when you participate in the summer program you will be an incoming junior or incoming senior.

School or Organization: American Chemical Society

Site Name: SCI Scholars Summer Internship Program

Site URL:

<https://www.acs.org/content/acs/en/education/students/college/experienceopp/scischolars.html>

Program Description: The Society of Chemical Industry (SCI), American Institute of Chemical Engineers (AIChE), and the American Chemical Society created the SCI Scholars Summer Internship Program to introduce

chemistry and chemical engineering students to careers in the chemical industry

Levels: Sophomores and Juniors

Minimum GPA: 3.5

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: Rolling deadlines check website

School or Organization: Brandeis University

Site Name: Bioinspired Soft Materials” Research Experience for Undergraduates

Site URL: <http://www.brandeis.edu/mrsec/education/reuoverview.html>

Program Description: The Brandeis Materials Research Science and Engineering Center (MRSEC) announces its "Bioinspired Soft Materials" Research Experience for Undergraduates (REU) program for summer 2019. The REU is a summer research program that will fund undergraduate students assigned to MRSEC laboratories

Levels: Freshman, Sophomores, Juniors & Non-Graduating Seniors

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 1, 2019

School or Organization: Broad Institute

Site Name: Broad Summer Research Program

Site URL:

<https://www.broadinstitute.org/bsrp/broad-summer-research-program-bsrp>

Program Description: The Broad Summer Research Program (BSRP) is an intensive nine-week summer research opportunity designed for

undergraduates with a commitment to biomedical research and an interest in genomics.

BSRP has a strong record of success in helping students to nurture their passion for research and succeed in graduate school and scientific careers. Students spend the summer performing original computational or experimental-based research in labs across the Broad's research areas, from cancer to infectious disease to computational biology. At the program's conclusion, students deliver oral and poster presentations on their research projects.

Levels: Freshman, Sophomores, Juniors & Non-Graduating Seniors

Minimum GPA: 3.2

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: January 14, 2019

School or Organization: Cal Poly Pomona

Site Name: Cal Poly Pomona Research Experience for Undergraduates in UAV Technologies

Site URL: <https://www.cpp.edu/~cppuasreu/>

Program Description: This REU program is designed to increase students' interest in UAV technologies by means of first-hand experience on UAV research with direct mentorship by faculty advisors from various departments within the CPP Colleges of Engineering and Science. This REU Site offers undergraduates opportunities to conduct research during a 10-week summer program, on state-of-the-art technologies and advanced research projects in UAV flight dynamic and control, computer vision, artificial intelligence, embedded systems, and robotics.

Application Opens : November 1, 2018

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors

Minimum GPA: 3

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: January 31, 2019

School or Organization: CalTech/Nasa
Site Name: Jet Propulsion Laboratory

Site URL: <https://www.jpl.nasa.gov/edu/intern/apply/summer-internship-program/>

Program Description: The JPL Summer Internship Program offers 10-week, full-time, summer internship opportunities at JPL to undergraduate and graduate students pursuing degrees in science, technology, engineering or mathematics

Levels:

Minimum GPA: 3

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: April 1, 2019

School or Organization: Carnegie Mellon
Site Name: Carnegie Mellon's Research Experiences for Undergraduates in Software Engineering (REUSE)

Site URL: <http://www.isri.cmu.edu/education/reu-se/index.html>

Program Description: Carnegie Mellon's Research Experiences for Undergraduates in Software Engineering (REUSE) program is an opportunity for undergraduate students to spend a summer working with some of the world's leading Software Engineering faculty researchers. A number of projects are available in diverse areas which may include automated bug repair, mining software repositories, green computing, requirements engineering, program analysis, programming languages, and usable programming tools. Accepted students will work closely with CMU faculty and researchers on research problems with the potential for publication and significant impact on the future practice of software engineering

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors
Minimum GPA: Not Specified
Citizenship Requirements: US Citizens & Permanent Residents
Deadline: February 16, 2019

School or Organization: Cold Spring Harbor
Site Name: REU Site: CSHL NSF-REU Bioinformatics and Computational Neuroscience

Site URL: <http://www.cshl.edu/Education/NSF-REU-in-Bioinformatics-and-Computational-Neuroscience.html>

Program Description:

Levels: Sophomores and Juniors
Minimum GPA: Not Specified
Citizenship Requirements: None stated, International Students are eligible to apply
Deadline: January 15, 2019

School or Organization: Cornell University
Site Name: Cornell LSAMP Summer Research Experiences for Undergraduates

Site URL: <https://sites.coecis.cornell.edu/lsampreu/>

Program Description: Description: The technological advances in this century open a new realm of biological questions that can be addressed experimentally. Large genomic sequence or image datasets are routinely and quickly acquired, but the resources and expertise to analyze this data present a challenge to researchers. CSHL's unique NSF REU program in Bioinformatics and Computational Biology addresses this need by providing early training to undergraduate students who might not otherwise pursue quantitative approaches. CSHL's URP/REU students learn theory and techniques from an applied perspective, investigating an important biological problem rather than from the abstract perspective of computer

science. Students are mentored by expert CSHL researchers, who combine biology, information theory and sophisticated computational techniques to address questions at the frontiers of modern genomics, bioinformatics, and neuroscience. In the past ten years, CSHL's URP/REU program has recruited and trained a diverse group of students, many of whom are still working in bioinformatics or computational fields. Almost all URP/REU participants have continued in scientific careers and/or advanced degree programs at competitive institutions. The program provides students with a modern quantitative biology training program that aims to inspire young scientists to become active participants in modern biological research with its demands for quantitative and computational skills

Levels: Freshman, Sophomores, Juniors

Minimum GPA: 3

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 15, 2019

School or Organization: Cornell University

Site Name: Cornell Center for Materials Research REU

Site URL: <http://www.ccmr.cornell.edu/education/graduate-and-undergraduate-programs/research-experience-for-undergraduates-reu/>

Program Description: Undergrads will have the opportunity to work directly with faculty on interdisciplinary materials research projects involving chemistry, physics, materials science, and engineering disciplines. Students will also participate in an organized program of lectures, laboratory visits and a variety of recreational activities.

Application Opens on October 31st

Levels: Freshman, Sophomores, Juniors, Seniors

Minimum GPA: 3

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: March 1, 2019

School or Organization: Cornell University

Site Name: Molecular Biology and Genetics of Cell Signaling

Site URL: <https://mbg.cornell.edu/undergraduate/summer-research-experience/>

Program Description: This is a ten week summer program for ten students, focusing on diversity and funded as an NSF REU site. Each student does an intensive research project in one of the two dozen labs associated with the program. The research topics of these labs span molecular biology, cell biology, genetics, development, and structural biology. Students give poster and oral presentations at the end. The MBG REU Program has weekly meetings with discussions by faculty to give overviews of their research, with descriptions of the grad school application process, and with faculty critiques of students' drafts of their posters and slides . Also included are several social activities with peer mentors who are current PhD students here.

