AGENDA

COMMITTEE ON EDUCATIONAL POLICY

Meeting: 10:30 a.m., Wednesday, January 31, 2024
Glenn S. Dumke Auditorium

Diego Arambula, Chair
Christopher Steinhauser, Vice Chair
Diana Aguilar-Cruz
Raji Kaur Brar
Jack Clarke, Jr.
Mark Ghilarducci
Leslie Gilbert-Lurie
Jonathan Molina Mancio
Jose Antonio Vargas
Darlene Yee-Melichar

Consent Discussion
1. Approval of Minutes of the Meeting of November 7, 2023, Action
2. Research, Scholarship and Creative Activities, Information
3. Proposed Amendments to Title 5: Implementation of the Student Transfer Achievement Reform Act of 2021, Information
Chair Arambula called the meeting to order.

Approval of Minutes

The minutes of the meeting on September 12-13, 2023, were approved as submitted.

Implementation of the Student Transfer Achievement Reform Act of 2021

Deputy Vice Chancellor of Academic and Student Affairs Nathan S. Evans began the presentation by providing a brief overview of the Student Transfer Achievement Reform Act of 2021 (Assembly Bill 928) which creates a single lower-division general education pattern that will satisfy transfer admission requirements for both the CSU and the University of California. The
Intersegmental Council of Academic Senates were charged to establish that singular lower-division general education pattern, called Cal-GETC.

Dr. Laura Massa, interim associate vice chancellor for Academic and Faculty Programs, provided further details on CSU GE-Breadth subject area requirements and the Student Transfer Achievement Reform Act of 2021 requirements. Chair of the Academic Senate of the CSU Beth Steffel continued to describe the role of the Intersegmental Committee of the Academic Senates in reviewing and editing lower division general education subject area and course requirements following the enactment of AB 928.

Taylor Thomas, an undergraduate student at CSU Bakersfield and vice president of Legislative Affairs for Associated Students, Inc., shared her experience as a transfer student and her support for streamlining the transfer process for students. Dr. Evans gave closing remarks and summarized the next steps in the implementation process with a brief timeline.

Following the presentation trustees recognized the benefits of simplifying the transfer process. Trustee McGrory suggested using this process as an opportunity to reevaluate all general education subject area requirements for effectiveness and relevance. Trustees expressed gratitude to Ms. Thomas for sharing her experience as a transfer student and applauded her academic perseverance. Dr. Evans and Chair Steffel addressed several questions regarding transfer enrollment, considerations for university autonomy in designing curriculum, the role of faculty and students in the Cal-GETC implementation process, anticipating possible implementation challenges and how the diminishing transfer student population impacts the desired outcome of the single pathway. Various trustees, including Trustee Lopez and Chair Fong, invited the committee to provide at the next board meeting more information regarding areas of differing opinions in the implementation of the Student Transfer Achievement Act of 2021.

**Graduation Initiative 2025 and Student Success**

The Deputy Vice Chancellor of Academic and Student Affairs Dilcie D. Perez began the presentation with an overview of the Graduation Initiative 2025 goals and milestones to date. Significantly, most universities have achieved all-time highs in graduation rates for students of all backgrounds. Issues such as bottleneck courses that were a persistent challenge to the initiative’s progress have largely been mitigated through strategic interventions and resources. However systemwide student equity gaps persist.

Assistant Vice Chancellor of Student Success Strategic Initiatives Jeff Gold proceeded to present the metrics used to track systemwide progress toward Graduation Initiative 2025 goals. Dr. Gold shared the graduation rates for 4-year and 6-year first-time students, 2-year and 4 -year transfer
students and the equity gap for Pell-eligible students and students from historically underserved communities. Dr. Gold outlined other disaggregate data to help inform student success work in the future.

Associate Vice Chancellor for Student Success and Inclusive Excellence Dr. Jennifer Baszile presented a vision to reimagine the next iteration of the CSU’s student success and equity work. She outlined a two-phase timeline, with the first phase consisting of a “year of engagement” with key stakeholder groups. The second phase will take place during the 2024-25 academic year, with the conclusion of the Graduation Initiative 2025 and introduction of the Student Success Framework that was developed in part through consultative work during the first phase.

Trustees commended the achievement of increased graduation rates and other successful outcomes since the inception of the initiative. Trustees suggested leveraging best practices and strategies that are proven effective at individual universities, ensuring strategies remain student-focused and continuing to reframe the academic experience to adjust to students’ diverse learning styles. Dr. Perez acknowledged the benefits of considering these opportunities in the future. Trustee Arambula voiced support for the student success framework and recommended providing the board with more frequent progress reports to ensure trustees can make informed decisions in the policy development and implementation process.

The meeting adjourned.
Research, Scholarship and Creative Activities

Presentation By

Dilcie D. Perez
Deputy Vice Chancellor
Academic and Student Affairs

Ganesh Raman
Assistant Vice Chancellor
Research

Tom Jackson, Jr.
President
Cal Poly Humboldt

Summary

A hallmark of The California State University (CSU) is a focus on research, scholarship and creative activity that can be applied to identify, address or transform society’s most urgent challenges. Whether pursuing directed research in areas of public health and climate change or giving voice to underserved populations through artistic endeavors, CSU students have a unique opportunity to engage in experiential learning and discovery. Working alongside faculty in the lab, out in the field or in a studio, students benefit from a vibrant learning experience while having the opportunity to contribute to their larger communities.

External Funding

As illustrated in the chart below, total expenditure—from grant and contract revenue—for CSU research and sponsored programs has been consistent over the past several years. In 2021-22, the most recent year for which data are available, the total amount was $708 million. This represents a growth of $45 million over the previous year and $118 million over the last five years.
Unlike state funds that are used exclusively for basic university operations, faculty compete for these external funds, which are used for innovative projects that benefit local communities and prepare students for 21st century careers.

Research, Scholarship and Creativity Activities in the CSU

Highlights of research, scholarship and creative activity by CSU faculty and students during the 2022-23 academic year are listed below.

California State University, Bakersfield

The Central California Emerging Technology Accelerator (CCETA)
Funding agency: U.S. Department of Commerce
Total award: $1,418,000
Investigators: Jeremy Woods and Seung Bach

Kern County is situated at the intersection of California’s aerospace, energy and agriculture sectors. Despite being the operational home of three separate and vibrant STEM industries, the county still has a systemically high unemployment rate, and the region lags its peers in high-growth startups. The project will address this problem by creating an emerging technology lab to augment
the recently inaugurated $1.2 million California State University Bakersfield (CSUB) Center for Entrepreneurship & Innovation (CEI) venture accelerator program. The accelerator recruits student and community entrepreneurs with promising venture ideas and helps turn those ideas into new businesses with initial revenue commitments and a path toward scalable growth. The emerging technology lab will augment our accelerator by pairing faculty/student research teams with global-leading aerospace, energy, and agriculture industry partners to work on cutting-edge R&D projects that push the envelope on some of these industries’ most pressing challenges.

**Early Modern Sensory Encounters Conference Presentation**  
**University of Oxford**

Emma Barnes, an M.A. student in History, recently co-presented a paper entitled “Sweet and Stinking Scents: A Sensory History of Reproduction in Early Modern England” at the Early Modern Sensory Encounters conference at the University of Oxford (U.K.) with her faculty mentor Dr. Kate Mulry. Emma was the only master’s student who presented at the conference. She started work in this area as an undergraduate at CSUB and conducted primary source research on the Early Modern perception of climate, scent and women’s reproductive health at the Huntington Library last fall with Dr. Mulry (who is working on a related project). Emma’s research was supported by the School of Arts and Humanities Research Initiative at CSUB.

**California State University Channel Islands**

**SOAR (Student Outreach, Academics, and Retention) at Chanel Islands**  
Funding agency: U.S. Department of Education  
Total award: $2,996,466  
Investigator: Elena Jaloma

This Title V grant has three distinct activities that will work together: Activity 1: The Channel Your Potential outreach activity will raise awareness about pathways to college through culturally-responsive community outreach and increase students’ and parents’ university readiness by building relationships with community and educational partners. Activity 2: The Channel Your Passion retention activity will build students’ academic skillsets and sense of academic efficacy and motivation, while also increasing a sense of connection to the university. Activity 3: The Channel Inclusive Excellence professional development activity will provide faculty/staff with opportunities to learn about equity-based best practices and implement new practices into work with students. SOAR includes 5 objectives: 1. Increase in Latinx student desire to attend college; 2. Increase Latinx student retention; 3. Increase number of students transferring from regional partner, Oxnard College; 4. Increase Latinx and Low-income student graduation rate; and 5. Provide project services to target population.
Stories of Labor From the Fields of Ventura County

Theresa Avila, assistant professor of Art, and student Ilien “La Buffy” Tolteca curated an art exhibition focused on the heritage of agriculture in Ventura County in spring 2023. “Stories of Labor from the Fields of Ventura County” was exhibited in the John Spoor Broome Library Gallery and provided a local perspective on the issues explored in “Dolores Huerta: Revolution in the Fields/Revolución en los Campos,” a traveling Smithsonian exhibition also on display. The exhibit featured a variety of media including paintings, graphic works and mixed media sculpture.

Utilization of Agricultural Waste (Olive and Grape Pomaces) to Improve the Service Life and Sustainability of Roadways

Funding agency: U.S. Department of Agriculture
Total award: $785,000, 3 years
Investigator: Kun Zhang

This multi-university partnership aims to repurpose olive and grape pomaces (the solid remains of the fruit after pressing for juice or oil) for roadway applications through their bioprocessing into more environmentally benign antioxidants and anti-icing products. By deriving “green” chemicals from these renewable wastes, the service life of roadways can be extended in warm regions where antioxidant additives are needed to retard oxidation-induced deteriorations and improve the sustainability of roadways in cold regions where less corrosive and more environmentally benign anti-icing products are needed for winter operations. Sustainable technologies that divert pomaces to beneficial applications are top priorities for both the olive and grape industries. Developing cost-effective and value-added solutions to upcycle pomace wastes is profitable for both upstream industries (farmers and food producers) and downstream industries.

Forest Therapy Guides

To serve individuals impacted by the Camp Fire, the Big Chico Creek Ecological Reserve received funding from the North Valley Community Foundation to certify 15 community leaders as Forest Therapy Guides through the Association of Nature and Forest Therapy. Led by Blake Ellis, Chico State Ecological Reserves, in 2021, the Ecotherapy Program was formed to provide mental health support to Chico State students in response to the COVID-19 pandemic. The Ecotherapy Program now serves Chico State students, staff, faculty and individuals impacted by wildfire in Butte County. Its mission is to promote the well-being of both people and the land through guided therapeutic and restorative activities in local natural environments. Forest Therapy (derived from the Japanese practice of “Forest Bathing”), the program’s flagship service, has been proven to: reduce cortisol and adrenaline levels; enhance immune function; improve respiratory and
cardiovascular function; decrease anxiety and depression; and improve mood, focus, academic performance and creativity.

California State University, Dominguez Hills

**Toro Allied Health Pathways**

Funding agency: California Department of Health Care Access and Information (HCAI)

Total award: $3,320,212

Investigator: Mi-Sook Kim

The CSUDH College of Health, Human Services, and Nursing has been awarded $3.3 million through the Department of Health Care Access and Information’s Health Professions Pathways Program (HPPP). The Toro Allied Health Pathways Program promotes the number of diverse and competent healthcare workers in the region by graduating a larger and more diverse healthcare workforce, creating pathway degree curricular connections between high schools, community colleges, and CSUDH. The pipeline program will closely advise, mentor and educate students into various healthcare career options, including nursing, medical technology, cytotechnology, radiologic imaging, social work, public health, marriage and family therapy, occupational therapy, clinical exercise physiology and speech pathology. The program will also serve to promote entry into the clinical laboratory sciences and mental health professions, two fields that are growing rapidly in part due to the post-pandemic public health needs.

Faculty Publication: Black Woman on Board

The University of Rochester Press published the book, *Black Woman on Board: Claudia Hampton, The California State University and the Fight to Save Affirmative Action, 1974-1994*, authored by Dr. Donna J. Nicol, professor and Chair of Africana Studies at California State University, Dominguez Hills. Dr. Hampton was appointed to the CSU Board of Trustees in 1974 and was the first black trustee and first woman to ever chair the board. The book examines Dr. Hampton’s 20-year efforts to enforce and expand affirmative action policy and programs in the CSU and her work to overcome racism and sexism.

