
CALIFORNIA STATE UNIVERSITY
LONG BEACH

# College of Natural Sciences & Mathematics

**2022 COMMENCEMENT CEREMONY**

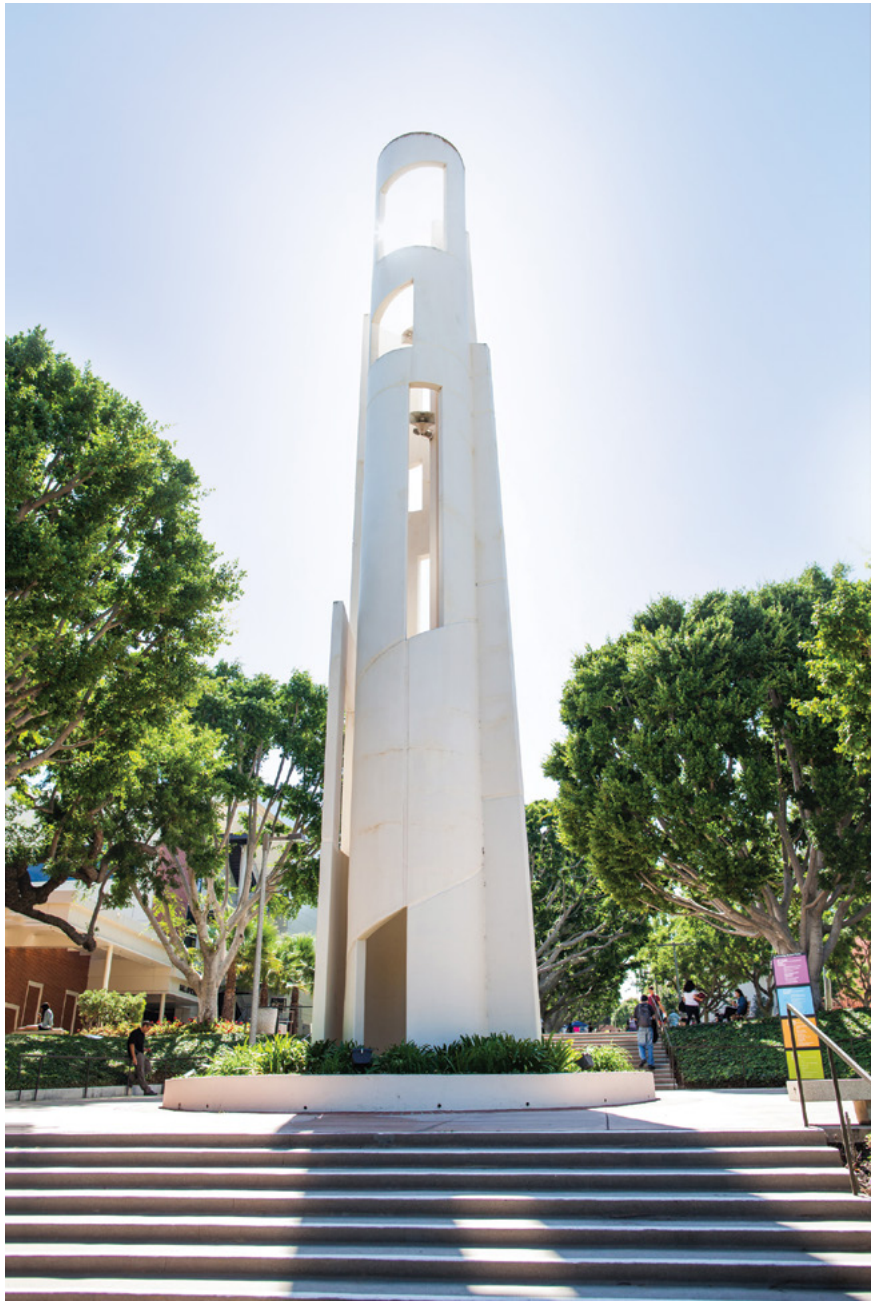


Photo above: Carlson Bloc Bell Tower. In 1965, the International Sculpture Symposium contributed nine monumental pieces and designs to CSULB. These works received credits in 21 national and international publications, and, in 1972, additional community funds in the form of a trust provided for the completion of the Carlson Memorial Tower, designed by French sculptor Andre Bloc.



*Welcome to*

# CALIFORNIA STATE UNIVERSITY **LONG BEACH**

SEVENTY-THIRD ANNUAL COMMENCEMENT CEREMONIES

California State University, Long Beach is a member of the 23-campus California State University (CSU) system. The initial college, known then as Los Angeles-Orange County State College, was established on January 29, 1949, and has since grown to become one of the state's largest universities.

The first classes in 1949 were held in a converted apartment building on Anaheim Street and the cost to enroll was just $12.50. The 169 transfer students selected from the 25 courses offered in Teacher Education, Business Education, and Liberal Arts which were taught by 13 faculty members.

Enrollment increased in 1953 when freshman and sophomore students were admitted.

Expansion, in acreage, degrees, courses and enrollment continued in the 1960s, when the educational mission was modified to provide instruction for undergraduate and graduate students through the addition of master's degrees.

In 1972, the California Legislature changed the name to California State University, Long Beach. Today, more than 37,000 students are enrolled at Cal State Long Beach, and the campus annually receives high rankings in several national surveys.

What students find when they come here is an academic excellence achieved through a distinguished faculty, hard-working staff and an effective and visionary administration. The faculty's primary responsibility is to create, through effective teaching, research and creative activities, a learning environment where students grow and develop to their fullest potential.

Today you are attending one of seven Commencement Ceremonies, taking place over three days, to celebrate the accomplishments of the more than 11,000 graduates and candidates. They are earning doctoral, master's and bachelor's degrees as well as credentials and certificates. We are proud of our graduating students, who now go forward to serve society.

Welcome to our 73rd annual Commencement Ceremonies.

A Message from the President...

## *Dear Graduate,*

Today, you join more than 355,000 fellow Cal State Long Beach alumni who are contributing to their communities and reshaping the world we live in. On behalf of the entire Beach Family; congratulations on your achievement. You have reached a significant milestone in your life, and we are proud to count you among those who call The Beach "home."

During this celebration, I know you must be feeling appreciation to those who have supported and loved you throughout your educational journey. I encourage you to think about those who touched your life, as well as those whose lives you have lifted up. Savor the memories of the relationships, friendships and connections you made here: they will be with you for the rest of your life.

Whatever your course in life is, I know that you have been equipped to make this world a better place. You proven this during your time here: you contributed to our community in ways that helped make CSULB one of the most diverse, vibrant and transformative communities anywhere in the world.

As you join fellow graduates in celebrating this landmark moment, realize this is not the end of your "learning journey." There is always more to learn, explore and understand. Today's ceremony marks a start, not a conclusion – today can be a new beginning. Remember that The Beach can be your partner for lifelong learning.

Finally, please know that your presence here has inspired us and continues to drive us. Because of you, we are a better campus. I know you will carry that spirit forward and continue achieving, leading, inspiring and succeeding as an alum. I encourage you to stay connected, personally and professionally with your alma mater. You will always be a member of this community.

Go Beach!

Sincerely,

Jane Close Conoley, Ph.D.
President



A Message from the Interim Chancellor...

## *Dear Class of 2022,*

Please accept my warmest and most heartfelt congratulations on achieving a truly momentous goal in your life. You set your sights on earning a degree; and now, that goal is a reality. That is a wondrous accomplishment, and I hope you feel a well-deserved sense of pride.

I hope you are filled with a sense of kinship and gratitude, as well. So many people have given so much to enable your success: faculty who illuminated your academic path; counselors, advisors, librarians, coaches and support staff who fostered an encouraging environment; family, friends, mentors and colleagues who gave their time and treasures to facilitate your journey. As you celebrate your success, please remember to celebrate their support as well.

Unlike any other graduating class, your university experience has been shaped in extraordinary ways by more than two years of a global pandemic. During those years, you have developed and honed attributes that will benefit you for a lifetime. Your resilience and adaptability will become career strengths. Your creativity and resourcefulness will define you. Your courage and determination are, in my eyes, already legendary. While it might have been different than the college experience you envisioned when you started your journey, these years have made you sharper, tougher, brighter and more purpose-driven than ever before.

With this rite of passage we call "commencement," you will join a dynamic, global network of more than four million California State University alumni. They are a remarkable force for good, and I am certain that your addition will multiply their contributions to our communities, to our state and to the world. I ask that you use the knowledge, skills and personal qualities you have developed to work for justice, to seek opportunities to foster equity, and to always uplift and empower others. Stay connected to your campus and look for ways to give back. Support future generations who aspire to follow in your footsteps.

As you step boldly into your future, I know I speak for every member of the California State University community when I express our collective pride in your perseverance and success. Your resolve shines as a symbol of hope and optimism. Again, congratulations, class of 2022!

Sincerely,

Jolene Koester
Interim Chancellor

## COLLEGE OF NATURAL SCIENCE & MATHEMATICS

The College of Natural Sciences and Mathematics is a center of scientific learning in Long Beach offering excellent educational opportunities. The College's vision is to educate the next generation of scientists and mathematicians, as well as a science-literate citizenry, through instructional programs that serve the diverse community of Long Beach and beyond. Our student-centered instructional and research environment fosters equity, diversity, and access. We mentor students for lifelong success by elevating character and supporting skill set development and growth mindset. Students gain scientific knowledge through research and also become advocates for applying science and mathematics in our community. Outstanding teaching and research programs are integrated within the departments of Biological Sciences, Chemistry and Biochemistry, Geological Sciences, Mathematics and Statistics, Physics and Astronomy, Science Education, and the program of Environmental Science and Policy.

College faculty conduct research projects that offer opportunities for our students, both graduate and undergraduate, to solve problems and be involved in cutting-edge research addressing the important issues of today in a wide variety of subjects including heart and neurological diseases, astrophysics, mathematical modeling, improving science teaching, machine learning/data science, designing and understanding new materials, cancer drug delivery methods, earthquakes, and environmental issues such as overfishing, pollution, and invasive species. Faculty mentored research encourages students to develop critical and analytical thinking in the classroom, the research lab, and the field setting. Graduates are prepared to fill critical roles in industry and they also form a substantial pipeline of K-12 science and math teachers for California.

