

AGENDA

COMMITTEE ON EDUCATIONAL POLICY

Meeting: 1:10 p.m., Tuesday, September 14, 2021
Virtually via Teleconference

Christopher Steinhauser, Chair
Romey Sabalius, Vice Chair
Larry L. Adamson
Diego Arambula
Jane W. Carney
Jack Clarke, Jr.
Douglas Faigin
Jean P. Firstenberg
Wenda Fong
Krystal Raynes

Consent 1. Approval of Minutes of the Meeting of July 13, 2021, *Action*
2. Academic Master Plan Update: Fast-Track Programs, *Action*

Discussion 3. Amendment to Title 5 Regulations: Credit for Prior Learning, *Action*
4. Research, Scholarship and Creative Activities, *Information*
5. Graduation Initiative 2025, *Information*

**MINUTES OF MEETING OF
COMMITTEE ON EDUCATIONAL POLICY**

**Trustees of The California State University
Office of the Chancellor
Glenn S. Dumke Auditorium*
401 Golden Shore
Long Beach, California**

July 13, 2021

**Members Present
Virtually via Teleconference**

Christopher Steinhauser, Chair
Romey Sabalius, Vice Chair
Larry L. Adamson
Diego Arambula
Jane W. Carney
Jack Clarke, Jr.
Douglas Faigin
Jean P. Firstenberg
Wenda Fong
Krystal Raynes

Lillian Kimbell, Chair of the Board
Joseph I. Castro, Chancellor

Trustee Steinhauser called the meeting to order.

Approval of the Consent Agenda

The minutes from May 18, 2021, were approved as submitted.

Item number two, Commission on the Extended University, was approved as submitted (REP 07-21-03).

Item number three, Amendment to Title 5 Regulations: Credit for Prior Learning, was an information item.

***PLEASE NOTE: Due to the Governor's proclamation of a State of Emergency resulting from the threat of COVID-19, and pursuant to the Governor's Executive Orders N-25-20 and N-29-20 issued on March 12, 2020, and March 17, 2020, respectively, all members of the Board of Trustees may participate in meetings remotely, either by telephonic or video conference means. Out of consideration for the health, safety and well-being of the members of the public and the Chancellor's Office staff, the July 13-14, 2021, meeting of the CSU Board of Trustees was conducted entirely virtually via Zoom teleconference.**

Recovery with Equity: A Roadmap for Higher Education After the Pandemic

The presentation began with an introduction by Executive Vice Chancellor of Academic and Student Affairs Fred E. Wood of Dr. Lande Ajose, senior policy advisor for Governor Newsom and chair of the California Higher Education Recovery with Equity Task Force. Dr. Ajose was invited to discuss the taskforce's report, Recovery with Equity Roadmap, and share findings and recommendations. Dr. Ajose outlined the four guiding principles that comprise the recommendations, including: fostering inclusive institutions; streamlining pathways to degrees; facilitating student transitions; and simplifying supports for student stability. She continued to outline the 11 recommendations developed by the taskforce as a set of interconnected and interdependent systemic solutions meant to change fundamentally the way California supports all of its residents equitably in education. Dr. Ajose concluded the presentation by sharing an overview of next steps supported by the legislature and proposed opportunities for action by various educational stakeholders and the CSU.

Trustees posed questions regarding establishing metrics to measure progress for the goals set out in the report, including what educational outcomes are expected to improve as progress is made on the report's goals. Additional questions touched on a strategic plan for implementing the recommendation to improve faculty, staff and administrative diversity, and increasing advocacy efforts to support the recommendations in the report, particularly for financial aid reform.

Graduation Initiative 2025

The presentation began with an overview from Executive Vice Chancellor of Academic and Student Affairs Fred E. Wood on the continuous support for Graduation Initiative 2025 that has contributed to several significant milestones for the initiative. Dr. Wood invited Assistant Vice Chancellor for Student Success Initiatives, Research and Innovation Jeff Gold to provide a brief overview of the Graduation Initiative 2025 Advisory Committee's work since its convening by Chancellor Joseph I. Castro earlier in the year. Dr. Gold described the committee's five recommendations and provided examples of possible interventions and outcomes.