California State University, East Bay

**CA Promise Neighborhoods Network Grant**

Funding agency: California Department of Social Services

Total award: $3,000,000

Investigator: Carolyn Nelson

Hayward Promise Neighborhoods (HPN) will work to sustain critical activities in priority neighborhoods with the highest child-poverty rates. State and federal funding support HPN's infrastructure and solutions based on the residential address and school of attendance. HPN
developed a guiding framework in 2022 with input from community assessments and partner workgroups and incorporated four principles to inform how to design, frame, and engage youth and families in the proposed work; 1) Healing: reducing sources of stress in communities; 2) Connecting: supporting proactive relationships; 3) Persisting: strengthening cores skills; and 4) Actualizing: uplifting pathways for all to succeed.

**National Endowment of Humanities Grant**

**Growing, Learning, and Archiving: Leveraging Underrepresented Histories of Food and Farming for CSU East Bay Students and Faculty**

Dr. Antonio Roman-Alcalá, assistant professor in the Department of Anthropology, Geography and Environmental Studies, is one of the seven recipients of the National Endowment of Humanities Spotlight on Humanities in Higher Education Exploration grant for 2023. Dr. Roman-Alcalá is an educator, researcher, writer and organizer who has worked for just and sustainable food systems for the past 18 years. His National Endowment for the Humanities funded project is titled “Growing, Learning, and Archiving: Leveraging Underrepresented Histories of Food and Farming for CSU East Bay Students and Faculty” which will include a 12-month speaker series and student-research program on untold histories of food and farming in California’s East Bay area. Dr. Roman-Alcalá's research has grown out of his longtime involvement in social movements for more sustainable and socially just food systems. He has a passion for connecting CSUEB students with community-based organizations while building alignment across research, practice and policy.

California State University, Fresno

**SOFT START: IT-Cybersecurity Workforce Education Collaborative**

Funding agency: U.S. Department of Commerce: Connecting Minority Communities

Total award: $2,406,276

Investigators: Keith Clement and Amith Belman

The SOFT START: IT-Cybersecurity Workforce Education Collaborative program democratizes access to IT education and careers. The program offers a range of boot camps, certificates and resources that allow students and residents to enroll and succeed even at the most beginning level. These “soft start” opportunities prepare at-risk students and residents to succeed and to progress to more challenging higher education opportunities. The aim is to prepare them for entry into IT-cybersecurity jobs, which are increasing in number and well paid. Their successful entry contributes to creating a diverse IT workforce.
Native Plants, Places and People in Central California: Linking STEM Education to Local Cultural and Linguistic Diversity

The many plants which sprouted from the flat grasslands and vast mountain ranges of Central California were vital in sustaining generations of the indigenous peoples. These tribes, including the Yokuts and Mono, used their botanical knowledge to live off the lands of the Central Valley and Sierra Nevada Range. The region’s flora collected for food, medicine and crafts were integral to their way of life, culture and language. Now, a CSU STEM-Net project at Fresno State is documenting the indigenous knowledge about the native plants of the Central Valley and surrounding areas. The project, titled “Native Plants, Places and People in Central California: Linking STEM Education to Local Cultural and Linguistic Diversity,” is an intersection of linguistics, anthropology and biology. The project aims to compile ethno-botanical information on native plants and how indigenous peoples used them for thousands of years. The project provides Fresno State students with valuable research opportunities.

California State University, Fullerton

CAREER: Improving Persistence of Underserved Students in Psychological Science Using an AI-Based, Personalized Career Exploration Platform
Funding agency: National Science Foundation
Total award: $979,212
Investigator: Yuko Okado

Combining insights from literature on STEM persistence and the learning sciences, this project establishes a framework for developing and implementing a tailored online curriculum in career exploration and development, featuring virtual agents that represent real-life mentors in STEM. Students can choose from, and have simulated conversations with, a set of diverse “virtual mentors” that convey personalized information about the mentor’s career path, experiences and advice. Each student user will also receive personalized recommendations and resources for further career exploration and planning. This framework will be tested in psychology, a discipline that presents unique opportunities to increase diverse entrants into the STEM workforce. Psychology undergraduate curricula uniformly emphasize statistical analysis, research methods and “21st century skills” necessary among STEM workers, and psychology is the largest STEM discipline with the greatest proportion of under-served students.

California State University Fullerton (CSUF) High School Equivalency Program (HEP)
Funding agency: U.S. Department of Education
Total award: $2,370,190
Investigator: Pablo Jasis

This project will offer a multimodal, technology-infused GED exam preparation program, which will include individualized, small group and online instruction in English and Spanish, a comprehensive personal counseling component, and an on-going set of campus-based cultural activities to help students develop an emerging college identity. Instruction will be delivered at
four locations, which includes the Fullerton campus and three satellite sites in areas of high migrant population density. As they prepare for exams, participants will be introduced to careers in engineering and mathematics under the guidance of CSUF’s award-winning STEM faculty, develop portable study skills and actively engage in introductory biology, health science and teaching workshops. Upon graduation, students will transition into higher education, enhanced employment or a career in the armed forces.

Women of Zalongo

As a professional actress with a secret love for creative writing, Professor of Theatre and Dance Maria Cominis had writing experience but “Women of Zalongo” was the first play she felt compelled to share. Inspired by her grandmother’s spirit and a desire to fill the theater with a story that honored her Greek heritage, Professor Cominis spent six years writing the play. In 2022 she was awarded a National Endowment for the Arts grant and earned semi-finalist placements in the 2022 Eugene O’Neil National Playwright’s Conference and the 2020 Bay Area Playwright’s festival. The show was performed in March in CSUF’s Young Theatre, kicking off Women’s History Month.

California State Polytechnic University, Humboldt

Climate Plan: Eureka and Arcata Corridor
Funding agency: CalTrans
Total award: $549,950
Investigators: Eileen Cashman and Margaret Lang

Cal Poly Humboldt researchers are investigating current and anticipated climate conditions on a six-mile segment of Highway 101 along Humboldt Bay, a roadway that’s experiencing one of the fastest rates of relative sea level rise on the entire U.S. west coast. The study will analyze impacts of inaction and evaluate adaptation options based on the best available sea level rise science under a range of scenarios. Findings will contribute to the development of a comprehensive climate adaptation plan for Highway 101, enabling Caltrans District 1 to advance planning and to prioritize and implement a collaborative and cost-effective adaptation solution.

Caminar Juntos
Funding agency: U.S. Department of Education
Total award: $2,830,088
Investigator: Mary Gonzalez

Caminar Juntos (Walking Together) is a new Developing Hispanic-Serving Institutions (DHSI) project at Cal Poly Humboldt designed to increase retention and graduation for Hispanic, low income and other underserved students. The initiative will provide students with coaching and
mentoring activities to increase academic skills, sense of belonging, and inclusion. The goal is that it will provide a transformative education – a holistic process with the student at the center of the learning experience. It will also provide faculty, staff, and mentors with professional development opportunities on topics surrounding inclusion and fostering a climate of support.

**Prison Arts Collective Exhibition**

Dr. Jim Woglom helped facilitate an art exhibition at Cal Poly Humboldt showcasing the work of incarcerated artists at Pelican Bay State Prison, a maximum security prison in Northern California. The exhibit was an effort of the Prison Arts Collective, a statewide initiative that pairs CSU art departments with state prisons, allowing the development of collaborative arts projects. This moving exhibition gave participants the opportunity to tell their stories and reflect on their experiences while encouraging viewers to see a different side of this population.

**California State University, Long Beach**

**Harvesting Healthy Habits in Long Beach: A Nutrition and Gardening Intervention to Prevent Chronic Diseases Among Underserved Populations**

Funding agency: U.S. Department of Agriculture  
Total award: $969,826  
Investigators: Melawhy Garcia and Natalia Gatdula

The Harvesting Healthy Habits in Long Beach integrated project aims to improve eating patterns to prevent chronic diseases and increase food access among underserved ethnic minority children and their families through an innovative nutrition and gardening intervention. The project has five overarching goals: 1) Education - Increase the pool of qualified health and nutrition professionals to enter the workforce to prevent chronic diseases among underserved communities; 2) Extension - Engage community stakeholders in the design, testing, and implementation of the intervention to ensure relevance to the priority population; 3) Research - Evaluate the effectiveness of the intervention in improving eating patterns among underserved children in third through fifth grades; 4) Extension - Engage underserved families to promote healthy decision making and improve eating patterns; and 5) Extension - Improve food security and nutritional health outcomes for program participants and their families.

**Excellence in Equity, Diversity, and Inclusion Award**

Dr. Alexander Hahn, a professional classical vocalist and faculty member of the College of the Arts, has researched, presented and performed works by composers from marginalized and underrepresented cultures and communities worldwide. This pursuit has been inspired by the diverse student body of CSULB. Dr. Hahn has performed solo recitals featuring the art songs of Colombian composer Jaime León Ferro. Additionally, he collaborated with Constellations Chamber Concerts in Washington D.C., delivering four recitals that showcased art songs by
composers of color. Recently, Dr. Hahn presented and performed the art song repertoire of South Korea and Lithuania at prestigious international conferences. Due to his efforts in championing music by composers from marginalized and underrepresented backgrounds, Dr. Hahn has received the 2022-2023 Faculty Excellence in Equity, Diversity, and Inclusion Award, leaving a lasting positive impact at CSULB.

**California State University, Los Angeles**

**Improving the Accuracy of Implicit Solvents with a Physics-Guided Neural Network**

Funding Agency: National Institutes for Health  
Total Award: $730,000  
Investigator: Negin Forouzesh

Negin Forouzesh, an assistant professor of Computer Science in the College of Engineering, Computer Science, and Technology at Cal State LA, was awarded a $730,000 grant from the National Institutes of Health to provide students with opportunities to participate in biomedical research. The title of the awarded project is “Improving the Accuracy of Implicit Solvents with a Physics-Guided Neural Network.” The four-year grant from the NIH Support for Research Excellence (SuRE) program will support research on computer-aided drug design. Five students will work on the project each year. In her research, Professor Forouzesh applies mathematical and physics-based modeling, high-performance computing and machine learning to simulate and understand biomolecular systems. Protein-ligand interaction is central to several biological processes, including DNA replication and cellular energy production. It also has vast applications in the early stages of drug discovery. The outcome of this research will improve understanding of protein-ligand interactions and will benefit computer-aided drug design.

**LA For All Campaign**

Graphic Design/Visual Communication students from the Art Department at Cal State LA were given the opportunity to add their voices to the LA For All campaign led by the LA Civil Rights Department. Students were tasked with creating a compelling poster design that communicated their personal interpretation of one of the main messages in the LA For All campaign. Now in its second year of partnership, this collaboration has led to a campus exhibition of the students’ work and the purchase of some of the designs to be used in the main citywide campaign.

**California State University Maritime Academy**

**Building and Bridging Data Science Opportunities in Solano County**

Funding agency: Foundation for California Community Colleges  
Total award: $180,000  
Investigators: Julie Simons and Taiyo Inoue
This Interdisciplinary Collaboration project will establish a new minor at CSU Maritime Academy in Data Science focusing on innovative and inclusive pedagogy and interdisciplinary collaboration. CSUM is located in one of the most racially diverse counties in the nation. Being a STEM-focused institution with a strong record of promoting socioeconomic mobility through discipline-specific training and an emphasis on job placement, CSUM is uniquely positioned to address the demand for data science education while promoting diversity in the field. The new minor will provide students with a solid foundation in data science while emphasizing its application across fields. The interdisciplinary approach will create a high-quality program attracting diverse students with wide-ranging academic interests.

National COVID Memorial

Associate Professor Sarah Senk is part of the leadership team at the nonprofit Marked by Covid. The organization is dedicated to memorializing pandemic victims, documenting preventable suffering caused by the U.S. response and empowering frontline communities. A scholar of Memory Studies, Dr. Senk has collaborated with community members to develop the National Covid Memorial, an augmented reality tribute featuring personal remembrances of Covid victims. She is also the co-director of the Memorial Matrix project, a digital archive showcasing grassroots Covid memorials from heavily affected neighborhoods. The product of a collaborative partnership between Marked By Covid and Dr. Sachin Pawaskar (University of Nebraska Omaha), the project's goal is to represent public memory about Covid-19 accurately, emphasizing the pandemic's uneven impact and the memorializing responsibility borne by survivors. The team is preparing to populate their site with data on hundreds of lesser-known memorials, ensuring a comprehensive reflection of the crisis.

