In keeping with Oregon State University’s mission to serve all Oregonians as the state’s land grant university, President Ed Ray and Dean Scott Ashford have challenged the College of Engineering communities to strive to increase student success.

Inspired by feedback from alumni that relationships with faculty and staff played a key role in student success and retention, the School of Civil and Construction Engineering (CCE) developed a committee to launch a first-year cohort program at the beginning of this academic year.

“The mission of the program is to build and strengthen the school community from the first year through graduation and into professional practice,” said Whitney Korthauer, academic advisor and founding program committee member. “Through regular cohort meetings with faculty mentors and other activities, students are learning more about CCE, engaging with faculty and staff, and getting to know their fellow students.”

Program activities include meetings with faculty mentors at coffee shops or other locations outside the traditional academic atmosphere. There is no homework or course credit in the program. Rather, the cohort activities are all about conversation and connection. Faculty mentors are encouraged to organize outings based on their own interests, such as hiking, cycling, and attending concerts.

“Some cohorts are even meeting on the weekend, which shows amazing commitment by those faculty members and students,” said Judy Liu, professor of structural engineering and the program’s coordinator.

To encourage participation, prizes are awarded to cohorts based on the amount of points accrued by attending a meeting, posting selfies with a Benny Beaver cutout at CCE events, and answering quizzes about weekly school news.

“In a recent study by Gallup, four-year graduation rates increase dramatically when students are engaged in an extracurricular activity and can work with faculty members who care about their success,” said Jason Weiss, school head and Miles Lowell and Margaret Watt Edwards Distinguished Chair in Engineering. “The program is designed to foster these activities by helping students to engage earlier with student organizations, faculty, and staff and build a supportive scaffold from the time they join Oregon State.”

The program has participation from about 190 students and 34 faculty mentors.

“Students are happy to know there’s a mentor here for them — a recognizable face who can answer questions and be a resource,” Korthauer said.
FROM THE SCHOOL HEAD

I am proud to share that the College of Engineering’s School of Civil and Construction Engineering (CCE) is making strides in enhancing the first-year experience for students and strengthening the school community through a new first-year cohort program. The mission is to increase connections from the first year through graduation and into professional practice.

Many of our students are supported by generous gifts from industry partners and friends of CCE. The funds provide unique learning opportunities, such as field trips and national conferences, that enrich the educational experience and help us prepare students who are ready to work and ready to lead.

CCE continues to attract top new talent – Bryson Robertson, Barbara Simpson, and Meagan Wengrove – to the school. And, through the Cascadia Lifelines Program, a research consortium based at Oregon State, researchers are partnering with the Port of Portland to protect critical runways from earthquakes.

I offer special thanks to Granite Construction, whose gift toward the development of the Complex for Resilient Infrastructure and Safety will advance research in safety and resilience.

These are just a few of the recent CCE accomplishments, of which there are many more to learn about within this newsletter. If you’re in Corvallis, please stop by to visit. I look forward to seeing you in Kearney Hall.

Go Beavs!

Jason Weiss
Head of the School of Civil and Construction Engineering
The Miles Lowell and Margaret Watt Edwards Distinguished Chair in Engineering
Director of the Kiewit Center for Infrastructure and Transportation Research

PARTNERS RAISE RECORD-BREAKING FUNDS

Our partners help students succeed. The 31st annual Construction Education Foundation Golf Tournament, held on Sept. 7, had the highest level of player and sponsor participation in the history of the tournament and raised $52,962 to support student scholarships in the CEM program.

OREGON STATE ADDRESSES COASTAL HAZARDS

Coastal protection is a priority for researchers in CCE. In their work, they employ remote sensing – the collection of data from satellites and aircraft – to better understand coastal hazards.

VIEW VIDEO: cce.oregonstate.edu

TRANSPORTATION STUDENTS EXCEL

Earlier this year, the Oregon State ITE Student Chapter received the 2018 ITE Western District Chapter of the Year Award. Members of the student chapter – Peter Kuskie, Travis Larson, Rachael Oster, and Amanda Rile – also took first place at the 27th Annual Oregon ITE Bill Kloos Traffic Bowl on Nov. 15.

Additionally, a project led by David Hurwitz, associate professor of transportation engineering received an Outreach and Engagement Award for Excellence at the Vice Provost Awards for Excellence Celebration. Through the project, Hurwitz and student project team members aimed to engage the public about lane departure crashes.

STUDENTS SHARE EXPERIENCES IN ‘ENGINEERING OUT LOUD’ PODCAST

How can students at Oregon State improve access to clean water for rural communities around the world? In a recent episode of the podcast “Engineering Out Loud” we hear from three students who worked in Nicaragua and Cambodia on projects that changed people’s lives – including their own.

LISTEN NOW: engineeringoutloud.oregonstate.edu
NEW FACULTY MEMBERS BRING EXPERTISE IN WAVE ENERGY, STRUCTURAL AND COASTAL ENGINEERING

Three new faculty members in CCE expand expertise in the school.

