

SCHOOL OF SCIENCE, TECHNOLOGY AND HEALTH

Mission

The mission of the School of Science, Technology and Health (<https://www.biola.edu/science/>) is biblically centered education, scholarship and service — equipping men and women in mind and character to impact the worlds of science, technology and health for the Lord Jesus Christ.

Vision

The vision of the School of Science, Technology and Health is to be identified among the world's foremost Christ-centered STEM and health programs — a community abiding in truth, abounding with grace and compelled by Christ's love to be a relevant and redemptive voice in the rapidly changing worlds of science, technology and health.

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 School of Science, Technology, and Health (SSTH), 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. This has enabled students and faculty to study in state-of-the-art laboratories and classrooms with cutting-edge equipment. Additional SSTH buildings include Soubirou Hall, Dorothy English Hall, and Rood Hall.

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.

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 (2022)

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, CCC-SLP

Associate Deans

Wendy Billock, Ph.D.; Sarah Flores, D.N.P.; Yohan Lee, Ph.D.

Emeriti Faculty

P. Coad, R. Coad, Crawford, Fleeger, Fuller, Gewe, Henry, Kilander, Kuld, Kurtz, A. Lin, McLaughlin, Norman, Orr, Rynd, Charles Sarver, Connie Sarver, Stangl, Thurber, Woo

Professors

Apkarian, Axe, Billock, Buzi, Chen, Gunasekera, Kobayashi, Y. Lee, Lin, Ni, Rouse, Wilson

Associate Professors

Allen, Altamirano, Clemons, Curtis, DiMuro, Flores, Havoonyan, Johnson, W. Lee, Lu, Marks, Miller, Newport, Ng, O' Dell, Park, Peterson, Styffe, Sun, Templeton, Tresser, Uranga-Hernandez, Van Niekerk, Varamini, Walker, Welty, Yan

Assistant Professors

Cho, H., Cho, N., Hoffman-McCully, Kojima Chiu, Loyola, Olsen, Pichaj, Raymond, Smith, Stunrod, Wong, Woo, Yang

Biological Sciences Faculty

Chair: Kit Ng, Ph.D.

Professors: Billock

Associate Professors: Havoonyan, Lee, Ng, Sun, Tresser, Varamini

Assistant Professors: Kojima-Chiu, Woo, Yang

Maxwell Professor of Molecular Biology: Axe

Chemistry Faculty

Chemistry Chair: Dana Johnson, Ph.D.

Associate Professors: Johnson, Lu

Assistant Professors: Cho, H., Pichaj

Research Professor: Gunasekera

Physics and Engineering Faculty

Physics and Engineering Chair: Grace Ni, Ph.D.

Professors: Chen, Ni

Associate Professors: Curtis

Assistant Professors: Cho, N., Wong

Communication Sciences and Disorders Faculty

Chair: Teri Clemons, SLP.D.

Professor: Rouse

Associate Professors: Clemons, Newport, Uranga-Hernandez, Welty

Assistant Professors: Olsen, Raymond

Math and Computer Science Faculty

Chair: Chelsie Stunrod, M.S.

Professors: Buzi, Lee, Y., Lin, Wilson

Associate Professors: DiMuro, Lee, W., Marks, Yan

Assistant Professor: Stunrod

Kinesiology and Public Health Faculty

Co-Chairs: Brent Peterson, MPH, Ph.D.; Danielle Walker, Ph.D.

Professor: Apkarian

Associate Professors: Altamirano, Miller, Park, Peterson, Walker

Nursing Faculty

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

Professor: Kobayashi

Associate Professors: Allen, Flores, O'Dell, Styffe, Templeton, Van Niekerk

Assistant Professors: Hoffman-McCully, Loyola, Smith

Programs

Programs Offered

Undergraduate

- Allied Health, B.S. (<https://catalog.biola.edu/ssth/BIAS-bs/>)
- Biochemistry, B.S. (<https://catalog.biola.edu/ssth/BCHM-bs/>)
- Biological Science, B.S. (<https://catalog.biola.edu/ssth/BIOS-bs/>)
- Chemistry, B.S. (<https://catalog.biola.edu/ssth/CHEM-bs/>)
- Communication Sciences and Disorders, B.S. (<https://catalog.biola.edu/ssth/CSDS-bs/>)
- Computer Science, B.S. (<https://catalog.biola.edu/ssth/CSCI-bs/>)
- Engineering, B.S. (<https://catalog.biola.edu/ssth/ENGR-bs/>)
- Engineering Physics, B.S. (<https://catalog.biola.edu/ssth/PHEP-bs/>)
- Health Sciences, B.S. (<https://catalog.biola.edu/ssth/BIHS-bs/>)
- Healthcare Management, B.S. (<https://catalog.biola.edu/ssth/NHCM-bs/>)
- Human Biology, B.S. (<https://catalog.biola.edu/ssth/BIHB-bs/>)
- Kinesiology, B.S. (<https://catalog.biola.edu/ssth/KHPE-bs/>)
- Mathematics, B.S. (<https://catalog.biola.edu/ssth/MATH-bs/>)
- Nursing, B.S. (<https://catalog.biola.edu/ssth/NURS-bs/>)
- Physics, B.S. (<https://catalog.biola.edu/ssth/PHYS-bs/>)
- Public Health, B.S. (<https://catalog.biola.edu/ssth/PBHL-bs/>)

- Robotics, B.S. (<https://catalog.biola.edu/ssth/ROBO-bs/>)
- Applied Statistics and Data Science Minor (<https://catalog.biola.edu/ssth/MAAS-minor/>)
- Biological Science Minor (<https://catalog.biola.edu/ssth/BIOS-minor/>)
- Chemistry Minor (<https://catalog.biola.edu/ssth/CHEM-minor/>)
- Computer Science Minor (<https://catalog.biola.edu/ssth/CSCI-minor/>)
- Environmental Science Minor (<https://catalog.biola.edu/ssth/BIES-minor/>)
- Kinesiology Minor (<https://catalog.biola.edu/ssth/KNSL-minor/>)
- Mathematics Minor (<https://catalog.biola.edu/ssth/MATH-minor/>)
- Physical Science Minor (<https://catalog.biola.edu/ssth/PHSC-minor/>)
- Physics Minor (<https://catalog.biola.edu/ssth/PHYS-minor/>)
- Public Health Minor (<https://catalog.biola.edu/ssth/PBHE-minor/>)
- Statistics Minor (<https://catalog.biola.edu/ssth/MAST-minor/>)
- Stewart Science Honors Program (<https://catalog.biola.edu/ssth/stewart/>)

Masters

- Master of Public Health in Global Health (<https://catalog.biola.edu/ssth/STPG-mph/>)
- Occupational Therapy, M.S. (<https://catalog.biola.edu/ssth/STOT-ms/>)
- Speech-Language Pathology, M.S. (<https://catalog.biola.edu/ssth/STSL-ms/>)

Certificate

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

Courses

Course Descriptions

Undergraduate

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

Post Baccalaureate

- Communication Sciences and Disorders (CDSR) (<https://catalog.biola.edu/ssth/courses/CDSR/>)

Graduate

- Occupational Therapy (OCTH) (<https://catalog.biola.edu/ssth/courses/OCTH/>)
- Public Health (PHLT) (<https://catalog.biola.edu/ssth/courses/PHLT/>)
- Speech-Language Pathology (MSLP) (<https://catalog.biola.edu/ssth/courses/MSLP/>)