California State University, Monterey Bay

GREAT Opportunities in Genome Science
Funding agency: National Institutes of Health
Total award: $1,538,021.00
Investigators: Nathaniel Jue and Shahidul Islam

The objective of “GREAT Opportunities in Genome Science” is to create a comprehensive, two-year mentored research and professional development training program at California State University, Monterey Bay. In collaboration with the University of California, Santa Cruz, this effort will train students who are from historically underrepresented and low-income populations for careers in genomics. The training will be focused on engaging students in a broad range of topics and research environments (both wet and dry labs at UCSC). A GREAT student cohort will be recruited from STEM majors including biology, math and statistics, and computer science. The goal will be to identify students early in their academic careers and build a solid foundation in
genomics and well position them to begin research training. The GREAT cohort will include students from rising juniors in the summer and fall prior to the summer of research.

**MSW Program Expansion**

Funding agency: California Office of Statewide Health Planning & Development  
Total award: $3,579,132  
Investigator: Maria Gurrola

The purpose of this proposed grant is to expand the Master in Social Work Program at CSUMB by a total of 48 students in the next five years. This grant will provide the funding to increase the number of professional social workers with the capacity to effectively serve the rural, bilingual, communities of south Monterey County and Central Coast Region and thus abate the shortage of qualified social work professionals in this high-need, high-demand region. The overall goal of this funding is first to expand the MSW program to recruit diverse faculty and staff support. Second, to strengthen curriculum to be culturally and linguistically responsive to prepare students to serve underrepresented, underserved and rural communities. Third, recruit and prepare three cohort of students from the local community from diverse backgrounds, underrepresented, underserved and rural communities in the Central Coast Region.

**Award Winning Experimental Film**

Dr. Timothy Orme is an assistant professor in Cinematic Arts and Technology, and his short films and animations span nearly every genre (experimental, narrative, music video, and documentary). They have been shown at film festivals and art venues all over the world, including European Media Arts Fest, Jihalva International Documentary Film Festival, Ann Arbor Film Festival, Philadelphia Film and Animation Festival, Raindance and the National Gallery of Art, among others. His most recent film, “Fulcrum,” won a prestigious Jury Award at the 2022 Thomas Edison Film Festival. It also won awards at numerous other festivals, including Best Animation at the Dam Film Festival, the Arizona International Film Festival and Liverpool Underground. The eight-minute experimental film features sound design by Dr. Lanier Sammons, associate professor in Music and Performing Arts.

**California State University, Northridge**

**HSI Institutional Transformation Project: Creating Opportunities for Minoritized Students to Participate in Faculty Mentored Research**

Funding agency: National Science Foundation  
Total award: $2,300,000  
Investigator: Gabriela Chavira

The HSI Institutional Transformation Project: Creating Opportunities for Minoritized Students to Participate in Faculty Mentored Research seeks to transform how HSIs bolster and scale research
as a high-impact practice for all STEM students and faculty mentors. It intentionally expands the focus from supporting participants to also identifying and dismantling structural barriers that often thwart institutionalization efforts. It plans to build an evidence- and equity-based research training hub called ESTUDIO: Excellence in Student Training for Undergraduates, Diversity Initiative Office. The project will use the framework of research as a high-impact practice, and builds on substantial evidenced-based work to establish ESTUDIO to: 1) Scale the high impact practice of research for all 10,000 undergraduate STEM students; 2) Create opportunities for all STEM students, including freshman and transfers, to engage in high-impact research or research training activities; 3) Center mentoring as part of faculty life (including in tenure requirements) and bolstering capacity and professional development opportunities for faculty; and 4) Create knowledge in a flexible construct that can be adopted by HSIs of varying sizes and means. These activities are designed to increase the retention and graduation rates of all STEM students, decrease the equity gaps and to enhance the quality of education for all STEM undergraduates.

**Educational Modules to Broaden Academic Research Culture (EMBARC)**
Funding agency: National Institutes of Health  
Total award: $2,212,400  
Investigator: Shu-Sha Guan

Educational Modules to Broaden Academic Research Cultures (EMBARC) innovatively leverages Cultural Mismatch Theory to create high-impact mentoring activities and educational modules powerfully linked to eliminating educational disparities and driving transformation at the individual and institutional level toward inclusion, recruitment and retention of underserved community college students to the biobehavioral research career fields at early and critical developmental periods of professional development. The approach includes rigorous testing of educational activities and modules through a partnership with the largest community college district within the largest system of higher education in the country (Los Angeles Community College District, California Community Colleges Chancellor’s Office and distribution nationwide with some of the largest scientific organizations for underserved students representing biobehavioral science to maximize outreach and sustainability.

**Public History Project on Immigrants and the Environment**

CSUN Chicana/o Studies Professor Stevie Ruiz and students held workshops across Los Angeles last summer to teach participants, mostly high-school and college-age young adults, environmental justice research and methods to advocate for the environmental health of their communities. These skills help them to conduct oral histories with local leaders, family members and teachers about local environmental issues. The oral histories, which will inform the museum exhibits, give them an understanding of the environmental issues, connect generations and inspire solutions to address climate change.
Building a Boulevard for Career Success in Agriculture and Natural Resources for Underrepresented Students
Funding agency: USDA - National Institute of Food and Agriculture
Total award: $9,500,000
Investigators: David Still and Fatheema Subhan

Building a Boulevard will help build a diverse and highly skilled workforce by recruiting, training and mentoring students from across the California State University system. Our goal with ARI-NEXTGEN Fellowships is to provide meaningful financial assistance and mentoring that will allow students to focus on their studies, immerse themselves in a discipline-specific, career-advancing project, work on-campus with faculty mentors, gain knowledge about careers, and learn skills that will help advance their careers. Over the five-year grant, underrepresented students will be encouraged to apply for 400 fellowships that will support undergraduate and graduate students to engage in research and professional projects. A series of workshops will allow a fellow to: a) participate in interactive workshops to develop and practice leadership skills; b) learn and practice the tenants of effective science communication; and c) learn about USDA Pathways program and USDA careers from USDA employees. Fellows will be financially supported to present and attend professional and other conferences. Scholarships will be provided to 40 community college students to enroll in a program and obtain a bachelor’s degree and 10 students from our program that matriculate and complete their first year in a related PhD program will receive scholarships. Student participants will have increased discipline-specific knowledge, improved leadership skills, increased awareness of USDA careers, improved research skills (which include critical thinking and problem-solving skills), and have increased confidence in their abilities – all skills needed for a thriving workforce.

Career Development in Construction Engineering through an Academic and Industry Network
Funding agency: National Science Foundation
Total award: $1,493,695
Investigator: Jeyoung Woo

This project will contribute to the national need for well-educated scientists, mathematicians, engineers and technicians by supporting the retention and graduation of high-achieving, low-income students with demonstrated financial need at the California State Polytechnic University, Pomona. Cal Poly Pomona is an HSI designated institution with 50% of the student body identifying as Hispanic, 62% are first-generation college students and 45% are Pell grant recipients. Over its five-year duration, this project will fund scholarships to 45 unique undergraduate students who are pursuing a bachelor’s degree in Construction Engineering and Management (CEM) and to 75 unique undergraduate students who will participate in a pre-
arranged summer internship. First-year students will receive up to four years of scholarship support and transfer students will receive up to two years of scholarships. The project aims to increase student persistence in the CEM discipline by increasing retention, student success, and graduation rates of the Hispanic and URM students. The project will implement evidence-based curricular and co-curricular activities to support the students. The project will demonstrate the impact of additional financial assistance through a scholarship opportunity during academic semesters as a research assistant and will offer summer opportunities to work as an intern at a construction firm, which is intended to enhance the academic performance of low-income students with academic ability and talent. Because Cal Poly Pomona has a high population of Hispanic and underserved students, this project has potential to broaden participation in the STEM fields and for faculty to learn how mentoring and individual development plans can be used to support retention and graduation of a student population.

California State University, Sacramento

Sacramento CCAMPIS - Child Care Access Means Parents in School
Funding agency: U.S. Department of Education
Total award: $1,893,468
Duration: 4 years
Investigator: Haley Myers Dillon

The goal of this program is to increase retention, persistence, academic success and graduation of student-parents by providing: 1) high-quality, long-term subsidized childcare for 33 student-parents annually; 2) short-term subsidized drop-in childcare for 17 student parents each year; and 3) welcoming outreach, communication and wrap-around support services, in addition to robust data collection. on student-parents including 36 demographic, academic, CCAMPIS specific and qualitative data points. The program aims to support student-parents each year by helping them pay for childcare using a sliding fee scale. 25 student-parents will receive up to $1,000 each month to pay for a first child’s childcare, and 8 student-parents will also receive up to $500 per month for a second child’s childcare. The program will provide a small reserve of $25,000 each year to support student-parents with drop-in care.

California State University, San Bernardino

2022 NCAEC-001-California State University San Bernardino
Funding Agency: National Security Agency
Total award: $17,576,032
Duration: 09/14/2022-09/13/2024
Investigators: Antony Coulson and Vincent Nestler
CSUSB is designated as a Center of Academic Excellence (CAE) in Information Assurance. This $17.6 million grant is focused on the development of a robust cybersecurity workforce. The CAE Community National Center (CNC) will offer three primary functions to the 370+ CAE institutions and projects: 1. Provide technical and logistical support for CAE National Centers, CAE events, initiatives, activities, and curriculum; 2. Provide infrastructure including a portal of CAE resources for the community, geographic regions, and the nation; and 3. Engage and facilitate strategic initiatives for the nation in the areas of research, other national centers, student and faculty development, diversity, workforce development activities and related other duties. The CAE Community National Center (CNC) will lead collaboration among the designated institutions, inclusive of candidates in accordance with program office policy, and to provide administrative support to the program.

Strange World

Stuart Sumida, a CSUSB professor of Biology, has used his knowledge, background and research in anatomy and paleontology to work as a consultant with filmmakers and animators for most of the major film animation studios, including “Puss in Boots, the Last Wish,” which was nominated for an Academy Award. Professor Sumida’s latest efforts can be seen in the Disney film, “Strange World,” which was his 70th film as a consultant working with animators. He helped the animators and production team make the characters both realistic and fantastic. The film also allowed Professor Sumida to work with his wife, Elizabeth Rega, a professor of Anatomy and associate vice provost for Academic Development at Western University of Health Sciences as both served as consultants. Both Professors Sumida and Rega are featured in behind-the-scenes video on the making of the film on the National Geographic Facebook page.

San Diego State University

Environmental Justice Thriving Communities Technical Assistance Center
Funding agency: Environmental Protection Agency
Total award: $9,999,999
Investigator: Rebecca Lewison

San Diego State University is leading one of 17 centers nationwide, and the only one in California, to empower historically excluded communities to advocate for climate and environmental justice. Over the next five years, the center and its partners will co-create accessible, multilingual, in-person and virtual services to help communities apply for government funding to address environmental challenges like drought, flooding and pollution that unjustly impact them. In particular, the perspectives of Indigenous and rural populations will be integral to decision-making, training and identifying sustainable energy solutions. The center will reach far beyond San Diego, with the ultimate aim of serving California, Nevada, Arizona, Hawai’i, Guam and American Samoa. To accomplish this goal, center director Rebecca Lewison and her team will
leverage SDSU’s inclusive, climate-focused initiatives as well as long-standing partnerships with tribal nations and non-profit organizations.

**Because You Moved Me**

This spring, San Diego State University dance majors presented two pieces at the American College Dance Association (ACDA) Regional Conference. One of the dances, “Because You Move Me” (directed by Jess Humphrey, associate professor of Dance), was selected, out of more than 50 dances, to be performed at the end of the regional conference and, for the first time, to represent the region at the national conference. Seventeen students collaboratively created this dance, practicing responsive leadership and articulation of dance language that helped prepare them for dynamic careers as independent or company performers. The dance program at SDSU emphasizes the importance of honoring students’ lineages and engaging in an ever-changing world. Students express the sociopolitical aspects and healing power of dance, requiring individual dancers to consciously attend to time, space and relationships with others in order to successfully move together and move an audience.

