

Mechanical Engineering @ Iowa State



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ME student working on Soybeans in Space project

For nearly two years Tyler Swenson, a junior in mechanical engineering, has been working on a project that could someday help astronauts grow food while completing a space mission.

He first came across the opportunity as a freshman when he applied for a NASA scholarship and has twice received the \$7,000 award from the Iowa Space Grant Consortium.

Swenson is part of a research team through an independent study course with Amy Kaleita, associate professor of agricultural and biosystems engineering, and the Program for Spaceborne and Earthbound System Sustainability. The group includes two other undergraduate students: Brandon Wilson, a junior in agronomy, and Rebecca Meerdink, a freshman in environmental science.

On April 20, 2010, the group will present their work in a talk entitled "Soybeans in Space! Studying the Effects of Supplemental LED Light to Maximize Soybean Yield in Closed Systems" during the Iowa State Undergraduate Research and Creative Expression Symposium.

Four ME students in addition to Swenson will also be at the symposium—Mark Wiemer, senior, will present "Taking Hold of Sound: Developing a High Resolution Sensor-Glove Controller for Music" with Jeffrey Kosinski, a senior in graphic design; Trevor Richardson, junior, and Joe Goering, senior, will present "Framework for the Understanding of Soil Moisture Patterns Using Self-Organizing Neural Networks" with Linda Geiger, a sophomore in agricultural engineering, and Kristin Crawford, a senior in aerospace engineering; and Jasmine Draper, senior, will present "An Experimental Test Design for the Study of Fan Noise." ([News release](#))

Tyler Swenson



McGrath named as 2010 STATEment Maker

Listed as a Global Giver, Greg McGrath, BSME'08, was honored as a 2010 STATEment Maker. McGrath is the executive director of EOS International, a nonprofit organization he cofounded with four other Iowa State alumni in 2008 to bring sustainable technology to the developing world.

Iowa STATEment Makers is an annual honor that recognizes the early personal and professional accomplishments and contributions to society of Iowa State University's young alumni. Read more about McGrath on the Iowa State Alumni Association's [list of honorees](#).

ME students travel to Belize

If all goes well with an Iowa State Engineers Without Borders (EWB) project, dried fruit may soon become a resource that helps fund books and supplies for students in rural Belize.

Over spring break in March, eight EWB members visited the country to implement their prototype design of a solar fruit dehydrator. In addition, they worked on several secondary projects including constructing a town sign, implementing two cook stove designs, providing a hygiene program to villagers that emphasized the importance of hand washing, and assessing soil quality to determine the feasibility of a school garden. ([INNOVATEonline story](#))

Havens uses engineering during development trip to Nicaragua

Andrew Havens, senior in mechanical engineering, spent his spring break in Nicaragua working to install ovens and biogas digesters, which produce and capture methane gas using water and cow manure. Havens was working for the nonprofit organization Emerging Opportunities for Sustainability International, which was founded by several Iowa State students, including two ME alumni. ([News release](#))

Upcoming department seminars

Krishna Garikipati, associate professor of mechanical engineering at the University of Michigan in Ann Arbor, will present "*In Silico* Estimates of the Free Energy Rates in Growing Tumor Spheroids" on April 20. The seminar will be held in 2055 Hoover from 11:00 to 11:50 a.m.

Do you have department news you'd like to share? Please e-mail news items for InCyde Mechanical Engineering to Jessi Strawn at jlstrawn@iastate.edu

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