

Four – Year Universities in San Diego

California State University San Marcos

Cal State University San Marcos (CSUSM) offers several programs to prepare students for a career in biotechnology. The University offers degree programs leading to a B.S. or a M.S. in Biological Sciences, or a B.S. in Biotechnology, Biochemistry or Chemistry.

The B.S. degree program in Biotechnology is designed to give students a lab-intense, science core education, along with business and industry exposure and experience.

CSUSM has several other biotech-related programs in the planning stages. These include:

- B.S. degree program in Nursing (Fall 2006)
- M.S. degree program in Biotechnology/Biochemistry (Fall 2009).
- Professional Science Masters (Applied Masters) in Biotechnology

Collaboration between the life science faculty and local biotech and pharmaceutical companies has resulted in internships and joint research ventures. Internships for biotechnology majors provide students with real-world exposure, as they gain hands-on experience, as well as academic credits.

Contact information for CSUSM:

Biological Sciences

www.csusm.edu/Biology/

Dr. Denise Garcia, Chair & Associate Professor

307 Science Hall 1

(760) 750-4132

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Chemistry & Biochemistry

www.csusm.edu/Chemistry

Dr. Jackie Trischman, Chair & Professor

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Biotechnology

Dr. Albert Kern, Director

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The Rady School of Management

UC San Diego's School of Management was established in 2001 and was named the Rady School of Management in January 2004. It opened its doors to executive MBA students in September 2004, and welcomed Full-Time MBA students in fall 2005. Unlike conventional MBA programs, the program targets students from diverse cultural backgrounds who have an understanding and appreciation of science and technology.

MBA students receive the fundamentals of business and management in a global environment – and build on this with a curriculum focused on the implications of

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management principles and business realities for organizations driven by science, technology and innovation. The curriculum includes industry-focused tracks that enable students to develop deeper knowledge in their areas of interest, including life/health sciences and information technology/communications.

The Rady School also offers executive education courses that provide business and leadership skill development for executives looking to increase their acumen in a non-degreed environment. Programs are designed and developed with industry input and can be customized for individual companies or offered as open enrollment for the community. All programs are consistent with the Rady School's unique strengths and its focus on science and technology.

Current information on course schedule and content can be found at:

<http://rady.ucsd.edu/consortium>

Or contact:

Sharon L. Wampler, Ph.D., Program Manager, Executive Education

Phone: (858) 822-0079

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San Diego State University

Undergraduate degree programs in biology and chemistry are offered through the College of Sciences. Students can earn a B.A. or B.S. degree in Biology or Microbiology, with emphasis in cell and molecular biology, ecology, evolution and systematics, marine biology, zoology, or medical technology and public health microbiology. Students wishing to pursue a chemistry undergraduate degree can get a B.A. or B.S. in Chemistry, a B.S. with Emphasis in Biochemistry, or a B.S. in Chemical Physics.

Graduate programs offered at SDSU include Masters Programs and Doctoral Programs. Masters Programs are offered in Molecular Biology, Physiology, Microbiology and Biostatistics, Computational Science, and Computer Science. M.S. programs and advanced certificates in Biomedical Quality Systems and Regulatory Affairs are offered by the Center for Bio/Pharmaceutical and Biodevice Development. Students can earn M.A. and M.S. programs in Chemistry.

The Joint Doctoral Degree in Biology (cell and molecular biology) is offered at SDSU in cooperation with the University of California at San Diego. Students in the program can select coursework from offerings at either UCSD or SDSU. Likewise, a Ph.D. degree in Chemistry is offered jointly with the UCSD Department of Chemistry through the Joint Doctoral Program (JDP).

The College of Sciences and Business Administration are currently developing new Professional/Applied Masters degree programs in Behavioral Neuroscience, Bioinformatics, and Computational Sciences. These Professional Masters degree programs will include industry based internships, courses in business management and principles, good laboratory practices, and regulatory affairs and emphasize team-based

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learning and oral and written communication skills. In the fall of 2003 a new joint PhD/MBA was piloted with its goal being the production of cell/ molecular biology graduates with research-based expertise skills in management, business practices, and communication. It is the first program of its kind in the U.S. SDSU's Entrepreneurial Management Center (EMC) is a founding member of the National Consortium for Life Sciences Entrepreneurship and conducts an Entrepreneurs-in-the-Classroom program and related programs dedicated to providing the regional entrepreneurial community with tools and skills necessary for venture creation and growth.

