

Continuing Education Programs in San Diego County

BIOCOM

BIOCOM is the life science industry association focusing on initiatives that positively influence the growth of the life science industry in the greater San Diego region. One of the ways in which BIOCOM serves its member companies is by seeking funding to support employee training, including training contracted through the above colleges and universities.

In partnership with outside trainers, BIOCOM also offers short courses introducing non-scientists to key concepts and vocabulary used in the life sciences industry, as well as courses designed to help scientists become better business managers. These are short, intense workshops that are designed for working professionals. Both topics are offered in at least two formats, allowing individuals to choose the offering most appropriate for their needs.

For high school students, BIOCOM offers a scholarship, and an essay contest. The scholarship is open to graduating high school seniors who will attend an accredited two-year college or four-year university in the US, and who demonstrate academic excellence, leadership abilities and a desire to pursue a career in the life sciences industry. The average scholarship amount is \$1000.00. The scholarship is funded by donations to a fund held at The San Diego Foundation.

Finally, BIOCOM is active in promoting education outreach programs run by The San Diego Workforce Partnership (SDWP) and by the San Diego Science Alliance. Programs organized by SDWP include internships for youth and teachers, job shadowing for students and teachers, and company tours. The San Diego Science Alliance organizes many activities including High Tech Fair, where industries share their technologies with 2,500 middle and high school students.

In an effort to prepare a world-class scientific workforce for San Diego, the Life Sciences Summer Institute (LSSI) was created to give students and teachers exposure to the life sciences industries. Created in 2005, the LSSI connects upper-level high school, university and community college students, as well as high school teachers, with leading companies within San Diego's life sciences community. The program serves three very specific objectives:

- To provide industry with well-prepared, high quality student interns
 - To provide students with hands-on experience within to the life sciences industry
 - To better equip our high school teachers to prepare our future scientific workforce
- The annual Counseling for Careers in Biotechnology and Medical Devices is a one-day workshop for career counseling professionals to gain exposure to the life sciences industries and perspective on everything from hiring trends to alternate career paths.

More information on the above is available through BIOCOM's website, www.biocom.org

California State University at San Marcos (CSUSM) Extended Studies

The Extended Studies Program at CSUSM is offering a Biotech Certificate Program. This 17-unit certificate program is ideal for college graduates seeking entry into the biotechnology/life science arena as lab technicians or research assistants. Likewise, this program can provide continuing education for biotech employees seeking change or professional development.

Contact information for CSUSM Extended Studies:

For information on the Biotechnology program, go to www.csusm-es.org/

Coleman College

Coleman College is a nonprofit San Diego based technical institution. It is nationally recognized as a leader in Information Technology (IT) education. Since 1963, Coleman College has provided accelerated career training that has helped its students become leaders in the IT industry.

For more information about the Bioinformatics Technician Program visit <http://www.coleman.edu/academics/undergraduate/bioinformatics.php>

SDSU College of Extended Studies

Professionals and students wanting Certification in biotechnology-related disciplines have several options available to them at SDSU's College of Extended Studies. Open University Certificate programs provide training in technical and scientific writing, as well as in computer science. Professional Certificates provide training in:

- Regulatory Affairs
- Leadership skills for technical professionals
- Lean manufacturing
- Lean Six Sigma Black Belt
- Operations resource management
- Project management
- Quality business practices and organizational excellence

UCSD (University of Cal. San Diego) Extension

UCSD Extension is an organization that provides post-baccalaureate education to working professionals, career-minded individuals and persons interested in personal enrichment education.

The UCSD Extension program offers individual courses, Advanced Study programs and Certificate programs in the biotech and pharmaceutical sciences. These classes are designed to meet the continuing educational needs of the pharmaceutical and biotech industries by providing skill development. Extension programs can also help those in the biomedical industry who want to make a career transition.

Individual courses are offered through UCSD Extension that provide education in the areas of bioinformatics, drug discovery and development, regulatory affairs, biotech manufacturing, quality systems, and biotech business management.