**San Francisco State University**

**CS4NorthCal: Scaling an Evidence-based Model for Teacher Preparation and Support to Provide Equitable and Inclusive CS Education in California High Schools**

Funding agency: National Science Foundation  
Total award: $1,994,917  
Investigators: Hao Yue, Larry Horvath, Ilmi Yoon, Jingyi Wang and Yue-Ting Siu

In CS4NorthCal, a consortium of four Institutes of Higher Education (IHEs) – San Francisco State University, California State University Sacramento, San José State University and Sonoma State University – will support 20+ Northern California school districts using a three-pronged approach. First, an online certification program will be established to immerse high school teachers in Computer Science content knowledge and evidence-based, inclusive pedagogical strategies for teaching CS. Second, professional learning communities will meet regularly to provide newly certified CS teachers with community and continuous professional learning on CS curricula and inclusive pedagogical practices. Finally, experienced high school CS teachers will mentor newly certified teachers, providing ongoing content and pedagogical support. This wraparound strategy will prepare and support a new cadre of 300-350 high school teachers committed to CS education excellence, who will serve 30,000+ high school students over the course of the project.

**San José State University**

**Marine Optical Buoy (MOBY) Operations and Technology Refresh**

Funding agency: NOAA
For over 15 years, the Marine Optical BuoY (MOBY), a self-sufficient radiometric buoy stationed off the coast of Lanai, Hawaii, has measured light near the sea surface, providing vicarious calibration data for US ocean color satellites. MOBY’s continuous spectral data collection has been fundamental to fostering international cooperation in the ongoing effort to develop global, multi-year time series of consistently calibrated ocean color products. This four-year award will help to fund the refresh of the optical system central to MOBY, allowing simultaneous spectra to be acquired and the ability to take more individual measurements. Improved optical systems will improve accuracy of data through the reduction of environmental noise, allow for the rapid initialization of new satellite sensors, and assist in the correction of sensors with instabilities – all important aspects to continuing to produce MOBY time series data and the ability to provide vicarious calibration capabilities into the future.

Beekeeper of Aleppo

Dr. Matthew Spangler, chair of SJSU’s Film & Theatre Department, and Nesrin Alrefaai, from the Middle East Centre, London School of Economics and Political Science, co-authored the play “The Beekeeper of Aleppo”, adapted from the novel of the same name. Exploring the harrowing journey of Syrian refugees, Professors Spangler and Alrefaai expertly weave an emotional narrative that directly counteracts the harmful stereotypes placed upon refugees. Professor Spangler examines the representation of refugees and immigration studies within a theatrical context. A natural extension of “The Beekeeper of Aleppo” previewed in London before touring for five months around the world. The work is notable because Santa Clara, the county SJSU resides in, hosts enough asylum seekers and refugees to be considered a refugee-impacted county. Professor Spangler is a well-known playwright and educator, having earned success with his earlier adaptation of Khaled Hosseini’s “The Kite Runner”, which premiered on Broadway and will tour North America in 2024.

California Polytechnic State University, San Luis Obispo

Cal Poly COMPASS Training Program

Funding agency: California Institute for Regenerative Medicine (CIRM)
Total award: $2,887,939
Investigators: Kristen Cardinal, Trevor Cardinal, Sandi Clement, Elena Keeling, Jane Lehr and Emily Neal

This two-year project will prepare a diverse group of students to make a substantive impact in the regenerative medicine field. Selected via a comprehensive recruiting plan and provided with funding and mentoring, 25 COMPASS Scholars will complete the program, while matriculating
in bachelor’s degree programs in biomedical engineering, biology or biochemistry. Scholars will complete a three-month summer internship with an industry partner, with the option to extend to a six-month “co-op” or to complete an additional three-month internship the following year. Upon returning to campus for the senior year, COMPASS Scholars will perform research with a faculty mentor and complete a capstone project. Students will participate in patient engagement and outreach activities, and will graduate from the program ready to enter their generative medicine industry, bringing their technical skills and unique perspectives to this rapidly evolving field.

**Ocean Sight One**

A team of Cal Poly faculty, California artists and media professionals have collaborated on a project called Ocean Sight One to document and present the ocean ecologies that have developed at the base of the oil rigs off the coast of Santa Barbara. The team is initiating dialogs around the social and architectural structures of the oil rigs themselves, and what happens with the top of these rigs in the decommissioning process. Ocean Sight One is interested in making the vibrant, but somewhat hidden, marine life that has formed on these artificial reefs more accessible to the California public through a series of interactive formats using virtual and augmented reality systems. The core faculty on the Ocean Sight One development team are Liberal Arts and Engineering Studies Co-Directors Dr. David Gillette and Dr. Michael Haungs, Architecture Professor Thomas Fowler and Music/Sound Technology Faculty Julie Herndon.

California State University San Marcos

**QIST in the CSU: Expanding Access to Quantum Information Science and Technology**

Funding agency: US Department of Energy  
Total award: $2,016,720.43  
Investigators: Justin Perron (PI, CSUSM), Ed Price, Megan Ivory, Jaime Raigoza, Jake Douglass, David Gruber, Gabe Hanzel-Sello and Frank A. Gomez

Quantum Information Science and Technology (QIST) is a priority for federal coordination and investment as an important component of U.S. scientific leadership, national security and economic competitiveness. The goal of this project is to meet this need and broaden participation in the QIST field by providing student opportunities and focusing on CSU faculty professional development. The proposed high school to undergraduate bridge programs will expose incoming undergraduate students to the field of QIST. Cohort-based student learning communities will support students during the academic year. Summer internships in partnership with Sandia National Laboratories will provide QIST research experiences that are rare at the undergraduate level due to the complexity and expense of QIST systems. In parallel with the student efforts, faculty focused activities will expand the capacity within the CSU system to offer QIST educational experiences. Two annual summer workshops will train CSU faculty on QIST concepts and educational modules.
Innovation Mural

What is innovation at CSUSM? That was the question for Scott Gross and Mary Oling-Sisay, who sparked conversations around the development of an artwork about innovation specifically for a university focused on social mobility. The innovation mural at CSUSM was conceived as a multi-dimensional invitation to engage in innovation across disciplines and with community. Because CSUSM emphasizes social innovation, the mural describing the innovation process would have to be unconventional. The mural consists of an oak tree that moves through the seasons, branches into circuitry, and describes the process of innovation with light boxes. Visitors to the Innovation Hub can input their ideas into the design pipeline, a vacuum-powered tube that moves their ideas along. The design team is interdisciplinary and community-based, consisting of muralist Tim Topalov, CSUSM Makerspace specialist Kodie Gerritsen, and innovation fellow Lucy HG Solomon, with essential contributions from CSUSM students and facilities staff.

Sonoma State University

NASA’s Neurodiversity Network (N3): Creating Inclusive Informal Learning Opportunities across the Spectrum
Funding agency: National Aeronautics and Space Administration
Total award: $5,486,044
Investigators: Lynn Cominsky and Laura Peticolas

NASA’s Neurodiversity Network is a five-year program to redevelop existing NASA resources for use with neurodiverse learners, with a special focus on autistic learners. SSU is partnering with Educational Development Corporation and New York Hall of Science to test the resources with northern California high schools that specialize in autistic learners, as well as informal audiences in New York City. This program was inspired by Professor Cominsky's work with autistic SSU physics majors, including the use of a robotic telescope for astronomical observations as well as model rocketry and payload development.

Human/Nature: An Exploration of Place, Story, and Climate Futurism

This grant will support a combined format, virtual and in-person, three-week NEH summer institute for 25 secondary English teachers from across the country. The institute will be held for two weeks on SSU's campus and includes field trips to various locations in Northern California. Participants will learn alongside literary scholars, teacher-artists, naturalists and media literacy scholars. The institute will guide participants through an in-depth inquiry into the human/nature dichotomy and connections through climate futurism. Climate futurism is defined here as storytelling that uses climate science as a catalyst to imagine possible climate futures. Storytelling
is essential to the humanities, but it also bridges other disciplines like science, helping people imagine alternative outcomes to complex problems. The intended outcome is to guide teachers to teach their students the impact of climate change through Sci-Fi. The institute starts with Octavia E. Butler's Parable of the Sower and includes young adult literature in the genre of "cli-fi," or climate science fiction. Literary study and field experiences lead to the development of curricular "Action Plans" for teachers' use in their own classrooms.

California State University, Stanislaus

**Growth & Research Opportunities with Traineeships in High energy physics at Minority Serving Institutions (GROWTH-MSI)**

Funding agency: Department of Energy  
Total award: $1,023,773  
Investigator: Wing To

This project will fund a traineeship program for undergraduates from six minority serving institutions and build-up the research participation in HEP for two investigators at California State University, Stanislaus and Sonoma. There are five participating CSUs: Stanislaus, Sonoma, San Francisco, East Bay and Fresno. UC Merced is the sixth participating MSI which currently does not have a HEP research program. Each MSI graduates about five-16 Physics students with bachelor’s degree and one-three with interested in HEP each year. The small number of students prevents these programs from offering HEP courses HEP regularly and create a HEP community on the individual campuses. The two aspects of this proposal aim to address key barriers preventing students and investigators at these MSIs from participating in HEP by creating a consortium made of MSIs, National Labs and R1 universities.

**The Dr. Allan Greenberg & Dr. Ellen Junn Warrior Fab Lab**

While Stanislaus State does not offer engineering degrees (except for a BS in Computer Science), this does not prevent it from engaging and inspiring students and communities in technology, arts and sciences. The Fab Lab was opened in the fall of 2022 and in spring 2023 Dr. Larry Weigel successfully secured a $150,000 California State University Hispanic-Serving Institution grant intended to expand technology, resources and programs for this lab. The project will promote innovation and inspiration on campus and within the broader community. This will done through upgraded equipment for the digital fabrication lab and programming for area K-12 students and teachers. This enables more equitable access to technology of designing and 3-D printing for all students, enhance the experience for problem solving creative innovation and critical thinking, and take Fab Lab programs into the community to spark innovation at local elementary, middle and high schools.
Systemwide Collaborations

CSU Research Consortia (Affinity Groups)

The CSU has 10 multi-campus affinity groups that support research collaborations on a breadth of topics that are important to California.

Agricultural Research Institute

ARI’s mission is to enable applied research, through the power of the CSU system, that benefits California agriculture, natural resources and food systems, while cultivating the next generation of agricultural leaders. A key to ARI’s success is aligning the organization to address the challenges facing California’s agricultural and natural resource industries by conducting applied research that is relevant, timely and impactful. By engaging and collaborating with stakeholders, it is developing actionable knowledge to help solve problems, while at the same time mentoring and developing the state’s future workforce and leaders. The skills learned through research are value-added components to a student’s education. The benefits are manifold: students involved in research are far more likely to graduate, be employed in a major-related career, and more likely to obtain an advanced degree. Most graduates remain in California, making an investment in students an investment for the future of California.

ARI-supported scientists are adapting cropping systems to climate change by utilizing remote sensing to manage water and fertilizers, detecting disease and insect damage, and breeding crops to withstand heat and use less water and fertilizers. A promising new approach utilizes naturally occurring micro-organisms found in healthy soils to help build resiliency against environmental and biological stressors. A team at Cal Poly San Luis Obispo discovered that a disease-resistant strawberry cultivar supports a soil microbiome with a high abundance of pathogen-suppressing bacteria, resulting in less disease. This discovery may allow plant breeders to develop disease-resistant cultivars by focusing on the rhizosphere microbiome and allow growers to manage their soil to increase beneficial micro-organisms. These approaches are economically sustainable and help promote healthy and biodiverse agroecosystems.