Committed to creating an equitable and inclusive environment for our students, staff, and faculty, the College ranks among the top master's-granting universities in the nation for producing graduates who go on to earn doctoral degrees in science and math research fields. The faculty, staff, and administrators of the College are proud of their graduates and wish them success and satisfaction in their careers.



# College of Natural Sciences & Mathematics

RICHARD D. GREEN DEAN
Curtis Bennett

### DEPARTMENT CHAIRS AND PROGRAM DIRECTORS

BIOLOGICAL SCIENCES
Dessie Underwood, *Ph.D.*
*University of California, Davis*

CHEMISTRY AND BIOCHEMISTRY
Lijuan Li, *Ph.D.*
*McMaster University, Hamilton, Ontario, Canada*

ENVIRONMENTAL SCIENCE AND POLICY
Christine Whitcraft, *Ph.D.*
*Scripps Institution of Oceanography, University of California San Diego*

GEOLOGICAL SCIENCES
Lora Stevens, *Ph.D.*
*University of Minnesota, Minneapolis, Minnesota*

MATHEMATICS AND STATISTICS
Will Murray, *Ph.D.*
*University of California, Berkeley*

PHYSICS AND ASTRONOMY
Andreas Bill, *Ph.D. (Dr. reurum naturalium.)*
*University of Stuttgart, Stuttgart, Germany*

SCIENCE EDUCATION
Lisa Martin, *Ph.D.*
*University of Iowa, Iowa City, Iowa*

### ▲ HONORS AND AWARDS

GRADUATE DEAN'S LIST OF UNIVERSITY SCHOLARS AND ARTISTS
Paul Fischer, *M.S. Physics – Computational Physics*
Reanna Bromley, *M.S. Mathematics – Mathematics Education for Secondary School Teachers*
Aaron Kaz Sugimoto, *M.S. Biology*
Shinta Tanamas, *M.S. Chemistry*

OUTSTANDING COLLEGE MASTERS GRADUATES

RICHARD D. GREEN DEAN'S GRADUATE SCHOLAR AWARD
Arturo Sotomayor, Jr., *M.S. Geology*
Kerry Anne Cogan, *M.S. Science Education – Secondary Science Education*

OUTSTANDING THESIS AWARDS

Parker Richardson, *M.S. Biology*
Steven Guillen, *M.S. Biochemistry*
Christina Anne Meadows, *M.S. Geology*
Ted Si Yuan Cheng, *M.S. Applied Statistics*
Cristien L. Arzate, *M.S. Physics – Computational Physics*
Justin Fournier, *M.S. Science Education – Secondary Science Education*

GRADUATING PHI BETA KAPPA NOMINEES FROM MEMBERS IN CLASS 2020-2021

Danna De Boer, *Chemistry and Biochemistry*
Malia Kaye, *Mathematics and Statistics*
Millie Nguyen, *Mathematics and Statistics*
Makena Pollon, *Mathematics and Statistics*
Alejandro Smit, *Physics and Astronomy*

PHI BETA KAPPA NOMINEES FROM MEMBERS IN CLASS 2021-2022

Aimee Tran, *Environmental Science and Policy*

## DEPARTMENTAL HONORS

BIOLOGICAL SCIENCES

Kambria Christine Schwalen, *B.S. Biology – Organismal Biology*
Isabel Moriah McQuoid, *B.S. Marine Biology*
Taylor Jo Woodruff, *B.S. Marine Biology*
Sabina Grace Timothy, *B.S. Biology – Organismal Biology*
Chance Palmer, *B.S. Biology – Molecular Cell Biology and Physiology*
Abbas Abdulhasan, *B.S. Biology – Molecular Cell Biology and Physiology*
Alexa Dickey, *B.S. Biology – Molecular Cell Biology and Physiology*
Tarek El Massri, *B.S. Biology – Molecular Cell Biology and Physiology*
Kevin Jaehyuk Choi, *B.S. Biology – Molecular Cell Biology and Physiology*
Nicole Marie Lopez, *M.S. Biology*
Hannah Rabitoy, *M.S. Biology*
Elishebah Tate-Pulliam, *M.S. Biology*

CHEMISTRY AND BIOCHEMISTRY

Tina Nguyen, *B.S. Chemistry*
Danna De Boer, *B.S. Chemistry*
Natalie Tran, *B.S. Chemistry*
Patrick Allen, *M.S. Biochemistry*
Adam Smith, *M.S. Chemistry*
Vernon Benedicto, *M.S. Biochemistry*

GEOLOGICAL SCIENCES

Spencer Horton Cooper, *B.S. Geology*
Desiree Selena Guzman, *B.S. Geology*
Amanda Seckington, *M.S. Geology*
Bedig Charkhutian, *M.S. Geology*

MATHEMATICS AND STATISTICS

Tu Tran Thieu Nguyen, *B.S. Mathematics Education*
Millie Vu Nguyen, *B.S. Mathematics – Applied Mathematics*
Mika Wong, *B.S. Mathematics – Applied Mathematics*
Wendolyn Lopez, *B.S. Mathematics*
Andrew Stapleton, *B.S. Applied Statistics*
Ivy Nguyen, *B.S. Mathematics*
Brandon Davis, *B.S. Applied Statistics*



Basanth Shankar, *M.S. Applied Statistics*
Victoria Lim, *M.S. Mathematics – Applied Mathematics*
Rosita Oey, *M.S. Mathematics – Mathematics Education for Secondary School Teachers*
Tu Li, *M.S. Mathematics*

PHYSICS AND ASTRONOMY

Michael Carroll, *B.S. Physics*
Blake Reid Koford, *B.S. Physics*
Mathew Andrew Leon, *B.S. Physics*
Derek Bergner, *M.S. Physics – Applied Physics*
Francisco Ramirez, *M.S. Physics – Applied Physics*
Spencer Halls, *M.S. Physics*
Michael Grant Roberts, *M.S. Physics*

SCIENCE EDUCATION

Mary Marguerite Nowak, *M.S. Science Education – Informal Science Education*
Adam Underwood, *M.S. Science Education – Secondary Science Education*

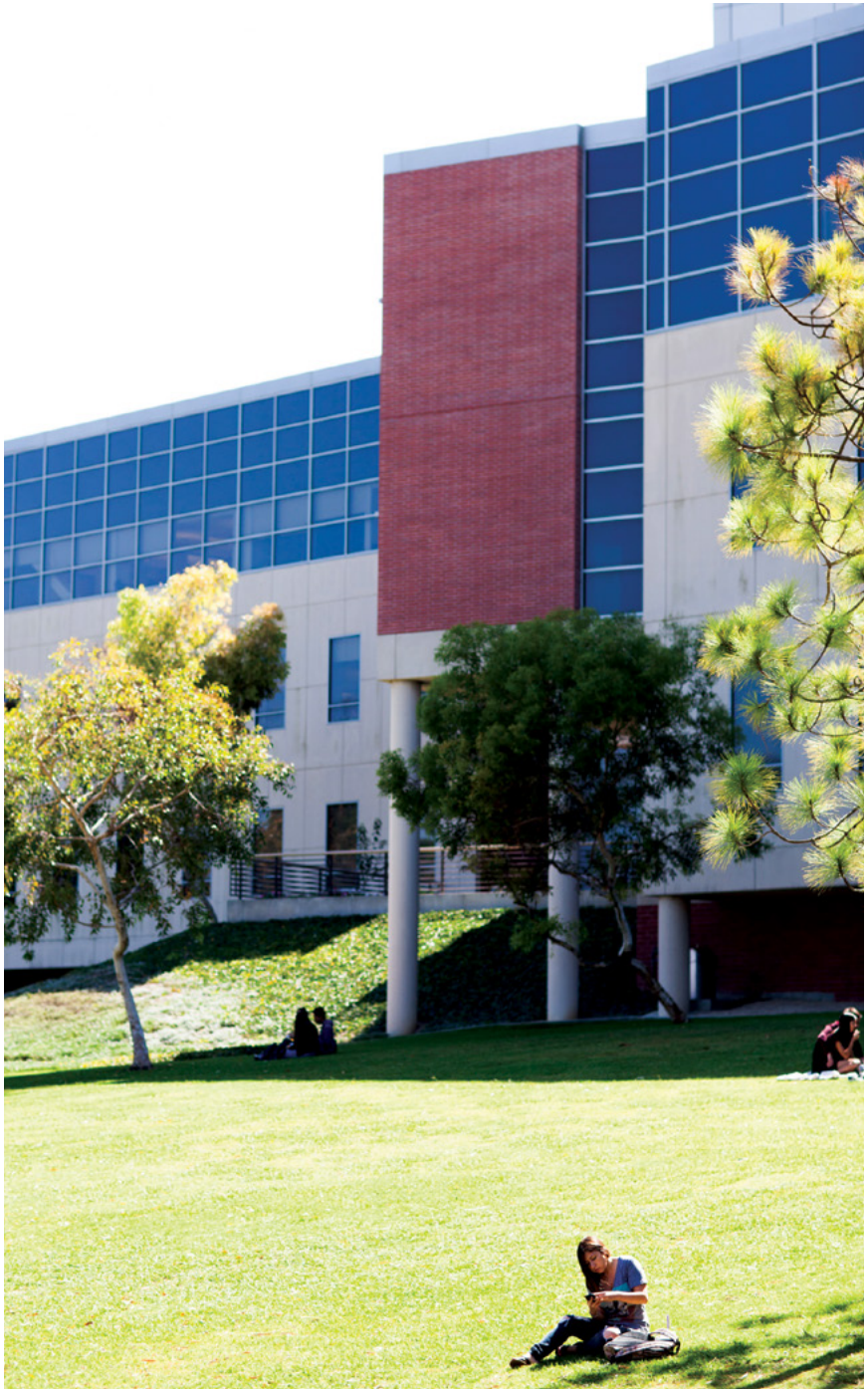
## OUTSTANDING COLLEGE BACCALAUREATE GRADUATES

RICHARD D. GREEN DEAN'S AWARD

Alex Yuan, *B.S. Biology - Molecular Cell Biology and Physiology*
Nishi Rauth, *B.S. Biochemistry*
Annika Gonzales, *B.S. Geology*
Helen Chang, *B.S. Mathematics – Applied Mathematics*
Sierra N. Breyer, *B.S. Physics*

