FOOTHILL COLLEGE SCIENCE / TECHNOLOGY / ENGINEERING / MATH

SUMMER INTERNSHIPS OPPORTUNITIES

Eight weeks (20-40 hrs/week) of professional mentoring and hands-on experience at a Bay Area Science Research Institution or STEM company. Please note that your application will only be considered if an internship in your field of study becomes available and you match the organization's needs.

Internships begin approximately July 1, 2019 and program duration vary. Applicants will be matched, interviewed by the STEM institution or organization, and if selected, students will be awarded the **scholarship of $2000**. Students are **required** to enroll in an ITRN course in the summer and may be required to attend an orientation/training on June 14th. Scholarship winners are required to turn in a final report of their internship experience by the end their internships.

Internship dates: July 1st- August 23rd 2019 (flexible)

Application deadline: April 8th, 2019

Application link:

- Log into MyPortal.
- Select "Foothill STEM Internship Program" under AcademicWorks Scholarships
- Or go to https://fhda.academicworks.com/opportunities/3270

Minimum criteria

1. Must have completed 12 units of STEM courses at Foothill by the end of Winter quarter of the current academic year (Any science, technology, engineering or math course).
2. Must be majoring in a STEM major.
3. Must demonstrate how this internship opportunity will help you reach your goals in a supplemental question.
4. Must have Foothill College as your primary school.

Matching done by April 10. Notification to students by April 12 for match.

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CinderBio

http://cinderbio.com

The intern will support efforts to expand our library of acid and heat stable enzymes that have the potential to replace or reduce harmful chemicals in many industries. The intern will learn molecular biology and biochemical techniques for cloning and expressing enzymes in our proprietary platform. Duties will include PCR, DNA purification, cloning, bacterial transformation, and protein expression. In addition to working with the project mentor, the intern will work directly with a research scientist and research associate and participate in weekly research meetings with the whole team.

Takachar

http://takachar.com

We are seeking 1-2 students for the following internship.

In many parts of the developing world, agricultural and other biomass waste is simply burned in the open air, creating much toxic pollution. Thermochemical treatment is a process whereby this waste can be converted into solid fuel. This has the potential to provide renewable energy, create new income opportunities, reduce waste, and reduce pollution and greenhouse emissions.

The reactor has been set-up and operated successfully. However, the measurement of different parameters (weight, temperature, flowrate, pressure, level, etc.) is done manually at present. We need to add some automation and control to make the system more effective and operational with minimal user intervention. The UROP will contribute mainly in setting up data acquisition system, temperature feedback control, and motor controller for adjusting flowrate.

Prior experience with electronic circuit design, controllers/relay and Arduino platform is preferred.

SnapDNA

http://snapdna.com/

We are looking for motivated, detail-oriented individuals interested in gaining highly relevant laboratory experience in a dynamic startup environment. We provide all requisite training, however, background in biochemistry, chemistry, and /or molecular biology is advantageous. We are a cross-disciplinary group, and we all have found ourselves wearing a variety of "hats" while we use tools that span typical wet lab (UV spec, centrifuges, pH meters, PCR thermocyclers) as well as non-typical skills (table-top milling machine, 3-D printer, pumps, valves).
We work to advance the careers of our interns, such as by sharing general pointers on laboratory critical thinking, experiment execution, organization and experiment design, practical laboratory tips and tricks. We offer general advice on interviewing, resume building, career topics, graduate school, and are able to offer introductions to others in our field.

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Sonera Magnetics

http://soneramagnetics.com

Sonera is developing novel magnetic sensors with applications in biomedical imaging and brain computer interfaces. Interns at Sonera would help perform measurements on these new sensors to evaluate their performance. The measurement system we are using is constantly changing and improving, and interns would help modify the setup as needed to get the best measurements. In the process, they would learn about radio-frequency (RF) measurements and equipment. They would also help develop software (in Python) to allow us to automate measurements and analyze data.