Council on Ocean Affairs, Science and Technology (COAST)

COAST is the CSU’s systemwide organization for ocean and coastal research, education and workforce development. COAST supports faculty members and students at each of the 23 campuses and has made over 2,000 student awards since it was established in 2008. In recent months, COAST established two new partnerships that will provide CSU students with unparalleled and unique research opportunities. With the University of Miami and Scripps Institution of Oceanography (UC San Diego), COAST will send five CSU students and one faculty member on a 22-day oceanographic cruise in July 2024. The cruise will study microbial energy dynamics in the California Current Ecosystem, some 200 nautical miles offshore. Students will
participate in the main cruise activities and conduct their own independent research projects. To prepare them, students will engage in scientific and professional development training in advance of the cruise, and students will attend a scientific meeting with other scientists from the cruise afterward.

COAST is also a partner on the recent $9.5 million USDA NIFA NextGen award to the CSU Agricultural Research Institute (ARI). Over the next five years, undergraduate and graduate students will receive stipends to support their investigation of ocean and coastal agriculture-related questions and the development of better practices and solutions. Areas of interest are 1) growing fields as sources of plastic pollution, 2) pesticide runoff and aquatic habitat, and 3) nutrient loading and ocean acidification. These experiences will prepare students to join the future agricultural workforce.

**CSU Program for Education and Research in Biotechnology**

Created in 1987 as a system-wide program, CSUPERB, now known as California State University Biotechnology (CSUBIOTECH) supports biotechnology education and research throughout the CSU to promote biotechnology and economic development in California. Among its goals are to provide leadership in training California's biotechnology workforce, enable CSU faculty and undergraduate, graduate and returning students to advance their careers and become leaders in biotechnology sectors in California and across the nation, extend and develop relationships with regional and industrial partners, and expand general education across the CSU and California to enhance understanding of biotechnology issues, challenges, and opportunities.

CSUBIOTECH provides grants and awards, organizes the annual CSU Biotechnology Symposium, sponsors industry-responsive curriculum, and serves as a liaison between the CSU and government, regional and biotechnology industry partners, including philanthropic partners. Within CSU, CSUBIOTECH promotes biotechnology workforce development by supporting innovative coursework, real-world research experiences, and core resources for students and faculty across all 23 CSU campuses. The program involves students, faculty and administrators from life sciences, physical sciences, health sciences, engineering, agriculture, business and computer science departments and divisions across the system, including the Chancellor’s Office. Grants, awards, payouts, and reimbursements are made to faculty and programs on all 23 campuses across the system. Altogether, nearly 1,000 CSU students, faculty, deans, and administrators interact with the CSUBIOTECH program office yearly.

Christian Quintero, an undergraduate student, received the CSUPERB President's Scholar Award of $8,000 for his project: "Chromosome organization of Bloom’s Syndrome cells." The Presidents’ Commission Scholars program aims to support up to 11 CSU undergraduate scholars during the summer in their first research project. Students conduct biotechnology-related laboratory-, field-, clinic- or community-based research. Vanessa Sanchez, a McNair Scholar and Biology major, received the 2023 Doris A. Howell Foundation – CSUPERB Research Scholar Award for her
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project “Using Trisomy 21 Down Syndrome cells to understand chromosome organization.” This competitive grant funds promising undergraduate student research projects in topics related to women's health.

**California Desert Studies Consortium**
The California Desert Studies Consortium facilitates research, education and outreach about the importance of arid lands. The Consortium provides infrastructure for STEM and transdisciplinary work in the Mojave desert region, with an emphasis on sustainability. Established in 1976, the Desert Studies Consortium includes seven member campuses: Dominguez Hills, Fullerton, Long Beach, Los Angeles, Northridge, Pomona and San Bernardino.

The centerpiece of the consortium is the Desert Studies Center, also known as the Zzyzx Campus. Zzyzx is a 1280-acre full-service field station in the Mojave Desert, which provides housing, meal service, classroom space, laboratories, and research support for university courses, research groups, workshops, and conferences. Zzyzx is a major launching point for CSU students into the STEM workforce. Each year, we host over 7,000 overnight visits from courses and researchers from the CSU and beyond. Zzyzx is a driver of change by providing unique and immersive STEM education experiences often for the first time for many of our students. Positioned in the exceptionally scenic environment of Soda Springs, the Desert Studies Center frequently hosts conferences and workshops. The Center accommodates up to 65 individuals in dormitory-style apartments, plus longer-term housing for researchers, and has multiple classrooms and meeting spaces with campuswide wi-fi. The location of Zzyzx inside the Mojave National Preserve provides easy access to a broad range of ecosystems, geological features, fossil beds, and historical sites. The facility is operated by the CSU in a cooperative management agreement with the National Park Service.

Prakrit Jain is the recipient of the Judith Presch Desert Research Award. As a high school student, Jain started conducting research on scorpions at the California Academy of Sciences, under the mentorship of Dr. Lauren Esposito. He has since become an undergraduate at UC Berkeley. This summer, Jain is working in the Mojave Desert based out of the Desert Studies Center with the goal of discovering and scientifically describing new species of scorpions and create a better understanding of the evolutionary history and modern ecology of these animals.

**CSU Shiley Haynes Institute for Palliative Care**
The CSU Shiley Haynes Institute for Palliative Care has two goals: to provide palliative care education to CSU students and their surrounding communities, and to offer continuing education certificate-level and topical courses in palliative care and care management to working healthcare professionals across the nation and worldwide. To date, programs, courses and educational tools have been utilized by more than 25,000 healthcare professionals and more than 26,000 pre-professional students across the CSU.
CSU faculty are highly committed to providing high quality palliative care education to their students. In March 2023 Professors Katie Robinson (Nursing), Blake Beecher, Lorene Ibbetson-Flanagan and Jeannine Guarino (Social Work), Deanna Schmidt (Kinesiology) and Michael McDuffie (Philosophy) provided an interprofessional education training experience on palliative care for 90 students from nursing, social work and kinesiology. This training was sponsored by the CSU Shiley Haynes Institute for Palliative Care campus partner office at CSU San Marcos. This training seeks to promote interdisciplinary cooperation among health professionals as they provide care to their patients and the patient’s families. The CSU Shiley Haynes Institute for Palliative Care is confident that through these kinds of efforts, healthcare can truly be transformed so that all patients get the best care possible.

**Moss Landing Marine Laboratories (MLML)**
San José State University’s Moss Landing Marine Laboratories (MLML) has a global reputation of more than 50 years of excellence in marine science education and cutting-edge research. More than 650 students have graduated from MLML’s prestigious Master in Marine Science program. MLML graduates have found positions in academia, government agencies, and public and private institutions. The strengths of MLML lie in its facilities and unique location. The lab supports marine operations, a research diving program, and a shore lab aquaculture facility that provides students, faculty, researchers, and staff with ready access to the diverse ecosystems and oceanography of Monterey Bay. MLML is known for its hands-on, field-oriented approach, with an emphasis on education and research that help to advance marine science, serve society, and transform public discourse and policy towards sustainable human interaction with the world.

Graduate student Katie Duncan advised by SJSU Assistant Professor of Biological Oceanography Sarah Smith was awarded as a finalist in the 2022 Algae Prize competition. This national competition from the U.S. Department of Energy’s Office of Energy Efficiency and Renewable Energy Bioenergy Technologies Office, encourages students to pursue innovative ideas for the development, design, and invention of technologies within the commercial algae value chain.

The future of California beaches and their resilience to future sea level rise is fundamentally related to the loss of sand from the shoreline to the deep ocean. MLML is located next to the head of the Monterey Canyon, a deep submarine valley where beach sand can get trapped and lost in it. Graduate student Marcel Peliks, advised by SJSU Geological Oceanography Professor Ivano Aiello, has used MLML’s Boston Whalers to complete, repeated, ultra-high-resolution mapping of the canyon’s seafloors using a multi-beam echosounder. For the first time, these maps offer the ability to measure sand movement over time.

The livestock sector is a significant source of greenhouse gases, particularly methane produced through enteric fermentation. A promising strategy to reduce methane emissions from ruminant livestock is to incorporate seaweeds rich in bromoform. Graduate student Jessica Metter, advised by SJSU Assistant Professor in Chemical Oceanography, Maxime Grand, presented at the fall
2022 AGU Meeting in Chicago the results of her innovative study to quantify bromoform emissions from aquaculture for livestock feed.

SJIS Assistant Professor of Biological Oceanography Sarah Smith hosted at MLML a week-long workshop (between May 14 and 19, 2023) which involved about 40 participants from various institutions in the US and internationally. The workshop was focused on planning responsible studies of ocean iron fertilization (OIF) as a potential path forward to enhance the ocean's uptake of atmospheric carbon dioxide. The workshop was fundamental to developing strategies toward climate change mitigation and reduce the concentration of greenhouse gases based on a solid scientific framework.

**Ocean Studies Institute**
The Ocean Studies Institute (OSI) is a consortium of CSU campuses that is pooling resources to explore the ocean and coastal regions more effectively. It is based out of the Los Angeles Harbor and includes nine campuses (Channel Islands, Dominguez Hills, Fullerton, Long Beach, Los Angeles, Northridge, Pomona, San Bernardino and San Marcos) addressing research and education on urban ocean and coast sciences.

OSI faculty Jeremy Claisse (Cal Poly Pomona) and students have worked on a collaborative projects with Occidental College quantifying the ecological status of a recently implemented artificial reef off Palos Verdes as mitigation habitat. OSI faculty Chris Lowe (CSULB) and students collaborated on the development of AI products for drone survey and shark identification analyses and socio-economic studies of the importance of sharks on the California ocean economy with Gabriella Hancock (CSULB Psychology), Katie Dudley (CSULB Recreation & Leisure Studies) and Dede Long (CSULB Economics) as part of the California Shark Beach Safety Program.

**Social Science Research and Instructional Center**
Executive Director of the Social Science Research and Instructional Center (and professor and Chair of Sociology at CSUDH) and Chancellor’s Office Director of Research have won a three-year, $796,858 National Science Foundation award with UCSB and UCI to identify and breakdown barriers for the social sciences in grant-seeking. Interventions include webinars, writing groups and writing retreats for faculty as well as seminars for campus leadership.

Professor and Chair of Sociology at CSUDH and Executive Director of SSRIC Billy Wagner was awarded a three-year, $260,740 National Science Foundation grant for this study that began in fall 2021. Together, the CSU-UC group is exploring barriers to securing grants among CSU and UC faculty and the research and external funding culture between these university systems. This work also established CAHSSA (https://cahssa.ucsb.edu/), the California Alliance for Hispanic-Serving Social Science Advancement, which creates programming to develop faculty grant writing skills
for faculty and implements programs to bring faculty from different campuses together to directly support project development and grant writing.

**Science, Technology, Engineering, and Mathematics Network (STEM-NET)**

STEM-NET is the preeminent multicampus collaborative working with all 23 CSU campuses and areas of STEM research and education. STEM-NET connects and strengthens faculty research and educational collaborations across the CSU system and across disciplines. It expands opportunities for active learning, innovative pedagogy, and supports CSU faculty in developing grant proposals with potential for scaling and sustainability with high impact and fundability. The mission of STEM-NET is to empower CSU STEM leaders to harness their expertise in pedagogy, research, and grant-writing to ensure the success of our students and faculty. Driven by an unwavering commitment to student success, STEM-NET is transforming the CSU into a preeminent champion of inclusive access to research and learning experiences that equip diverse STEM students for thriving careers in STEM-related fields.

Genesis Barzallo is a master’s student at Cal State Los Angeles. During her undergraduate studies, Barzallo developed a passion for multidimensional separation science while researching alternative fuels derived from plastic waste conversion using comprehensive two-dimensional gas chromatography. She has since had the privilege of presenting her research at various prestigious events, including the 2022 and 2023 American Chemical Society (ACS) National Meetings and the 2022 Southern California Section of ACS Research Symposium at Caltech. She also received an honorary invitation to present at the 14th Multidimensional Chromatography Conference in Liège, Belgium, and received travel awards from CSULA and ACS. In 2023, the ACS Analytical Chemistry Division named her a Rising Star in Analytical Chemistry. In addition to her research, she actively participates in various student outreach activities on campus, is the lab manager of C’AL, and aims to inspire more women to pursue research careers.

