Research and Internship Experiences for Biomedical Engineering Students Details and Deadlines 2012

The American Physiological Society - Undergraduate Summer Research Fellowship
The program will fund up to 24 fellowships during the summer. These fellowships are to support full-time undergraduate students to work in the laboratory of an established investigator. The intent of this program is to encourage students to pursue a career as a basic research scientist.
http://www.the-aps.org/education/ugsrf/
Deadline: February 1, 2012

Battelle Memorial Institute
Battelle serves industry and government in developing new technologies and products. They insert technology into systems and processes for manufacturers; pharmaceutical and agrochemical industries; trade associations; and government agencies supporting energy, the environment, health, national security, and transportation.
Deadline: Depends on internship of choice

Case Western Reserve University
The Department of Biomedical Engineering at Case Western Reserve University is pleased to announce the 2012 summer program in Biomedical Engineering research for undergraduates, funded by the National Science Foundation. Project areas in biomaterials, tissue engineering, drug delivery, imaging, and neural engineering
http://bme.case.edu/reu/
Deadline: February 1, 2012

Cleveland Clinic Foundation
Undergraduate Engineering in Medical Research, sponsored by the National Science Foundation and the Cleveland Clinic Foundation. Research opportunities include five to six month on-site cooperative engineering positions in an international research group in order to develop research skills, leadership and collaboration skills, and technical knowledge.
http://lerner.ccf.org/bme/education/
Deadline: Applications will be continuously reviewed and offers will be extended four times per year

Engineering World Health Organization
The Summer Institute is an opportunity for engineering students to gain hands on repair and design experience while simultaneously helping disadvantaged hospitals and patients in a developing nation. Open to students of engineering, physics and chemistry, the Summer Institute begins with a one-month stay in Costa Rica or Tanzania in which students live with a host family. Mornings are spent learning Spanish or Swahili, while in the afternoons students receive three hours of technical training in the operation and repair of medical equipment. Day trips to the country's breathtaking natural features punctuate the experience and give volunteers a time to bond. After the one-month training, each student travels to his or her target hospital. Students work repairing and installing badly needed equipment. Whether they're working on an infusion pump that helps treat a tiny infant, or an ECG that will aid in diagnosing someone's grandfather, each
student-engineer makes a difference in patients lives.
http://ewh.org/index.php/programs/institutes/duke
Deadline: January 28th, 2012

Harbor Branch Oceanographic Institute
The areas of study include: aquaculture, biomedical marine research, marine biology, marine mammal research, marine natural product chemistry, marine microbiology, ocean engineering, and oceanography.
http://www.fau.edu/hboi/education/internships/index.php
Deadline: Not yet updated for 2012

Harvard University
We are pleased to announce summer research opportunities for K-12 teachers and undergraduates through our NSF REU/RET Site Materials for Bioengineering Research Internships Dedicated to Gateway Experiences (BRIDGE). Our program provides undergraduates with hands-on experiences in research at the interface of biology and materials science and engineering, along with a program that includes faculty seminars, professional development workshops, and community activities. We are seeking undergraduates from chemistry, physics, biology, applied math, and engineering. Students without prior research experience, including freshman and sophomore students, are especially encouraged to apply.
http://reusite.seas.harvard.edu
Deadline: February 28, 2012

Illinois Institute of Technology
The Research Experience for Undergraduates (REU) program at the Illinois Institute for Technology is a 10 week program for undergraduate students from around the country who have completed at least their 2nd year in a science or engineering field. The program is sponsored by the Biomedical Engineering Program at IIT and The Engineering Center for Diabetes Research and Education (ECDRE). Each student chooses a project relating to diabetes and will be guided by an engineering mentor at IIT. The objectives of the program are to train undergraduates in basic research through challenging diabetes-related engineering projects performed with research mentors from IIT, expose them to the broader health implications of their research with lectures from clinical experts and tours of clinical facilities and integrate ethics discussion and training into all aspects of the student experience.
http://www.iitdiabetes.org/reu
Deadline: Not yet updated for 2012

Iowa State University
The Department of Chemical and Biological Engineering at Iowa State University hosts a summer research experience for undergraduate students. The program will create novel research experiences for undergraduate students in the areas of biological materials and processes (BioMaP). The students will be active members of interdisciplinary groups and will interact with faculty, postdocs, graduate students, and industry. The students will participate in cohort experiences such as short courses, joint seminars/meetings, workshops, tours of research facilities, and field trips. A unique component of the program is a partnership with the Department of Chemical Engineering at the Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM), Mexico. As part of this international component, some students will participate in research projects at ITESM.
http://www.eng.iastate.edu/biomapreu/program.asp
Deadline: Not yet updated for 2012