The UCSD Advanced Study Program offers a Master of Advanced Studies (MAS) in Clinical Research as well as Leadership and Management Development Programs. Typical students in this program include professionals in the biotechnology or pharmaceutical industry wishing to pursue further education.

UCSD Extension offers a wide range of university-accredited Certificate programs that are relevant to the biotech and pharmaceutical industries. The time required to complete a certificate program varies, depending on the needs of the student. A Professional Certificate requires completion of at least twenty units. The Specialized Certificate is a shorter, more focused program and a Certificate of Proficiency provides brief, solution-focused training.

The Certificate in Bioinformatics enables professionals to better utilize and develop bioinformatics databases and tools in order to better understand biological information. The Specialized Certificate is ideal for people who want a quick introduction to this field. The Professional Certificate in Bioinformatics requires more time to complete but provides more in-depth learning. Students enrolled in the Professional Certificate program can choose either biology or computer science track curriculum.

The Biomedical Product Development Certificate is geared toward scientists, engineers, project managers, manufacturing managers, quality control managers and others involved in biomedical design, development and control. This is an eighteen-week long program.

Biotechnology from a Global Perspective is a highly-interactive ten-week-long course for anyone interested in getting into the biotech industry or looking to start a biotech business. The class explores the global biotech environment and current developments in various countries, with a particular emphasis on Asia-Pacific.

UCSD Extension offers both a 12-unit Specialized Certificate in Biotechnology Manufacturing Fundamentals and a 24-unit Professional Certificate in Biotechnology Manufacturing. The specialized certificate is ideal for someone exploring this field as a possible career. It offers an industry-focused curriculum that covers basics in biotechnology manufacturing process and good practices. The professional certificate is geared toward professionals who would like more formal training in biotech manufacturing. The curriculum addresses issues unique to biotechnology manufacturing, as well as those issues common to manufacturing in general. Key topics include manufacturing processes and good practices, project management, quality control and regulation, validation and calibration.

A Certificate in Lean Enterprise is an eighteen week, one day per week program that is ideal for those who manage or participate in manufacturing activities. The program

teaches the essentials of efficient manufacturing. Application for candidacy is required for this program.

The Clinical Trials and Management Professional Certificate is 23-unit program that acquaints students with the many aspects of the clinical trial research process. The Certificate is designed to educate clinical research associates, clinical research coordinators, physicians, medical directors, biological researchers, nurses, statisticians and database administrators.

The Drug Discovery and Development Certificate is a Professional Certificate program that provides researchers with a broad background and appreciation of the multidisciplinary process that leads to drug discovery. Students can choose either a biocentric or chemocentric curriculum.

The Certificate in Medicinal Chemistry is an intensive eighteen-week course focused on understanding drug discovery, design and mechanism of action. Biomedical researchers are taught ways to 'build bridges' between biology and chemistry to facilitate the drug discovery process.

Designed for chemists, bio-chemists and biologists, the Certificate in Quality Control and Assurance is an eleven-unit program that covers quality regulations for production and control of biologics and drugs all the way from early stage discovery to manufacturing.

Students who are interested in an introduction to the field of regulatory affairs can complete a Certificate in Regulatory Affairs Essentials. This program focuses on the technology, as opposed to the business of regulatory affairs. The Certificate in Regulatory Affairs for the Biomedical Industry is a Professional Certificate program and offers more in-depth knowledge about FDA-imposed regulatory issues that are relevant to the pharmaceutical and biotech industry. Classes offer understanding in a broad range of technical as well as business skills.

The Six Sigma Program offers instruction to working professionals on how to improve business processes, products or services. A seven-week Specialized Certificate is offered, as are shorter courses and workshops. Application for candidacy is required for these programs.

For more information on UCSD Extension programs, please visit www.extension.ucsd.edu or <http://bioscience.ucsd.edu>