California Lutheran University
Capability Statement

Institution: **California Lutheran University**

DUNS No: **009680471**   Cage Code: **0XAX0**   NAICS ID(s): **611310**   SIC: **8221**

Federal EIN No: **95-2962604**

Certificates, Registrations, Accreditations: ***Western Association of Schools and Colleges; National Council for Accreditation of Teacher Education;***

POC Information: **Dr. Lauren Causey, Executive Director**
Office of Sponsored Research and Projects
60 W. Olsen Road, Thousand Oaks, CA 91360
lcausey@callutheran.edu
www.callutheran.edu

OVERVIEW

Founded in 1959, California Lutheran University is home to more than 3,078 undergraduate and 1,324 graduate students who come from more than 49 countries and represent a wide variety of faiths. Its mission is to educate leaders for a global society who are strong in character and judgment, confident in their identity and vocation, and committed to service and justice. Designated as a Hispanic Serving Institution in 2016, the university is strongly committed to the academic success of individuals who are first-generation college students, from low-income backgrounds and/or from traditionally underrepresented populations. Cal Lutheran offers undergraduate, graduate and professional programs through the College of Arts and Sciences, School of Management, Graduate School of Education, Graduate School of Psychology and Pacific Lutheran Theological Seminary. Thirty-nine undergraduate majors and 41 minors are offered. Graduate programs include doctorates in educational leadership, higher education leadership and clinical psychology, and master's degrees in education, psychology, computer science, business administration, public policy and administration, information systems and technology, and economics. PLTS offers master's degrees in divinity and theological studies; certificate programs in theological studies and theological education for emerging ministries; and Ph.D. and Th.D. programs through the Graduate Theological Union.

RESEARCH CAPABILITIES

Biology: Biochemistry, molecular biology, genetics, genomics, neuroscience, anatomy/physiology, microbiology, herpetology, ecology, environmental ecology, marine biology and primate ecology

Chemistry: Organic synthesis, pesticide tracing, protein structure and function, synthesis MOFs for drug delivery, structure-based antibiotic drug design, non-destructive analysis of pigment in works of art and cultural heritage, synthetic methods development

Computer Information Systems: Computer networking, robotics, virtual/augmented reality, embedded systems processing, general concepts in computing

Earth and Environmental Science: Paleoclimatology, paleoecology, climate change, micropaleontology (foraminifera, ostracods), sediment core analysis, paleofire and wildfire history, paleoceanography, paleovolcanism, extraterrestrial impacts, paleotempestology, carbon cycle, paleolimnology, human impacts on environmental systems, extreme events, natural hazards, time scales: from deep time (Cenozoic) to recent environmental change (Holocene-Anthropocene)

Exercise Science: Biomechanics, Exercise Physiology, Motor Development, Motor Control

Mathematics: topology, graph labelling, 3D printing, math pedagogy, statistics

Physics: Astronomy: Analysis of observational data from telescopes w/ emphasis on high mass stars
Particle physics: Design and development of particle detectors, data analysis for particle physics
experiments Atomic and molecular physics: Design, implementation and analysis of x-ray laser-based
studies Computational condensed matter physics: Modeling of superconducting compounds

FACILITIES

Biology: Laboratory facilities in microbiology, biochemistry, marine science, genetics and neuro science.
Microscopy/visualization capabilities and DNA sequencing. Field capibilities in herpetology, marine science and
primate ecology.

Chemistry: X-ray fluorescence, FTIR, NMR, GC-MS, HPLC, FPLC, protein overexpression, capillary
electrophoresis

Computer Information Systems: Wireless network, 3 axis gantry robot, rotary arm robot, VEX robots
various sensors and actuators, Occulus Rift, computer workstations

Earth and Environmental Science: *LAB*: magnetic susceptibility, X-ray fluorescence, sediment core
track, light microscopy, palynology, GIS, sediment processing/chemical digestion, foraminifera
processing, charcoal analysis, LOI; *FIELD*: multiple coring devices (Livingstone, etc.) for lake
sediments/wetlands, lake coring platform (catamaran with Zodiac inflatables),

Exercise Science: 3-D motion capture, multiple force plates, wired and wireless EMG systems,
ultrasound, , metabolic measurements (VO2, VCO2, RER, VE), ECG, HR, BP, BMI, % body fat, LBM, work,
power, muscle strength, muscle endurance, flexibility fitness, Bod pod, accelerometers

Physics: Scientific computing resources: Multiprocessor servers for parallel computing applications

PAST PERFORMANCE
The National Science Foundation has awarded the following grants to our institution:

- "New Models Of Stellar Evolution To Understand The Past, Present & Future Of Magnetic Massive Stars"
- "RUI: Structural and Functional Substrate Binding in Iterative Non-ribosomal peptide synthesis Independent
  Synthesis (NIS) Enzyme DesD"
- "Growing a new science of landscape terraformation: The convergence of rock, fluids, and life to form
  complex ecosystems across scales"
- "A Southern California PULSE Vision & Change Institute"

We were awarded a subaward from University of Michigan, which served as a pass-through organization for the
"Grand Alliance: Concussion Assessment, Research and Education Consortium – Longitudinal Clinical Study Core"
funded jointly by the Department of Defense and NCAA.