STEM-AWAY Inc.

https://www.stemaway.com

1. Students will participate in UX research for the STEM-Away platform. Details at https://www.stemaway.com/projects/project-ideas/model-for-collecting-user-feedback. Interested students can additionally work on implementing feedback obtained from the UX research.
2. Students will help to build (1) a STEM skills database and (2) STEM events listing using data from the web. Explanation of technique at https://towardsdatascience.com/data-science-skills-web-scraping-using-python-d1a85ef607ed. Based on performance, select students will be given a chance to work on AI Machine learning algorithms.

   Additional points:
   1. Select students will be given the opportunity to shadow founders and/or participate in promotional events.
   2. We will use the internships to refine the design of our virtual internship platform (a career tool of STEM-Away). Some of the internship work will be done remotely using our virtual internship infrastructure. Students will gain a valuable skill of working in remote team environments. An important skill given that remote teams are becoming increasingly prevalent in the tech industry.
   3. Our virtual internship are designed as Mentor Chains Projects. College students will be encouraged to mentor high school students to foster mentorship and leadership skills. We have a well defined mentoring structure that helps college students assign small tasks to juniors. We will highlight any mentoring done by students in their internship reports. (The mentoring part is optional.)

Visolis, Inc

http://visolisbio.com

Summer interns will gain a lot of bench research experience and analytical instrumentation experience. They will be involved in sample preparation and bench work in the areas of microbiology, bioengineering, and fermentation or analytical chemistry and column separations.

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Nodexus

www.nodexus.com

Nodexus addresses the quickly growing markets of gene editing, drug development, cancer biology, agriculture, and more. We are building the NX One platform to be the go-to system in every biological lab by making isolating single cells 10X faster and 30X cheaper. We are seeking enthusiastic and driven individuals who will excel in the multidisciplinary environment of a startup company. There are several positions available:

Engineering: Instrument/cartridge testing and technical documentation for manufacturing; Software testing
Biology: Cell culture; Cell line and genomic validation; Flow cytometry and imaging
Business Development: Customer discovery and identification

Personal Characteristics:

- Strong work ethic and ability to work independently
- Meticulous, eager to learn new skills, and a self-starter
- Strong time management, organizational skills, and ability to handle multiple projects simultaneously
- Ability to thrive both individually and in a team environment to achieve goals
- Strong interest in helping build a company from the ground-up

The Ideal Candidate:

- Will be currently working toward a major related to Bioengineering, Mechanical Engineering, EE, CS, Biology, Chemistry, Chemical Engineering, MSE, or a similar field
- Will have demonstrated responsibility and independence in a laboratory setting

Enable Biosciences

www.enablebiosciences.com

Enable Biosciences is a medical diagnostics company that makes ultrasensitive blood and saliva tests to detect autoimmune and infectious diseases in their earliest stages, when they can be more easily treated. The candidate will work under the general direction of the Chief Scientific Officer to conduct biomedical research and assay development. Responsibilities: Perform qPCR experiments; Prepare reagents for assay development; Keep detailed records of experiments; Communicate results in a timely manner; Contribute to the overall intellectual and scientific progression of the company. Requirements: 1+ year wet lab experience. All candidates are expected to display exceptional communication and professional skills.

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Dahlia Biosciences

https://indiebio.co/companies/dahlia-biosciences/

Dahlia Biosciences is harnessing programmable RNA-targeting CRISPR-Cas9 technology for cell therapy applications. We are seeking an intern to join our team to support the development of cell therapy applications based on RNA-targeting CRISPR-Cas9 technology. Responsibilities - Prepare stock buffers for protein purification and cell-based assays; Express and purify Cas9 protein, including training on AKTA FPLC system; Run SDS-PAGE gels to QC Cas9 protein preparations; Maintain cell lines (cell culture) and prepare samples mounted onto slides for microscopy; Input and organize experimental data into database system.

Stimson Biokinematics

www.biokinematics.com

Stimson Biokinematics is a start up in Silicon Valley. We create laser-based visual feedback tools for teaching motor control to athletes and patients. We are looking for two interns with experience in electrical engineering and computer science. They will develop software that will actively connect to and obtain information for up to 2 devices simultaneously and record them in a CSV format compatible with Microsoft Excel.

