

A powerhouse in the making

EMMA SADLOWSKI — SCIENCE@THEAGGIE.ORG 📅 FEBRUARY 7, 2017



UC Davis Solar Decathlon team to begin construction of sustainable house

After months of preparation and design, the UC Davis Solar Decathlon team is officially in the works of constructing an

UC DAVIS SOLAR DECATHALON TEAM / COURTESY

affordable, sustainable house for the 2017 Solar Decathlon. Known as the Blue Mustangs, the multidisciplinary team aims to take home the competition's top prizes this October.

The Solar Decathlon, a biennial collegiate competition held by the U.S. Department of Energy, is made up of 10 contests that challenge student teams to design and construct full-size, solar-powered houses. UC Davis will join universities from around the world in Denver, Colo. this fall to compete for prizes up to \$300,000.

UC Davis provides its Solar Decathlon students with educational opportunities and resources throughout the year to ensure success at the event.

"In preparation for the Solar Decathlon, UC Davis sets up classes usually once a quarter that allow students to learn about the project and sustainable practices," said Brooke Carey, a fifth-year civil and environmental engineering (CEE) major and the team's student project co-manager. "This quarter our team is focusing on construction, so we'll be in the field about eight hours a week working on our house."

During the design period in the winter of 2016, the Blue Mustangs brainstormed innovative ways to address notable environmental problems in Davis. Kara Barcza, the Blue Mustangs' Water Engineering Lead, explained in an email the team's efforts to incorporate water efficiency and affordability into their house's design.

"Because of the recent drought, this year we're really striving to get as close to zero net water as possible," said Barcza, a fourth-year CEE major, via email. "To do this, we're emphasizing the use of efficient appliances and fixtures along with educating users on how to change habits and conserve water. We're also reducing water usage by treating greywater and using it for outside irrigation purposes."

However, engineering isn't the only aspect of the Solar Decathlon. The UC Davis team is made up of a variety of students across different majors, ranging from interior design to landscape architecture and communications.

Alysia Love, a fifth-year CEE major and student project co-manager, emphasized the role the of communications team during the Solar Decathlon.

"Communication is one of the biggest parts of the competition," Love said. "It's really important that we make the house look desirable and communicate all of its features. We're really trying to incorporate a lifestyle into the house."

Teams will specify their goals before the competition and are graded on how well they manage to accomplish them. According to Carey, the communications team helps articulate the team's goals and accomplishments to the judges, which can have a huge impact on the final score.

The Blue Mustangs occasionally deal with project drawbacks, such as insufficient funding and limited supplies. To combat these mishaps, the team must employ creative alternatives.

"In the real world, especially in construction, what might go wrong could definitely go wrong," Love said. "It's all about working with what you have and problem solving."

As Solar Decathlon volunteers come and go, the Blue Mustangs continue to learn from one another and improve their house design.

"The greatest thing about the Solar Decathlon is having a such a multidisciplinary team," Love said. "We're always learning and teaching each other. It's been a really great resource as a student and professional-wise."

The 2017 Solar Decathlon will take place in Denver, Colo. from Oct. 5 to 15. Donations to the Blue Mustangs' project can be made on the team's [website](#).

Written by: Emma Sadlowski — science@theaggie.org

© 2017, ASUCD. Designed By Creative Media