

CAREERS

Continuing education and networking in the workplace

For biotechnology professionals, getting ahead may mean going back to class.

Daniel Coulter

Recent graduates and those new to the biotechnology industry often lack an appreciation of the complex research, regulatory, manufacturing, and computing environment unique to the industry. Adequate exposure to this environment is difficult to obtain and often is only achieved through years of on-the-job experience. University programs have traditionally focused on full-time students, but increased requests from working professionals and their employers alike have prompted some universities to offer classes, training programs, and certificates in biotechnology-related disciplines. These programs are designed to assist students in becoming industry proficient in an expeditious fashion by exposing them to practical laboratory, clinical, and pilot-plant environ-

ments, as well as classroom lectures.

Benefits for the students enrolled are considerable. In addition to the specific knowledge and skills obtained, the classroom is an excellent environment for making contacts and staying current with news and trends in the industry. For recent graduates, those finishing a postdoc, or those looking for a change in careers, a course is a great way to get an inside track on meeting managers, finding out which companies are hiring, and investigating a career move. Most companies will reimburse employees for educational expenses, and at \$300 to \$1,800, the cost per class is often less than similar courses offered at national meetings and conferences.

Job hunting and networking in a classroom is more relaxed and less stressful than at a conference or job fair, where you may only meet with someone once, and then only for a few minutes. An educational environment allows people to get to know each other and feel comfortable with one another over a few days or weeks. This makes bringing up

career topics such as opportunities one knows about, hiring managers to contact, or compensation issues much easier.

Kamal Rashid, program director of the Biotechnology and Bioprocessing Training Program at Penn State University (University Park, PA) says most of the 1,500 participants who have completed their training program in the past 10 years have been from the biotechnology and pharmaceutical industries, with a few from government and academic institutions. Most were from R&D groups, yet there have been CEOs, VPs, and even marketing and sales people. As for prior education, most participants had bachelor's degrees, but a few had PhDs.

Educational programs tailored for biotechnology professionals provide an excellent means to obtain valuable knowledge, while maintaining a relaxed atmosphere in which to interact with one's peers. Updating one's skills and meeting new industry acquaintances are beneficial habits from which anyone can gain. ///

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Table 1. Selected university programs for biotechnology professionals.

Institute	Internet address	Details
Penn State University	http://www.bmb.psu.edu/deptpage/BiotechTraining/	Emphasizes hands-on training in bioprocesses as well as other development and manufacturing areas.
UC San Diego	http://www-esps.ucsd.edu/	Provides an array of credential programs in drug discovery, clinical trials management, biotech manufacturing, engineering, and network computing.
Massachusetts Institute of Technology	http://web.mit.edu/professional/	Includes courses organized by a multidisciplinary program of the Schools of Engineering and Science and the Sloan School of Management.
UC Berkeley	http://www.unex.berkeley.edu:4243/	Provides credential programs with an emphasis on network computing, Web design, and database management.
Rutgers University	http://aesop.rutgers.edu/~ocpe/	Offers training in protein and DNA purification, isolation, analysis, and characterization as well as courses in capillary electrophoresis, PCR, and HPLC.
Cold Spring Harbor	http://nucleus.cshl.org/meetings/	Includes coursework in genomics, molecular biology techniques, and the nervous system.
Microsoft Certified Professional Program	http://www.microsoft.com/mcp/	Several universities and some community colleges offer these courses, suitable not only for those looking to be certified in the popular Office suite, but for database administrators, Web-based application designers, and those in network computing looking to become a Certified Microsoft Systems Engineer or Solution Developer.
Oracle Professional Development	http://education.oracle.com/	Another university-offered program, suitable for database administrators, Web-based application designers, and those in network computing looking to become an Oracle Certified Application Developer or Database Administrator. Also suitable for those working with the popular HTS and pharmacophore detection databases, QSAR, and docking simulation software offered by Tripos and Molecular Simulations, Inc.