RICHARD D. GREEN DEAN'S OUTSTANDING STUDENT TEACHER IN SCIENCE

Kelci Boynton, *Single Subject Credential – Life Science*
*B.S. Environmental Science and Policy, CSULB*



# College of Natural Sciences & Mathematics

*Candidates for the Master's Degree*

## BIOLOGICAL SCIENCES

***Master of Science - Biology***

Max Jonathan Amaya Muñoz
Thesis*: Effects of Development on Mesocarnivore Occupancy Across Different Lanscape Classification Assessments*
Advised by*: Dr. Ted Stankowich*

Eric Brothell
Thesis*: Challenges In Validating Prior Studies Demonstrating HAC1 and MED25 Might Regulate ERF022, and the Development of Teaching Materials for a Course-Based Undergraduate Research Experience (CURE)*
Advised by*: Dr. Judy Brusslan*

Katrina Elizabeth Cazel
Thesis*: Activity Shifts in Defended Versus Non-Defended Mammals in Response to Predator Presence and Urbanization Throughout North America*
Advised by*: Dr. Ted Stankowich*

James Ti Chhor
Thesis*: Effects of Microplastic Exposure on the Growth and Development of Larval California Grunion (Leuresthes Tenuis)*
Advised by*: Dr. Darren Johnson*

Altagracia Contreras
Thesis*: Reduced Myo-Inositol Catabolism Alleviates Diabetic Symptoms But Causes Developmental Defects in Drosophila Melanogaster (Fruit Fly)*
Advised by*: Dr. L.S. Klig*

Andrew Jeffrey Dunnigan
Thesis*: Vacuolar Morphology and Env7 Localization as a Function of the Cell Cycle: Creating Synchronous Cultures of Saccharomyces Cerevisiae with Nocodazole*
Advised by*: Dr. Editte Gharakhanian*

Cody J. Fees
Thesis*: Quantifying ecosystem functions of living shorelines through fish and epifaunal invertebrate communities of Upper Newport Bay*
Advised by*: Dr. Christine Whitcraft*

Justin Antoine Griffin
Thesis*: Activity of Binary and Complex Environmental Polychlorinated Biphenyl Mixtures Toward the Ryanodine Receptor 1 (RyR1)*
Advised by*: Dr. Erika Holland*

Mehernaz Haque
Thesis*: Innate immune protein C1q modulation of endothelial cell responses in Atherosclerosis*
Advised by*: Dr. Deborah Fraser*

Alvin Vu Huynh
Thesis*: Identifying and Characterizing Oxygen Sensors in the Spinal Cord of Mice*
Advised by*: Dr. Douglas Pace*

Dream Le
Thesis Title*: Determination of Progesterone Receptor(s) that Mediate Neuroprogesterone Induction of the Luteinizing Hormone Surge*
Advisor*: Dr. Kevin Sinchak*

Long Lertpanit
Thesis*: Characterizing the Expression and Distribution of RNA-Binding Motif Protein 48 in the Developing Mouse Brain*
Advised by*: Dr. Houng-Wei Tsai*

Nicole Marie Lopez
Thesis*: The trade-offs and predictors of sexual weaponry in ungulates*
Advised by*: Dr. Ted Stankowich*

Kyra Lynn MacFarlane
Thesis*: Effects of Upland Habitat Access on Distribution and Diets of a Rodent Community in a Southern California Tidal Marsh*
Advised by*: Dr. Christine Whitcraft*

Jack Howard May, III
Thesis*: The influence of water temperature on aggregation behavior of the leopard shark (Triakis semifasciata) at Santa Catalina Island, California*
Advised by*: Dr. Chris Lowe*

Peter Ryan Nilsson
Thesis*: Effects of culture density and large inedible particles on the development of the feeding larvae of echinoids.*
Advised by*: Dr. Bruno Pernet*

Noor F. Osman
Thesis*: Investigating the Role of 18-Wheeler in Follicle Cell Migration*
Advised by*: Dr. Elizabeth Eldon*

Hannah Morgan Rabitoy
Thesis*: Risk perception and escape behavior of skunks, squirrels, and rabbits in response to predator and human approaches*
Advised by*: Dr. Ted Stankowich*

Maria Carmen Ramos
Thesis*: Trafficking of Protein Kinase Env7 to the Lysosomal Vacuole of Saccharomyces cerevisiae*
Advised by*: Dr. Editte Gharakhanian*

Parker J. Richardson
Thesis*: Restoration Following Sediment Addition in a Southern California Salt Marsh: Limitations of Seed Availability and Analyses of Planting Methods for Spartina Foliosa*
Advised by*: Dr. Christine Whitcraft*

***Master of Science - Biology, continued...***

Josephine Rodriguez
Thesis: *Evolution and diversity of pollinator associations in western hemisphere Justicia (Acanthaceae)*
Advised by: Dr. Amanda Fisher

Callyn Elizabeth Shelley
Thesis: *Larval Fish in a Warming Ocean: A Bioenergetic Study of Growth of California Grunion, Leuresthes tenuis*
Advised by: *Dr. Darren Johnson*

Taylor R. Smith
Thesis: *The influence of environmental and social factors on aggregation behavior of the leopard shark (Triakis semifasciata) along the Southern California Coast*
Advised by: *Dr. Chris Lowe*

Bridget Marie Steiner
Thesis: *Do the Feeding Pluteus and "Dipleurula" Larvae of Echinoderms Differ in Their Constructional Costs and Their Expression of Phenotypic Plasticity?*
*Advised by: Dr. Bruno Pernet*

Caitlin Sierra Stapp
Thesis: *The effects of ecological traits on the evolution and diversity of armadillo armor*
Advised by: *Dr. Ted Stankowich*

Aaron Sugimoto
Thesis: *Comparing Contaminant-Induced Gene Expression in Native and Non-Native Oysters in Southern California Estuaries*
Advised by: *Dr. Erika Holland*

Alyssa Jean Syverud
Thesis: *The Role of Digestive Enzyme Activity in Phenotypic Plasticity During Larval Development of the Pacific Sand Dollar*
Advised by: *Dr. Douglas Pace*

Elishebah Divyne-Diamond Tate-Pulliam
Thesis: *The Effects of Restoration Methodology Using Olympia Oysters (Ostrea Lurida) and Eelgrass (Zostera Marina) on Infaunal Invertebrate Community Composition in Newport Bay, California*
Advised by: *Dr. Christine Whitcraft*

Benjamin Verboonen
Thesis: *Exploring the Role of TET8-Associated Apoplastic Vesicles in the Regulation of Leaf Senescence in Arabidopsis thaliana*
Advised by: *Dr. Judy Brusslan*

Juliana Vitagliano
Thesis: *Determining the relationship between chemical cues, protein metabolism, and the induction of phenotypic plasticity in the Pacific Sand Dollar, Dendraster excentricus*
Advised by: *Dr. Douglas Pace*

Kathy Uyen Vo
Thesis: *Effects of Mammalian Aposematic Color Contrast and Pattern Variation on Predator Avoidance Behavior*
Advised by: *Dr. Ted Stankowich*

## ▲ CHEMISTRY & BIOCHEMISTRY

***Master of Science - Biochemistry***

Muhammad Imam Ud Abeer
Thesis: *Modification of apolipoprotein E, a cholesterol transport protein, by 4-hydroxynonenal, a lipid peroxidation product*
Advised by: *Dr. Vasanthy Narayanaswami*

Patrick Walter Allen
Thesis: *Forbidden protein angles: Exploitation of unfavorable dihedrals for the enhancement of human-designed enzymes*
Advised by: *Dr. Jason Schwans*

Kelly Naomi Araujo Urey
Thesis: *Missing Thesis information. Missing Thesis Information. Missing Thesis information. Missing Thesis Information. Missing Thesis information. Missing Thesis Information*

Vernon Gil L. Benedicto
Thesis: *Luteolin transportation via reconstituted high-density lipoprotein nanodiscs*
Advised by: *Dr. Vasanthy Narayanaswami*

Andrew Seth Buckley
Thesis: *Evaluation of the triisopropylsilyl group for the protection of fluorophenols as model system for the protection of fluorotyrosines*
Advised by: *Dr. Jason Schwans*

Noemi M. Castro
Thesis: *Effect of roscovitine, a selective inhibitor of cyclin-dependent kinases, on the unfolded protein response and insulin signaling*
Advised by: *Dr. Deepali Bhandari*

Steven Gonzalez Guillen
Thesis: *Experimental and computational studies of MIL-88B(Fe) on COOH-terminated functionalized gold surfaces*
Advised by: *Dr. Fangyuan Tian*

Heather Nicole Hershberger
Thesis: *Probing the antimicrobial activity of apolipoprotein A-I*
Advised by: *Dr. Paul Weers*

Juliette Marie Jauregui
Thesis: *A pyrene conformational study on the self-association of apolipoprotein A-I* Advised by: *Dr. Paul Weers*

Iris Marquez
Thesis: *Purification and activity analysis of recombinant CDK5-p25 complex harboring mutations on a potential autophosphorylation site*
Advised by: *Dr. Deepali Bhandari*



Jose Luis Martin
Thesis: *Unraveling the effects of MICAL-induced oxidation on actin isoforms*
Advised by: *Dr. Elena Grintsevich*

Joshua Mercado
Thesis: *Thermodynamic stability of loop 6 motion in human triosephosphate variants*
Advised by: *Dr. Jason Schwans*

Kyle Albert Meyer
Thesis: *Fluorescence spectroscopic analysis of apolipoprotein AI during HDL particle modulation*
Advised by: *Dr. Vasanthy Narayanaswami*

Koyinsola Oloja
Thesis: *Investigating Serine 46 as a phosphoregulatory residue in cyclin dependent kinase 5*
Advised by: *Dr. Deepali Bhandari*

