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**Sac State continues tradition of a green campus**

Sacramento State’s commitment to an environmentally clean and sustainable campus continues apace.

A case in point is the innovative Sustainable Technology Outdoor Research Center (STORC). According to Associate Vice President Michael Christensen of Sacramento State’s Risk Management Services (RMS), the center “provides real-world experimental learning to better prepare students for success within their chosen professions.”

Situated on a small plot of land opposite Parking Lot 4, the center immediately south of the Non-Destruct Lab is an outdoor fenced area that has housed the Office of Water Quality Programs’ (WQP) Storm Water Research Project for the past six years. Now housed within the same fenced location is a Biodiesel Production System (BPS).

Design and construction of the BPS began two years ago as a collaborative effort between RMS and the College of Engineering and Computer Science (ECS). The goal in constructing the BPS was to convert kitchen waste oil (vegetable oil), produced by Sac State’s campus eateries, to biodiesel for powering Sac State’s grounds maintenance equipment operated by Facilities Management.

Now near completion, the BPS is capable of producing enough biodiesel to perpetually fuel the University’s fleet of grounds equipment, lowering the current cost of petroleum-based diesel by approximately two-thirds while reducing air pollution associated with the use of petroleum-based diesel.

More than five sustainable senior engineering projects are in various stages of design and construction and will soon share the STORC space with WQP. RMS and Facilities Management are busily expanding the footprint of the STORC facility to properly accommodate several sustainable technology projects currently being constructed by students and faculty in Engineering and Environmental Studies.

Projects include a biodiesel production system, a solar water purification system, a bio-toilet, a food waste composter, an aquaponics system and the aforementioned Water Quality Programs’ Storm Water Research Project. Several other innovative projects are forthcoming.
STORC’s goal is to facilitate, support and house functional and ongoing sustainable technology projects. The STORC concept and acronym are unique to Sacramento State, Christensen says. “This collaborative technology research process encourages the sharing of one sustainable technology to enhance the performance of another technology.”

STORC encourages teamwork between educational disciplines. For example, the Biodiesel Production System was designed and constructed by engineering students; however, product quality testing is performed by students in chemistry. Biodiesel that meets federal quality standards as confirmed by chemistry students will be used to power grounds equipment.

Likewise, the aquaponics system, under the direction of Environmental Studies Professor Dudley Burton, will use worms grown in composting food waste to feed fish, and the digested waste produced by the fish will in turn feed growing plants.

The success of the BPS project suggested that this experiential learning model could be expanded to promote and support the development of other small-scale technologies that might also benefit both students and the campus as a whole. Consequently, RMS and ECS began identifying additional sustainable projects that students might consider designing and constructing in fulfillment of their Senior Project requirement.

Students, faculty and staff as well as visitors to the campus will be able to tour the STORC facility to learn about various sustainable technologies and to discover what Sacramento State is doing to study, promote and improve these promising technologies.

For media assistance, contact Sacramento State’s Public Affairs office at (916) 278-6156. – Alan Miller

Sacramento State is making a difference in California’s Capital Region and beyond. We offer a life-changing opportunity for our 28,000 students, preparing them to be leaders in their professions and communities. Our professors are known for their dedication to great teaching. And our location in the capital of the nation’s most populous state allows students to pursue unique internships and research.

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