$1.2 million grant from the U.S. Department of Energy will transform environmental sciences, environmental justice education at FLC

The grant, renewable for up to five years, will fund an Environmental Science and Justice Laboratory, Environmental Justice Center, Climatology Lab, Ozone Garden, and heavy metals lab, and provide housing and internship stipends for qualifying students.

DURANGO, Colo.— For the last ten years, Environmental Sciences at FLC have been experiencing the growing pains of a new program, including sharing space with other units and not having a place to call home.

Office of Legacy Management.

The grant will fund several projects, including the new Environmental Science and Justice Laboratory. Housed at Berndt Hall, it includes a general sciences lab, soil and water labs, and an Environmental Justice Center where students and community members can gather to study, build community, and organize events.

“This grant will allow FLC to transform our environmental education, providing increased opportunities for hands-on learning and interdisciplinary collaboration within and outside FLC,” said Jared Beeton, PhD, chair and associate professor of the Department of Environment & Sustainability.

The grant will also fund a Climatology Lab and Ozone Garden with the Engineering Department and a heavy metals lab with the Chemistry Department. In addition, the environmental justice grant funds housing and internship stipends for eligible students and an Environmental Science and Justice Research coordinator.

Beeton noted that marginalized people and tribal communities in the Four Corners region have been disproportionately affected by pollution.

“This generous funding from the Department of Energy will also help FLC become a community resource for environmental justice education in the Four Corners region by intentionally building up our research and community outreach capacities around the idea of environmental justice and environmental racism,” he said.

“We are especially interested in reaching out to the communities that have been disproportionately affected by pollution in this area, including Indigenous communities, and give them a stronger voice in the scientific research on campus.”

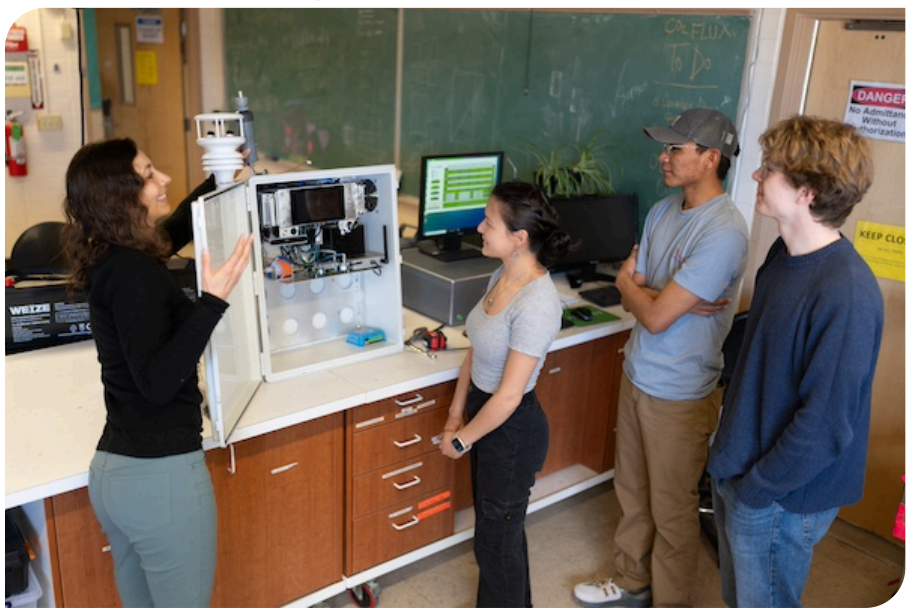
Greenhouse gases and plants

Joanna Gordon Casey, PhD, a professor of physics and engineering, is

quality and as more instruments are added, climatology.

Students will measure air pollution with specialized instruments to measure ozone, particulate matter, and carbon dioxide. The instruments will be near several plant beds known to serve as bioindicators for air pollution.

“Air pollution and its impacts on human and the environment are often not visible,” Casey said. “One hope for this garden is to make some of these impacts more visible and tangible.”



Casey noted the Southern Ute Indian Tribe's Environmental Programs Division operates three sophisticated regulatory monitoring stations in the region, but none are in Durango.

Data from the instruments will be available to the community online. However, the data is intended to be educational and allow students to explore trends rather than to serve as regulatory measurements.

“This project will give FLC students many new opportunities to engage in research activities connected to air quality and the connections between air pollution and plant productivity,” Casey said.

“The hope is that this air quality garden will serve as a catalyst for many new interdisciplinary projects and a venue for FLC students to engage the broader community with education and outreach about air pollution and strategies to reduce exposure.”

Making environmental studies accessible

Beeton said that each semester, the social justice portion of the grant pays for housing for 16 students struggling with socioeconomic challenges. The students can be in any major but must be studying environmental justice or environmental science in some way.

“It’s difficult to focus on your education if you don't have a place to live,” said Beeton.

internships on campus or take an internship for a nonprofit or governmental agency like the U.S. Forest Service or National Park Service.

So far, 24 students have received paid internships, 10 in the Spring and 14 in the Summer.

An experiential learning coordinator was hired on the grant to organize field trips and other activities focused on experiential learning and the community gardens on campus.

“Our students are in a perfect natural laboratory for interdisciplinary environmental research, with the Animas River, San Juan mountains, wetlands, glacial deposits, alpine tundra, and deserts of the Southwest,” Beeton said.

“They are passionate about better understanding complex environmental systems and human-environment interactions. We are excited that this grant will help us expand their educational experience and allow us to share our efforts with the larger community.”



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