Application Opens December 1, 2018

Levels: Rising Sophomores and Juniors

Minimum GPA: 3

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: January 31, 2019

School Name: Cornell University

**Name of your Program: Center for Bright Beams Summer REU
Program for Underrepresented Minorities**

Description of the program: Students in the CBB Summer Program for Underrepresented Minorities can do Center for Bright Beams research through any of four REU programs and are guaranteed a Center for Bright Beams research project. The Center for Bright Beams is at the forefront of producing, accelerating and transporting the brightest beams of electrons for applications from giant particle colliders to electron microscopes. Center for Bright Beams advances promise new opportunities, such as imaging of biological molecules in action through ultrafast electron microscopy.

Site URL: <http://cbb.cornell.edu/Students/SummerStudents.html>

Levels: (freshman, sophomore, etc) freshmen, sophomore, junior

Minimum GPA: Not specified

Citizenship Requirements: U.S. Citizenship required

Application Deadline: February 1, 2019

School or Organization: Department of Energy

Site Name: Science Undergraduate Laboratory Internship

Site URL: <https://science.energy.gov/wdts/suli/eligibility/>

Program Description: Summer internships at the DOE Labs including Ames Lab, Argonne National Lab, Brookhaven National Lab, Fermi National Lab, Lawrence Berkeley National Lab, Oak Ridge National Lab, Pacific Northwest National Lab, Princeton Plasma Physics Lab, Stanford Linear Accelerator Lab, Thomas Jefferson National Accelerator Facility,

Levels:

Minimum GPA: 3

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: January 12, 2019

School or Organization: Duke University

Site Name: Duke ECE Undergraduate Summer Research Program

Site URL: <https://ece.duke.edu/undergrad/reu>

Program Description: Research Experience for Undergraduates – or REU – brings students from around the world into the research laboratories of the Department of Electrical and Computer Engineering each summer. These students work with a faculty member and their research group to tackle an innovative research project. Students admitted to the program receive a competitive monthly research stipend as well as arranged on-campus housing and a travel allowance.

Application Opens: Late November

Levels: Sophomores and Juniors

Minimum GPA: Not Specified

Citizenship Requirements: Domestic and international students
Deadline: Check Website

School or Organization: Duke University
Site Name: REU for Meeting the Grand Challenges

Site URL: <http://gcreu.pratt.duke.edu/research/program-information>

Program Description: During a period of nine weeks, students will work full-time in a research project, will participate in weekly seminars and workshops, and will attend regular group meetings in their research labs. The program concludes with the students presenting their research findings during the REU Summer Symposium.

Levels: Rising juniors and rising seniors
Minimum GPA: Not Specified
Citizenship Requirements: US Citizens & Permanent Residents
Deadline: January 10, 2019

School or Organization: Georgia Tech
Site Name: Summer Undergraduate Research in Engineering

Site URL: <https://sure.gatech.edu/>

Program Description: Founded in 1992 by Dr. Gary May, current Dean of the Georgia Tech College of Engineering, the Summer Undergraduate Research in Engineering/Sciences (S.U.R.E.) program is committed to increasing the number of qualified students who are traditionally underrepresented in STEM fields. These include but are not limited to students from racial/ethnic minority groups, women, or first generation college students.

Opens December .3, 2018

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors
Minimum GPA: 2.75
Citizenship Requirements: US Citizens & Permanent Residents
Deadline: February 28, 2019

School or Organization: Harvard

Site Name: Research Experience for Undergraduates

Site URL: reusite.seas.harvard.edu/application

Program Description: Spend your summer at Harvard University performing cutting-edge research in world-class laboratories. Focus on an in-depth research project while exploring multidisciplinary research topics and honing your science communication skills. Undergraduates from chemistry, physics, biology, computer science, mathematics (applied and pure), statistics, and engineering. Students without prior research experience, including freshman and sophomore students, are especially encouraged to apply.

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors
Minimum GPA: Not Specified
Citizenship Requirements: US Citizens & Permanent Residents
Deadline: Check Website

School or Organization: Johns Hopkins University

Site Name: REU Site: Program in Nanotechnology for Biology and Bioengineering

Site URL: <http://inbt.jhu.edu/education/undergraduate/nanobio-reu/>

Program Description: The Institute for NanoBioTechnology at Johns Hopkins University offers undergraduate students from colleges and universities around the country a chance to participate in research projects

in the exciting and rapidly growing area of nanobiotechnology, a place where biology, medicine, and nanoscience meet.

Application Opens: 11/10/2018

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors

Minimum GPA: 3.5

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 10, 2019

School or Organization: Johns Hopkins University

Site Name: REU Site: Research Experience for Undergraduates (REU Site for Computational Sensing and Medical Robotics (CS&MR))

Site URL: <https://lcsr.jhu.edu/reu/>

Program Description: The REU program in Computational Sensing and Medical Robotics(CSMR) is an intensive, ten-week program of laboratory research and instruction, beginning at the end of May and concluding in early August. Projects are available in Electrical and Computer Engineering, Mechanical Engineering, Biomedical Engineering and Computer Science. Students are awarded a \$5,000 stipend and are given housing for the summer.

Application Opens:12/1/2018

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 10, 2019

School or Organization: Los Alamos Lab

Site Name: Summer Intern Program

Site URL: <http://www.lanl.gov/careers/career-options/jobs/apply-information.php#students>

Program Description: Our signature facilities are a critical component for maintaining the vitality and leadership of our science, technology, and

engineering capabilities for national security. Through its designated national user facilities, Los Alamos allows its partners and other entities to conduct research at many of its unique facilities.

Levels:

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: Rolling Deadlines, Apply Early

School or Organization: Mayo Clinic

Site Name: Summer Undergraduate Research Fellowship

Site URL: <https://www.mayo.edu/mayo-clinic-graduate-school-of-biomedical-sciences/programs/summer-undergraduate-research-fellowship/application-process>

Program Description: The Summer Undergraduate Research Fellowship (SURF), sponsored by Mayo Clinic Graduate School of Biomedical Sciences, offers a great way to build your skills as a young scientist or test your inclinations toward research.

Levels: sophomores & above

Minimum GPA: 3

Citizenship Requirements: UC Citizens and International Students are also eligible

Deadline: February 1, 2019

School or Organization: MIT Lincoln Labs

Site Name: MIT Summer Research Program and Internships at Lincoln Labs

Site URL: <https://www.ll.mit.edu/careers/summer-research.html>

Program Description: MIT Lincoln Laboratory applies advanced technology to problems critical to national security. Behind the Laboratory's solutions are researchers with excellent technical abilities and imagination working in cross-disciplinary collaborations to develop systems from the initial concept stage, through simulation and analysis, to design and prototyping, and finally to realworld demonstrations. Majors: Electrical engineering, computer science, physics, mathematics, mechanical engineering, aeronautics/astronautics, materials science, molecular biology, biochemistry, and related fields.

Levels: Sophomores and Above

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: Rolling deadlines

School or Organization: Multiple Schools including University of Washington, UCLA, and Johnson Hopkins

Site Name: Rosetta Commons

Site URL: <http://www.rosettacommons.org/intern>

Program Description: One week of Rosetta Code School where you will learn the inner details of the Rosetta C++ code and community coding environment, so you are fully prepared for the summer! Major in computer science, engineering, mathematics, chemistry, biology, and/or biophysics with an interest in graduate school.

