

SCHOOL OF SCIENCE, TECHNOLOGY AND HEALTH

Vision and Mission

The School of Science, Technology and Health (<https://www.biola.edu/science/>) is equipping a new generation of ethically thoughtful professionals in the sciences and health care, grounded in a Christian worldview, educated in an academically rigorous environment, ready to assume positions of leadership, and able to provide the clear moral vision the world desperately needs.

Overview

In February 2016, Biola University broke ground on the most ambitious building project in its history. The new facility, an expansive new \$63 million, 91,200 square ft. science facility that serves as the home to the new School of Science, Technology, and Health, is comprised of some of the University's fastest and highest demand job opportunities. The building opened in early 2018 and tripled the amount of space devoted to science education at Biola which enabled students and faculty to study in state-of-the-art laboratories and classrooms with cutting-edge equipment.

Additional Educational Opportunities and Distinctives

The rapidly evolving fields of science and medicine need scientists and clinicians who are not only prepared academically and intellectually, but also guided by a strong ethical core. Biola's science, technology, and health programs offer several key advantages:

Integration of Science and Faith. The School of Science, Technology, and Health at Biola University is dedicated to understanding how science fits into the Biblical narrative, helping equip students to thoughtfully engage the broad world of ideas and offer a morally-grounded foundation built on compassion and stewardship of all forms of life. Small class sizes and laboratory sections give students the opportunity to spend significant time in close mentorship with their professors, who remain active scientists in their respective fields.

Laboratories with State-of-the-Art Equipment for analyzing gene expression, immunohistochemistry, fluorescence and scanning electron microscopy, high-performance liquid chromatography, proton NMR, high performance liquid chromatograph, a high-speed centrifuge, atomic absorption spectrometer, infrared and fluorescence spectrometers, supercomputing cluster, and an atomic force microscope offer strong resources and rich opportunities for directed research.

3+2 Engineering Program. The first three years of the engineering physics program will be spent at Biola, studying physics, chemistry, mathematics, biblical studies and the liberal arts — all from a Christian worldview. The following two years will be spent at the University of Southern California (<http://viterbiadmission.usc.edu/threetwo/>) or another accredited engineering school. At the end of this five-year program, students will earn a B.S. in engineering physics from Biola and a B.S. degree in the field of engineering chosen by the student.

Locale and A Variety of Habitats for Study are within driving distance to do field work in marine, coastal, desert, and alpine ecology. In addition, Biola's Organic Garden and Aquaculture site allow for research projects

on campus. Our close Christian partner, the Au Sable Institute, offers field classes in Michigan, Washington, Costa Rica and India.

The Nursing Simulation Lab gives students hands-on experience in a variety of different simulated hospital environments caring for a variety of patients in a safe structured setting. These may include medical/surgical, critical care, obstetrics or pediatric settings and patients.

Top Tier Hospital Training. Biola has partnered with multiple top tier, magnet hospitals in Los Angeles and Orange County including UCLA, Children's Hospital of Los Angeles, University of California, Irvine, St. Joseph's, City of Hope, Children's Hospital of Orange County, Hoag, St. Jude's, and the Kaiser Health Care System as well as many other community hospitals allowing students to receive rigorous, hands-on clinical training in a real hospital environment.

Speech and Language Clinic. Biola has an on-campus speech and language clinic that is open to the public free of charge. The clinic provides speech and language services to clients ages 3 to 90+ with diagnoses such as autism, speech sound disorders, and aphasia. It has state-of-the-art equipment including a digital endoscope, Visipitch, a nasometer, and AAC devices.

The Human Performance Lab and Athletic Training Room are on-campus resources for students to practically apply skills they've learned in classes. Faculty facilitate opportunities for students to participate in research and students are able to volunteer and gain experience working with special populations and the local community.

Clinical Shadowing Program provides weekly opportunities to observe and interact with physicians to explore a field of interest, gain valuable clinical experience, make connections that provide a source for letters of recommendation, and witness first-hand what it means to be a Christian health professional.

Medical Missions. Students can participate in medical missions work in hospitals overseas and across the country including the Philippines, Thailand, Mexico, Rwanda or Alaska. They are also actively involved in the running and management of many community-based, underserved, outreach clinics locally like the La Mirada Activity Center serving older adults, a clinic serving the homeless in Costa Mesa, and the Fred Jordan Missions in Los Angeles. This allows them to gain invaluable cross cultural, clinical, service learning experiences which are beneficial for their future clinical nursing careers as well as a solid foundation for future graduate school pursuits.