Johns Hopkins University
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 nanotech meet.
http://inbt.jhu.edu/reu-nanobio.php
Deadline: February 12, 2012

Keck Graduate Institute
The REU program for undergraduate research in biotechnology and bioengineering at Keck Graduate Institute provides undergraduate students the opportunity for cutting-edge, interdisciplinary research in the areas of bioengineering, computational biology, and applied molecular and cellular biology, as well as exposure to related ethics and business topics.
http://www.kgi.edu/x1748.xml
Deadline: Not yet updated for 2012

Lehigh University
Undergraduate physics and engineering majors currently in their sophomore or junior year are invited to apply to the Lehigh University Summer Undergraduate Research Participation Program in Physics. This year the Department of Physics at Lehigh University has again been selected by the National Science Foundation as a "Research Experiences for Undergraduates" (REU) site. In addition, a number of Sherman Fairchild Scholarships for research in solid state studies and electrical engineering are also available. The Lehigh REU program is intended for students who plan to pursue graduate study in physics or related fields. Participants will receive $475 per week for a 10 week program in one of a variety of current research areas at Lehigh. The work will be supervised by Lehigh faculty and will begin around June 1, 2010. Free housing is also available to participants.
http://www.lehigh.edu/~inreu/reu/index.html
Deadline: March 7, 2012

The Lerner Research Institute
The Cleveland Clinic's REU Program is located in the Department of Biomedical Engineering, a component of the Lerner Research Institute, which is one of the major divisions of the Cleveland Clinic. The Cleveland Clinic provides a somewhat different experience than that offered through the usual National Science Foundation REU Site, in that it is organized as a nominally six months long co-operative engineering position. Development of the student's research leadership skills along with technical training are highly emphasized.
http://www.lerner.ccf.org/bme/education/reu/nsf/
Deadline: Applications will be continuously reviewed and offers will be extended four times per year

Marquette University
The Department of Biomedical Engineering at Marquette University, with the support of a grant from the National Science Foundation, is pleased to announce its Summer Research Program for 2007. The department seeks undergraduates in biomedical engineering to participate in innovative and interdisciplinary biomedical research aimed to improve the quality of life of individuals with neurological dysfunction or disease. The focus of the 9-
A week summer project is imaging, modeling and rehabilitation of neurosystems, drawing on faculty strengths at Marquette University and The Medical College of Wisconsin.
http://www.marquette.edu/engineering/biomedical/reu.shtml
Deadline: Unspecified

Massachusetts Institute of Technology
The Department of Biological Engineering (BE) at the Massachusetts Institute of Technology (MIT) is presently seeking outstanding current junior-year undergraduates to participate in the Research Experience for Undergraduates Program during the summer term of 2009. The REU Program, sponsored by the National Science Foundation, provides non-MIT students with the opportunity to participate in the research happening in the Department of Biological Engineering.
http://web.mit.edu/be/education/reu.htm
Deadline: February 15, 2012

Mayo Graduate School Summer Undergraduate Research Fellowship (SURF) Program.
Conduct your own small research project or work on part of an ongoing research investigation for 10 weeks, develop your technical skills and participate in a special weekly seminar series that introduces you to rapidly progressing research areas.
http://www.mayo.edu/mgs/surf.html
Deadline: February 1, 2012

Mote Marine Laboratory (MML)
Research internship programs include biomedical, Invertebrae Zoology and Benthic Ecology, Aquaculture, and Marine Mammal Research. The four different centers include the Center for Shark Research, Marine Mammal and Sea Turtle Research, Coastal and Tropical Ecology, and Fisheries Enhancement.
http://www.mote.org/~jimg/reu.htm
Deadline: February 15, 2012

National Institute of Health Biomedical Engineering Summer Internship Program (BESIP).
This ten week summer program allows undergraduate biomedical engineering students to participate, under the mentorship of scientists on various biomedical research projects in NIH laboratories in Bethesda, Maryland.
http://www.nibib.nih.gov/Training/UndergradGrad/besip/home
Deadline: February 11, 2012

Neuroscience Institute Summer Research Program
Selected applicants will come to the Morehouse School of Medicine for ten weeks, where they will join a single laboratory, attend lectures on the neurobiology of degenerative disorders, undertake a well-defined research project with Institute faculty, and make scientific presentations at the end of the program.
http://www msm.edu/prospective_students/admissions/PipelinePrograms.aspx
Deadline: Depends on the program