Judith Rodriguez
Thesis: *Removal of His6-tag from apolipoprotein A-I N-terminal chimeras by TEV protease*
Advised by: *Dr. Paul Weers*

Blair Alistair Russell
Thesis: *Insight into the structure and function of fragments of apolipophorin III from Locusta migratoria and the role of the individual helices in lipid binding*
Advised by: *Dr. Paul Weers*

Jamie Jo Solorsa
Thesis: *Effect of Akt inhibition on endoplasmic reticulum stress signaling*
Advised by: *Dr. Deepali Bhandari*

***Master of Science - Chemistry***

Edwin G. Avila
Thesis: *Water-soluble palladium nanoparticles for the oxidation of terminal alkenes*
Advised by: *Dr. Young-Seok Shon*

Cecilia Cisneros

Douglas Arano Fowler
Thesis: *Assessing the viability of hydrated electron reduction of perfluorooctanoic acid*
Advised by: *Dr. Stephen Mezyk*

Erik Dennis Galicia
Thesis: *Synthesis and characterization of dinitrosyl iron complexes containing pyrazole|derivatives*
Advised by: *Dr. Lijuan Li*

Katia Hatem
Thesis: *Reactions of Monobromamine with Wastewater Chemical Constituents*
Advised by: *Dr. Stephen Mezyk*

Thai Quoc Hoang
Thesis: *Synthesis and mechanistic studies of iron dinitrosyl dicarbonyl reactions*
Advised by: *Dr. Lijuan Li*

Dominick Damian Ortega
Thesis: *Lipid bilayer-embedded hydrophobic palladium nanoparticles for catalysis of olefins in water: Effects of lipid membrane and phase transition*
Advised by: *Dr. Young-Seok Shon*

Nicholas John Pavlakovich
Thesis: *Effects of lipid composition on the catalytic behavior and colloidal stability of palladium nanoparticle-containing liposomes*
Advised by: *Dr. Young-Seok Shon*

Hilda V. Posada Pacheco
Thesis: *Solvent Effects in Photohydroacylation*
Advised by: *Dr. Paul Buonora*

Connor Joseph Shinn
Thesis: *31P-NMR investigations of solvent effects for ligands used in lanthanide and actinide extraction technologies*
Advised by: *Dr. Stephen Mezyk*

Adam Christopher Smith
Thesis: *Molecular dynamics simulations of previtamin D3 in a phospholipid bilayer*
Advised by: *Dr. Enrico Tapavicza*

Shinta Tanamas
Thesis: *Synthesis, Crystal Structure, and Magnetic Properties of Novel Nickel Ruthenate Series: $Li_{3+x}Ni_{2-x}RuO_6$*
Advised by: *Dr. Shahab Derakhshan*

Jiam Hoang Vuong
Thesis: *Oxygen deficiency, structural transition, electrical conductivity, and oxygen intercalation trends in the perovskite-related family of compounds, Sr2-xCaxFe2O6-d, as related to water oxidation electrocatalysis*
Co-Advised by: *Dr. Shahab Derakhshan and Dr. Hadi Tavassol*

Caitlin Marie West
Thesis: *Methyl benzoylformate photo-initiated synthesis of gamma-keto esters*
Advised by: *Dr. Paul Buonora*

## GEOLOGICAL SCIENCES

***Master of Science - Geology***

Justin M. Arakaki
Thesis: *Formational Scale Differences in Styles of Deformation in the Pismo-Huasna Syncline and Implications for Petroleum Migration and Production*
Co-Advised by: *Dr. Nate Onderdonk and Dr. Richard Behl*

Vural Burc Cakir
Thesis: *Boron isotope studies of the Sierra Cres Shear Zone*
Advised by: *Dr. Gregory Holk*

Bedig Charkhutian
Thesis: *Sedimentology, Stratigraphy, and Petrography of the Siliceous Lithofacies, Upper Modelo Turbidite system, Eastern Ventura Basin, Southern Lake Piru, California*
Advised by: *Dr. Richard Behl*

Kenton Crabtree
Thesis: *Investigation of in-situ Temperature and Processes of Diagenetic Transition from Opal-A to Opal-CT and their Physical/Chemical Controls in the Subsurface San Joaquin Basin, California*
Advised by: *Dr. Richard Behl*

Matthew James Graves
Drake Kerr
Thesis: *Tectonic Geomorphology and Recency of Faulting of the Northernmost San Jacinto Fault Zone, and Implications for Slip Transfer to the San Andreas Fault Zone*
Advised by: *Nate Onderdonk*

Christina Anne Meadows
Thesis: *Temporal and Spatial Patterns of Groundwater Recharge Across an Apline Headwater System in the California Sierra Nevadas*
Advised by: *Dr. Benjamin Hagedorn*

Cesar Mejia
Thesis: *Deformation of the Mineral Hill Erratic Along the Henderson Thrust, Eureka County, Nevada*
Advised by: *Dr. Stan Finney*

Amanda Seckington
Thesis: *The Role of the Monterey Formation as a Carbon Sink and Implications for Miocene Climate Change*
Advised by: *Dr. Richard Behl*

Arturo Sotomayor
Thesis: *New Insights into the Age and Origins of Two Small Cretaceous Seamount Chains Proximal to the Northwest Hawaiian Ridge*
Advised by Dr. Andrea Balbas

Mitsuyo Tsuda
Thesis: *Submarine Groundwater Discharge on a Semi-Arid Island (Santa Catalina, California) - Assessing Radon/Salinity Mass Balance Method Uncertainty and Utility for Groundwater Recharge Estimation*
Advised by: *Dr. Benjamin Hagedorn*

Eric Robert Tutterow
Thesis: *Quaternary Uplift and Deformation of the Western Transverse Ranges and Santa Maria Basin of South-Central Coastal California*
Advised by: *Dr. Nate Onderdonk*

James Shayle Uroff
Thesis: *The fluid evolution of the Pelona schist, as shown by stable isotopes.*
Advised by: *Dr. Gregory Holk*

## MATHEMATICS & STATISTICS

***Master of Science - Applied Statistics***

Bibek Acharya
Luis Antonio Cervantes
Thesis: *Analyzing Premium Persistency Through the Use of Long Short-Term Neural Networks*
Advised by: *Dr. Sung Kim*

Ted Cheng
Thesis: *Binary Classification of Malignant Mesothelioma: A Comparative Study*
Advised by: *Dr. Xiyue Liao*

Jon Braswell
Thesis: *Student Attrition at CSULB: Interpretable Classification with Imbalanced Datasets*
Advised by: *Dr. Kagba Suaray*

Mychelle Hale
Thesis: *Partitioning PAN into Various Sources Using Geographically Weighted Classification Methods*
Advisor: *Dr. Kagba Suaray*

Andrew Le
Thesis: *Characterizing At-Risk Students Using Bayesian Profile Regression*
Advised by: *Dr. Tianni Zhou*

Jonathan Mateo Lopez
Hellen Yesenia Loya
Thesis: *Modeling Air Pollution Effect on Epidemiological Events: Regression and Machine Learning Approaches*
Advised by: *Dr. Olga Korosteleva*



David Marmor
Thesis: *Predictive Modeling for Baseball Pitch Success Rate*
Advised by: *Dr. Xiyue Liao*

Jose Manuel Marquez
Jacquelinne Stephanie Mejia Sandoval
Thesis: *Generation Methods and Statistical Inference for Random Variables and Processes*
Advised by: *Dr. Olga Korosteleva*

Kushal Mohnot
Ryan B. Nguyen
Chioma Akurulo Nwuzi
Thesis: *Prediction of Diabetes Prevalence Among the World's Countries Using Aggregate Nutritional and Medical Data*
Advised by: *Dr. Hojin Moon*

Ly Heng Phey
Thesis: *Predictive Modeling of Calibration Cycle and Calibration Conditions*
Advised by: *Dr. Xiyue Liao*

Dean Reeves
Basanth Shankar
Joy May Taevajira
Huy Truong
Kha T. Vu
Xuan Zhou

***Master of Science - Mathematics***

Connor Scott Bergmann
Ashleigh Bisbee
Jacob Cornejo
Andrew Jackson-Pardo
Tu Li
Jamie Nakamoto
Pilar Amilcar Orellana
Tu Huu Pham
Vipul Sudharsanan
Roy Joel Zipstein

***Master of Science - Applied Mathematics***

Adam Elisha Robert Allred
Omnya Lyla Elhag
Gen Lian Hartnett
Rafael Hernandez
Mirian Juan Estrella
Christian Kim
Victoria B. Lim
Thesis: *Material Point Method for Mochi*
Advised by: *James von Brecht*
Yasmin Osama Mousa
Henry Hung Nguyen
Walter Chuka Obi
Martin Raabe-Lopez
Matt Rublee
Osvaldo Salazar
Xin Xiang
Kai Yang

***Master of Science - Mathematics - Mathematics Education for Secondary School Teachers***

Daniela Arzate Zavala
Reanna Bromley
Rosita Hendrawati Oey
Stephanie Panameno
Michael Peterson

## PHYSICS & ASTRONOMY

***Master of Science - Physics***

Nicholas Cassar
Thesis: *Mean Field Modifications to the Hadron Resonance Gas model*
Advised by: *Thomas Klaehn*

Paul Fischer
Thesis: *Realistic Fractional Quantum Hall Energy Gaps in Graphene via Monte Carlo Simulations*
Advised by: *Michael Peterson*

Edgar Garcia
Thesis: *Equilibrium Properties of Catenated Membranes*
Advised by: *Alex Klotz*

Angel Gomez
Thesis: *Micromagnetic Simulation of Magnetic Switching Behavior of Permalloy Nanocaps*
Advised by: *Jiyeong Gu*

Lydia Juan
Thesis: *Numerical Studies of Chiral Spin Liquids*
Advised by: *Michael Peterson*

Andrew Konz
Thesis: *Equation of State and Lowest State Energies of Neutron Star Crust at Varying Temperatures*
Advised by: *Thomas Klaehn*

