Life after grad school

I read the article “Thinking Ahead in Graduate School” (C&EN, May 9, page 14) with interest. As chair of the University of Michigan’s department of chemistry, I can say that we have had unanimously and positive agreement around attending to our students’ overall career development.

In our graduate program, we adopted two mandatory one-semester research rotations in 2002, putting informed choice at the heart of the most critical decision made by a student: namely, the selection of the best match with a research project and a research group. Though it is difficult to ascribe direct cause in complicated systems, it is nonetheless true that average time to degree has been reduced over the past 15 years from 5.2 to 5.0 years, the average time to candidacy has been reduced from 2.1 to 1.6 years, and the overall successful completion of a Ph.D. has increased from 67% to 87% (all of these numbers are five-year averages). Using demographic comparison, I can say these outcomes are not based on any change in our admissions standards.

We have been seriously attending to future faculty development for more than 20 years, and in 2014 we institutionalized a program (Chemical Sciences at the Interface of Education, pronounced “cesium”) in which faculty-directed instructional projects are enabled using the research group structure. With mechanisms of support including course and degree options as well as hybrid teaching assistantships, the program allows Ph.D. students to add substantive work in education to their overall graduate experience.

Last year, building on the success we saw in CSIE|UM, we introduced CALC|UM (Chemistry Aligned with Life & Career, pronounced “calcium”) as the parallel program for students who are interested in options outside academia. As with CSIE|UM, the programming is all planned and carried out by a committee of students. The turnout for CALC|UM events immediately outgrew the space we had scheduled, reflecting a huge pent-up demand. Topics this year have ranged from informative (for example, strategies for and experience with interviews, advice for moving into management, and site visits) to experiential (for example, case study problems done collaboratively with an industrial partner and opportunities for consulting with local and regional start-ups). We are currently working with our Schools of Business, Law, Public Policy, and Public Health to devise the same sorts of project and degree opportunities as we have with the School of Education.


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