Your Corvallis Weather Report

By Carrie Black

Corvallis is located in the Willamette Valley, nestled between the Coast Range and Cascade mountains. Much of what makes this area so attractive (the lush green forests, rich farmland, and scenic countryside) is due to the climate. Weather in Corvallis is relatively mild, with cool, wet winters and warm, dry summers.

While averaging 44 inches of rain per year, most of the rain occurs during the winter months (December through February). In fact, Oregon’s rainy reputation is somewhat misleading. On average it rains 161 days per year in Corvallis (only 45% of the time!). December is the wettest month overall. However, this does not deter students from travelling by foot or bicycle—it is not uncommon for students to arrive to class in full raingear and boots, with extra pairs of dry socks just in case.

Whether you enjoy the dry heat of summer, or the fresh smell after a rainstorm, there is something for everyone in Corvallis, Oregon.

Fortunately, when summer weather returns it is warm and sunny. Summers are generally dry in Corvallis, although thunderstorms are known to occur. Temperatures can get up to the high 80’s and 90’s. Students who stay in town for the summer find relief from the heat by swimming and floating in the cool waters of the Willamette River.

Although the climate is usually mild, Corvallis occasionally gets cases of extreme weather. In January of 2012, Corvallis got 4.02 inches of rain in 24 hours—the most rain since 1996 and the third rainiest day in over 100 years. The rainfall led to flooding, electrical outages, and school closures. In December 2013, heavy snow and extreme cold caused OSU to cancel classes on the last day of term, and to postpone final exams the next week. Students took advantage of the rare opportunity to build snow forts, have snowball fights, and ski through the streets. Whether you enjoy the dry heat of summer, or the fresh smell after a rainstorm, there is something for everyone in Corvallis, Oregon.
Earthquakes and other natural disasters can significantly damage structures. Some of these losses may be due to gaps in our knowledge of the way buildings perform during real earthquakes. Creating better test methods that simulate actual earthquake stresses on buildings would be a valuable tool for helping engineers and architects design safer structures. Rakesh Gupta (Associate Professor, Wood Science and Engineering) at the College of Forestry is leading a team to do exactly that.

Much of the experimental research in wood structures is conducted at the Gene D. Knudson Engineering Laboratory in the Department of Wood Science and Engineering in Richardson Hall on the OSU campus.

There is no national standard for testing building designs against earthquakes—and although researchers have tried different tests, none match actual conditions. In monotonic testing, the test wall is pushed sideways in one direction until it breaks or fails. In cyclic testing the wall is pushed and pulled to failure through a regular cycle of increasing and decreasing loads.

But real earthquakes are not regular—they vary in length and strength or intensity. And they create varying stresses on buildings from more than one direction and at fast, random rates. Therefore, to be more effective, earthquake testing should be dynamic—simulating the duration, randomness, and intensity of an actual earthquake.

The large wood engineering lab is a 3,000 sf. high-bay facility with 12 ft. high L-shaped reaction wall and 60x40 foot reaction floor to accommodate dynamic testing of large wood components and structural systems.

In the large wood engineering lab at Richardson Hall, Gupta and Tom Miller (Civil Engineering) and their graduate students Kevin White and Peter Seaders have been conducting monotonic, cyclic, and dynamic earthquake tests on shear walls with the help of Milo Clauson (WSE). The walls are built of 2 x 4 Douglas-fir with OSB sheathing on the “outside” and sheetrock on the “inside,” just like walls found in wood-frame house.

The computer-controlled tests use seismic data from real earthquakes such as the massive Chilean quake of 1960 (magnitude 9.5). For one test, the inside wall is decorated with metal bracketed book shelves complete with books, containers, and even a teddy bear. As the wall rocks and shakes violently, nails twist and bend loose and items come crashing down from the shelves onto the concrete lab floors. Despite the teddy bear’s tumble, Gupta says the wood-frame wall responded surprisingly well.

“An earthquake is a release of energy,” he says. “Wood has good energy-absorbing characteristics, and it’s lightweight and flexible—so wood buildings usually perform quite well during an earthquake. But we can make them safer still and that’s our goal.”
Student Profile: Amy Willmont studies in Costa Rica

Amy Willmont
Hometown: Thousand Oaks, California
Senior in Natural Resources

Natural Resources Policy & Management option

When I first heard about the course FOR 365, Issues in Natural Resources Conservation, I was immediately intrigued. It was offered as an online class during fall quarter 2013, with a required field trip to Costa Rica during winter break. Most importantly, since this is my final year at Oregon State, it fulfilled both a Baccalaureate Core requirement in Contemporary Global Issues and a requirement in my Natural Resources Policy and Management option.

I was wary about getting too excited at first, because I figured that I would not be able to afford all of the costs of the class. But the College of Forestry proved me wrong! The entire cost of the trip was covered through a College of Forestry scholarship fund, so I didn’t have to pay for anything out of pocket, except for what I spent while in the country. I was absolutely thrilled because I did not think that I would be able to study abroad again. I would not have been able to spend an entire quarter abroad again if I wanted to graduate on time, and I could never have afforded this experience on my own.