Application Opens : November 10, 2018

Levels: sophomores and Juniors

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 1, 2019

School or Organization: NASA

Site Name: NASA Summer 2019 Internships

Site URL: <https://intern.nasa.gov/>

Program Description: NASA Internships are competitive awards to support educational opportunities that provide unique NASA-related research and operational experiences for high school, undergraduate, and graduate students, as well as educators. These opportunities serve students by integrating interns with career professionals emphasizing mentor-directed, degree-related tasks, while contributing to the operation of a NASA facility or the advancement of NASA's missions.

Levels:

Minimum GPA:

Citizenship Requirements:

Deadline: April 1, 2019

School or Organization: National Institute of Health

Site Name: Summer Research Training Program in Biomedical Big Data Science

Site URL: <http://lincs-dcic.org/summer-research-app#nav>

Program Description: The BD2K-LINCS DCIC Summer Research Training Program in Biomedical Big Data Science is a research intensive ten-week training program for undergraduate and graduate students interested in participating in cutting edge research projects aimed at solving data-

intensive biomedical problems. Summer fellows training in the Ma'ayan Laboratory at the Icahn School of Medicine at Mount Sinai in New York City will conduct faculty-mentored independent research projects in the following areas: data harmonization, machine learning, cloud computing and dynamic data visualization.

Levels: Not specified

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 1, 2019

School or Organization: North Carolina State University

Site Name: FREEDM Systems Center

Site URL: <https://www.freedom.ncsu.edu/education/undergraduate/>

Program Description: The Summer REU program offers a research opportunity to undergraduate students who are majoring in electrical and computer engineering, civil engineering, mechanical engineering, materials science engineering, computer science and related fields. The undergraduate student will spend 10 weeks during the summer conducting research at NC State, learning different aspects of university research, and presenting their work at symposia.

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: January 27, 2019

School or Organization: NASA

Site URL

<https://www.nasa.gov/audience/forstudents/stu-intern-current-opps.html>

Program Description: NASA Internships are competitive awards to support educational opportunities that provide unique NASA-related research and operational experiences for high school, undergraduate, and graduate

students, as well as educators. These opportunities serve students by integrating interns with career professionals emphasizing mentor-directed, degree-related tasks, while contributing to the operation of a NASA facility or the advancement of NASA's missions.

Levels: Freshman, Sophomores, Juniors, Seniors

Minimum GPA: 3.0

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: Rolling Deadlines

School or Organization: Pepperdine

Site Name: Summer Undergraduate Research in Biology

Site URL: <https://seaver.pepperdine.edu/surb/>

Program Description: Pepperdine University will host the Summer Undergraduate Research Program in Biology (SURB) developed specifically for students who are interested in pursuing a career in biological research, science education, environmental science, or biotechnology. Pepperdine biology faculty will work closely with selected students in diverse areas of biological research. Successful applicants will be provided a generous stipend, on-campus housing, a unit of biology research credit, funding for travel to Malibu, and a budget for the purchase of research supplies. The program will begin with a 14-day research orientation workshop, May 6 - May 17. During the workshop, students will be introduced to varied research tools and techniques and will partner with a faculty member to develop a project idea for their summer research.

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 16, 2019

School or Organization: Portland State University

Site Name: Computational Modeling Serving the City

Site URL: <http://www.teuscher-lab.com/reucomputing/applications/>

Program Description: The focus area of this REU site is computational modeling to serve and enhance the Portland metropolitan region as it grows and evolves. You will be involved in a cutting-edge, multi-disciplinary research project and trained in computational thinking across different disciplines and communities. You will learn the fundamental skills of computational modeling that will help you understand and solve complex problems in a complex world.

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors

Minimum GPA: March 1, 2019

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: March 1, 2019

School or Organization: Princeton University

Site Name: Princeton Institute for the Science and Technology of Materials (PRISM) and the Princeton Center for Complex Materials (PCCM)

Site URL: <https://pccm.princeton.edu/reu-0>

Program Description: Potential projects span a broad range of topics under the guidance of faculty from the departments of Physics, Chemistry, Molecular Biology, Chemical Engineering, Electrical Engineering, Mechanical and Aerospace Engineering, and Civil and Environmental Engineering. The research topics chosen each year complement the current research of faculty associated with the Princeton Center for Complex Materials.

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: Check Website

School or Organization: Purdue University

Site Name: CISTAR (Center for Innovative and Strategic Transformation of Alkane Resources)

Site URL: <https://cistar.us/education/reu>

Program Description: CISTAR's Research Experience for Undergraduates (REU) held at Purdue University, is an 11-week summer research internship program for undergraduates majoring in chemical engineering, chemistry, materials engineering, ceramic engineering or science, environmental science, or economic analysis.

Application Opens December 1, 2018

Levels: Freshman, Sophomores, Juniors & Seniors

Minimum GPA: 3

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 15, 2019

School or Organization: Purdue University

Site Name: Biomedical Engineering

Site URL: <https://engineering.purdue.edu/BME/> and <https://engineering.purdue.edu/Engr/Research/SURF>

Program Description: Biomedical Engineering, SURF, tissue engineering, biomaterials, imaging, biophotonics, polymers, bionanotechnology, biosensors, neural engineering, orthopaedics, biomechanics, implants, computational biology, systems biology, healthcare systems engineering

Levels: Freshman, Sophomores, Juniors & Seniors

Minimum GPA: 3

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 26, 2019

School Name: Ohio State University

Name of your Program: Summer Research Opportunities Program (SROP)

Description of the program: The Summer Research Opportunities Program (SROP) at Ohio State is designed to help historically underrepresented students explore opportunities for graduate study and academic careers. Over the course of eight weeks during the summer, Ohio State SROP participants will conduct research with a faculty mentor on a topic of mutual interest, and participate in activities crucial to preparation for graduate school, including workshops on research skills, seminars on topics related to graduate education, and professional development events. At the end of the summer program, participants present their research at a campus summary conference and a regional conference.

Site URL: <https://gradsch.osu.edu/research/summer-research-opportunities-program>

Levels: Freshman, Sophomore, Junior, and non-graduating Seniors

Minimum GPA: 3.0

Citizenship Requirements: US Citizen

Application Deadline: February 10, 2019

School or Organization: Purdue University

Site Name: Engineering Education UPRISE Academy

Site URL: <https://engineering.purdue.edu/Engr/Research/SURF>

Program Description: UPRISE provides undergraduates the opportunity to fill integral roles in INSPIRE and the School of Engineering Education's research projects, as well as to be given the necessary training, tools and mentorship to participate in research symposia and publish in journal and conference proceedings, thus rounding out their academic experience. Students also have the opportunity to use research to transform educational experiences for preschool, elementary, middle, high school or college students.