Northeastern University
The Bernard M. Gordon Center for Subsurface Sensing and Imaging Systems (Gordon-CenSSIS), provides the opportunity for science or engineering undergraduate students to
work at CenSSIS laboratories on research projects related to the emerging technology of subsurface sensing and imaging systems. These REU students have the opportunity to work at CenSSIS testbed facilities in the areas of hyperspectral underwater imaging, medical ultrasound and optical imaging, 3D biological imaging, and imaging of underground objects or environmental conditions by ground-penetrating radar or electromagnetic induction. http://www.censsis.neu.edu/education/REU/
Deadline: Not updated for 2012

Northwestern University
Active hands-on research infuses the traditional undergraduate curriculum with excitement. These experiences provide a glimpse into the life of a scientific researcher and opportunities to meet and work with world-renowned scientists. The center offers the Research Experience for Undergraduates (REU) program, under the leadership of Professor Mark Hersam, each summer. The REU program is held for a 9-week period over the summer. Participants engage in fulltime research on a nanotechnology-related topic. Regular group meetings give students opportunities to share their progress along the way, and gain a broad overview of a wide array of scientific projects. Additional activities include special lectures, field trips, a public speaking seminar, technical writing workshops, summer picnic, and tours of facilities and laboratories. http://www.nsec.northwestern.edu/REU.htm
Deadline: February 15, 2012

Northwestern University, Bioengineering Education Research REU
The Bioengineering Education Research REU (BER REU) is unique in focusing on bioengineering education research projects. The current program, which runs through summer of 2102, is descended from the REU of the VaNTH Engineering Research Center in Bioengineering Educational Technologies. The BER-REU begins with a week-long orientation to education research at Vanderbilt, particularly stressing engineering education, as well as an introduction to the ethics and communications components of the REU. Students then begin projects at one of three research sites (Northwestern, Vanderbilt, or the University of Texas at Austin) and continue to interact through videoconferences on a weekly basis.

At each site, students work with individual faculty mentors on a project in education research and curriculum development at either the undergraduate or precollege (6-12) level. The objectives of the BER REU program are to expose students to quantitative and qualitative aspects of research in engineering education, and to research methods more broadly, to have each student gain research experience by doing a project that contributes to the development of curricular materials for bioengineering using learning science principles, and/or to evaluate educational innovations for their impact on student learning to develop skills in scientific writing and presentation, and finally to develop an awareness of and sensitivity to ethical aspects of biomedical research. http://ber-reu.northwestern.edu
Deadline: February 15, 2012

Northwestern University, Materials Research Science and Engineering Center (MRSEC)
The NU-Materials Research Science and Engineering Center is an interdisciplinary program focused on multi-functional nanoscale material structures. Over 35 faculty from 9 different departments are involved. REU students will have the opportunity to contribute to a research project led by a center faculty member and will participate in interdisciplinary research group meetings, expanding their
University of California, San Diego
The Department of Bioengineering at the University of California, San Diego is pleased to announce a National Science Foundation Research Experience for Undergraduates (NSF-REU) program in Regenerative Medicine, Multi-Scale Bioengineering, and Systems Biology. This exciting summer program provides undergraduate students access to state-of-the-art facilities, the opportunity to work with accomplished and experienced faculty mentors, and to participate in highly collaborative, cutting-edge research projects. In addition to the training students receive in individual research laboratories, extensive professional development opportunities will be provided through weekly workshops, an undergraduate research conference, panel discussions, and GRE preparation courses.
http://www.be.ucsd.edu/undergraduate_offcampus_research
Deadline: Not yet updated

University of Illinois Chicago
The Departments of Bioengineering, Chemical Engineering, Electrical Engineering, and Mechanical Engineering at the University of Illinois at Chicago are pleased to announce their Summer Research Fellowship Program for 2009. Eleven fellowships are sponsored by the National Science Foundation (NSF) Research Experiences for Undergraduates (REU) and the Department of Defense (DoD) ASSURE (Awards to Stimulate and Support Undergraduate Research Experiences) programs. Summer fellows will have the opportunity to conduct research in Novel Advanced Materials and Processing with applications in biomedical, electrical and chemical engineering in an academic setting. This program welcomes students in Science and Engineering.
http://www.uic.edu/labs/AMReL/NSF-REU.htm
Deadline: February 29, 2012

University of Maryland Molecular and Cellular Bioengineering Research Experiences for Undergraduates
The Molecular & Cellular Bioengineering REU program focuses on the investigation of fundamental bioengineering questions using techniques that elucidate the roles of elemental participants. The University of Maryland, and specifically the new Fischell Department of Bioengineering, is engaged in a number of bioengineering research activities that bring together the University’s traditional strength in engineering with recent advances in biological sciences as well as collaborations with surrounding national laboratories, including the NIH, NIST, and FDA. As a result, major research initiatives are underway in topics including biomicroelectromechanical systems, biomechanics, biomolecular engineering, cardiovascular mechanics, cellular and metabolic engineering, drug delivery, biomedical imaging, nanobiotechnology, neuroengineering, systems biology, and tissue engineering.
http://www.bioe.umd.edu/reu
Deadline: Not yet updated
University of Massachusetts, College of Engineering
Summer Research Experience for Undergraduates (REU)
Each summer the College of Engineering sponsors a Research Experience for Undergraduates (REU) program. This is a great way to find out if graduate study is right for you and an opportunity to learn more about the broad range of interdisciplinary research being conducted in the College.
http://www.engineering.umass.edu/reu
Deadline: February 15, 2012