Bryson Robertson, associate professor of coastal and ocean engineering and director of the Pacific Marine Energy Center, joined Oregon State in October. Previously, he managed the Pacific Institute for Marine Energy Discovery and 2060 Project within the Institute for Integrated Energy Systems at the University of Victoria, Canada. Robertson's research interests are wind, tidal and offshore wind energy systems, coastal engineering, energy systems analyses, and oceanography.

Barbara Simpson, assistant professor of structural engineering, joined Oregon State after receiving her doctorate from the University of California, Berkeley. “My goal is to build innovative, optimized, and resilient structural systems that improve building performance and reduce the effects of natural hazards on the built environment,” said Simpson.

Simpson is also interested in the growing frontier of new, visual technology. “I would like to utilize this technology, especially as related to advanced computational and experimental methods, to better understand structural response and uncertainty,” Simpson said.

After earning her doctorate from the University of New Hampshire and conducting research in the Netherlands as a Fulbright scholar, Meagan Wengrove joined Oregon State as an assistant professor of coastal and ocean engineering.

“My research works to understand best practices for marsh and sand dune restoration to increase coastal community resilience,” Wengrove said. “I am interested in many aspects of how our coasts and beaches will change into the future – for example, how small scale sand ripples can feed larger morphologic change which is relevant to how often we need to dredge our inlets to keep ports open for ship navigation.”

PROTECTING PDX FROM SEISMIC RISK

With an earthquake imminent on the Cascadia Subduction Zone (CSZ), the Port of Portland is partnering with Oregon State to protect runways from seismic damage.

Over nine months, Armin Stuedlein, associate professor of geotechnical engineering, and a team of researchers, prepared an experimental test site at Portland International Airport for a series of blast-liquefaction tests. The recent experiments required detonation of multiple underground charges in an effort to understand the soil behavior during seismic ground motions.

The results of the tests will inform the design of a runway that will be able to withstand an expected magnitude 8.0 to 9.0 earthquake and ensure that critical supplies can be delivered following a massive natural disaster.

“This work is important because the airport needs to decide which runway should be retrofitted to survive the CSZ earthquake,” Stuedlein said.

The blast-induced liquefaction technique, which was co-developed at Oregon State by Scott Ashford, dean and Kearney Professor of Engineering, consists of multiple, controlled, detonations in 40- and 90-foot deep holes. Although the ground motions from the blasts are different from earthquakes, the soil response to the blasts can be used to gauge response to earthquake motions and improve understanding of soil behavior during an earthquake.

Since the airport sits upon liquefiable soils, including dredged sand, and Columbia river silts and sands, there is ambiguity about how deep liquefaction will occur during a CSZ event.

“We’re going to spend many months understanding what we have collected from the test, and then we will produce results that are readily transferable to our partners at the port to incorporate into their design process,” Stuedlein said.

OSU HOSTS RENOWNED AISC HIGGINS LECTURER

Presented by the American Institute of Steel Construction, OSU hosted the AISC Higgins Lecture, “Towards an Integrated Fracture-control Plan for Steel Bridges” on Friday, Oct. 19, by Robert J. Connor, professor of civil engineering and director of the S-BRITE Center at Purdue University.

“Fracture critical Member”

“Not critical”

Fracture critical Member
UPCOMING EVENTS

FEB. 8, 2019
GRADUATE RESEARCH SHOWCASE

APRIL 11, 2019
CONTRACTORS NIGHT

FACULTY HONORS

Chris Higgins, the Cecil and Sally Drinkward Professor of Structural Engineering, received the Alumni Professor Award at the College of Engineering's Celebrate Excellence event.

David Hurwitz, associate professor of transportation engineering, received the OSU Faculty Teaching Excellence Award, which honors unusually significant and meritorious achievement in teaching and scholarship that enhances effective instruction.

Burkan Isgor, professor of infrastructure materials and the John and Jean Loosley Faculty Fellow received the 2018 Excellence in Technology Transfer Award from the Pacific Northwest Transportation Consortium.

GRANITE GIVES BACK

Special thanks to our grads at Granite Construction for their support of CCE. The company made a $100,000 commitment to support development of a state-of-the-art facility, the Complex for Resilient Infrastructure and Safety (CRIS), which will advance research in construction safety and infrastructure performance.

“We are happy to help create new opportunities for faculty, students, and industry to collaborate on safer work sites and built environments,” said Paul Harding, SW Washington/Oregon area manager, Granite Construction (CEM ’00). “Protection of our employees, the public, and the environment is at the core of everything we do.”

BEAVERS BUILD

View alumni stories on Facebook.

Learn how CCE alumni are building a better world. Nick Clark (CE ‘97) and bridge engineers from HDR Engineering performed the first up-close inspection of the 746-foot high towers on the historic Golden Gate Bridge. Previously, inspectors used binoculars to examine the bridge. Using ropes, Clark and team members walked up cables of the 1,100-foot back spans to access the tops of the towers and rappelled down each face to conduct the inspection. Go Beavs!