Levels: Freshman, Sophomores, Juniors & Seniors

Minimum GPA: 3

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 26, 2019

School or Organization: Purdue University

Site Name: Industrial Engineering

Site URL: <https://engineering.purdue.edu/Engr/Research/SURF>

Program Description: Industrial Engineering, SURF, machine learning, ergonomics, data analysis, healthcare, human integrated systems

Levels: Freshman, Sophomores, Juniors & Seniors

Minimum GPA:

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 26, 2019

School or Organization: Rutgers University

Site Name: Computational Biology Summer Research Experience at Rutgers

Site URL: <http://ccib.camden.rutgers.edu/reu/>

Program Description: The Computational Biology Summer Program provides meaningful summer research experiences to 10 undergraduate students and combines experimental, theoretical, and computational approaches with a focus on the intersection of the mathematical, computational, and biological sciences. In addition to the research experience, students receive computational biology training, professional skills development, and enrichment sessions geared towards broadening their understanding of the application of and issues surrounding scientific research.

Application opens in November

Levels: Freshman & Sophomores (Veterans are encouraged to apply)

Minimum GPA: 3

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: Check Website

School or Organization: Sandia National Lab

Site Name: Summer Intern Program

Site URL:

http://www.sandia.gov/careers/students_postdocs/internships/index.html

Program Description: Each year, Sandia welcomes students from around the country—from those in their final years of high school to researchers obtaining PhDs—to work in a variety of technical and business positions. Interns work on real-world, challenging projects to contribute to critical national goals. Many of our research internships can be experienced through technical institutes that encompass a range of disciplines, including cyber security, energy surety, engineering design, and software development. Each institute provides a team to guide and mentor interns in

projects aligned with their major or area of particular technical interest. Professional development and social activities supplement project work to create an even more rewarding experience.

Levels: All

Minimum GPA: 3

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: Rolling Deadlines so apply early

School or Organization: Stanford University

Site Name: Amgen Scholars Program

Site URL: <https://biosciences.stanford.edu/current-students/diversity/programs-for-students/ssrp-amgen-scholars-program/>

Program Description: The SSRP-Amgen Scholars Program is a fully-funded research-intensive residential program that takes place on Stanford's beautiful campus for a nine-week period. Participants are matched with a member of Stanford's distinguished faculty and work in one of our state-of-the-art research facilities. Each participant works with both a faculty member and a lab mentor to craft a research project. The lab environment provides challenging projects and involves a broad range of research techniques that are feasible within the nine-week period. The program culminates with a research symposium, where students present individual talks and posters on their summer projects in front of their peers, faculty, lab mentors, University administrators, and general public.

Levels: Sophomores, juniors and non-graduating seniors

Minimum GPA: 3.2

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 1, 2019

School or Organization: Stanford University

Site Name: Stanford Medicine Dean's Office

Site URL: <https://biosciences.stanford.edu/current-students/diversity/programs-for-students/ssrp-amgen-scholars-program/criteria-and-application-requirements/>

Program Description: Fully-funded research-intensive residential program that takes place on Stanford's beautiful campus for a nine-week period. Participants are matched with a member of Stanford's distinguished faculty and work in one of our state-of-the-art research facilities. Each participant works with both a faculty member and a lab mentor to craft a research project. The lab environment provides challenging projects and involves a broad range of research techniques that are feasible within the nine-week period. The program culminates with a research symposium, where students present individual talks and posters on their summer projects in front of their peers, faculty, lab mentors, University administrators, and general public.

Levels: Sophomores, juniors and non-graduating seniors

Minimum GPA: 3.2

Citizenship Requirements: DACA Eligible students or US Citizens and Permanent Residents

Deadline: February 1, 2019

School or Organization: Stanford University

Site Name: REU Site: Re-inventing the Nation's Urban Water Infrastructure (ReNUWIt)

Site URL: <http://www.renuwit.org/research-experience-undergraduates-reu-program>

Program Description: ReNUWIt's Research Experience for Undergraduates (REU) Program engages undergraduate students in ReNUWIt faculty's research labs, under the mentorship of ReNUWIt post-docs and graduate students. Participants learn laboratory/field techniques, are immersed in

ReNUWIt's collaborative and interdisciplinary culture, and conduct meaningful research in state-of-the-art facilities. REU participants also interact directly with ReNUWIt faculty and peers, receive professional development training, and experience ReNUWIt's systems-level approach to addressing the nation's water issues.

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors

Minimum GPA: Not specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 10, 2019

School Name: Texas A&M University

Name of your Program: Undergraduate Summer Research Grant (USRG) Program at the College of Engineering

Description of the program: The USRG program at Texas A&M University provides an exciting and unique opportunity for undergraduate students to immerse themselves in research under the guidance of College of Engineering faculty, postdoctoral fellows and advanced graduate students.

Site URL: <https://engineering.tamu.edu/admissions-and-aid/undergraduate-summer-research-grants/index.html>

Levels: (freshman, sophomore, etc): Incoming sophomores through seniors. Anyone who has completed their Freshman year.

Minimum GPA: 3.0

Citizenship Requirements: US Citizens & Permanent Residents

Application Deadline: Feb. 21st. Application cycle opens on November 1st, and applications are reviewed beginning the first week of December.

School or Organization: Weill Cornell Medicine Medical College
Site Name: Travelers Summer Research Fellowship Program

Site URL: <https://medicaleducation.weill.cornell.edu/medical-education/premedical-programs/travelers-summer-research-fellowship-program>

Program Description: The Travelers Summer Research Fellowship Program is designed to give 25 premedical students deeper insights into the field of medicine, including issues that greatly affect the health of traditionally underserved groups. Through the experiences of laboratory or clinical research, the student learns how one pursues a specific research problem under the supervision of a faculty member, thus providing an early education into basic research techniques that could be applicable to any area of medicine. A lecture series explores topics in cardiovascular physiology, exposing the students to basic science concepts that are relevant to a more specific understanding of hypertension and cardiovascular disease, both of which are major problems in minority communities. The summer fellows attend a series of talks by minority physicians about various medical specialties, addressing issues of concern in these physician's daily work plus views of the bigger picture in health

care to minority communities. Shadowing physicians provide further exposure to the clinical facets of medicine. Students in the summer program receive information on the medical school admissions process, and counseling on financial planning for medical school and how to examine the financial aid package.

Levels: Juniors and above

Minimum GPA: Not specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 1, 2019

School or Organization: University of California at Irvine

Site Name: Cultivating the IoT-enabled Smart Community (IoT-SITY)

Site URL: <http://sites.uci.edu/iotsity>

Program Description: Description: IoT-SITY REU Site will annually host 9-10 students from across the nation to conduct research during the summer with faculty mentors on topics related to IoT for Smart Communities. Participants will investigate exciting applications and explore ways in which we can reliably and safely apply and deploy IoT systems to develop the Smart and Connected Communities of the future

Levels:

Minimum GPA: 3

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 1, 2019

School or Organization: University of Arkansas

Site Name: From Benchtop to Market: Engineering Systems for High Efficiency Separations

Site URL: <https://chemical-engineering.uark.edu/reu/>

Program Description: The Separations & Commercialization REU program will offer research experiences in laboratories that are working towards the goals of improving separation efficiency and reducing separation processing costs to a diverse group of undergraduate students. Participants will interact with faculty and graduate students to plan and execute a 10-week research project. A unique component of this REU program is the commercialization assessment training (CAT) series that will prepare them to think about the potential commercialization of traditional hypothesis-driven research early in the process. Participants will have the opportunity to interact with industry leaders in the separation field through the CAT series, industrial mentorships, as well as industrial site visits locally and in Dallas.

