Nuclear Career Horizons Expand in France

Why would a nuclear engineering student add a French minor to an already challenging load? Because French is the language of love? Because they want to learn to hurl insults with finesse? Or (more likely) because it can broaden their career opportunities?

Last month, for example, the Areva website listed a six-month paid internship for foreign students in a small French city near the Palace of Versailles. Oooh la la.

NERHP senior Alison Arnold recently capitalized on her French language skills by joining a study abroad program, sponsored by OSU International Programs, where she attended the Catholic University of the West (CUW) in Angers, France. “I decided on a French minor,” she says, “because I always liked the language and they are so active in the nuclear field. I would love to live abroad so I thought it would be a really good combination.”

Angers, a metropolitan area of nearly 300,000, is 2.5 hours west of Paris by train and a world away from the chummy atmosphere of OSU. “It’s not a campus,” Arnold says of CUW. “It was in the city and there were only a few buildings. They don’t really have college sports teams. You don’t see students wearing sweatshirts in support of the college. It’s more like you are just going to university, taking classes, and getting your degree. In the U.S. we have much more emphasis on the whole experience.”

Arnold lived with a host family for her eleven-week stay and that intensive exposure really

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When OSU science professor Dave White agreed to arrange a seminar on ‘The Structure of Atoms’ for a group of Bend, Oregon elementary teachers, it seemed like a fairly simple task: get a room, set a date, invite the teachers and bring in an expert. It turned out the last part wasn’t so easy.

Initially White arranged for a group of nuclear scientists at Diablo Canyon Nuclear Power Plant to conduct the seminar via Skype conference call. Two days before the session date, Diablo announced a plant outage and the scientists had to cancel. White was in a panic.

NERHP to the rescue! White called NERHP looking for a speaker just before Christmas break. With professors scrambling to get grades done and students headed out of town, the timing could not have been worse. But White lucked out because Patrick Byfield was still on campus. Byfield, one of the most personable students at NERHP, is a senior in nuclear engineering. And his mom is a teacher. And his family lives in Bend. So he graciously volunteered to step up.

“Originally they arranged for me to talk to them via Skype but when they realized I was in town [Bend], they asked me to come over to the elementary school. It was better that way. I would have been this giant Wizard of Oz, disembodied head. That would have been kind of weird,” Byfield says.

In preparation for the seminar, White asked Byfield to explain the basic structure and properties of an atom, and give the teachers a brief overview of fission and fusion. Byfield came prepared to cover that but, when he opened the session up for questions, the teachers took him on a wild ride through light spectrums, Chernobyl, Avogadro’s number, and orders of magnitude.

“They asked me lots of questions about nuclear...
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improved her French. “I had dinner with them at least three nights a week which is good because it forces you to practice,” says Arnold. “I was surprised how fast I picked up understanding the language but responding took much more time. I’d have to sit there and think, ‘How do I say this?’”

Like many students in the department, Arnold is fully aware of the increasing globalization of the nuclear power field. “Having the knowledge of a second language is extremely important because many international students know more languages than we do. Being fluent [in French] is very very important for me.”

Arnold will graduate in June and is now applying to teach English in France next year. After that she’ll apply to OSU’s graduate program in nuclear engineering. Her dream job? “Ideally it would be amazing to be working in the nuclear field abroad especially in France. To be able to use my degree and knowledge of a second language to be able to travel would be my dream job.”

Joel Moreno, also a senior in nuclear engineering, recently returned from ten weeks in France where he attended the University of Poitiers as part of his International Degree language requirement. Moreno is writing a thesis for his International Degree and his experience in Poitier provided frontline research. In his short time there he discovered that the French are very fond of logic, math and technology. “They are proud of state-driven technical achievements such as their railway system,” he says, “and nuclear power is certainly celebrated.”

In the world of nuclear science, both commerce and research are rapidly becoming multi-national. The nuclear workforce of the near future will reflect this and OSU is committed to preparing students like Arnold and Moreno to work in a global community.

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reactors, three mile island, and Chernobyl. They knew a lot more than I thought they would,” says Byfield. “Someone asked me about the benefits of nuclear power. Despite being raised in Eugene with that whole hippie background, my personal view is that one nuclear reactor can produce so much continuous power compared with other alternative sources, it has to be considered.”

An interesting discussion ensued but Byfield found this group to be very open minded about nuclear power. “I didn’t get any negative input,” he says. “The only negative reaction I got was when I told them I was born after Three Mile Island. They were all mad at me for making them feel old.”

The group of teachers gathered at Bend’s Lava Ridge elementary school were completing a group of seminars sponsored by the Oregon Science Teachers’s Project. It’s the kind of outreach NERHP embraces; an opportunity to inform and perhaps dispel some of the mystery and fear that surrounds nuclear science. The department has dozens of students who volunteer for department outreach every year.

Byfield, who is graduating this spring and has applied to graduate school, really enjoyed the experience. “I had a lot of fun doing it. They were a great audience. Since they were all teachers, they were nice to me when it took me two full minutes to erase the white board every time I drew another graph.”
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