

COMMUNITY COLLEGES OF SAN DIEGO COUNTY

Cuyamaca College

Biology 126, *Introduction to Biotechnology* is a three - unit course that provides an introduction to biotechnology for non-biology majors. Topics include fundamentals of molecular biology and of scientific research, product development and manufacturing, as well as the social, legal and ethical implications of biotechnology. This course is designed for those who might be interested in working in the industry in a non-scientific capacity, or who are currently working in the industry and want to expand their overall understanding of it. There are no prerequisites for this course.

More information on the above is available at <http://www.cuyamaca.edu/>

General, (619) 660-4000

Admissions, (619) 660-4275

Math and Sciences, (619) 660-4452

Biotechnology Director, (619) 660-4345

MiraCosta College

Three certificates are available at MiraCosta College. A *Certificate of Achievement - Biotechnology Lab Assistant* is a 17-20 unit program which is designed to prepare entry level workers in support positions including media preparation. A *Certificate of Competence - Biotechnology Research and Development Technician* is a 40-41 unit program designed to give students a deeper understanding of the science to work in R&D support positions, quality assurance/control and manufacturing. Course work includes basic solution and media preparation, basic bacteriology and sterile technique, assay and spectrophotometry, as well as gel electrophoresis. Prerequisites include English, math, chemistry, biology and basic computer information systems. Finally the college offers a *Certificate of Competence - Biotechnology Manufacturing Operator* which is 27-28 units and provides the background for involvement in the production of products. Specialized course work includes: Solution and Media, Bacteriology / Sterile Technique, Assays / Spectroscopy, Tissue Culture, Business and Regulatory Practices in Biotechnology and Bioprocessing. Prerequisite courses include 17 units total of intermediate algebra, English, preparatory chemistry, human biology (or Introduction to Biotechnology), and Computer Information Systems.

More information on the above is available at

<http://www.miracosta.edu/instruction/biotech/index.html> or

<http://hub.miracosta.edu/biomfg/>

General, (760) 757-2121

Admissions, (760) 795-6620

Math and Sciences, (760) 795-6812

Biotechnology Coordinator, (760) 757-2121, ext. 6496

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Palomar College

Biology 160 is a five-unit course called *Biotechnology Preparatory Course* and is designed to be a preparatory course for students interested in further studies in biotechnology or for an entry-level position in industry. It articulates with various regional certificate programs.

More information on the above is available at www.palomar.edu

General, (760) 744-1150

Admissions, (760) 744-1150, ext. 2164

Department Secretary, (760) 744-1150, ext. 2275

Biotechnology Faculty, (760) 744-1150, ext. 2737

San Diego Mesa College

The *Chemistry Technician Certificate* at San Diego Mesa College is a program designed to prepare students for an entry-level chemistry lab job in the biotech field. Students must take two semesters of Organic Chemistry with lab, Instrumental Analysis with lab, Biochemistry lecture and lab techniques, Introductory Biology with lab, and Microbiology with lab. Chemistry 225 (Inside the Pharmaceutical Industry), is also included in the curriculum. Second semester general chemistry with lab is a prerequisite to entering the Certificate program.

More information on the above is available at <http://www.sdmesa.edu>

General, (619) 388-2600

Admissions, (619) 388-2500

Math and Sciences, (619) 388-2795

Rob Fremland, (619) 388-2422 rfremlan@sdccd.edu

San Diego Miramar College

San Diego Miramar College offers a *Certificate of Completion in Applied Biotechnology*. This is a one-year certificate program designed to teach students the basic biology, chemistry and lab skills needed for an entry-level position in the industry.

To earn this Certificate, students must complete two courses. Each course is four units and eight hours a week. Applied Biotechnology I covers introductory biology and chemistry skills. Applied Biotechnology II introduces advanced lab techniques and is taught by industry instructors. Students are advised to take 12 units total of Introduction to Biotechnology, chemistry and algebra prior to entering the Certificate program.

More information on the above is available at

<http://www.sdmiramar.edu/academics/tech/biotech>

Admissions, (858) 536-7844

Math and Sciences, (619) 388-7844

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Biotechnology Director, (619) 388-7490 sslivka@sdccd.edu

Southwestern College

The *Biotechnology Certificate* is a 31-unit program that provides an introduction to a variety of biotechnology disciplines and techniques. Students take 13 units total of General Chemistry, Principles of Biology (lecture and lab), Introduction to Research I and DNA Science I. The following semester, students take 14 units total of Microbiology, Cell Biology, Introduction to Research II, and DNA Science II. Elementary algebra is a program prerequisite.

More information on the above is available at <http://www.swccd.edu/>

General, (619) 421-6700

Admissions, (619) 482-6550

Math, Sciences & Engineering, (619) 582-6459

Biotechnology Program Director, (619) 421-6700, ext. 5476 Dr. Nouna Bakhiet