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: March 1, 2019

School or Organization: University of California at Berkeley

Site Name: SUPERB REU

Site URL: <https://eecs.berkeley.edu/resources/undergrads/research/superb>

Program Description: The goal of the SUPERB Computer and Information Science and Engineering (CISE) program in EECS is to prepare and motivate a group of diverse, competitive candidates for graduate study. Our research focus is collecting and using Big Data for the public good.

Levels: Sophomores & above

Minimum GPA: 3

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: January 31, 2018

School or Organization: University of California at Berkeley
Site Name: Transfer to Excellence Program

Site URL: <https://e3s-center.berkeley.edu/education-diversity/education/undergraduate/tte-transfer-excellence-summer-research-program/>

Program Description: Transfer-to-Excellence Research Experiences for Undergraduates (TTE REU), a competitive merit-based program, seeks to inspire California community college students through research at UC Berkeley so that they will ultimately transfer and complete their Bachelor's degree in science and engineering. The TTE REU program is a residential program providing nine-weeks of hands-on research experiences in the laboratories of UC Berkeley professors.

Levels: Community College students (please see criteria)

Minimum GPA: 3

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 1, 2009

School or Organization: University of California at Berkeley, Stanford, MIT, Florida International, & University of Texas El Paso
Site Name: Center for Energy Efficient Electronics Science

Site URL: <https://e3s-center.berkeley.edu/education-diversity/education/undergraduate/reu-summer-research-experience-undergraduates/>

Program Description: The E3S Research Experiences for Undergraduates (E3S REU) program provides residential research internships in the laboratories of E3S faculty. Participants of this competitive merit-based program undertake cutting edge electrical engineering, material science, physics and chemistry research projects. They also have access to enrichment activities including seminars, field trips, as well as advising on

graduate school programs, the application process for fellowships, and a subsidized GRE prep course. The Fall after the completion of the E3S summer internship, participants are expected to continue their Bachelor of Science or Engineering studies and eventually apply for graduate school

Application Opens Late October

Levels: sophomores, juniors, and non-graduating seniors

Minimum GPA: 3.5

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: Check Website

School or Organization: University of California at San Diego

Site Name: Designing for Safety & Safety by Design

Site URL: <https://armor.eng.ucsd.edu/apply/reu>

Program Description: The overarching goal of this NSF REU Site is to immerse students in a meaningful and highly interdisciplinary research environment within the structural engineering domain and to teach them that design does not end with construction. Instead, designing for safety embodies: quantifying potential load conditions, damage mechanics, and uncertainties; monitoring for anomalies during operations; processing this information through cyber-modeling via digital surrogates; and translating the information to actionable knowledge for improving current and future system designs. This REU Site will recruit and train 12 diverse U.S. scholars for eight weeks each summer, recruited from across the nation with emphasis on broadening the participation of underrepresented minority, women, and economically-disadvantaged students, to conduct research alongside six professors and their graduate students

Levels: freshman, sophomores, juniors, and non-graduating seniors

Minimum GPA: 3.3

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: March 1, 2019

School or Organization: Various including the University of Minnesota, the University of California–Berkeley, Northwestern University, Cornell University, the University of Chicago, Washington University in St. Louis, and the University of South Dakota.

Site Name: CSP SUMMER UNDERGRADUATE RESEARCH PROGRAM

Site URL: <https://csp.umn.edu/summer-undergraduate-research-program/>

Program Description:

Levels: Note specifically stated.

This program is open to undergraduate students in science and engineering majors, preferably chemistry, chemical engineering, or materials science. Underrepresented and multicultural students are strongly encouraged to apply (e.g. female, genderqueer, transgender, Black or African American, Hispanic or Latinx, Native American or Alaskan Native, Native Hawaiian or other Pacific Islander, bisexual, gay, lesbian, queer, disability, or veteran of the US Armed Forces, Reserves, or National Guard).

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 1, 2019

School or Organization: University of California at San Diego

Site Name: Summer Training Academy for Research Success (STARS)

Site URL: <http://grad.ucsd.edu/diversity/programs/stars/index.html>

Program Description: The University of California, San Diego Summer Training Academy for Research Success (STARS) program is an eight week summer research academy for community college students, undergraduate students, recent college graduates, and masters students. STARS offers student participants a rigorous research opportunity with esteemed UC San Diego faculty, informative transfer and graduate school

preparation workshops, and educational, cultural, and social activities in sunny San Diego.

Application Opens: November 10, 2018

Levels: Freshman, Sophomore, Junior, and non-graduating seniors

Minimum GPA: Not Specified

Citizenship Requirements: AB 540 or DACA students are eligible or US Citizens or Permanent Residents.

Deadline: March 1, 2019

School or Organization: University of Connecticut

Site Name: Nano-Research Experience for Undergraduates

Site URL: <http://nano-reu.engr.uconn.edu/>

Program Description: The objectives of our REU Site are to increase the quantity and quality of scientists and engineers prepared to address grand challenges through ethical use of nanoscience; increase the number of students from underrepresented populations including minorities, women, and veterans who pursue graduate education and academic research in nanotechnology-related engineering fields; and to build alliances with minority-serving institutions and programs to enable a sustainable pipeline of underrepresented students who will become leaders in nanotechnology-related engineering fields.

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: March 1, 2019

School or Organization: University of Illinois Urbana Champaign

Site Name: Research Experience for Undergraduates

Site URL: <http://reu.bioengineering.illinois.edu/>

Program Description: Train and perform research at the forefront of biomedicine using advanced imaging and microscopy technologies at Discoveries in Bioimaging, a 10-week, NSF-funded summer research experience for undergraduate students.

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors

Minimum GPA: 3

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 1, 2019

School or Organization: University of Maryland College Park

Site Name: Bioinspired Robotics Research Experiences for Undergraduates

Site URL: <http://robotics.umd.edu/REU>

Program Description: The Maryland Robotics Center, with support from the National Science Foundation, is offering exciting research opportunities for undergraduate students in the area of bioinspired robotics. Bioinspired robots—defined as robots that are inspired by natural systems such as insects, birds, mammals, and reptiles—have the potential to significantly enable or enhance capabilities in manufacturing, health care, reconnaissance, exploration, food safety, and search and rescue. Because of their unique design, bioinspired robotics offer a truly interdisciplinary systems research challenge that encompasses biology, materials,

mechanical design, control, sensors and actuators, power, electronics, and computer science among other topics.