Trustees posed questions regarding how budgeting for faculty and staff diversity will be prioritized in context of Graduation Initiative 2025 goals and how will the CSU address critical course availability at the system level. More information was requested regarding the expected timeline for next steps, and ways that the board can support the implementation of the recommendations, particularly in unifying and amplifying policies and practices.

The Post-Pandemic Student Experience

The presentation began with a review by Executive Vice Chancellor of Academic and Student Affairs Fred E. Wood on a series of recent board presentations by Academic and Student Affairs envisioning the post-pandemic university. Dr. Wood invited Dr. Luoluo Hong, associate vice chancellor for Student Affairs and Enrollment Management, to outline the many ways student affairs professionals support CSU students, the philosophy that underscores their work and how they continue to ensure CSU students' well-being and academic progress throughout the pandemic. Dr. Hong defined student affairs work, how it supports the Graduation Initiative 2025's strategic pillar student engagement and well-being as well as the key ways the student experience is essential to improving retention rates, closing educational equity gaps and reducing time to degree. Dr. Hong continued to explain how various student services and programmatic offerings adjusted to address challenges presented by the pandemic, supporting students where they needed it most in areas including advising, housing, financial aid, identity-based centers and learning support services. The presentation concluded with additional insights that were drawn from the pandemic and what the future may hold for the practice and discipline of student affairs.

Trustees posed questions regarding strategic planning for post-pandemic student affairs in fall 2021 and requested examples of a hybrid approach for student support services.

COMMITTEE ON EDUCATIONAL POLICY

Academic Master Plan Update: Fast-Track Programs

Presentation By

Sylvia Alva
Executive Vice Chancellor
Academic and Student Affairs

Alison M. Wrynn
Associate Vice Chancellor
Academic Programs, Innovations and Faculty Development

Summary

In accordance with California State University (CSU) Board of Trustees policy established in 1997, the fast-track process shortens the time to program implementation by allowing proposals to be submitted at the same time that the projection is proposed to the Trustees.

Background

To be proposed via fast-track, a degree program must meet all of the following six criteria:

1. The proposed program could be offered at a high level of quality by the campus within the campus's existing resource base, or there is a demonstrated capacity to fund the program on a self-support basis.
2. The proposed program is not subject to specialized accreditation by an agency that is a member of the Association of Specialized and Professional Accreditors.
3. The proposed program can be adequately housed without a major capital outlay project.
4. It is consistent with all existing state and federal law and Trustee policy.
5. It is either a bachelor's or a master's degree program.
6. The proposed program has been subject to a thorough campus review and approval process.

Fast-Track Timeline

Two Deadlines: **The first Monday in January – for March Board approval**
 The second Monday in June – for September Board approval

- New projection proposed for addition to ten-year campus academic plans and to the CSU Academic Master Plan (**Attachment A**)

This Year's Projection Proposal

This year the Office of the Chancellor received two projections for new degree programs. A degree proposal may be developed only after trustees approve the preliminary step: a degree projection, which is a long-term plan to develop a degree program.

Changes to Program Projections

New Projection Proposed for Addition to Ten-Year Campus Academic Plans and to the CSU Academic Master Plan

The Academic Programs, Innovations and Faculty Development Department at the Office of the Chancellor maintains the CSU Academic Master Plan, a comprehensive list of projected programs, existing degree programs and program-review schedules for authorized degree programs. The CSU Academic Master Plan, which guides program, faculty and facility development, will be updated to reflect the resolution adopted by the board at the September 2020 meeting. The CSU Academic Master Plan and each campus academic plan will thereafter be posted online as resources for university planning.

In addition to the CSU Academic Master Plan, the Office of the Chancellor maintains the CSU Degrees Database, an online inventory of all authorized degree programs and associated concentrations (focused areas of study within the degree program). The CSU Degrees Database informs the public CSU Search Degrees website (<http://degrees.calstate.edu>), a tool for exploring the bachelor's and graduate degree programs and concentrations currently offered at CSU campuses.

The projection listed below and in **Attachment A** indicates a campus intention to develop the degree program within the coming decade. One new projection is proposed, at the graduate level. New programs are planned in response to student demand, employer need, faculty interest, and licensure and accreditation requirements.