University of Massachusetts, The Institute for Cellular Engineering (ICE)
The Institute for Cellular Engineering (ICE) hosts a Research Experience for Undergraduates for U.S. citizens or permanent residents interested in pursuing graduate studies in bioengineering or biological sciences. Cellular engineering is a new frontier of applied biology. Understanding cellular function and manipulating cells/tissues to perform in a particular manner is the basis for many ventures in the biomedical, biotechnology and pharmaceutical industries, including drug production from cell culture, generation of artificial organs for replacement of diseased tissues, and design of bioremediation processes for waste water clean-up. Our faculty and research are at the forefront of cellular engineering innovation, performing cutting-edge work in biosensor development, cell and drug delivery, metabolic engineering and protein engineering.
http://www.umass.edu/ice/reu/index.html
Deadline: February 15, 2012

University of South Carolina, NSF-REU Program
In 2011 (May 22 – July 30) USC will host a 10-week research program in biomolecular and biomechanical interactions. The NSF-REU program will provide experience in experimental and computational studies at the protein, cellular and tissue levels. For more information please visit the website.
http://biomed.engr.sc.edu
Deadline: Not yet updated

Virginia Polytechnic Institute and State University  Macromolecules and Interfaces Institute
Thanks to the Research Experience for Undergraduates (REU) grants (funding pending) - with focuses on the Design and Delivery of Polymer-Drug Complexes - the twenty-first consecutive summer of research opportunities is being made available for undergraduates who wish an exciting laboratory experience.
http://www.mii.vt.edu/SURP/index.html
Deadline: February, 1, 2012

Wayne State University
The SSIM sponsored REU - Research Experiences for Undergraduates - program integrates ongoing research efforts in our Smart Sensors and Integrated Microsystems (SSIM) Program into a cooperative traineeship program for undergraduate students. This program builds upon existing sensor-related projects to develop a concerted thrust in the area of sensor integration with VLSI circuitry, a growing research strength at Wayne State University. Active programs in wide-bandgap semiconductor materials, graded pyroelectrics, photonic systems, thin-film magnetic devices, organic film devices, and integrated (intelligent) technology will form the core research here at SSIM.
http://www.ssim.eng.wayne.edu/education/ssim_reu_program.asp
Deadline: Visit website for more information.

Whitaker International Fellows and Scholars Program
The Whitaker International Program is a grant that sends emerging leaders in biomedical engineering (or bioengineering) overseas to increase international collaboration in the field. The Whitaker Program was funded by The Whitaker Foundation (now closed), and is administered by the Institute of International Education. Funding for awards will exist until around 2020. Whitaker International Program grants are awarded based on an activity/project proposal that is relevant to biomedical engineering. We can offer about 30-45 grants annually, but only the highest quality applicants are awarded. In the last three competition cycles, 15, 12, and 20 grants have been awarded. This year, we are looking for at least 100 qualified applications this year, so all high quality students are encouraged to apply. Recent awards have included research in heart blood flow, improved prosthetic leg design, and development of affordable oral cancer screening tools. Projects occur worldwide, including farflung countries like the United Kingdom, Denmark, India, and South Africa. 
http://www.whitaker.org/home
Deadline: February 6, 2012

Worcester Polytechnic Institute
Faculty members from Biomedical Engineering, Chemical Engineering, and Chemistry & Biochemistry have created a diverse array of projects for students to choose from. Each student conducts research in the laboratory with the faculty mentor on a project specifically designed for his or her abilities and also participates in professional development activities. A novel component of this REU is that each undergraduate will receive training in mentoring, and will become a mentor to a middle-school student.
http://www.wpi.edu/Academics/Depts/BME/Research/reu.html
Deadline: Not yet updated

Biology, Biotechnology, and Pre-Medical Engineering Internships
Homepages and web-links to over 590 paid co-op/internship and summer undergraduate research postings listed alphabetically by organization name and listed by state.
http://people.rit.edu/gtfsbi/Symp/summer.htm

Complete List of Research Experiences for Undergraduates
http://www.nsf.gov/crssprgm/reu/reu_search.cfm