Application Opens in November

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 14, 2019

School or Organization: University of Maryland College Park

Site Name: Summer Engineering Research Experiences in Transportation Electrification

Site URL: <http://www.eng.umd.edu/html/survey/reu-engr>

Program Description: The University of Maryland's Department of Electrical & Computer Engineering, with support from the National Science Foundation is offering exciting research opportunities for undergraduate students in the broad area of electrical engineering. The Transportation Electrification program combines cutting-edge, team-based research with technical and educational seminars. Students are supervised jointly by faculty members and graduate students

Application Opens in November

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: Check website

School or Organization: University of Missouri

Site Name: Creative Approaches to Materials Design and Processing

Site URL: <https://undergradresearch.missouri.edu/summer/>

Program Description: Innovation in materials design and processing requires not only a fundamental understanding of the interrelationships

among structure, composition, processing, and properties, but also creative thinking and approaches. Creativity training is a necessary and fundamental component to building innovative capabilities in scientists and engineers, but is rarely part of traditional curricula. Building on MU Bioengineering's established "creativity in engineering" undergraduate program, the REU Site will fill a critical gap in workforce development in materials design and manufacture, and address a national need for researchers who can solve complex, interconnected problems. Summer research projects will focus on understanding and predicting such relationships for micro- and nano-structured materials across a wide spectrum of applications, including sensors, batteries, reactors, and implantable devices. Student will learn a variety of approaches, including atomistic simulation, coarse-grain modeling, and materials design / fabrication / characterization techniques, in addition to proven, theatre-based approaches that will increase creativity and boost innovation. Projects will provide students with unique, marketable skills in computational modeling, materials science design, processing, characterization, and creative thinking.

Levels: Freshman, Sophomores, Juniors

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 15, 2019

School or Organization: University of Missouri-Columbia

Site Name: NSF REU Site in Consumer Networking Technologies

Site URL: <http://reu.rnet.missouri.edu>

Program Description: NSF REU Site in Consumer Networking Technologies

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors

Minimum GPA: 3

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: Jan 31, 2019 (Early Deadline); Mar 25, 2019 (Regular Deadline)

School or Organization: University of Missouri-Columbia

Site Name: Summer Research Projects for Undergraduates in Neuroscience

Site URL: <https://engineering.missouri.edu/academics/eecs/neuro/neuro-research/neuro-nsf-reu/>

Program Description: A 10-week summer research experience. An opportunity to assist graduate students with important research led by leading faculty with a wide range of expertise spanning four different colleges. This REU will have a computational component. Students will receive a 1 hr credit for a course in "Computational Neuroscience" (meets one hour a week).

Levels: Freshman, Sophomores, Juniors

Minimum GPA: 3.0 (but flexible)

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: January 15, 2019

School or Organization: University of Notre Dame

Site Name: University of Notre Dame REU

Site URL: <https://www3.nd.edu/~biosreu/apply.html>

Program Description: The Department of Biological Sciences at the University of Notre Dame is sponsoring a NSF Research Experience for Undergraduates (REU) program during the summer of 2019. The focal point of the proposed projects is Integrative Cell and Molecular Biol

Levels: Freshman, Sophomores, Juniors, and Non-graduating seniors

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: Check website

School or Organization: University of Oregon

Site Name: : Summer Program for Undergraduate Research (SPUR)

Site URL: http://spur.uoregon.edu/pgm_description.shtml

Program Description: The University of Oregon (UO) Summer Program for Undergraduate Research (SPUR) provides fellowship opportunities for undergraduate students from other Universities and Colleges to participate in ongoing research in Life Sciences laboratories at UO during the Summer months. Each project is a rigorous and rich immersion in a mentored, high profile science research project with a lab mentor under the direction of a research profession

Application Opens December 1, 2019

Levels: sophomores & above

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens, Permanent Residents, & International Students

Deadline: Check website

School or Organization: University of Pittsburg

Site Name: ASPIRE Program

Site URL: <http://www.herl.pitt.edu/education/undergrad/aspire>

Program Description: The mission of HERL is to continuously improve the mobility and function of people with disabilities through advanced engineering in clinical research and medical rehabilitation. The ASPIRE REU program is designed to promote greater involvement and understanding of Rehabilitation Engineering and assistive technology – while fostering an understanding of the problems faced by individuals with disabilities. This results in a greater ability to apply engineering principles to improve the quality of life, which promotes a higher degree of inclusiveness and greater functionality for people with disabilities.

Levels: Freshman, Sophomores, Juniors, and Non-graduating seniors
Minimum GPA: Not Specified
Citizenship Requirements: US Citizens & Permanent Residents
Deadline: Check website

School or Organization: University of Pittsburgh
Site Name: iSchool Inclusion Institute (i3)

Site URL: <https://www.sis.pitt.edu/i3/admissions/admissions.html>

Program Description: The i3 admissions process is competitive, however, students are evaluated for qualities beyond GPA. We seek students who have shown academic promise, including those who have demonstrated improvement over their college careers. Students from all majors and disciplines are encouraged to apply. The information sciences are interdisciplinary and connect with many other fields of study. Past i3 Scholars have majored in information science, computer science, psychology, sociology, public policy, communication, business, economics, public health, history, English, and engineering, among others

Levels: Freshman, Sophomores, Juniors, and Non-graduating seniors
Minimum GPA: Not Specified
Citizenship Requirements: US Citizens & Permanent Residents
Deadline: Check website

School or Organization: University of San Francisco
Site Name: Summer Research Program

Site URL: <https://graduate.ucsf.edu/srtp>

Program Description: Students selected for summer research at UC San Francisco spend up to ten weeks working with UCSF faculty members on research projects. Participants in the program take part in seminars, lectures, and social events, creating a cohesive and supportive community.

At the end of the program, students give presentations of their research and get valuable feedback from students, postdocs, and faculty at UCSF.

Application Opens: 11/1/2018

Levels: sophomores & above

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: Check website

School or Organization: University of Southern California

Site Name: Robotics & Autonomous Systems REU

Site URL: <https://www.cs.usc.edu/reu/>

Program Description: The Department of Computer Science at University of Southern California offers a 10-week summer research program for undergraduates in Robotics and Autonomous Systems. USC has a large and well established robotics research program that ranges from theoretical to experimental and systems-oriented. USC is a leader in the societally relevant area of robotics for healthcare and at-risk populations (children, the elderly, veterans, etc.); networked robotics for scientific discovery, covering for example environmental monitoring, target tracking, and formation control; using underwater, ground, and aerial robots; and control, machine learning, and perceptual algorithms for grasping, manipulation, and locomotion of humanoid robots

Application Opens November 15, 2018

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: January 18, 2019

School or Organization: University of Washington

Site Name: REU Site: Sensorimotor Neural Engineering

Site URL: <http://www.csne-erc.org/content/research-experience-undergraduates>

Program Description: The CSNE at the University of Washington sponsors a 10-week Research Experience for Undergraduates (REU) on the Seattle campus during the summer. This program provides undergraduate students with opportunities to work on research projects with scientists and to take part in workshop training sessions in ethics, communications, and scientific presentation skills designed to provide the undergraduate scientist with a solid foundation for graduate study. Undergraduates will help with research in one of labs at the UW.