Nicholas Lozano
Thesis: *Finite-temperature effects on the g-mode oscillations of neutron stars*
Advised by: *Prashanth Jaikumar*

Cristopher Luna

M. Grant Roberts
Thesis: *A Vector-Scalar Model Equation of State in a Density Functional Approach*
Advised by: *Thomas Klaehn*

Laura Tandy
Thesis: *Clean Superconducting-Magnetic Proximity System in an Electromagnetic Field*
Advised by: *Andreas Bill*

***Master of Science - Physics – Applied***

Derek Bergner
Thesis: *Using Angle Resolved Photoemission Spectroscopy to Unveil the Band Structure of the Air Stable Layered Ferromagnet Chromium Platinum Ditelluride*
Advised by: *Claudia Ojeda-Aristizabal*

Spencer Halls
Thesis: *Fabrication and Characterization of A Py/SmCo/Py Exchange Spring Coupled Single Micropillar Josephson Junction*
Advised by: *Jiyeong Gu*

Nathan Howald
Thesis: *Genomic Mapping of DNA through a Nanopore using Single Strand Binding Proteins*
Advised by: *Alex Klotz*

Maya Martinez
Thesis: *Atomic Force Microscopy Characterization and Electronic Transport Measurements of the Air-Stable Ferromagnet Crx Pt1-x Te2*
Advised by: *Claudia Ojeda-Aristizabal*

Zachary Minaker
Thesis: *Investigation of the Magnetic Switching Behavior for the Thin Film Permalloy Deposited Over a Monolayer of Nano/Microspheres*
Advised by: *Jiyeong Gu*

Everardo Molina
Thesis: *Probing the Electronic Transport in Kitaev Materials and Ferromagnetic Insulators Through Graphene Heterostructures*
Advised by: *Claudia Ojeda-Aristizabal*

Francisco Ramirez
Thesis: *Electronic Transport and Microscopy Study of CuPc on a Graphene/h-BN Heterostructure*
Advised by: *Claudia Ojeda-Aristizabal*

Aytana Sanchez
Thesis: *Quantitative Analysis Using High-Resolution Atomic Force Microscopy on Iron Phthalocyanine Thin Films*
Advised by: *Thomas Gredig*



## SCIENCE EDUCATION

***Master of Science - Science Education - Elementary and Middle School Science Education***

Sarah Mary Bohinski
Thesis: *Development of an Online Unit to Teach Conservation of Energy to Middle School Students Using Simulations*
Advised by: *Dr. Laura Henriques*

Laura Vanessa Crespo
Thesis: *How Parents of Color Connect Culture with Science Education*
Advised by: *Dr. Amy Ricketts*

Joshua Patrick Gagnier
Thesis: *STEM Education in America: Understanding High School Students' Experiences to Provide Early Response and Increase Colleagiate STEM Graduation Rates*
Advised by: *Dr. Lisa Martin*

Katharine A. Muniz
Thesis: *Elementary Teachers' Perceptions of Student Engagement in Science Investigations During a Virtual Field Trip*
Co-Advised by: *Dr. Amy Ricketts and Dr. Laura Henriques*

Emily T. Sanders
Thesis: *Development of a 7th-Grade NGSS-Based Unit: Plastics in Our Ocean* Advised by: *Dr. Lisa Martin*

***Master of Science - Science Education - Informal Science Education***

Mary Marguerite Nowak
Thesis: *The Effect of an Afterschool Teaching Practicum on Future Teaching*
Advised by: *Dr. James Kisiel*

Spencer Burns Wonder
Thesis: *Examining Factors Contributing to Higher Education Science Faculty Teaching Efficacy*
Advised by: *Dr. Laura Henriques*

***Master of Science - Science Education - Secondary Science Education***

Kerry Anne Cogan
Thesis: *Field Work in Tropical Ecology Curriculum Review With a Focus on Nature of Science*
Advised by: *Dr. Lisa Martin*

Justin Fournier
Thesis: *Development of a Lesson Sequence on the Nature of Light Using Argumentation and Modeling in the Classroom*
Advised by: *Dr. Laura Henriques*

Jerren Smith
Thesis: *Students' Perspectives on Participating in a Science Learning Community.*
Advised by: *Dr. Amy Ricketts*

Adam Underwood
Thesis: *What Motivates Students While Using Phet Simulations and How Does Teacher Feedback Affect Student Motivation?*
Co-Advised by: *Dr. Amy Ricketts and Dr. Laura Henriques*

Amanda White
Thesis: *A Retrospective Study on a Physics Camp for High School Girls*
Advised by: *Dr. Laura Henriques*

# College of Natural Sciences & Mathematics

*Candidates for the Bachelor's Degree*

## BIOLOGICAL SCIENCES

***Bachelor of Science - Biology***

Shima Abbasi
Alyssa Delecia Adams
Jessica Aguilera
Sabrina Lisette Ahmed
Raneem Al Shoubaki
Sarah Habeeb Aladross
Jaden Arasalde Alejo
Alyssa Monet Alfaro
Yazen Hayman Alomari
Elda T. Amanuel
Victor Arturo Amaya
Chris Matthew Ancheta
Alexander Andrade
Viviana Maria Araiza
Daisy Barajas
Yessenia Barajas
James Michael Bateman
Jasmine Graciela Bautista
Alyssa Bautista
Mason Gabriel Bautista-Therieau
Jazmine Be
Kaitlin Marie Beaston
Latifa Berri
Madara Madushika Bopitiya Vidanag-amage
Jonathan David Broberg
Connor Alan Brown
Danielle Jo Bujanovich
Alex Burton
Alyssa Renae Campbell
Nancy Guadalupe Carrasco
Estefany Carrillo
Arianna Krissa Castillo
Samar Caton
Cindy Chan Wu
Alka Chaudhary
Jessica Chavez
Irwin Kane Cheung
Jesselyn Gem Chhu
Steven Oswaldo Chumbiray Ascate
Bobby John Compani
Katy Michelle Coreas
Samantha Corpuz
Kelly Cortez
Isabel Covarrubias
Samantha Covarrubias
Sierra Julia Crandell
Elsie Clarissa Cruz
Daniel Esteban Cruz
Katelyn Dang-Lien
Rafael Pineda de Jesus
Kevin Ismael Dejo
Hiralben Rameshchandra Diwan
Emmy Mai Linh Do
Jonathan Dodd
Sneh Samir Dodhia
Jacob Ecija
Ryan Chihiro English
Angela Belle Enriquez
Jazmin Esparza
Elena Rose Esparza
Kimberly Aislinn Esquivel
Eileen Faury
Vanesa Alejandra Flores
Andres Martin Flores
Jessica M. Flores
Beverly Flores Galicha
Ruben Gaona
Daisy Summer Alexis Garbutt
Alice Garcia
Amy Garcia
Danika Nicole Gaslan
Justyne Alexandria Gay
Kristinicole Yolanda Gingras
Juan Jesus Gonzalez
Marisela Gonzalez
Kristen Rene Graham
Jazmin Abigail Guzman
Annika Lois Rae Henry
Tshue Lawrence Her
Jennifer Hernandez
Emily Hernandez
Dominique Hernandez
Myles Tristin Hernandez-Henderson
Brianna Renae Hivner
Amanda Ho



Brian Dai Hoang
Madison Rae Holton
Kaitlynn May Hor
Cameron Reese Houser
Erica Lynn Hunter
Joann Huynh
Jazlyn Jackson
Danielle Flores Jacla
Izabella Jacome
Alondra Belen Jimenez
James Toufic Kabalan
Ofelia Karapetian
Akbar Khawaja
Megan Rachel Kholmer
Edward Khoo
Ruby Jieun Kim
Kerinna Lynne Kirk
Jennifer Ko
Jasmine La
Tiffany Kim Lam
Shara Lapides
Louis Quang Le
William Minh Le
Brandon A. LeClaire
Jonathan Lee
Jane Lee
Lauren Delaney Lees
Richard Leonides
Mariana Leyva
Megan Dubouzet Lim
Shahara Lohanee
Robert Dante Lopez
Isabel Lopez
Bayron Adrian Lopez Mendoza
Logan Henry Luevano
Ivy Luong
Genesis Madalyn Lupercio
Dang Cat Ly
Nickolas Nathan Mabini
Leslie Macias
Kristi Chiyoko Maeda
Aubri Magallon
Oscar Daniel Mantecon
Susana Lizeth Martinez
Giselle Nicole Martinez
Alyssa Nicole Martinez
Christopher M. Medina
Cristian Mendoza
Christina Desiree Mendoza
Anhel Larissa Molina
Hannah Marie Montano
Andrea Morales
Yasmeen Morales
Elizabeth Cora Moses
Timothy Cherzong Moua
Joleen Sun Nguyen
Anna Ha Nguyen
Charlyn Thuy Anh Nguyen
Michelle Lynn Nguyen
Phuc Bao Nguyen
Theodore Nguyen
Huy Nguyen
Justin Tien Nguyen
Lyna Phuongvy Nguyen
Chantelle Nguyen
Cynthia Briana Nguyen
Pauline Nguyen
Casey N. Nguyen
Han Vo Mai Nguyen
William Nguyen
Clara Noh
Marwa Nouristani
Sahana Cheyenne Oglesby
Alexis Osatohanwmen Omoregie
Brianna Marie Oropeza
Saira Rubi Pacheco Penaloza
Woo-Young Park
Anish Shekhar Patwardhan
Michelle Jessie Pham
Tammy Tu-Uyen Pham
Kim-Chi Nguyen Phan
Selene Marina Plascencia
Tera Polo
Nicole Ashley Provins
Nethan Quach
Julie-Anne Trang Quach
Miguel Ramirez
Katelyn Ramkissoon
Vanessa Ramos
Janet Rodriguez
Paulina Rodriguez-Prado
Marissa Natalia Romero
Brenda Romero
Steven Alexis Rosales Hurtado
Azadeh Rostami
Mattias Conlon Saati
Rania Nicole Saba
Berenice Sanmartin Mejia
Nikol Stefania Sanchez Duarte
Anmoljot Kaur Sandhu
Laura Aki Sato
Logan Nicolas Schaefer
Brett Schiller
Alex Everett Schleicher