Contact information for SDSU: www.sdsu.edu.

University of California San Diego

UCSD offers several undergraduate and graduate degree programs that can prepare students to enter or progress in the biotechnology/ pharmaceutical arena. Such programs are available through the UCSD Division of Biological Sciences, the UCSD Department of Chemistry & Biochemistry, the Department of Bioengineering, the Department of Bioinformatics, the Department of Neuroscience, the UCSD School of Medicine and the UCSD School of Pharmacy and Pharmaceutical Sciences.

The UCSD Division of Biological Sciences offers several undergraduate degree programs that are relevant to a career in biotechnology. These include:

- Animal Physiology and Neuroscience
- Biochemistry and Cell Biology
- Ecology, Behavior and Evolution
- General Biology
- Human Biology
- Microbiology
- Molecular Biology
- Bioinformatics

The UCSD Department of Chemistry & Biochemistry offers undergraduate degree programs leading to a B.S. in:

- Chemistry
- Biochemistry/Chemistry
- Pharmacological Chemistry
- Bioinformatics

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Graduate degree programs available through the UCSD Division of Biological Science include:

- Biomedical Sciences
- Computational Neurobiology
- Joint Ph.D. in Biology with SDSU

Graduate degree programs available through the UCSD Department of Chemistry & Biochemistry include:

- Chemistry (M.S. and Ph.D.)
- Biochemistry/Chemistry (M.S. and Ph.D.)
- Bioinformatics (Ph.D.)
- Joint Ph.D. in Chemistry & Biochemistry with SDSU

Ph.D. degree programs in Bioengineering, Bioinformatics, and Neurosciences are offered, respectively, by the Department of Bioengineering, Department of Bioinformatics, and Department of Neuroscience.

UCSD has put together a joint B.S./M.S. Biology program to serve those students who wish to gain more experience in their field of study before graduation. Students can make themselves more marketable in the biotechnology industry with this degree since it adds research experience to their resume. The program is open to UCSD biology undergraduates only.

The School of Pharmacy and Pharmaceutical Sciences currently has a Doctor of Pharmacy (Pharm.D.) program. The School plans to add three more programs, open to students in the fall of 2005. Students will have the option of earning a combined B.S. in Chemistry/ Doctor of Pharmacy on a seven-year plan. A Ph.D. program and a combined Ph.D./Pharm.D. programs are also planned for the fall of 2005.

The UCSD School of Medicine Ph.D. Training Program offers doctorate degrees in Biomedical Sciences, Neuroscience, and Molecular Pathology. The M.D. /Ph.D program is for those who wish to do medical research as a physician – scientist.

Contact information for UCSD:

www.ucsd.edu

Contact information for the UCSD School of Pharmacy:

Phone (858) 822-4900

<http://pharmacy.ucsd.edu>

Admissions Email, sppsadmissions@ucsd.edu

General Email, pharmacy@ucsd.edu

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University of San Diego

USD offers undergraduate degrees in Biology and in Chemistry through the College of Arts and Sciences. The Biology undergraduate program aims to give students a thorough preparation for graduate or professional school and the laboratory training necessary for entry into advanced programs in biotechnology. A strong emphasis is placed on laboratory and field experience; students are encouraged to complement their formal course work with research under faculty supervision. An internship experience is also offered to upper-division biology majors so that they may participate in the application of biological knowledge to problems in the off-campus world.

The program in Chemistry provides a strong foundation in the principles and practices of modern chemistry within the framework of a liberal education. The major is designed to give students both the theoretical basis of the discipline and also extensive hands-on experimental experience to allow them to test theories in the laboratory. Students can major in traditional chemistry or they can major in chemistry with emphasis in biochemistry.

Contact information for USD:

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