All Pre-Med and Pre-Health Majors have access to individualized advising and support from the Biola Office of Health Professions Advising (BOHPA). BOHPA provides application workshops, interview prep, graduate admissions exam support, and individual curriculum planning and advising as students prepare for medical school. BOHPA also sponsors the Health Careers Club (HCC), a student-led group that educates, supports, and builds community among all our pre-med/health career students on the Biola campus. BOHPA and the HCC together help to prepare Biola students to impact the world for our Lord Jesus Christ through future careers as health professionals. With the support of Biola's pre-med committee, recent applicants to medical school have had close to a 90% success rate across all applications in recent years. Biola graduates have been accepted into a variety of medical schools both locally and around the country, including UCLA, UCI, UC Davis, UC San Diego, Loma Linda, USC, Dartmouth, Yale, Georgetown, University of Washington, Oregon Health Sciences University, University

of Wisconsin, University of Arizona, University of Texas, University of New Mexico, and St. Louis University.

Program Accreditations

State of California Board of Registered Nursing (1966)

Commission on Collegiate Nursing Education (2007)

American Speech-Language-Hearing Association Council for Academic Accreditation, Candidate Program (2016)

California Teaching Credential, Speech-Language Pathology Services Credential (2018)

Program Affiliations

American College of Sports Medicine

American Public Health Association

Western Council on Higher Education for Nursing

Faculty

Dean: Matthew H. Rouse, SLP.D.

Associate Dean: Wendy Billock, Ph.D.; Sarah Flores, M.S., B.S.N.

Emeriti Faculty: P. Coad, R. Coad, Crawford, Fleegeer, Fuller, D. Henry, Kilander, Kuld, Kurtz, A. Lin, McLaughlin, Norman, Orr, Payne, Rynd, Charles Sarver, Connie Sarver, Stangl, Thurber, Woo

Professors: Apkarian, Axe, Bloom, Chen, Gunasekera, S. Lin, Rouse, K. Wong

Associate Professors: Bacon, Billock, Buzi, Clemons, Dantuma, DiMuro, Dixon, Galbadage, Gardner, Havoonjian, Kobayashi, Kim, Lew, Marks, Newport, O' Dell, Peterson, Styffe, Tresser, Uranga-Hernandez, Van Niekerk, Varamini, Wilson, Welty, Yan

Assistant Professors: Allen, Altamirano, Flores, Henderson, Johnson, Lee, Loyola, Lu, K. Ng, Pichaj, Sun, Walker, E. Wong

Instructors: Balli, Miller, S. Ng, Peirson

Biological Sciences Faculty

Chair: Jason Tresser, Ph.D.

Associate Professors: Billock, Havoonjian, J. Kim, Tresser, Varamini

Assistant Professors: Lee, K. Ng, Sun, Woo

Maxwell Professor of Molecular Biology: Axe

Chemistry, Physics and Engineering Faculty

Chair: Stanley Ng, M.S.

Professors: Bloom, Chen, Gunasekera

Assistant Professors: Johnson, Lu, Pichaj, E. Wong

Instructor: S. Ng

Communication Sciences and Disorders Faculty

Chair: Teri Clemons, Ph.D.

Professor: Rouse

Associate Professor: Clemons, Dantuma, Uranga-Hernandez, Newport, Welty

Instructors: Peirson

Computer Science and Mathematics Faculty

Chair: Jason Wilson, Ph.D.

Professor: Lin, K. Wong

Associate Professor: Buzi, DiMuro, Lew, Marks, Wilson, Yan

Instructor: Balli

Kinesiology and Public Health

Chair: Jacob Gardner, Ph.D.

Professor: Apkarian

Associate Professors: Galbadage, Gardner, Peterson

Assistant Professor: Altamirano, Walker

Instructor: Miller

Nursing Faculty

Director: Rachel Van Niekerk, M.S.N., Ph.D.