Dr. Kamila Larripa received a grant from the National Science Foundation to mathematically model microglia activity. Microglia are a special type of immune cell found only in the central nervous system. These multifaceted cells fight infections, repair damage, remove debris, and are central to maintaining brain health. However, these cells can go rogue and contribute to neurodegenerative pathologies such as Alzheimer's Disease. This is linked to a shift in their cellular metabolism, but how and why this metabolic reprogramming occurs and its impact on disease progression remains unknown. The project will develop and analyze multi-scale mathematical models with undergraduate students to better understand the role of various molecular mechanisms in microglia behavior and how this behavior influences and orchestrates further cellular activity in the brain.

**CSU WATER (Water Advocacy Towards Education & Research)**

CSU-WATER represents the combined resources of all 23 CSU campuses and directly fosters their joint efforts to help the state of California’s residents, agencies and industries address
pressing water issues. Dynamic water cycles and their impacts are exacerbated by climate uncertainty, and an aging and antiquated water infrastructure compromise water, economic, and food security for California. CSU-WATER strives to create and sustain research and educational partnerships to address current and future water issues. It also works in water-relevant fronts including agriculture, climate, environment and community engagement. To support these efforts as it completes its first year, the internal organizational structure has grown to include Campus Representatives, a Student Research Advisory Council and soon a consortium of relevant campus centers and institutes. The external network of partners and collaborators includes engagement in the Association of CA Water Agencies (ACWA) Foundation, CA Water Quality Monitoring Council, Valley Vision (water workforce), CA Strategic Growth Council, Resource Conservation Districts and others. The CSU-WATER networks place us in a position to rapidly respond to finding and engaging in interdisciplinary solutions to pressing water issues in California, and thus support state water agencies in executing and amending their water management missions.

Mallory Sutherland is an agricultural business student and in the prestigious Smittcamp Family Honors College at California State University, Fresno. She is a research assistant on the important CSU-WATER research project “SGMA Compliance; Spatial and Operational Consistency across San Joaquin Valley GSAs?” Sutherland eagerly learns about the nuances of California water and will leverage her project duties into her Honors Thesis Project. This spring she was awarded the Association of California Water Agencies (ACWA) Diversity Scholarship, their highest level among five categories. This summer she is interning at a water agency in Bakersfield.

Under the auspices of the CSU-WATER Faculty Incentive Program, Dr. Erin Bray (Assistant Professor, Earth and Climate Sciences, San Francisco State) was recently awarded $339,000 in funding from the 2023 SWC Science Solicitation under the California State Water Contractors Science Program. The proposal "Cooling California Rivers: Developing a spectral physically-based energy balance model to predict and manage river temperatures" will be conducted with a team of students and collaborators in the Bray Rivers Lab at San Francisco State. As part of the SWC Science Program, Dr. Bray and students will participate in kick-off meeting with Federal and State agencies across California that have interest in the study.

**Conclusion**

CSU research, scholarship and creative activities contribute to the intellectual and creative vibrancy of campus life while offering solutions to real-world problems. These activities are critical both to the success of Graduation Initiative 2025 and to fulfilling the CSU mission of student success, faculty excellence and service to California and beyond. CSU continues to prepare each new generation of researchers, artists, performers and scholars to carry on the spirit of collaboration, innovation and community.
COMMITTEE ON EDUCATIONAL POLICY

Proposed Amendments to Title 5: Implementation of the Student Transfer Achievement Reform Act of 2021

Presentation By

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Strategic Enrollment Management

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Academic Senate of the CSU

Summary

The Student Transfer Achievement Reform (STAR) Act of 2021 has called for the consolidation of two existing general education transfer pathways for California Community College (CCC) students into a singular pathway to either the California State University (CSU) or University of California (UC) systems. It enacted Education Code Section 66749.8 which requires that the CCC place incoming students on an Associate Degree for Transfer (ADT) pathway – if one exists for their major – on or before August 1, 2024. It also required the Intersegmental Committee of the Academic Senates of the CSU, the UC and the CCC (ICAS) to establish a single pathway, deemed the California General Education Transfer Curriculum, Cal-GETC (Attachment A) that meets the academic requirements necessary for transfer admission to the CSU and UC and replaces the current Intersegmental General Education Transfer Curriculum, IGETC (Attachment B). This singular lower-division general education transfer pathway is to be made available to eligible students for the fall term of the 2025-26 academic year.

This information item outlines proposed amendments to Title 5 of the California Code of Regulations in the areas of admissions requirements for transfer into the CSU and educational
programs as they relate to lower division general education. Two options for meeting general education requirements in the CSU are proposed herein (see page 4).

The revisions to Title 5 are required to implement the necessary changes resulting from the STAR Act of 2021. The possible amendments within the pertinent sections of Title 5 are included in this written agenda item, and board action will be requested at the March 2024 board meeting.

Background

Transfer among California’s public postsecondary institutions has been a hallmark of the state’s vision for higher education. A goal of the Student Transfer Achievement Reform Act of 2021 was to streamline the process by which CCC students may transfer to a four-year university. The act established an Intersegmental Implementation Committee to facilitate coordination for the ADT and focuses on improving student transfer outcomes. The act also directed the Intersegmental Committee of Academic Senates (ICAS) to establish one lower division general education pathway, of no more than 34 semester units, that meets admission requirements for both the CSU and UC systems.

Periodic review and assessment of general education is a hallmark of college and university general education in the United States. As a result of internal and external factors, the CSU has evaluated its general education requirements. However, until the addition of an Ethnic Studies requirement in 2020, the CSU GE Breadth framework has remained constant since 1980. The following is a brief timeline of efforts to review and/or amend General Education requirements in the CSU as well as consultation and activities specific to the implementation of the STAR Act of 2021.

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>Title 5 language and CSU policy governing CSU GE Breadth were adopted establishing a common CSU GE Breadth framework of 48 semester units (39 lower-division and 9 upper-division requirements)</td>
</tr>
<tr>
<td>1991</td>
<td>Title 5 language and CSU policy governing CSU GE Breadth were amended to add alternative ways for undergraduates to complete CSU GE Breadth requirements (IGETC or UC GE).</td>
</tr>
<tr>
<td>2008-2011</td>
<td>CSU participates in national <em>Give Students a Compass</em> focusing on GE assessment and alignment with transfer partners.</td>
</tr>
<tr>
<td>2017</td>
<td>CSU policy governing CSU GE Breadth was revised to clarify existing general education requirements.</td>
</tr>
<tr>
<td>2017-2019</td>
<td>The Academic Senate of the California State University (ASCSU) commissioned a General Education Task Force which delivered recommendations for GE review and reform.</td>
</tr>
</tbody>
</table>
Title 5 language and CSU policy governing CSU GE Breadth was amended to add a legislatively required course in Ethnic Studies.

The Student Achievement Reform Act of 2021 is signed into law.

The STAR Act charges the Intersegmental Committee of the Academic Senates (ICAS) with developing a single lower division general education pathway, of no more than 34 semester units, that meets admission requirements for both the CSU and UC systems.

A newly proposed Cal-GETC pathway is disseminated to the faculty of the three systems for vetting.

ICAS approves the final Cal-GETC framework which would require 34 semester units of lower-division coursework.

The Chancellor’s Office hosts a GE Informational Seminar regarding pending changes to General Education.

The Chancellor’s Office hosts multiple meetings with stakeholders regarding implementation of the STAR Act of 2021.

The CSU Admission Advisory Council meets to discuss proposed changes to Title 5.

The CSU Committee on Educational Policy presents an information item at the November Board of Trustees meeting.

The CSU Committee on Educational Policy provides a second of three presentations to the Board of Trustees on the implementation of the STAR Act of 2021.

Over the last year, the Chancellor’s Office hosted a series of consultative meetings with the ASCSU Executive Committee, Academic Affairs Committee and the General Education Advisory Committee (GEAC) regarding implementation of STAR Act of 2021.

Admissions Requirements

Annually, the CSU admits tens of thousands of transfer students from the 116 community colleges across the state. Historically, half of new CSU undergraduate students enroll as transfer students. A transfer student is a person who has left or graduated from high school and enrolled in an institutionally accredited college after achieving high school graduation or equivalent.

In addition to traditional transfer student populations who pursue enrollment at another college or university before attending the CSU, an increasing number of new first-time undergraduate students arrive with college credit also earned, most typically, in general education subjects. For fall 2023, more than half of new first-year undergraduate applicants to the CSU had earned college credit during high school, either through simultaneous “dual enrollment” or through examinations such as Advanced Placement (AP) or International Baccalaureate (IB). These students, as well as those CSU students concurrently enrolled in CSU and community colleges, increasingly resemble
the omnidirectional nature of college credit accumulation and transfer. Thus, the practical implications of general education changes resulting from the STAR Act of 2021 impact a majority of future CSU undergraduates.

The implementation of the STAR Act of 2021 will require updates to the Admission Requirements section of Title 5 of the California Code of Regulations. In general, CSU stakeholders that were consulted have been in alignment with the proposed changes, as detailed in Attachments E, F, G and H. These changes will come for board action at the March 2024 Board of Trustees meeting.

**Educational Programs: CSU General Education Breadth Requirements**

CSU General Education requirements have been designed to complement the major program and electives completed by each baccalaureate candidate, to assure that graduates have made noteworthy progress toward becoming truly educated persons. Thus, the objectives of CSU General Education are to provide the knowledge, skills, experiences and perspectives that will enable CSU students to expand their capacities to take part in a wide range of human interests and activities; and to confront personal, cultural, moral, and social experiences that are an inevitable part of human life (see Attachment C). Faculty are encouraged to assist students in making connections among disciplines to achieve coherence in the undergraduate educational experience.

**CSU General Education Under the STAR Act of 2021**

In addition to changes within the Admissions Requirements, the implementation of the STAR Act of 2021 will require updates to the Educational Programs section of Title 5 of the California Code of Regulations relating to general education requirements. It is within this section that two different approaches to implementation have emerged. After wide-ranging consultation between the Office of the Chancellor and stakeholders, the Board of Trustees will be presented with the two options for addressing the current general education breadth requirements in the CSU.

**Option 1 | Two General Education Pathways:** Recommends keeping CSU GE Breadth requirements as they currently are (see Attachment D without edits) and adding Cal-GETC as the pathway only for transfer students (see Attachment A). In addition, other areas of Title 5 would be updated to reflect changes as a result of the adoption by ICAS of Cal-GETC as the singular general education pathway for CCC students to transfer to a CSU or UC campus (see Attachments B, C, E, F, G and H).

**Option 2 | Unified General Education Pathway:** Recommends amending CSU GE Breadth requirements to align with Cal-GETC (see Attachment D with edits), thereby creating a singular general education pathway for all CSU first-time, first-year and transfer students. In addition, other areas of Title 5 would be updated to reflect changes as a result of implementation of the STAR Act of 2021 (see Attachments A, B, C, E, F, G and H).
A comparison of CSU GE Breadth requirements and Cal-GETC is provided below. The STAR Act of 2021 stipulates that a new singular lower division general education pathway would not include more units than the existing IGETC pattern, which is 34 semester units. In comparison, Cal-GETC requires five fewer units than CSU GE Breadth as a result of:

- Including a one-unit required laboratory for Biological or Physical Sciences
- Removing one of the three Arts or Humanities courses (in Area C)
- Removing Area E, Lifelong Learning and Self Development

<table>
<thead>
<tr>
<th>CSU GE Breadth</th>
<th>Cal-GETC</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1 – Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>A2 – Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>A3 – Critical Thinking</td>
<td>3</td>
</tr>
<tr>
<td>B1 – Physical Sciences</td>
<td>3</td>
</tr>
<tr>
<td>B2 – Life Sciences</td>
<td>3</td>
</tr>
<tr>
<td>B3 – Laboratory (included in B1/B2 units)</td>
<td>Laboratory (for Science course)</td>
</tr>
<tr>
<td>B4 – Mathematics/QR</td>
<td>3</td>
</tr>
<tr>
<td>C1 – Arts</td>
<td>3</td>
</tr>
<tr>
<td>C2 – Humanities</td>
<td>3</td>
</tr>
<tr>
<td>C3 – Additional course from C1 or C2</td>
<td>3</td>
</tr>
<tr>
<td>D1 – Social and Behavioral Sciences</td>
<td>3</td>
</tr>
<tr>
<td>D2 – Social and Behavioral Sciences</td>
<td>3</td>
</tr>
<tr>
<td>E – Lifelong Learning and Self-Development</td>
<td>3</td>
</tr>
<tr>
<td>F – Ethnic Studies</td>
<td>3</td>
</tr>
<tr>
<td><strong>UNIT TOTALS</strong></td>
<td><strong>39</strong></td>
</tr>
</tbody>
</table>

**Current Lower Division General Education Transfer Patterns**

Policies adopted by the CSU Board of Trustees in July 1991 provide three possible lower division GE patterns for undergraduate students to fulfill CSU GE requirements for a CSU undergraduate degree:

**CSU General Education Breadth**
Fulfillment of CSU GE requirements (Title 5, Section 40405.1, Attachment D), includes lower-division certification by a CCC or a CSU, and also includes the completion of 9 upper-division semester units consisting of a minimum of 3 semester units each in Areas B, C and D; or

**Intersegmental General Education Transfer Curriculum (IGETC)**
Completion of the Intersegmental General Education Transfer Curriculum (IGETC)
(Title 5, Section 40405.2, Attachment B), as certified by a CCC, and includes the completion of 9 upper-division semester units at the CSU consisting of a minimum of 3 semester units each in Areas B, C and D; or

University of California (UC) Campus Lower-Division General Education
Completion of lower-division general education requirements of a University of California campus (Title 5, Section 40405.3), as certified by that campus, and includes the completion of 9 upper-division semester units at the CSU consisting of a minimum of 3 semester units each in Areas B, C and D.