Miranda Lorraine Scolaro
Kaylee Emma Sedig
Yesha Shah
Nayely Silva
Katherine Julissa Silvestre
Davis Kyutae Sim
Jonathan Louis Small
Brittany Som
Shivam Kumar Srivastava
Briana Staley
Bentley Su
Guy Suankaew
Saad Syed
Marc Wagih Tadros
Natsumi Takanashi
Sarah Lynn Tang
Mariela Romina Tapia
Jacqueline Celeste Tellechea
Shirlene Theng
Hannah Thiede
Kayla Marie Thompson
Heet V. Thumar
Catriana Tiet
Julian Juan Torres
Nancy Tran
Pauline Nguyen Tran
Matthew Pham Tran
Sean Hoang Tran
Chris Tran
Danielle Tran
Amanda Thy Trinh
Nhu Trinh
Keegan Montana Turner
Maya Tuzzeo
Josselyn Vaca Trujillo
Miswa Vaishnani
Julissa Valderrama
Renato Eloy Valdez
Isabel Vasquez
Shawn Vazana
Jordan Ross Verreyne
Cecilia Villasenor
Samuel Vo
Sabrina Vo
Benjamin Nguyen Vu
Amia Rosaleina Weiss
Angel Renae Winans
Isaiah Ybarra
Melissa Z. Yee
Emily Rose Yepez
Tiffany Ving Yip
Sandra Osama Youssef
Elizabeth Mary Zaarour
Maesum Ali Zaidi
Fiorella Zapata
Nathan Dillion Zatarain
Erick Zendejas

***Bachelor of Science - Biology - Biology Education***

Amanda Leigh Daulton
Rosary Empett
Stefani Elizabeth Lang
Brandon Luong
Riley Lewis Meyer
Henry Hien Nguyen
Jose Rogelio Paez Ordinario
Katelyn Vo
Joey Wedmore

***Bachelor of Science - Biology - Molecular Cell Biology and Physiology***

Mariell Butawan Abad
Abbas Firas Abdulhasan
Codey Steven Aboff
Alli Adams
Loulya Alcharbaji
Teresa Ethnee Aleman
Piunik Babakhanins
Pavleen K. Bajwa
Esteban Fidel Barajas
Abigail Marie Barba
Rayner Rafael Benega Pelegrin
Jennifer Bin
Tania BouAkar
Emma Jean Burton
Natalie Grace Cabuhat
Sabrina Emerald Calderon
Alyssa Josefina Catalan
Crystal H. Chau
Simon Aragon Chau
Judy Soad Chayah
Kevin Jaehyuk Choi
Tegan Marie Curren
Christine Phung Dang
Sally Debbas



***Bachelor of Science - Biology - Molecular Cell Biology and Physiology, continued...***

Alexa Breanne Dickey
Jocelyn Duyen Do
Matthew Michael Drury
Katelyn Ly Duenas
Onellka Devhara Dunsford
Jerome Ee
Carol Ek
Tarek El Massri
Gabriela Espinoza
Sophia Elena Estrada
Christian Orcullo Fabiana
Kendal Joan Faynor
Pierce Matthew Fernandez
Sergio Flores
Brianni Marie Flores
Rayyan Abdul-Aziz Franklin
Kelly J. Funez
Erika Gama Gonzalez
Mia Garcia
Mario Emmanuel Garcia Paez
Pamela Gatchalian
Kirollos Khaled Gergis
Lupe Gomez
Laurenett Gonzalez
Erin Kelley Gordon
Jessica Grifaldo
Alejandro Hernandez
Natalie Thomas Hughes
Natalie Marlene Jackson
David Alejandro Jimenez
Katerin Joachin
Payton Jones
Catherine Kamel
Douglas Ian Kelly
Celina Kemm
Joel Landa
Alyssa Michelle Later
Joseline Leticia Lazo
Quynh Le
Bobby Lefevre
Maria Guadalupe Lizama
Jared Joseph Loayza
Cynthia Trudy Lockwood
Marissa Lule
Amanda Alyssa Macias
Isadora Nkeruka Madu
Fernando Marquez Romero
Raul David Martinez
Nubia Mejia
Verena Moris Mikhail
Maximilian Mobley
Juan Carlos Munguia
Narjes Nadimzadeh
Giang Quynh Nguyen
Cathy Nhi Nguyen
Georgina Alejandra Oceguera
Alisa Oropeza
Wesley Philip Ostrowski
David Padilla Aguilera
Chance Everett Palmer
Randy Steve Pena
Angela Pham
Camille Nhi Pham
Anthony Phan
Noelle Merry Phan Ho
Matthew Piwdee
Daniel Poe
Christian D. Powell
Vaishnavi Purushothaman
Samantha Quinones
Prerana Ahalya Reddy
Anastasiia Reipolska
Carolina Reyes
Andrew Rodriguez
Jasmine Rodriguez
Vicente Salazar
Celeste Segura
Komal Sethi
Christian N. Shaifer
Viola Yoojin Shin
Amanda Nicole Saenz Sibayan
Pawan Singh Sidhu
Alejandro Daniel Solorzano
Shyanne Nicole Thompson
Nhi Minh Truong
Stephen Lapnhan Tu
Sean M. Valle
Stephanie Pasion Vargas
Amy Ventura
Cindy N. Vu
Ryan Lee Weber
Niko Yamamoto
Jeana Marie Young
Alex Yuan

***Bachelor of Science - Biology - Organismal Biology***

Christian Nathaniel Alderson
Priscilla Alvarez
Irving Andrade
Elena Armendariz
Cristobal Arteaga Castillo
Lauren Ashley Ashenfelter
Jorge Ayon
Nicole Paige Bebout
Samantha Yessenia Carranza
Hannah Louise Carrillo
Bethany Davenport
Jessica De Loera
Ynez Alejandra Diaz
Alec M. Fogy
Kambria Galindo
Brooke Higa
Senna Marzo
Alex Andrew Mendelson
Joshua Michael Pawlowski
Sarai Plata Ramos
Rebecca Ramos
Eric Steven Ross
Jeremiah Walter Skipps
Lauren Renee Smith
Emily Nicole Stoddart
Sabina Grace Timothy
Vincent Tran
Timothy Duong Tran
Diana Elizabeth Zavalza

***Bachelor of Science - Marine Biology***

Lindsey Ann Arenson
Shelby Alexandra Argabright
Abigayle Nichol Audiss
Bailey Bonham
Sabrina Canto
Claire Anastasia Cockroft
Alexis Codding
Cameron LynnMarie Combs
Samantha Contreras
Emily Anne Darin
Izaaya Nickolai DeGuchy
Tanner Thomas DeLong
Madison Demetral
Gabrielle Bernice Esparza
Gigi Rae Fernandez
Chelsea Field
Ezekiel Firth
Veronica Elizabeth Flores
Isabella Fusco
Christian Garcia
Nichole Lauren Gatten
Clara Gattenby
Cassandra Breana Griffith
Emilie Rose Grubaugh
Alejandra Isel Guerrero
Sal Gutierrez
Morgan Brittany Harris
Abby Henderson
Arisa Emiko Jones
Carissa Autumn Keo
Amanda Hanna Kim
Ashlee Korte
Alexis Karin Lazo
Stephanie P. Lee
Sophia Elaine Lee
Yolanda Isabel Leon
Ariana Loera
Madison Margaret Logan
Carlos Lopez
Kelsey Hannah Lowe
Elena Mei Magana
Otto Marco Martinez
Adrian Jose Martinez
Isabel Moriah Mcquoid
Zoe Jane Meyers
Eric Moctezuma
Cameron Mulligan
Hernan M. Navarro
Yingqi Ni
Ivana Alexia Ortiz
David M. Ramirez
Jennifer Lisset Rauda Carabantes
James Rees
Vanesa M. Reynaga
Robert Agustin Rodriguez
Milliecent Kadie Rustrata
Lyssa Olivia Salger
Seth Christopher Segal
Logan Campbell Siemens
Na Young Son
Sofia Noelle Terry
Jason E. Valdez
Amy Caroline Visquerra
Chloe Winter
Taylor Jo Woodruff
Sarila Jillian Young



***Bachelor of Science - Microbiology***

Sandra Amin
Adam C. Babcock
Vanessa Kristyne Barahona
Alessandra Santiago Bernardo
Jenny Brambila
Katherine R. Calderon
Xavier Rafael Castaneda
Jennifer Celestino
Christopher Dietz
Carolina Yazmin Dominguez Maldonado
Kayden Elizabeth Faro
Victor Hugo Flores
Alexis Guardiola
Cecilia Heredia
Robyn Leslie Hillman
Diego Francisco Hooghkirk
Sanjana Hossain
Jeremy D. Huff
Tasneem S. Khatib
Sarah Jueun Kim
Jocelyn Leon
Angel Magana
Jo Nguyen
Lillian On
Hector Steven Orellana
Carlos Luis Osorto
Thao Pham
Bryan Duong Phan
Kayla Rene Raygoza
Gladys Rodriguez
Ricca Romero
Torazo Saito
Michelle Masae Smith
Charlie Javier Suarez
Johann Hemant Tailor
Howard Ed Terrence
Janice Michelle Valdivia
Meghan Leighann Winzler
Ericka Yap

## CHEMISTRY & BIOCHEMISTRY

***Bachelor of Arts - Biochemistry***

Malina Chan
Eldai Joaquin
Bjorn Manansala
Ramiro Monteon
Celeste Murga
Benjamin Isaac Joshua Quintero
Irmak Uzun
Corina Anguiano Vester
Elaine Le Vo

***Bachelor of Arts - Chemistry***

Patricia Ann Aguayo
Emily Suon Mam
Janice M. Martinez
Janeth Laura Murrieta
Tuan Hong Nguyen
Rosio Reyes
Cuong C. Tran
Imani Nadasia Tyson