I have had many incredible experiences here in the College of Forestry, but nothing compares to the opportunities that I have had to study abroad.

In my sophomore year, I was able to travel to Chile for winter quarter. It was by far the best thing that I have ever done in my life. I came out of that experience a completely different (and better) person. When I returned, I had the travel bug, and felt like going to another country was no longer just a desire, but a need.

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... Costa Rica Continued

I learned so many valuable things from the online portion of the class. It really helped to supplement my other courses and reinforce some valuable topics that are essential to a thorough understanding of natural resource management. However, the main event (of course) was the trip to Costa Rica. I absolutely loved the format of the class, where you learn a lot of important information and then actually see it play out in real life.

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While in Costa Rica, we traveled through almost the entire country in 10 days, and saw things that you can only see once in a lifetime. We toured a pineapple plantation, went whitewater rafting, heard lectures from incredible biologists and ecologists, and spent a great deal of time observing the tropical rainforests. We visited wind energy and hydro energy sites, watched sea turtles laying eggs, toured the mangroves, and relaxed on the beach. It was both exhausting and incredibly wonderful.

We met many wonderful people, and were able to explore the towns and eat Costa Rican food. Although Spanish is the primary language of Costa Rica, almost everyone that we met also spoke English. It gave me an opportunity to practice the Spanish that I had learned in Chile, but also allowed me to effectively communicate when I inevitably forgot some important words.

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Along with the important natural resources issues that we learned about, a study abroad experience means that you also learn about a new culture and experience all that it has to offer.
Faculty Profile: Professor Chris Still

By Jennifer Knoellinger

While at UC, Chris also did his postdoctoral research on the role of clouds in the ecological structure and function of forests, on the global biogeography and biogeochemistry of C4 grasses, and on the isotopic composition of atmospheric CO2 and linkages between the carbon and water cycles at a range of spatial and temporal scales. His interest in these topics developed during a summer spent in Costa Rica, where he worked in the Tropical Montane Cloud Forests.

If you are interested in undergraduate research, Chris may have some exciting opportunities for you in his lab. Chris says that students and postdoctoral scholars in his lab have focused on various aspects of ecology and biogeochemistry, including ecophysiology, hydrology, and ecosystem and landscape ecology. A key focus is studying interactions between plants and the atmosphere, such as exchanges of carbon and water during photosynthesis, transpiration, and respiration, and using isotopes to better understand those exchanges.

Chris, like many others within the College of Forestry, enjoys being outside, hiking, mountain biking and skiing. Chris resides in Corvallis with his wife of 16 years, Maria, and their two year old daughter, Sequoia. Their family also consists of two dogs, a coonhound and a blue heeler-pointer mix. As a family, they enjoy going to the Oregon Coast, Eastern Oregon, and Portland for weekend adventures.

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Forestry & Forest Engineering Professional Program

Which College of Forestry degrees are a part of the Professional Program?

- Forestry
- Forest Engineering
- Forest Engineering & Civil Engineering

What is the Professional Program?

In our three professional degree programs, Forestry, Forest Engineering, and Forest & Civil Engineering, the student has an academic focus directly preparing them for a diversity of career options. Each student completes pre-professional school coursework (the first two years) and demonstrates a level of mastery that will allow the student to be more successful in the Professional Program (a.k.a. "Pro School," the third, fourth, and sometimes fifth years of our curricula). The coursework and training in Pro School ultimately matches very well with forestry career paths and prepares the student for real-world career applications.

Professional Program Entrance Requirements

- Satisfy the pre-professional course requirements
- Receive a "C" grade or better in technical courses
- Receive a 2.25 grade point average prior to applying to Pro School

Forestry Field School

Once admitted to Pro School the spring prior to junior year, students attend a two-week intensive field training to gain hands-on experience in Oregon’s western and eastern forest ecosystems. Students observe a range of forest types, and the issues and characteristics of each. The group returns from Field School as a team prepared for Pro School.

Cooperative Education Program

All Pro School students are required to have at least six months of relevant work experience. Pro School candidates also have the opportunity to participate in our new Cooperative Education (Coop Ed) program in order to gain extensive internship experience with on-the-job training.

The optional Coop Ed program offers mentored work experiences within partnering companies. These opportunities provide real-world experience, develop technical and essential skills, and provide fast-track connections to employers.

Click HERE for additional information on the Cooperative Education Program

Click HERE for additional information on the Professional Forestry Program (Pro School)
Back Cover Photo: Salamander at Finley Wildlife Refuge, Corvallis, OR by NR student Thomas DiGiovannangelo

Front and back cover photos were submissions in the 2013–14 College of Forestry Photo of the Week Contest for CoF undergraduate and graduate students.

Check out previous winners of the Photo of the Week Contest at our Flickr site