Birdeye

https://birdeye.com

Birdeye is located in Palo Alto.
Key skills for UI engineer internship: Javascript, HTML5, CSS3, React
Key skills for design internship: Sketch, Photoshop, Adobe, Bootstrap + Basic HTML5 + CSS3

Interns will be working with UI Engineers, JavaScript Engineers, and Designers. UI Engineer is an enthusiastic frontend engineer, who is experienced in developing rich web experiences to work on crafting user experiences which support some of Apple's most impactful teams and products. JavaScript Engineer is full-stack developer with strong experience in Node.JS with proficiency in HTML/CSS and supporting front-end technologies like ReactJS. JavaScript Engineer also has experience in charting libraries like D3. Designer has extensive experience in using UX design best practices to design solutions, and a deep understanding of mobile-first and responsive design.

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GeneTether

GeneTether is an early stage startup company developing technologies to improve the efficiency and specificity of gene editing.

Summer interns would be expected to work at our 953 Indiana Street laboratory 3-4 days per week. This may require some work on weekends. Interns would be working directly with company scientists and CEO providing hands-on help in the laboratory constructing DNA plasmid vectors, purifying genomic DNA, PCR analysis, and mammalian cell tissue culture. This will include some laboratory support responsibilities including media/reagent preparation, and maintaining laboratory databases for cell/plasmid/reagent inventories.

Mammoth Biosciences

Mammoth Biosciences has a vision to provide a CRISPR-based platform on which an infinite number of tests can be built, democratizing access to an endless variety of tests for bio sensing in healthcare, as well as across industries such as agriculture, manufacturing, forensics, and more.

The available internship projects will be focused on the following areas: protein engineering, molecular biology, biochemistry, and bioinformatics. The candidate should be highly motivated, be comfortable working as part of a team, and display excellent time management skills. Research interns will work directly with Mammoth's team of talented CRISPR scientists and research associates.

Responsibilities

- Protein purification, molecular biology, and bioinformatics
- Design and execute CRISPR biochemistry and bioinformatics-based projects
- Think creatively about diagnostic and CRISPR technologies
- Communicate and accurately record experimental progress
- Stay current in the field by participating in educational opportunities and reading relevant publications

Qualifications

- Currently enrolled in an undergraduate or masters program in biology, chemistry or related field
- Background in molecular biology, bioinformatics, protein biochemistry, and nucleic acid biochemistry
- Exceptional skills in communication, presentations, data analysis, and interpretation
- Experience with high-throughput protein engineering and synthetic biology in prokaryotes
- Experience with programming (Python, R, etc.) with emphasis on biological data

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AesculaTech

aesculatech.io

AesculaTech engages in the development of smart materials for medical devices. Our first product is a treatment for the millions of Americans in the US that suffer from dry eye syndrome. The device is one-size-fits-all and easy to administer, resulting in improved patient comfort, better outcomes and fewer repeat procedures.

AesculaTech is seeking outstanding and talented individuals to aid in the development of their first product, a novel, smart medical device for the treatment of Dry Eye Syndrome (DES). DES is one of the most common ocular disorders with symptoms including irritation, burning, blurred vision and eye redness. Approximately 160 million Americans regularly experience one or more symptom of DES and 64 million use artificial tears more than five times per week. AesculaTech has developed a unique device to resolve this pressing issue. The Materials Engineer Intern will participate in product development and validation for this revolutionary medical device. This will include responsibilities in design, quality control, and validation both for the material and applicator. The internship will run from Monday, May 20 - Friday, August 16, 2019

Key Activities:
• Communicate with medical, engineering and scientific staff to determine material requirements.
• Test, evaluate and improve upon existing materials and devices currently in use.
• Design, test and synthesize novel materials with enhanced features and capabilities.
• Write technical reports and documentation.
• Train medical personnel on device purpose and proper, effective usage
• Review Design and Development documents, records, etc for compliance to internal procedures and regulations.
• Ensure proper justification of statistical analysis and hypothesis testing.
• Review technical information as well as documents for Design History Files.
• Participate in device risk management activities including UFMEA, DFMEA, PFMEA.
• Aid in establishing proper statistical controls in development and transfer to manufacturing processes.
• Participate in Phase Reviews.

Minimum Qualifications:
• Currently enrolled in a BS in Chemistry, Engineering or a related discipline with experience relevant to the medical device industry.
• Strong written and oral communication skills