Associate Professors: Bacon, Dixon, Kobayashi, O'Dell, Styffe, Van Niekerk

Assistant Professors: Allen, Flores, Henderson, Loyola

Programs

Programs Offered

Undergraduate

- Allied Health, B.S. (<http://catalog.biola.edu/sssth/BIAH-bs/>)
- Applied Physics, B.S. (<http://catalog.biola.edu/sssth/PHAP-bs/>)
- Biochemistry, B.S. (<http://catalog.biola.edu/sssth/BCHM-bs/>)
- Biological Science, B.S. (<http://catalog.biola.edu/sssth/BIOS-bs/>)
- Biological Science: Secondary Instruction, B.S. (<http://catalog.biola.edu/sssth/BISI-bs/>)
- Chemistry, B.S. (<http://catalog.biola.edu/sssth/CHEM-bs/>)
- Communication Sciences and Disorders, B.S. (<http://catalog.biola.edu/sssth/CSDS-bs/>)
- Computer Science, B.S. (<http://catalog.biola.edu/sssth/CSCI-bs/>)
- Engineering Physics, B.S. (<http://catalog.biola.edu/sssth/PHEP-bs/>)
- Health Science, B.S. (<http://catalog.biola.edu/sssth/HSCI-bs/>)
- Health Sciences, B.S. (<http://catalog.biola.edu/sssth/BIHS-bs/>)
- Human Biology, B.S. (<http://catalog.biola.edu/sssth/BIHB-bs/>)
- Kinesiology, B.S. (<http://catalog.biola.edu/sssth/KHPE-bs/>)
- Mathematics, B.S. (<http://catalog.biola.edu/sssth/MATH-bs/>)
- Nursing, B.S. (<http://catalog.biola.edu/sssth/NURS-bs/>)
- Physical Science, B.S. (<http://catalog.biola.edu/sssth/PHSC-bs/>)
- Physics, B.S. (<http://catalog.biola.edu/sssth/PHYS-bs/>)
- Public Health, B.S. (<http://catalog.biola.edu/sssth/PBHL-bs/>)
- Applied Statistics and Data Science Minor (<http://catalog.biola.edu/sssth/MAAS-minor/>)
- Biological Science Minor (<http://catalog.biola.edu/sssth/BIOS-minor/>)
- Chemistry Minor (<http://catalog.biola.edu/sssth/CHEM-minor/>)
- Coaching Minor (<http://catalog.biola.edu/sssth/PECO-minor/>)
- Computer Science Minor (<http://catalog.biola.edu/sssth/CSCI-minor/>)
- Environmental Science Minor (<http://catalog.biola.edu/sssth/BIES-minor/>)
- Kinesiology and Health Science Minor (<http://catalog.biola.edu/sssth/KNES-minor/>)
- Mathematics Minor (<http://catalog.biola.edu/sssth/MATH-minor/>)
- Physical Science Minor (<http://catalog.biola.edu/sssth/PHSC-minor/>)
- Physics Minor (<http://catalog.biola.edu/sssth/PHYS-minor/>)
- Science and Theology Minor (<http://catalog.biola.edu/sssth/SCTH-minor/>)
- Statistics Minor (<http://catalog.biola.edu/sssth/MAST-minor/>)

- Stewart Science Honors Program (<http://catalog.biola.edu/sssth/stewart/>)

Masters

- Master of Public Health in Epidemiology (<http://catalog.biola.edu/sssth/STPE-mph/>)
- Master of Public Health in Global Health (<http://catalog.biola.edu/sssth/STPG-mph/>)
- Speech-Language Pathology, M.S. (<http://catalog.biola.edu/sssth/STSL-ms/>)

Certificate

- Communication Sciences and Disorders Post-Baccalaureate Certificate (<http://catalog.biola.edu/sssth/CDCT-cert/>)

Courses

Course Descriptions

Undergraduate

- Biological Sciences (BIOS) (<http://catalog.biola.edu/sssth/courses/BIOS/>)
- Chemistry (<http://catalog.biola.edu/sssth/courses/CHEM/>)CHEM (<http://catalog.biola.edu/sssth/courses/CHEM/>)
- Communication Sciences and Disorders (<http://catalog.biola.edu/sssth/courses/CODS/>)CODS (<http://catalog.biola.edu/sssth/courses/CODS/>)
- Computer Science (<http://catalog.biola.edu/sssth/courses/CSCI/>)CSCI (<http://catalog.biola.edu/sssth/courses/CSCI/>)
- Kinesiology and Health Science (<http://catalog.biola.edu/sssth/courses/KNES/>)KNES (<http://catalog.biola.edu/sssth/courses/KNES/>)
- Mathematics (<http://catalog.biola.edu/sssth/courses/MATH/>)MATH (<http://catalog.biola.edu/sssth/courses/MATH/>)
- Nursing (<http://catalog.biola.edu/sssth/courses/NURS/>)NURS (<http://catalog.biola.edu/sssth/courses/NURS/>)
- Physical Science (<http://catalog.biola.edu/sssth/courses/PHSC/>)PHSC (<http://catalog.biola.edu/sssth/courses/PHSC/>)

Graduate

- Public Health - Graduate (PHLT) (<http://catalog.biola.edu/sssth/courses/PHLT/>)
- Speech-Language Pathology (<http://catalog.biola.edu/sssth/courses/MSLP/>)MSLP (<http://catalog.biola.edu/sssth/courses/MSLP/>)