**Associate Degree for Transfer**

In September 2010, the Student Transfer Achievement Reform Act (SB 1440) was signed into law. This legislation enacted Education Code Sections 66745-66749 which enabled community colleges to confer ADTs to students once they have met specified general education and major requirements for the degree. ADT frameworks were developed collaboratively by CCC and CSU faculty.

The STAR Act of 2021 (AB 928) further stipulates that where ADT major pathways exist, California Community College students who have declared a goal of transfer on their mandatory education plans be placed on an ADT pathway on or before August 1, 2024.

**Conclusion**

The proposed amendments to Title 5 are an essential step in implementing the Student Transfer Achievement Reform Act of 2021. Ensuring clear pathways for all students and ultimately equitable student access and success is a shared objective of CSU faculty, staff, leaders and students.
Attachment A
This is a proposed new section to Title 5.

5 CCR § 40405.5
§ 40405.5 – California General Education Transfer Curriculum

(a) Commencing with fall 2025, students transferring from California Community Colleges under the provisions of this subdivision may satisfy General Education-Breadth requirements for the California State University bachelor's degree through satisfactory completion of the California General Education Transfer Curriculum and a minimum of 9 semester units of upper division general education coursework. All upper division general education requirements shall be completed no sooner than the term in which the candidate achieves upper division status at the California State University campus granting the degree.

All lower division requirements can be fulfilled by completing the California General Education Transfer Curriculum which shall include lower division courses distributed as follows:
(1) A minimum of 9 semester units or 12 quarter units in English communication, to include one course in English composition of no fewer than 3 semester units or 4 quarter units, one course in oral communication of no fewer than 3 semester units or 4 quarter units, and one course in critical thinking and composition of no fewer than 3 semester units or 4 quarter units.
(2) A minimum of 3 semester units or 4 quarter units in mathematical concepts and quantitative reasoning.
(3) At least two courses totaling a minimum of 6 semester units or 8 quarter units in arts and humanities, to include at least one course in the arts and at least one course in the humanities.
(4) At least two courses totaling a minimum of 6 semester units or 8 quarter units in the social and behavioral sciences, including courses in a minimum of two disciplines.
(5) At least two courses totaling a minimum of 7 semester units or 9 quarter units in the physical and biological sciences, to include at least one course in physical science and one course in biological science, at least one of which incorporates a laboratory.
(6) At least one course totaling a minimum of 3 semester units or 4 quarter units in ethnic studies. This course must be in ethnic studies or in a similar field provided that the course is cross-listed with ethnic studies.
(b) The president or an officially authorized representative of a California Community College may certify that the requirements of subdivision (a) of this section have been met through the satisfactory completion of courses approved by the California State University and the University of California for inclusion in the California General Education Transfer Curriculum. California State University campuses shall accept certification of the fully completed California General Education Transfer Curriculum as meeting all of the lower division general education requirements for the baccalaureate degree.
§ 40405.2 – Intersegmental General Education Transfer Curriculum

(a) Students transferring from California Community Colleges under the provisions of this subdivision may satisfy General Education-Breadth requirements for the California State University bachelor's degree through satisfactory completion of the Intersegmental General Education Transfer Curriculum and a minimum of 9 semester units or 12 quarter units of upper division general education coursework. All upper division general education requirements shall be completed no sooner than the term in which the candidate achieves upper division status at the California State University campus granting the degree.

All lower division requirements can be fulfilled by completing the Intersegmental General Education Transfer Curriculum prior to fall 2025 which shall include lower division courses completed prior to fall 2025 and distributed as follows:

1. A minimum of 9 semester units or 12 quarter units in English communication, to include one course in English composition of no fewer than 3 semester units or 4 quarter units, one course in oral communication of no fewer than 3 semester units or 4 quarter units, and one course in critical thinking-English composition of no fewer than 3 semester units or 4 quarter units.

2. A minimum of 3 semester units or 4 quarter units in mathematical concepts and quantitative reasoning.

3. At least three courses totaling a minimum of 9 semester units or 12 quarter units in arts and humanities, to include at least one course in the arts and at least one course in the humanities.

4. At least two courses totaling a minimum of 6 semester units or 8 quarter units in the social and behavioral sciences, including courses in a minimum of two disciplines or in an interdisciplinary sequence.

5. At least two courses totaling a minimum of 7 semester units or 9 quarter units in the physical and biological sciences, to include at least one course in physical science and one course in biological science, at least one of which incorporates a laboratory.

6. At least one course totaling a minimum of 3 semester units or 4 quarter units in ethnic studies.

(b) The president or an officially authorized representative of a California Community College may certify that the requirements of subdivision (a) of this section have been met through the satisfactory completion of courses approved by the California State University and the University of California for inclusion in the Intersegmental General Education Transfer Curriculum. California State University campuses shall accept certification of the fully completed Intersegmental General Education Transfer Curriculum as meeting all of the lower division general education requirements for the baccalaureate degree.

Note: Authority cited: Section 89030, Education Code. Reference: Sections 89030 and 89032,
Education Code.

1. Renumbering of former section 40405.2 to 40405.1 and adoption of new section filed 9-16-91; operative 10-16-91 (Register 92, No. 2).
3. Amendment of subsection (a)(4), new subsection (a)(6) and amendment of Note filed 5-26-2022; operative 5/26/2022 pursuant to Education Code section 89030.1. Exempt from the Administrative Procedure Act and OAL review pursuant to Education Code section 89030(b).
   Submitted to OAL for courtesy filing and printing only pursuant to Education Code section 89030.1(e) (Register 2022, No. 21).
4. Add note explaining that no new students will be offered this curriculum starting fall 2025 (i.e., that we enter teach out at that point)
General education-breadth requirements in The California State University are so designed that, taken with the major depth program and elective credits presented by each candidate for the bachelor's degree, they will assure that graduates from the several campuses in the system have made noteworthy progress toward becoming truly educated persons. Particularly, the purpose of the breadth requirements is to provide means whereby graduates:
(a) will have achieved the ability to think clearly and logically, to find and critically examine information, to communicate orally and in writing, and to perform quantitative functions;
(b) will have acquired appreciable knowledge about their own bodies and minds, about how human society has developed and how it now functions, about the physical world in which they live, about the other forms of life with which they share that world, and about the cultural endeavors and legacies of their civilizations;
(c) will have come to an understanding and appreciation of the principles, methodologies, value systems, and thought processes employed in human inquiries.

It is the intent of this section that the general education-breadth requirements be planned and organized in such a manner that students will acquire the abilities, knowledge, understanding, and appreciation suggested as interrelated elements and not as isolated fragments.

Acceptable programs include: The California State University General Education-Breadth Requirements (Section 40405.1), the Intersegmental General Education Transfer Curriculum (Section 40405.2) completed prior to fall 2025, the California General Education Transfer Curriculum (Section 404045.5) completed in fall 2025 or later, and General Education Reciprocity with the University of California (Section 40405.3).

Notes
1. New section filed 7-11-80; effective thirtieth day thereafter (Register 80, No. 28).
2. Amendment of Note filed 3-19-82; effective thirtieth day thereafter (Register 82, No. 12).
3. Amendment filed 9-16-91; operative 10-16-91 (Register 92, No. 2).
5. XYZ History of this change
5 CCR § 40405.1

5 CCR § 40405.1 - General Education - Breadth Requirements

(a) Each recipient of the bachelor's degree completing the California State University General Education-Breadth Requirements pursuant to this subdivision (a) shall have completed a program which includes a minimum of 483 semester units or 72 64 quarter units of which 9 semester units or 12 quarter units shall be upper division level and shall be taken no sooner than the term in which the candidate achieves upper division status. At least 9 of the 48 semester units or 12 of the 72 quarter units shall be earned at the campus granting the degree. The 483 semester or 64 quarter units shall be distributed as follows:

1. A minimum of 9 semester units or 12 quarter units in communication in the English language, to include both oral communication and written communication English composition, and in critical thinking, to include consideration of common fallacies in reasoning.
2. A minimum of 123 semester units or 1819 quarter units, including 3 semester or 4 quarter units at the upper-division level, to include inquiry into the physical universe and its life forms, which includes a 1 semester unit which includes some immediate participation in laboratory activity, and into mathematical concepts and quantitative reasoning and their applications.
3. A minimum of 129 semester units or 12 quarter units, including 3 semester or 4 quarter units at the upper-division level, among the arts, literature, philosophy and foreign languages.
4. A minimum of 129 semester units or 12 quarter units, including 3 semester or 4 quarter units at the upper-division level, dealing with human social, political, and economic institutions and behavior and their historical background.
5. A minimum of 3 semester units or 4 quarter lower-division units at the lower division in study designed to focusing on ethnic studies.

The specification of numbers of units implies the right of discretion on each campus to adjust reasonably the proportions among the categories in order that the conjunction of campus courses, credit unit configurations and these requirements will not unduly exceed any of the prescribed semester or quarter unit minima. However, the total number of units in General Education-Breadth accepted for the bachelor's degree under the provisions of this subdivision (a) shall not be less than 4843 semester units or 64 quarter units unless the Chancellor grants an exception.

(b) The president or an officially authorized representative of a college which is accredited in a manner stated in Section 40601 (d) (1) may certify the extent to which the requirements of subdivision (a) of this section have been met up to a maximum of 3934 lower-division semester (or 58 quarter units) units. Such certification shall be in terms of explicit objectives and procedures issued by the Chancellor.
(c) In the case of a baccalaureate degree being pursued by a post-baccalaureate student, the requirements of this section shall be satisfied if:
(1) The student has previously earned a baccalaureate or higher degree from an institution accredited by a regional accrediting association; or
(2) The student has completed equivalent academic preparation, as determined by the appropriate campus authority.