***Bachelor of Science - Biochemistry***

Rhami Issam Abumuhor
Emmad Nigus Ahmed
Osama Ahmed
Giulia Ferreira Aiello
Jasbeth Adriana Almanza
Maricarmen Amador
Jaqueline Arciga
John Orlina Arcillas
Joey Balba
Ryan Michael Benko
Sarah Elizabeth Boniface
Dylan Bui
Kenny Calderon-Godinez
Ebonee Lena Carter
Trevor J. Chapman
Andrew T. Chau
Ngan T. Chiem
Jennifer Cisneros
Jordan Alyse Cook
Lluvia Yolanda Cordova

Kayla Franco Crisostomo
Vincent Dang
Abigail Gwynne Dangla Cruz
Claudia Ellen David
Kayla Maelia De Castro
Brian J. Diaz
Shannon Canan Duckworth
Madalynn Kay Duncan
Guillermo Ivan Ramirez
Jerika Shayne Lagrimas Estrella
Brianna Michelle Ferrario
Elizabeth Gonzalez
Suchana Gurung
Marian C. Gutierrez
Jonathan Steve Gutierrez
Kevin Hahn
Youn Lwin Lwin Han
Christopher Hernandez
Antonio Hernandez
Isabel Herrera
George Andrew Ibarra
Justin Raphael Morales Jacildo
Christian Arne Johansson
Anderson Alex John
Sally Nabil Jubran
Kim Hong Keu
Aaqil Khan
Nicole Marie Kovaleski
Alexis Lazaro
Nathaly Lazcano
Sarah Azeret Lazcano
Caroline Hoang Le
Rachel Lee
Brianna Jazlynn Lopez
Luis Antonio Manzo Gonzalez
Kimberly Vanessa Martinez
John Wong Moy
Thu Nguyen
Melanie Nguyen
Jimmy T. Nguyen
PhuongMy Ngoc Nguyen
Annie Nguyen
Stephen Nunez
Jessica Pham
Nhi Pham
Sydney Anhvy Phan
Ana Pimentel Madrigal
Connor Raper-Mateo
Nishi Rauth
Anthony J. Rios
Jennifer Erika Romero
Angel Daniel Ruiz
Andreasiel Ruiz
Katelyn Miranda Sanchez
Annalesia Smallcomb
Dan Tang
Alexandra Tapia
Loc Huu Tran
Jonathan Thien Tran
Kayden Trinh
Erika Velasquez
Tiffany Vu
Vincent Vuong
Sylvia Judith Wedderburn
Brenna Marie Wilson
David P. Wisnieski

***Bachelor of Science - Chemistry***

Elahe Ashrafichoobdar
Andrew Beshay
Estella Cristina Calito
Richard Carlos Camacho
Tien Cao
Ryan E. Cornista
Rachel Dang
Danna Lee De Boer
Anna Grace Esquivel
Alexander Pierce Fey
Amanda Francis
Ryann Avery Gonzalez
Duy Dac Hang Ha
An T. Ho
June Hoang
Lamisa Ashraaf Hossain
Israel Ibarra
Kenneth Daniel Jacobo
Marc Jimenez
Gie Y. Kang
Joseph Christopher Kelly
Brian James Kilbane
Brittni Marena Lopez
Kassady Barbara Marasigan
Emily Mitchelle Marquez
Amy Yvette Melgar Peralta
Otto Alexander Meza
Sergio Rey Murillo
Karissa Emi Nakayama
Ryan Hoang Ngo
Justin Nguyen
Wendy Nguyen



***Bachelor of Science - Chemistry, continued...***

Tina Ngoctu Dang Nguyen
Susan Nguyen
Nhu Khanh Nguyen
Hoa Nguyen
Carlos Ortiz
Jay Patel
Loren Anthony Pendilla
Joel Perez
Vi H. Pham
Helen Pham
Kevin Phan
Leonardo Manelick Quero
Jack Thomas Rogers
Stephanie Michelle Romero
Dylan Thomas Rotert
Luis Adrian Ruiz Armenta
Sahar Soltani
Elizabeth Oluwadamilola Sydney
Trish Tang
Natalie Uyen Tran
Vivian Wynn

***Bachelor of Science - Chemistry - Materials Science***

Elmira Baghdadi
Marina Crystal Balza
Benjamin Dao
Sebastian Andrew Marroquin
Mitchell Paul Wagner

## ENVIRONMENTAL SCIENCE AND POLICY

***Bachelor of Science - Environmental Science and Policy***

Jazmin Aguilar
Letty Griselda Aguilar
Anas A. Amer
Dann Angelo Rogacion Amoyen
Nicole Clarice Angel
Sydney A. Bowers
Michael Daniel Butler
Celeste Monique Cacho
Lauryne Michelle Cannata
Exequiel Jacob Castillo III
Cristal Castro
Priya Dhupar
Isabella Amaris Espinoza
Emiliee Kaitlyn Estrada
Phoebe Lee Evans
Nayeli Sarahi Galan
Gabriela Concepcion Garcia
Elijah Luke Graves
Shaun Allan Gross
Rachel Elizabeth Guerrero
Seth Hall
Celia Mae Hawkins
Anayantzy Hernandez Nieblas
Chelsea Inthavong
Abygail Jimenez
Sarah Kambli
Michael Parke Kemp
Joseph J. Kim
Julie Lazor
Gabriela Leslie Lopez
Riley Elizabeth Mackinen
Luis Angel Mendiola Luna
Jaqueline Molina Macias
Jacob David Morris
Ken H. Nguyen
Chioma Jessica Nyenke
Deanna Christine Ochi
Tahlia Padilla
Alexander Joseph Papac
Ashleigh Perez
Madeline Peterson
Andrew Phuc Pham
Jennifer Ngoc Pham
Elena Protsenko
Jose Jonathan Rios
Hannah Lane Robidoux
Irvin Rodriguez
Jacob Rosenthal
Angel Isac Ruiz
Nayely Sabas
Brendan Scott Schultheis
Ashley Ellen Seymour
Pamela J. Solano
Noah Nash Stevens
Minh-Khoi Dinh Trinh
Desiree Skye Ulman
Sarah Nilza Valencia Bonilla
Jade Fiona Vasquez
Maris Estelle Zammataro

## GEOLOGICAL SCIENCES

***Bachelor of Science - Earth Science***

Bryan Josue Camarillo Ramirez
Lorenzo Mateo Cebreros

***Bachelor of Science - Geology***

Grant Lewis Allred
Daniella Balassa
Alec R. Billmeier
Victoria B. Colaruotolo
Parker Concannon
Spencer Horton Cooper
Holden Ford
Ruben Elias Gomez
Annika Gonzales
Joseph Gunter
Desiree Selena Guzman
Karissa Laine Hansen
Bryan Kurata
Ryan Nicholas Lilly
Kaylin N. Luciani
Sara Marie Olson
Jason Anthony Pizzi
Abel Rodriguez
Gustavo Esteban Sandoval
Luz Ofelia Sesmas
Isabella Suarez
Anthony Temprano
James Michael Wiseman
Jessica Wright

## MATHEMATICS

***Bachelor of Science - Applied Statistics***

Alejandro Arellano
Keneth Burgueno
Justin Cao
Silvia Jin-Sil Choi
Erdene Enkhbadral
Andrew Graham Filipich
Noah Thomas Gallagher
Derek Garcia
Alexis Jovani Gonzalez Canizal
Annie Hoang
Tri Tam Huynh
Justin Leaman
Zhaochuan Lu
Kierra Manuel
Haiky Cuu Nguyen
Hani Nguyen
Nicole Quynh Pham
Andrew William Stapleton
Annabel Tapia
Anh Tuan Vu
Yuan Wang

***Bachelor of Science - Mathematics***

Amira Esmat AbdEl Malek
Marco Tulio Aguirre Gutierrez
Zoe Ann Arias
Rana Sami Barakat
Susan Ivonne Becerra
Anthony Benites
George Junior Blanco-Sanchez
Alexander James Bolton
Triniti B. Boykin
Gabriel Vincent Calva
Julio Cesar Castro
Daizy Valerie Cornejo
Dominic James Cunneen
Priscilla Curtis
Markie Davis
Zabehi Doukrou
Tyler Agustin Elliott
Jose Luis Escobar
Adrienne Hailey Fox
Erika Aline Garfias
Hector Gaxiola Williams
Ivan Jose Gonzalez
Eduardo Hernandez
Elizabeth Him
Ryan Huynh
James Alexander Yoshio Iwamasa
Amanda Jones
Austin Kim
Michael Lainez
Wendolyn Michelle Lopez



***Bachelor of Science - Mathematics, continued...***

Josephine Hong Tien Mai
Rafael Marquez Guerrero
Roman Anthony Mcdaniel
Bryan Arath Miranda
Juan Murillo
Sophanou Neou
Cyna Nguyen
Ivy Nguyen
Yen Phi Nguyen
Katie Nguyen
Tommy Nguyen
Sujeong Park Park
Sandra Plazola
Faye Ocfemia Ponferrada
Nico Daniel Saavedra
Frank Aaron Sanchez
Jonathan Hossein Sohrabi
Anne Sun
Justin Matthew Din Tan
Andy Khoa Tran
Tien Thuy Tran
Jessica Valencia Alvarado
Edward Gerardo Vasquez Hernandez
Tram Nguyen Hong Vo
Peter Vuong Vu
Vy Nguyen Bao Vu
Daniel Wang
Brooke Adriana Yale

***Bachelor of Science - Mathematics - Applied Mathematics***

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Guadalupe Almaraz
Vicente Cardenas
Alvaro Casales Gil
Helen Chang
Kent William Chavez
Daniel Crisostomo
Thea Fernandez De Gala
Donovan Arturo Diaz
Maya Dye
Brian Alexander Flores
Edwin Garcia Cuevas
Max Garcia Roldan
Ulises Daniel Guzman
Farhana Hoq
Mark Anthony Jimenez
Melvin Kem
Tamia Elisabeth Leavell
Nicolas Daniel Louie
Alina Mahmood
Claire Elisha Marsudidjaja
Kristine Martinez
Jeffrey Ruben Morales Toledo
Luis Fernando Moreno Juarez
Key Muhammad
Millie Vu Nguyen
Timothy Nguyen
Jesus Alberto Oropeza
Izac Daniel Ortiz
Alante Paschall
Makena Pollon
Safwat Rahman
Daniel Valentin Silver Ramirez
Philip Andrew Ramirez
Alejandro Ramos
Cheyenne Reed
Steven Michael Robles
Ricky Vincent Robles Duenas
Jacqueline Saldivar
Saul Sanchez
Ada So
Sonitha Alice Soth
Ian Robert Speers
Greg Robert Vincent
Josselyn Stacy Vivar
Annie Yen-Nie Wang
Paul Kariuki Wanganga
Christofer Wellington
Mika Wong

