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**Monsanto 2016 Field Testing Engineering Co-Ops. 013SB**

If you love developing innovative, breakthrough technologies that create breakthrough products, you’ll want to check out these exciting opportunities at Monsanto.

Monsanto is seeking talented & driven students to become integral members of our Smart Fields team. Our students work side-by-side with the best software & automation engineers in the agriculture & biotechnology industry to create smarter automation solutions that accelerate our ability to deliver products to farmers. Monsanto has a proven track record of creating exciting, innovative products that have changed the agricultural industry. Smart Fields has been a key component of developing those products.

We designed the world’s first & only seed chipper that has accelerated the search for valuable genes (<http://www.monsanto.com/products/pages/breeding.aspx>) and we designed a variable rate seed planter that has taken the guesswork out of planting populations  <http://www.monsanto.com/newsviews/pages/taking--guesswork-out-of-planting-populations.aspx>.  Our work includes everything from stand alone bench top to large scale automated/robotic machines and automated agricultural field equipment. (See more at [http://Smart.is.Smart](http://bcove.me/f6lomhuh)).

**Field Testing Engineering Co-ops requires a six (6) month commitment.**

*Students sit out a full academic semester (June-December 2016).  Please apply only if you are certain of your willingness and ability to commit to the full duration of the assignment.*

**Automation Engineering Co-op**

The Automation Engineer Coop will be part of a team focused on the development and delivery of the next generation of automation platforms for our global biotechnology field testing network. The position will be based in St. Louis at our corporate headquarters with our engineering teams.

In this role, you will practice your engineering knowledge and be involved in the integration and application of state-of-the-art technologies for Monsanto’s field testing platform. You will assist Monsanto scientists and engineers in a multidisciplinary environment, working and supporting engineers in electrical/electronic, mechanical, software and automation design. Be part of the deployment team, to see your innovations in action. This opportunity will cultivate a first-hand, complete understanding of automation project life cycle from design to deployment.

**Required Skills/Experience:**

* Candidates must be currently enrolled in a Bachelors or graduate degree program in Agricultural, Electrical, or Mechanical Engineering, Mechanized Systems Management or a related field
* Knowledge of agricultural equipment and sensing is desirable
* Experience with installation and programming of automation and controls systems
* Familiarity with 3D CAD software, i.e. SolidWorks or Pro/ENGINEER

**Production Engineer Co-op**

The Production Engineer Co-op will be part of a team focused on the development and delivery of the next generation of automation platforms for our global biotechnology field testing network. The position will be based in St. Louis at our corporate headquarters with our automation & engineering teams.

You will gain experience working with the development teams to fabricate prototypes of next generation automation equipment or test platforms for new technologies. As part of the Production group you will assist with build-to-print projects, involving planning and executing acceptance tests of new equipment and development of more efficient methods for production and testing of automated equipment.

**Required Skills/Experience:**

* Candidates must be currently enrolled in a Bachelors or graduate degree program in Industrial Engineering, Mechanical Engineering, Electrical Engineering, or a related field
* Knowledge of agricultural equipment, row crop production practices, seed technology industry and/or plant breeding methodologies is desirable
* Experience with design, development, and testing of automated analytical equipment
* Experience with CAD software, i.e. SolidWorks or AutoCAD Electrical

**Software Engineer Co-op**

The Software Engineer Co-op will be part of a team of top software developers/engineers to create a smart ecosystem of integrated research equipment that accelerates product development & creates new business opportunities. The position will be based in St. Louis at our corporate headquarters with our automation & engineering teams.

You will gain experience participating in code development, testing specific functionality of the product, analyzing test results, verifying fixes, providing feedback in the product design and specification process, implementation, support, and enhancement of automated system software programs used in agricultural research. You will also participate in generating engineering requirements and design reviews. This is a unique and exciting opportunity for a dynamic individual who loves to work in a creative, ground-breaking engineering-minded environment!

**Required Skills/Experience:**

* Candidates must be currently enrolled in a Bachelors or graduate degree program in Software Engineering, Computer Science, Mechatronics or related discipline
* Experience with database setup, management and interactions with automated instrumentation and equipment for laboratory, production, and/or agricultural field environments
* Experience using C# for application development and automation solutions involving machine control, I/O, and sensor feedback control loops
* Experience with control system architecture, HW, instrumentation, design and implementation related work in machine projects

**Imaging Application Engineer Co-op**

The Imaging Application Engineer Co-op will be part of our St. Louis agricultural research teams to create new scientific know-how & insights through inspired, smart-design engineered solutions.  Our state-of-the art prototyping labs are available for the invention, design and development of electro-mechanical and imaging/sensing systems for use in production and research.

You will gain valuable experience through a significant hands-on role in developing both small and large-scale imaging systems designed for high-throughput laboratory and field deployment. You’ll be part of a dynamic team responsible for the design and analysis of novel imaging platforms and applications. You will be involved in the design, development, integration and documentation of production systems as part of multidisciplinary project teams of scientists and engineers. Assist in developing imaging or spectroscopy applications ranging from prototypes to production systems and ensure successful deployment to support Monsanto’s product pipeline.

Major duties include: Imaging prototype development, optical system design, integration with robotic platforms, development of image analysis routines and predictive models, and validation of designs and system performance. You should have experience with high-throughput imaging and spectroscopy/hyperspectral systems, core image & spectral analysis routines, and data-driven modeling. This role will provide technical support for other engineers in electrical/electronic, mechanical, software and automation design. Expect some travel to production and processing facilities to provide installation and upgrade support on an as-needed basis.

**Required Skills/Experience:**

* Currently enrolled in either a M.S or B.S. degree program in Electrical, Computer, Chemical, Biological Engineering or a related field
* Ability to work on multiple tasks in an agile, fast-paced environment as part of dynamic multidisciplinary teams
* Ability to solve challenging and complex analytical problems, and developing optical imaging solutions in a laboratory, production or field environments
* A willingness to extend the candidate’s own scientific and engineering interests into new fields of research and development
* Excellent entrepreneurial thinking, innovation, and real world problem solving skills
* Strong communication skills for effective interactions with senior business/R&D stakeholders as well as peer groups and team members

**Preferred skills:**

* Exposure to developing image processing routines in MATLAB, C/C++ or equivalent
* Experience in designing/implementing electrical/electronic systems, precision mechanisms, optical assemblies, imaging hardware, and automation systems
* Experience with more than one imaging modality, e.g., Color, NIR, IR, Fluorescence, Raman, X-ray, NMR, Optical CT or other novel imaging technologies is a plus

**Locations:**

* Saint Louis, MO

**Apply at:** [www.monsanto.com/careers](http://www.monsanto.com/careers) Requisition number: **013SB**