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: January 15, 2019

School or Organization: University of Washington

Site Name: REU Site: Sensorimotor Neural Engineering

Site URL: <http://www.csne-erc.org/content/veterans>

Program Description: The 2019 Research Experience for Veterans (REV) program will start on June 18, 2019 (Tuesday) and end on August 23, 2019 (Friday). Participants in the REV program will work in research laboratories at the interface of biology and engineering. For 10 weeks, participants work in a laboratory and are mentored by a graduate student, a post-doctoral trainee, and a professor. Participants work with teams on projects with defined goals and also attend lectures and seminars on relevant topics. REV participants also take part in a poster session and a research symposium at the end of the summer.

Levels: All Levels but must be US Veteran

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: January 15, 2019

School or Organization: Various including Howard, UCLA, University of Washington

Site Name: Summer Health Professions Education Program

Site URL: <http://www.shpep.org/apply-to-shpep/>

Program Description: Summer Health Professions Education Program

Application Opens: 12/1/2018

Levels: Freshman and sophomores

Minimum GPA: 2.5

Citizenship Requirements: an individual granted deferred action for childhood arrivals (DACA) status by the U.S. Citizenship and Immigration Services OR a U.S. citizen, a permanent resident.

Deadline: February 15, 2019

School or Organization: Various Sites

Site Name: CCHF Chemistry Summer Undergraduate Research Program

Site URL: <http://nsf-cCHF.com/CSURP/index.php/eligibility-and-selection/>

Program Description: CSURP is a program for undergraduate students, majoring in chemistry or chemical engineering, interested in conducting supervised summer research. The program is supported by the Center for Selective C-H Functionalization (CCHF), which is a network of 23 academic and industrial research laboratories at 15 partner institutions throughout the country. The CCHF is one of eight National Science Foundation (NSF) funded Centers for Chemical Innovation CSURP is a program for undergraduate students who are majoring in chemistry or chemical engineering and are interested in conducting supervised summer research. The program is supported by the NSF-funded Center for Selective C-H Functionalization (CCHF),

Levels: all Levels. No previous research experience is required but students should express an interest in the field of C–H Functionalization.

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens, Permanent Residents, & International Students

Deadline: February 8, 2019

School or Organization: Various including University of Pennsylvania & Washington University in St. Louis

Site URL: <https://cemb.upenn.edu/diversity/reu/>

Program Description: CEMB seeks motivated undergraduate students for its Research Experiences for Undergraduates (REU) program for summer 2018. Students participate in 10-week, on-campus programs in Philadelphia or St. Louis, working in research groups at the University of Pennsylvania and Washington University in St. Louis. Students are matched to projects within a research group based upon their interests, educational background, and previous research experience

Levels:

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: Check website

School or Organization: Various

Site Name: Leadership Alliance Summer Research-Early Identification Program (SR-EIP)

Site URL: <http://www.theleadershipalliance.org/programs/summer-research/apply/application-instructions>

Program Description: SR-EIP is a fully paid summer internship that provides undergraduates with training and mentoring in the principles underlying the conduct of research and prepares them to pursue competitive applications to PhD or MD-PhD programs

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors

Minimum GPA: 3

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: Rolling Deadlines

School or Organization: Wake Forest

Site Name: Summer Scholars Program

Site URL: <https://school.wakehealth.edu/Research/Institutes-and-Centers/Wake-Forest-Institute-for-Regenerative-Medicine/Education-and-Training/Summer-Scholars-Program>

Program Description: Through its Summer Scholars Program, the Wake Forest Institute for Regenerative Medicine (WFIRM) offers undergraduate students an opportunity to engage in exciting, multidisciplinary research firsthand at the interface of engineering and biology in challenging areas of tissue engineering and regenerative medicine (TERM). Summer scholars receive a \$5,000 stipend for their participation in the 10-week program.

Application Opens November 30, 2018

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors

Minimum GPA: 2.85

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: January 4, 2019

School or Organization: Washington State University

Site Name: Research Experience for Undergraduates

Site URL: <http://reu.eecs.wsu.edu/apply.html>

Program Description: This REU program is hosted by the School of Electrical Engineering and Computer Science at Washington State University. WSU is located in Pullman, Washington, a small town in the Palouse region of Eastern Washington. The program consists of 10 weeks working with top research professors and graduate students at WSU. REU students will perform hands-on research on topics related to smart environments including artificial intelligence, machine learning, data mining, high-performance computing, pervasive computing, networking, distributed systems, health, medicine, psychology, gerontechnology, and energy sustainability. Students will present their research results in a poster session at the end of the program. Travel support is available for students who submit their work to a research-related conference.

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: March 1, 2019

School or Organization: Washington State University

Site Name: Engineering Tools for Disease Diagnosis and Treatment

Site URL: <https://voiland.wsu.edu/reu/>

Program Description: This new summer research experience for undergraduates (REU) site will train undergraduate scholars to develop or utilize engineering tools to diagnose and/or treat diseases

Levels:

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 15, 2019

School or Organization: Worcester Polytechnic Institute

Site Name: Research Experience for Undergraduates

Site URL: https://www.wpi.edu/academics/departments/biomedical-engineering/resources/undergraduate-research-opportunities?utm_source=redirector&utm_medium=bmereu&utm_campaign=short_url

Program Description: The National Science Foundation and WPI collaborate to bring bioengineering, research, education, and outreach experiences for women and underrepresented minorities to 10 undergraduates who attend WPI or other universities (U.S. citizens and permanent residents). This is an opportunity for participants to be engaged in research in the exciting and rapidly developing bioengineering field from May 27th - August 2nd, 2019.

Levels: Freshman, Sophomores, Juniors, and Non-graduating Seniors

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 1, 2019

School or Organization: Yale

Site Name: Sacklet Interdisciplinary Research Training Across Biology, Physics, and Engineering

Site URL: <https://sackler.yale.edu/sackler-nsf-reu-site>

Program Description: This program enables undergraduates interested in pursuing a career in the sciences to conduct interdisciplinary research at Yale for a 10-week period during the summer. Our program focuses on

research at the intersection of biology, physics, and engineering and serves as a glimpse of what graduate school at a large research institutions is like

Levels: Freshman, Sophomores, Juniors & Non-graduating Seniors

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 3, 2019

School or Organization: Various including University of Colorado at Boulder, the University of California at Los Angeles, the University of California at Berkeley, Fort Lewis College, Florida International University, and the University of California at Irvine.

Site Name:

STROBE Research Experience for Undergraduates in Imaging Sciences

Site URL: <http://strobe.colorado.edu/education/SURS>

Program Description: Spend a summer learning about cutting-edge imaging science at one of the newest NSF Science and Technology Centers in the United States. Your efforts will help push the limits of real-time functional imaging by advancing and combining different imaging modalities including visible microscopy, X-ray, nano-probe, and electron microscopy.

Levels: Not Specified

Minimum GPA: Not Specified

Citizenship Requirements: US citizen and non-citizen undergraduates.