***Bachelor of Science - Mathematics - Mathematics Education***

Stephany Alvarado
Emmanuel Alberto Anceno
Cesar Andrade Hernandez
Stephanie Bailon Ortiz
Jocelyn Barron Hernandez
Nathalie Elizabeth Becerra
Erica Mae Louise Natividad Binauhan
Marco A. Cardenas
Charmaine Castle
Eunice Chavez

Layne Mackenzie Cooper
Aimee Corral
Brandon Davis
Luis Emanuel Diaz
Daniel Richard Forrest
Joshua Keith Frazer
Maritza Fregoso
Jessica Poblete Gaspan
Cecilia Guadalupe Gonzalez
Jordyn Michelle Helaire
Tiffany Nicole Hernandez
Timothy Hoang
Malia Ann Kaye
Katherine Celine Khiev
Allison Yaena Kim
Ryan Hay Lao
Katie Lee Lewis
Leslie Janet Lopez
Zoe Kaitlyn Marley
Karina Moron
Lloyd Nguyen
Tu Tran Thieu Nguyen
Phillip Phien Nguyen
Jay Nixon
Robert Pickett
Soklay Pouch
Bryant Quiroz Acevedo
Alejandro E. Reyes
Austin Ring
Tiffany Zarah Roldan
Victor Jr Rosas
Jovanie Sandoval
Luna Scott Santos
Ryan Anthony Sapp
Navneel Kaur Sekhon
Kevin Akihito Takeda
Samantha Thiede
Kerra Desiree Thompson
Kevin Minh Tran
Winston Tu

## PHYSICS & ASTRONOMY

***Bachelor of Arts - Physics***

Nicole Christine Campbell
Javier Carlos
Sophealena Reginie Chhom
Kyle Covington
Jimwell Antuerpia Delos Santos
Noah Matthew Jost
Daisy Jesus Nava
Khoi Bao Nguyen
Brenda Marlen Padilla
Ryan Nikolaus Tait
Sinuhe Andrew Villegas

***Bachelor of Science - Physics***

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Sierra Nichole Breyer
Sergio Carranza
Michael Carroll
Brenda Caseres
Steve Figueroa
Emmanuel Guardado
Neil Bradley Helvoigt-Happoldt
Daniel Esteban Hernandez
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Siddharth Mehta
Daniel Christopher Morgan
Loc Tran Nguyen
William Pavel Sandoval
Nanette Lynn Smith
Ezekiel Vargas
Ashley N. Ward



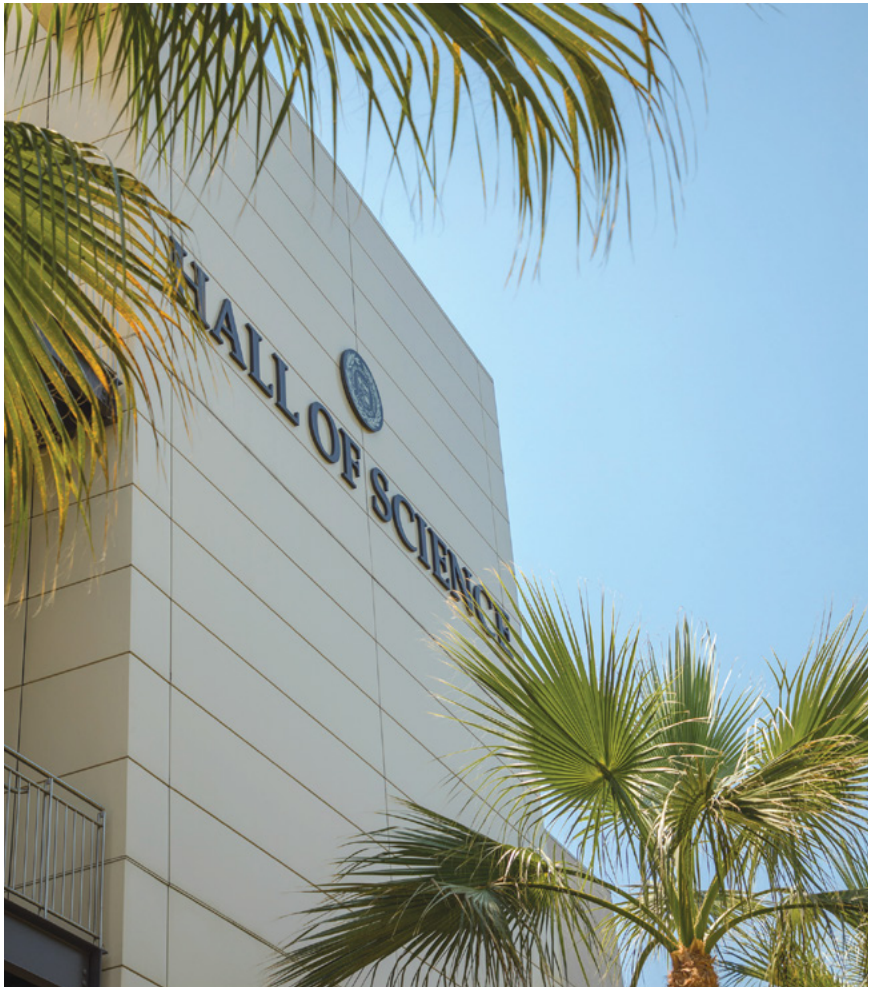
# College of Natural Sciences & Mathematics

*Candidates for Certificates*

## BIOLOGICAL SCIENCES

***Certificate - Biotechnology***

Alicia Chavez
John Kenneth Dy
Qui Luong
Robert Miller
Tiana Danielle Nguyen
Victoria Nguyen
Stephany Ramirez
Ernesto Uriel Simental
Kelly Wong



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## ACKNOWLEDGEMENTS

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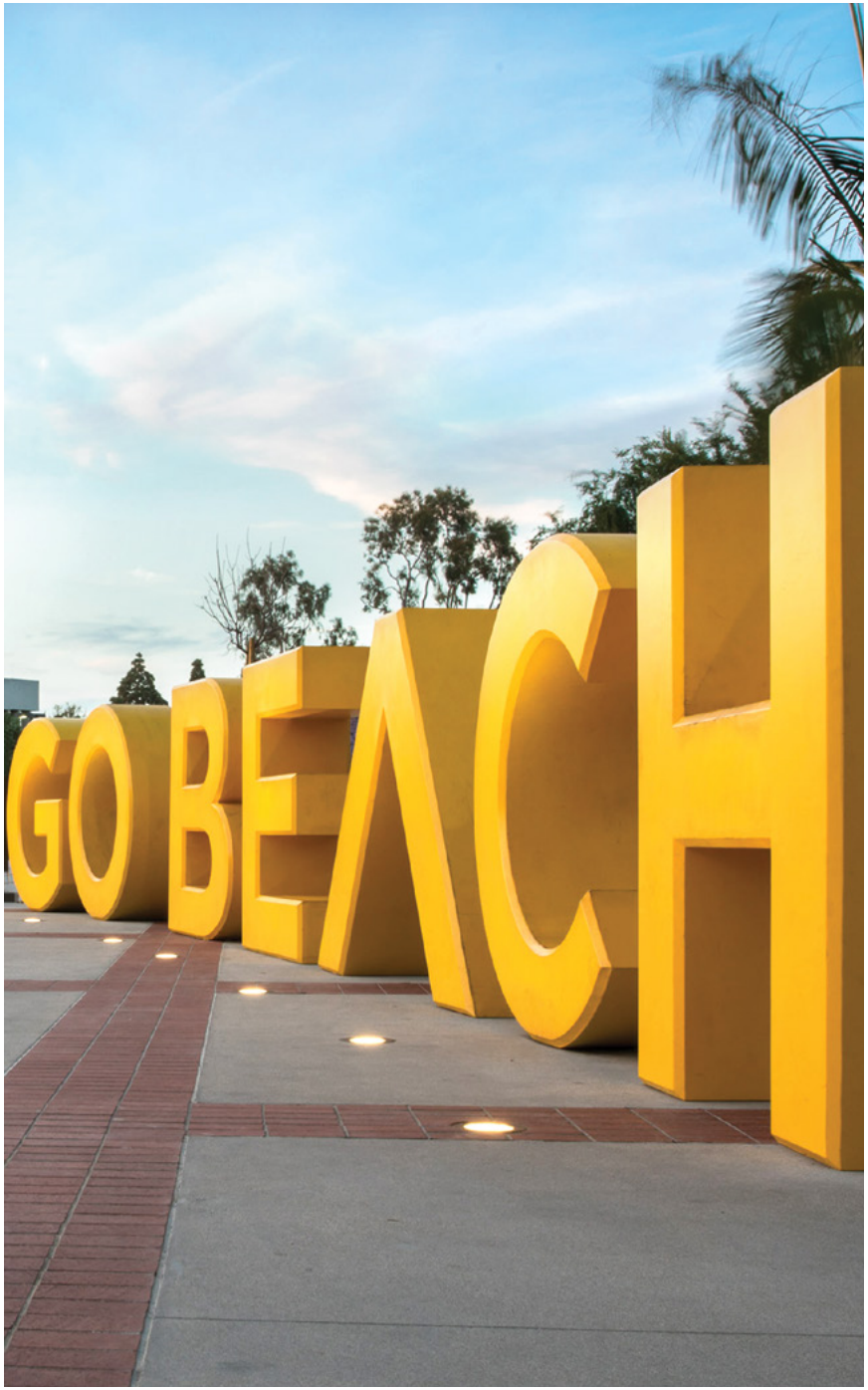
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