Credits


HISTORY
1. New section filed 7-11-80; effective thirtieth day thereafter (Register 80, No. 28).
2. Amendment filed 3-19-82; effective thirtieth day thereafter (Register 82, No. 12).
3. Renumbering and amendment of former sections 40405.2 and 40405.3 to 40405.1 and renumbering of former section 40405.1 to section 40402.1 filed 9-16-91; operative 10-16-91 (Register 92, No. 2).
6. Amendment of subsection (a)(5) filed 2-11-2013; operative 2-11-2013. Submitted to OAL for printing only pursuant to Education Code section 89030.1 (Register 2013, No. 7).
7. Amendment of subsection (a)(4) and new subsection (a)(6) filed 9-22-2020 pursuant to Education Code section 89030.1. Submitted to OAL for filing and printing only pursuant to Education Code section 89030(b) (Register 2020, No. 39).
8. Amendment of subsection (a)(6) and amendment of NOTE filed 1-28-2021; operative 1-28-2021 pursuant to Education Code section 89030.1. Exempt from the Administrative Procedure Act and OAL review pursuant to Education Code section 89030(b). Submitted to OAL for filing and printing only (Register 2021, No. 5).
This database is current through 9/1/23 Register 2023, No. 35.
Cal. Admin. Code tit. 5, § 40405.1, 5 CA ADC § 40405.1
9. XYZ History of this change
5 CCR § 40803

(a) An applicant who is a resident of California may be admitted to a campus as an undergraduate transfer, if the applicant:
(1) Commencing with admission to the fall term 2025, has completed with a grade of C- or better: courses in English composition; oral communication; critical thinking and composition, and mathematical concepts and quantitative reasoning at a level satisfying general education requirements;
(2) For admission prior to the fall term 2025, has completed with a grade of C- or better: courses in written communication in the English language; oral communication; critical thinking, and mathematics or quantitative reasoning at a level satisfying general education requirements;
(23) has completed at least 60 semester (90 quarter) units of transferable college credit, of which 30 semester (45 quarter) units are at a level equivalent to general education breadth courses;
(34) has attained a grade point average of 2.0 (grade of C) or better in across all transferable college courses attempted; and
(45) is in good standing at the last college attended.
(b) Impacted campuses or programs may require supplemental admission criteria, including an overall higher grade point average and/or the completion of additional specified courses.
(c) Eligible students who meet the above admission requirements and who earn an appropriate Associate Degree for Transfer from a California Community College will receive a guarantee of admission with junior status to the California State University but not to any particular campus or academic program. Students admitted with an Associate Degree for Transfer will receive priority over all other community college transfer students and will have priority for admission to a program or major that is determined by the campus to be similar to their Associate Degree for Transfer major or area of emphasis, as determined by the campus to which the student is admitted.

Credits

HISTORY
1. Amendment of section and NOTE filed 4-29-77; effective thirtieth day thereafter (Register 77, No. 18). For prior history, see Registers 72, No. 35 and 70, No. 8.
2. Amendment of NOTE filed 3-19-82; effective thirtieth day thereafter (Register 82, No. 12).
3. Amendment filed 8-4-83; effective thirtieth day thereafter (Register 83, No. 32.)
4. Amendment of subsections (a) and (b) filed 9-3-87; operative 10-3-87 (Register 87, No. 36).
5. Amendment of first paragraph and subsection (a), new subsection (b) and subsection
relettering filed 9-21-99; operative 10-21-99. Submitted to OAL for printing only (Register 2000, No. 29).


7. Redesignation and amendment of first paragraph as subsection (a), redesignation of former subsections (a)-(d) as subsections (a)(1)-(a)(4) and new subsection (b) filed 7-19-2004; operative 7-19-2004. Submitted to OAL for printing only pursuant to Education Code section 89030.1 (Register 2004, No. 36).

8. Amendment of section and NOTE filed 1-29-2018; operative 1-29-2018 pursuant to Education Code section 89030.1. Exempt from the Administrative Procedure Act and OAL review pursuant to Education Code section 89030(b). Submitted to OAL for courtesy filing and printing (Register 2018, No. 5).

This database is current through 11/3/23 Register 2023, No. 44.

Cal. Admin. Code tit. 5, § 40803, 5 CA ADC § 40803
§ 40803.1. Applicants Who Are Not California Residents and Who Have Completed the Prescribed Number of Units of College Credit.

(a) An applicant who is not a resident of California may be admitted to a campus as an undergraduate transfer upon satisfaction of the requirements of subdivisions (1), (2), and (3) or (1), (3), and (4), as appropriate:

(1) Commencing with admission to the fall term 2025, the applicant has completed satisfactorily at least 30 semester (45 quarter) units in courses at a level at least equivalent to the California General Education Transfer Curriculum (Cal-GETC), including courses in English composition, oral communication in the English language, critical thinking and composition, and mathematical concepts and quantitative reasoning;

(2) For admission prior to fall term 2005, the applicant has completed at least 56 semester (84 quarter) units of transferable college credit and has attained a grade point average in all units of transferable college credit which places the applicant among the upper one-half of eligible California residents who are applicants for admission under Section 40803, the required minimum grade point average to be determined by the Chancellor;

(32) For admission prior to the fall term 2025, the applicant has completed satisfactorily at least 30 semester (45 quarter) units in courses at a level at least equivalent to General Education Breadth courses, including courses in English composition, oral communication in the English language, critical thinking and composition, and mathematical concepts and quantitative reasoning;

(3) Commencing with admission to the fall term 2005, the applicant has attained a grade point average of 2.0 (grade of C) or better in at least 60 semester (90 quarter) units of transferable college credit and has attained a grade point average in all units of transferable college credit which places the applicant among the upper one-half of eligible California residents who are applicants for admission under, the required minimum Section 40803 grade point average to be determined by the Chancellor;

(4) The applicant was in good standing at the last college attended.

(b) Commencing with admission to the fall term 2006, an applicant who has attended a California community college and who has committed to a major and campus of the California State University before earning more than 45 semester (68 quarter) units will receive the highest priority for admission to that campus and major if the applicant has completed successfully the systemwide lower division transfer pattern for that major and the campus specific lower division transfer pattern for that major and campus, as defined in Section 40530. “Highest priority” as used herein means a guarantee of admission subject to enrollment demand, available space, and satisfactory completion of any impaction criteria for that campus and major.

Credits

HISTORY
1. Amendment of section and NOTE filed 4-29-77; effective thirtieth day thereafter (Register 77, No. 18). For prior history, see Registers 73, No. 35; 72, No. 35; 70, No. 8.
2. Amendment filed 3-19-82; effective thirtieth day thereafter (Register 82, No. 12).
3. Amendment filed 8-4-83; effective thirtieth day thereafter (Register 83, No. 32.)
4. Amendment of subsections (a) and (b) filed 9-3-87; operative 10-3-87 (Register 87, No. 36).
5. Amendment of first paragraph and subsection (a), new subsection (b) and subsection relettering filed 9-21-99; operative 10-21-99. Submitted to OAL for printing only (Register 2000, No. 29).
7. Redesignation and amendment of first paragraph as subsection (a), redesignation of former subsections (a)-(d) as subsections (a)(1)-(a)(4) and new subsection (b) filed 7-19-2004; operative 7-19-2004. Submitted to OAL for printing only pursuant to Education Code section 89030.1 (Register 2004, No. 36).
This database is current through 11/3/23 Register 2023, No. 44.
Cal. Admin. Code tit. 5, § 40803.1, 5 CA ADC § 40803.1
Attachment G – Lower Division Transfer

5 CCR § 40804

§ 40804. Applicants Who Were Eligible for Admission As First-Time Freshmen First-Year Students and Who Have Completed Fewer Than the Prescribed Number of Units of College Credit.

Subject to restrictions on admission due to impaction, an applicant who has completed fewer than 60 semester (90 quarter) units of college credit may be admitted to a campus as an undergraduate transfer upon satisfaction of the requirements of each of the following lettered subdivisions:

(a) The applicant was eligible for admission to a campus as a first-time freshman first-year students, either

(1) on the basis of the admission requirements in effect at the time of the application, other than the provisions of Sections 40757, 40758, 40900, or 40901, and including satisfactory completion of the comprehensive pattern of college preparatory subjects as defined in subsection (n) of Section 40601 or an alternative program determined by the Chancellor to be equivalent; or

(2) on the basis of the admission requirements in effect at the time of the applicant's graduation from high school, other than the provisions of Sections 40757, 40758, 40900, or 40901, including satisfactory completion of any college preparatory course requirements in effect at that time or an alternative program determined by the Chancellor to be equivalent, if the applicant has been in continuous attendance at a college since graduation;

(b) Commencing with admission to the fall term 2025, the applicant shall have completed, with a grade of C- or better, a course in written composition in the English language and a course in mathematical concepts and quantitative reasoning at a level satisfying California General Education Transfer Curriculum (CAL-GETC) Area 1A and Area 2, respectively.

(c) For admission prior to the fall term 2025, the applicant shall have completed, with a grade of C- or better, a course in written communication in the English language and a course in mathematics or quantitative reasoning at a level satisfying CSU General Education Breadth Area A2 and B4 requirements, respectively.

(d) The applicant has attained a grade point average of 2.0 (grade of C) or better in across all transferable college units attempted; and

(e) The applicant was in good standing at the last college attended.

Credits


HISTORY

1. Amendment of section and NOTE filed 4-29-77; effective thirtieth day thereafter (Register 77, No. 18). For prior history, see Registers 73, No. 25 and 72, No. 35.

2. Amendment filed 3-19-82; effective thirtieth day thereafter (Register 82, No. 12).
3. Amendment filed 8-4-83; effective thirtieth day thereafter (Register 83, No. 32).
4. Amendment filed 9-3-87; operative 10-3-87 (Register 87, No. 36).
5. Amendment of section heading and first paragraph filed 5-5-2003; operative 2-28-2003.
   Submitted to OAL for printing only (Register 2003, No. 40).
6. Amendment of first paragraph, new subsection (b), subsection relettering and amendment of
   newly designated subsection (c) filed 1-29-2018; operative 1-29-2018 pursuant to Education
   Code section 89030.1. Exempt from the Administrative Procedure Act and OAL review pursuant
   to Education Code section 89030(b). Submitted to OAL for courtesy filing and printing (Register
   2018, No. 5).
This database is current through 11/3/23 Register 2023, No. 44.
Cal. Admin. Code tit. 5, § 40804, 5 CA ADC § 40804
Attachment H – Lower Division Transfer

5 CCR § 40804.1

§ 40804.1. Applicants Who Were Ineligible for Admission As First-Time Freshmen for Failure to Meet Course Requirements and Who Have Completed Fewer Than the Prescribed Number of Units of College Credit.

Subject to restrictions on admission due to impaction, an applicant who has completed fewer than 60 semester (90 quarter) units of college credit and who was not eligible for admission to a campus as a first-time freshman first-year student solely because of failure to complete satisfactorily the comprehensive pattern of college preparatory subjects defined in subdivision (n) of Section 40601 or an alternative program determined by the Chancellor to be equivalent may be admitted to a campus as an undergraduate transfer upon satisfaction of each of the following lettered subdivisions:
(a) Except for satisfactory completion of the comprehensive pattern of college preparatory subjects defined in subdivision (n) of Section 40601 or an acceptable alternative program, the applicant who was eligible for admission to a campus as a first-time freshman, either (1) on the basis of the admission requirements in effect at the time of the application, other than the provisions of Sections 40757, 40758, 40900, or 40901; or
(2) on the basis of the admission requirements in effect at the time of the applicant's graduation from high school, other than the provisions of Sections 40757, 40758, 40900, or 40901, if the applicant has been in continuous attendance at a college since graduation;
(b) Subsequent to high school graduation, the applicant has completed satisfactorily whatever college preparatory course requirements were in effect at the time of the applicant's graduation from high school, or an alternative program determined by the Chancellor to be equivalent;
(c) Commencing with admission to the fall term 2025, the applicant shall have completed, with a grade of C- or better, a course in written composition in the English language and a course in mathematical concepts and quantitative reasoning at a level satisfying California General Education Transfer Curriculum (CAL-GETC) Area 1A and Area 2, respectively.
(ed) For admission prior to the fall term 2025, the applicant shall have completed, with a grade of C- or better, a course in written communication in the English language and a course in mathematics or quantitative reasoning at a level satisfying CSU General Education Breadth Area A2 and B4 requirements, respectively.
(de) The applicant has attained a grade point average of 2.0 (grade of C) or better in across all transferable college units attempted; and
(ef) The applicant is in good standing at the last college attended.

Credits
HISTORY
1. New section filed 8-4-83; effective thirtieth day thereafter (Register 83, No. 32).
2. Amendment filed 9-3-87; operative 10-3-87 (Register 87, No. 36).
3. Amendment of section heading and first paragraph filed 5-5-2003; operative 2-28-2003. Submitted to OAL for printing only (Register 2003, No. 40).
4. Amendment of first paragraph, new subsection (c), subsection relettering and amendment of newly designated subsections (d) and (e) filed 1-29-2018; operative 1-29-2018 pursuant to Education Code section 89030.1. Exempt from the Administrative Procedure Act and OAL review pursuant to Education Code section 89030(b). Submitted to OAL for courtesy filing and printing (Register 2018, No. 5).
This database is current through 11/3/23 Register 2023, No. 44.
Cal. Admin. Code tit. 5, § 40804.1, 5 CA ADC § 40804.1