Deadline: February 8, 2019

School or Organization:

Site Name: Fred Hutchinson Cancer Research Center

Site URL: <http://www.fredhutch.org/en/education-training/undergraduate-students.html>

Program Description: The Fred Hutch Summer Undergraduate Research Program [SURP] is an intensive, nine-week internship designed to provide research experience and mentorship for undergraduate students who are interested in biomedical research. Under the guidance of a faculty mentor, students will complete an independent research project and present their findings at a competitive poster session.

Students will be paired with a faculty mentor after selecting one of the following areas of interest: Basic Science, Human Biology, Public Health, Clinical Research, Vaccine and Infectious Diseases

Levels: Juniors and non-graduating seniors

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens

Deadline: January 11, 2019

School or Organization: Northeastern University

Site Name:

Site URL: <https://cos.northeastern.edu/biology/academics/undergraduate/reu-site/reu-apply/>

Program Description: This REU site program in the Department of Biology at Northeastern University, located in Boston, MA, will support the training of 10 students for 10 weeks from June to August 2019.

The focus of the REU site is interdisciplinary research across biological levels. Pairs of participating students will work in interdisciplinary research teams and explore related research questions from different perspectives. Example

projects include microbial biofilm assembly and DNA damage response, behavioral and molecular aspects of immunity, and mitochondrial DNA inheritance in developing oocytes. Students will participate in joint workshops on ethics and responsible conduct of research, proposal writing, presentation of talks and posters, applying to graduate school, and career opportunities in science. At the end of the program, students will present their research in a summer research symposium.

Levels: Sophomores, Juniors, and non-graduating Seniors. Students majoring in biology, biochemistry, or other related disciplines.

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 15, 2019

School or Organization: Northeastern University

Site Name: Research Experiences for Undergraduates (REU) in the Department of Chemistry and Chemical Biology at Northeastern University

Site URL: <https://cos.northeastern.edu/chemistry/academics/undergraduate/reu-site/reu-apply/>

Program Description: This NSF-REU program offers interdisciplinary research opportunities in Biochemistry, Organic, Physical, Computational, and Analytical Chemistry laboratories with an overarching focus on the theme of Catalysis. Students will do research in a nurturing and vibrant academic setting and spend a summer enjoying all what the city of Boston has to offer.

Students will be paired with a Northeastern Chemistry faculty mentor and a graduate student mentor based on their stated research interests. These mentors will guide the student as they immerse themselves in full-time laboratory research over 10 weeks. Participants will attend research seminars presented by program faculty and invited speakers; academic and professional skills development workshops and panel discussions on topics such as research ethics, literature searching, graduate school; social activities and events with other members of the chemistry department or with students from other summer research programs at Northeastern; and field trips to pharmaceutical & biotech companies, or other research institutes in the Boston area. The REU program will conclude with a research symposium where students will orally present their research findings to the wider chemistry community.

Levels: Freshman, Sophomores, Juniors

Minimum GPA: Not specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: March 11, 2019

School or Organization: Various including Rice University, Arizona State University, and Stanford

Site Name: BioXFEL Summer Undergraduate Research Experience (BESURE)

Site URL: <https://www.bioxfel.org/education/undergraduate-internships>

Program Description: BioXFEL is a National Science Foundation Science and Technology Center (STC) that focuses on promoting and advancing the study of Biological molecules using X-ray Free Electron Lasers (XFELs). A summer internship is the best way to get started in this new and exciting field. BioXFEL offers Summer Research Internships to highly qualified undergraduate and post-graduate students with backgrounds in physics, chemistry, biochemistry, mathematics, computer science and all related fields. All applicants should be interested in pursuing a career in research and MUST be US citizens or US Nationals. Women and minorities underrepresented in STEM fields are strongly encouraged to apply.

Levels: Freshman, Sophomores, Juniors, and Seniors.

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 8, 2019

School or Organization: Texas A&M

Site Name: Texas A&M Mechanical Engineering REU

Site URL: <https://reu.engr.tamu.edu/>

Program Description: Insufficient energy research and the shortage of U.S. citizens pursuing advanced degrees in engineering and science are both topics of supreme importance in modern times, and with this Research Experiences for Undergraduates (REU) site we are targeting both problems through a collaborative effort between various laboratories at Texas A&M University. Approximately ten undergraduate students from colleges and universities throughout the United States will reside at the Texas A&M campus for 10 weeks during the summer months, working alongside professors and graduate students conducting research on a broad range of topics related to energy and combustion science.

Levels: Freshman, Sophomore, Juniors, and non-graduating Seniors from Non-Tier One Schools.

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: May 1, 2019

School or Organization: Scripps Institution of Oceanography (SIO)

Site Name: The Marine Physical Laboratory (MPL)

Site URL: <https://scripps.ucsd.edu/mpl/mpl-summer-internship-program>

Program Description: The Marine Physical Laboratory (MPL) at world renowned Scripps Institution of Oceanography (SIO) seeks inquisitive motivated undergraduates with exceptional aptitude for quantitative science, majoring in engineering, physics, chemistry, biology or geology. Undergraduate college students contemplating a career in scientific research and development are encouraged to apply for a summer research internship in marine science and technology. This ten- week summer internship program offers qualified students the opportunity to work with some of the most notable scientists in the world while earning a modest salary. In addition to their research, students will attend weekly seminars given by members of our faculty and scientific staff

Levels: Freshman, Sophomore, and Juniors

Minimum GPA: not specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: January 18, 2019

School or Organization: Various including Georgia Institute of Technology (GT), University of Georgia (UGA), University of Puerto Rico at Mayagüez (UPRM), and University of Wisconsin-Madison (UW)

Site Name: NSF Engineering Research Center for Cell Manufacturing Technologies (CMaT)

Site URL: <http://cellmanufacturingusa.org/paid-summer-undergraduate-student-research-opportunities>

Program Description: Every summer, CMaT provides its **Research**

Experience for Undergraduates (REU) program. The REU summer program funds 10-15 undergraduate students to work in CMat labs at Georgia Tech (GT), University of Georgia (UGA), University of Puerto Rico at Mayagüez (UPRM), and University of Wisconsin-Madison (UW).

Levels: Not Specified

Minimum GPA: Not Specified

Citizenship Requirements: US Citizens & Permanent Residents

Deadline: February 15, 2019

School or Organization: Columbus State University

Site Name: NSF CISE REU Site in Security for Mobile Sensing

Site URL: <http://www.reucusu.org/>

Program Description: The [TSYS School of Computer Science](#) at Columbus State University is pleased to announce the development of a NSF CISE REU Site in Security for Mobile Sensing. In our program, students will participate in an 8-week research experience at Columbus State University in researching problems and issues related to security, privacy, authentication, data integrity, and malware for Mobile Sensing Environments.

Levels: sophomores, juniors, and non-graduating seniors

Minimum GPA: Not specified

Citizenship Requirements: US citizens or permanent residents

Deadline: February 22, 2019

School or Organization:

Site Name:

Site URL:

Program Description:

Levels:

Minimum GPA:

Citizenship Requirements:
Deadline:

School or Organization:
Site Name:

Site URL:

Program Description:
Levels:
Minimum GPA:
Citizenship Requirements:
Deadline: