FROM

JOB SKILLS

TO

CAREER ADVICE

TO

MENTORING

CST’s professional development initiatives offer students invaluable real-world experience.
Through an array of initiatives, CST students can access thoughtful advising and real-world experiences that inform their career decision-making while at the college and well after they’ve left campus. “Professional development for science and technology majors is a little different than it is for other majors,” says Rose McGinnis, director of Student Professional Development and the Undergraduate Research Program. “We want to make sure students have all of the resources they need in order to be successful, whether their goal is to get into graduate school and pursue a career in academia, or to work in a laboratory conducting research for a pharmaceutical company or to join the tech industry. The key is that it’s not a one-size-fits-all approach.”

PICKING A PATH
McGinnis’ office typically engages with students early in their time at CST, usually by the end of freshman year or beginning of sophomore year. Helping students think about their goals from the outset ensures that they can stay on track to graduate in four years. It also may open them up to possibilities they hadn’t yet considered. “A perfect example is a student I met with a couple years ago who had a 3.89 GPA in chemistry,” she says. “When I asked what he’d do next he said he planned to go to graduate school to continue his studies but didn’t sound very happy about it. We explored his other options. He went on to get a master’s in computer science and now happily works for a large pharmaceutical company, which is a better fit for him. Sometimes students just need a little help to think outside the box.”

For those who already have a goal in mind, Professional Development staff will identify the types of working experiences needed to round out classroom education and improve résumés. The office maintains a list of internships and research vacancies both on and off campus and staff members help students develop the right networking skills and professional communication to lock down those opportunities.

“We might assist a student in drafting an introductory email or we’ll conduct mock interviews to help them brush up on their presentation skills,” McGinnis says. “We want them to feel confident and ready to take on the job.”

CONNECTING WITH EMPLOYERS
McGinnis’ office is responsible for organizing the Science and Technology Job Fair twice annually, in spring and fall. Some 350-400 students register to attend and the fair hosts approximately 75 employers specifically looking for science and tech majors. The list includes Dow Chemical, Merck & Co., GlaxoSmithKline, Cigna, TD Bank, J.P. Morgan & Co. and Aramark, among many others.

“Sometimes companies fight over students, and some take 10 to 20 students every year straight from Temple,” McGinnis says, adding that employers are not always looking for the most obvious candidates. “Often tech employers will talk to biology and chemistry majors because they recognize that these students have the problem-solving skills that are easily transferable.”

It’s not uncommon for alumni who have been hired during job fairs to return to campus and recruit the next generation for their company. “Our students understand that it’s about giving back and making opportunities for others,” McGinnis says.

NURTURING TALENT
Another initiative, CST’s Science Scholars Program, identifies high-achieving students and helps prepare them for graduate school, scholarships and academic careers. The program was introduced four years ago and the first class graduated in spring 2016. “We look at talented students and the potential roadblocks that might interfere with their success,” McGinnis says. “Then we figure out ways to get them beyond those hurdles.”

Promising students interested in research careers are identified early on and invited to apply for the program, which offers regular mentorship and academic guidance. Students must maintain a 3.65 GPA to stay eligible.

The program’s first graduating class includes a chemistry major who will go on to pursue a fully funded PhD at the University of Michigan. Three other students will be conducting research abroad in their chosen subject areas over the summer. Currently, there are about 50 Science Scholars students.
TOMORROW’S TEACHERS

CST students can pursue a career in science education through T’Uteach, offered by CST in conjunction with the College of Education and encompassing eight majors, including biology, chemistry, mathematics, mathematics and computer science and physics, and a strong foundation in pedagogical practices.

“Typically students would have to major in education to gain the needed teaching credentials for a job.” This program allows them to focus on a math or science major while taking part in specially designed internships and field experiences that prepare them to teach,” says Susan Jansen Varnum, associate dean for science education.

Students can join T’Uteach through multiple entry points, whether they are a self-directed incoming freshman or a junior with a change of plans or a transfer student. Though some students may need to take summer courses, they can still graduate on time with a bachelor’s degree and eligibility for state-recognized credentials for a career in education. “Even for students who don’t necessarily want to teach, the program provides important skills like public speaking and communication that can be valuable in any career,” Varnum explains.

Dylan Peay (BS ’16, Bio/Teaching) joined the program as a transfer student in his second semester. The biology major especially liked the idea of getting field experience. “T’Uteach students enter the classroom as primary instructors from freshman year and continue to teach throughout the program,” he says. “T’Uteach students get a more personal advising experience and the degree requirements provide extra incentive to achieve good grades. A large university can be overwhelming but T’Uteach helped me find opportunities to carve my own path.”

Varnum also oversees the community STEM education initiative, which covers 27 different programs run with the help of CST students, volunteers and dedicated staff. Through programs like after-school classes in a community center, college preparatory sessions, a residential science camp at Temple or a science and literacy program in an underperforming school, students can gain informal teaching experience and in many cases, be paid for their work.

The community education program reaches hundreds of young people every year. Temple students report that the experience is not only valuable from a professional standpoint but they feel they are making a difference in kids’ lives, engaging them in science education and inspiring them to continue to pursue their own goals.

Peay graduated in May and has found that T’Uteach and his work in the community education initiative has been extremely helpful in the job interviewing process. “As I talk to prospective employers, they often comment on how impressed they are that I was able to amass so much experience while still excelling academically. T’Uteach has definitely given me a leg up.”

REAL MENTORSHIP

Even the most career-driven students need help navigating the professional world. The Owl to Owl Mentor Program, started by the CST Alumni Board, connects students with alumni already out in the work world. The program mostly targets sophomores and juniors. Once students apply, they are selected by a committee and matched to appropriate mentors.

“The mentors offer their most valuable resource—time—because they really want to help students. They attend campus events, connect with students by phone and email and stay in touch over the course of the year,” says program chair Sina Adibi (BA ’84, CIS; FOX ’86) senior technology product and services executive at Artezio.

Owl to Owl publishes a handbook that covers the expectations of the program and includes practical advice on résumé writing and interviewing. Through at least four meetings a year, mentors listen to students, help them think through career goals and map out effective strategies for achieving those goals. They advise students on communication skills, connect their classroom learning to job possibilities and assist them in building a professional network. They might also help in other ways, such as giving a student a tour of their own place of employment or offering to make a call on their behalf.

Karen Gomez, Class of 2017, applied to the program as a biochemistry major with an eye toward a career as a physician scientist working in biomedical research. “My mentor, Jim Guare (BA ’77, MA ’83, Chem) introduced me to the cardiologist I shadowed for a day. I learned more about his work and gained valuable exposure to the healthcare field,” she says.

For his part, Adibi was inspired to get involved in the program because an informal mentorship while he was a student at Temple set the stage for his own career in technology. “We want to give students access to resources they might otherwise not have,” Adibi says. “In my experience as a mentor, I’m helping shepherd students to the right opportunities. One student I worked with got an internship at Apple; unusual because Apple doesn’t recruit on campus. It’s very gratifying to help students whenever we can.”

URP MEANS REAL-WORLD RESEARCH

One goal of CST’s Student Professional Development office is to get students opportunities that might result in publication or the chance to present research at a conference. To that end, the Undergraduate Research Program provides funding for students to spend two semesters in a lab setting, working with world-class researchers.

The program, which began in 2009, has supported over 850 students. To be eligible, students must be high achievers and their application must be approved by the CST Dean’s office. Accepted students select a research project from a posted list. In the fall and spring semesters, students receive credit for their work; in summer, it’s a paid position. Some labs also offer stipends for work that goes beyond the research requirements. Students can then present their work at the URP Research Symposium, which offers cash awards for top projects.

—Elisa Ludwig