Recommendations for board approval of campus academic plans (including proposed projected programs) follow Office of the Chancellor review of campus projection proposals. Review includes consideration of “declared policy of the board to encourage broadly based degrees of high academic quality and to avoid unnecessary proliferation of degrees and terminologies” (REP-91-03). Projected programs are removed from campus academic plans if a full degree proposal is not submitted to the Office of the Chancellor within five years of the date originally projected for implementation. Campuses may request an extension of this five-year deadline if there are compelling circumstances for such an extension.

After the board approves a projection, the campus may begin developing a full degree implementation proposal, which is submitted to the Office of the Chancellor for review and final

approval as a program. Traditional, fast track, and pilot degree-proposal processes are described in **Attachment B**. In **Attachment A**, a ten-year overview of projected degree programs – by campus – is presented.

New Projections

Humboldt

BS	Data Science
BS	Marine Biology

Recommended Action

The following resolution is recommended for adoption and refers to a change in the CSU Academic Master Plan and the campus academic plan described in this agenda item.

RESOLVED, by the Board of Trustees of the California State University, that the amended projection to the Academic Plan for the California State University campus (as identified in Agenda Item 2 of the September 14-15, 2021 meeting of the Committee on Educational Policy) be approved and accepted for addition to the CSU Academic Master Plan and as the basis for necessary facility planning; and be it further

RESOLVED, that this projected degree program proposed to be included in the campus academic plan be authorized for implementation, at approximately the date indicated on Attachment A, subject in each instance to the chancellor's review, approval, and confirmation that there exists sufficient societal need, student demand, feasibility, financial support, qualified faculty, facilities and information resources sufficient to establish and maintain the programs; and be it further

RESOLVED, that degree programs not included in the campus academic plans be authorized for implementation only as pilot or fast-track programs or as modifications of existing degree programs, subject in each instance to Chancellor's Office approval and CSU policy and procedures.

CSU Academic Master Plan Ten-Year Overview of Planned Programs

Projections Proposed to the CSU Board of Trustees
Planned for Implementation between 2021-22 and 2030-31

Planned degree programs (“program projections”) appear in bold red font and are proposed for board approval at the September 2021 meeting. Existing, previously approved program projections appear in black font. Projected degree programs may remain on the CSU Academic Master Plan for five years after the originally approved implementation date, which appears in the second column from the left. Within that five-year window, planned launch years may be adjusted in response to societal need or campus schedules and resources. Current planned implementation years appear in the column to the left of the degree designation. Subsequent to approval of a projection, the campus may develop a full degree implementation proposal, which requires the chancellor’s approval in order for a program to enroll students.

Campus	Year Approved By BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
Bakersfield	2016	2017	2019	MS	Computer Science
	2018	2019	2019	BA	Latina/o Latin American Studies
	2018	2019	2019	BS	Public Health
	2018	2019	2019	MS	Applied Economics and Analytics
	2018	2020	2020	MS	Accounting
	2018	2020	2020	MS	Finance
	2018	2020	2020	MS	Kinesiology
	2018	2021	2021	MS	Technology Management
	2018	2022	2021	MS	Logistics and Supply Chain Management
	2020	2021	2021	BS	Environmental Sciences
	2020	2022	2022	BM	Music
	2020	2022	2022	MS	Behavioral Neuroscience

Campus	Year Approved by BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
Channel Islands	2008	2012	2021	MPA	Public Administration
	2009	2012	2021	MA	History
	2011	2012	2021	MS	Coastal Sustainability
	2013	2013	2021	BA	Freedom and Justice Studies
	2013	2013	2021	MS	Applied Sociology
	2014	2014	2022	BA	Philosophy
	2015	2016	2021	MA	Psychology

Campus	Year Approved by BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
Chico	2018	2020	2022	BA	European Studies
	2018	2020	2022	BS	Geography
	2020	2021	2021	MS	Business Analytics

Campus	Year Approved by BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
Dominguez Hills	2009	2011	2021	MA	Communication Disorders
	2011	2018	2020	MA	International Peace and Security
	2014	2014	2020	MA	Kinesiology
	2015	2016	2020	MHA	Healthcare Administration
	2018	2019	2019	BA	Asian Pacific Studies
	2018	2019	2019	MS	Accounting
	2018	2019	2019	MS	Business Analytics
	2019	2020	2020	BM	Music
	2019	2020	2020	BS	Orthotics and Prosthetics
	2019	2020	2020	MA	Teaching of the Spanish Language
	2019	2020	2020	MS	Radiologic and Imaging Sciences
	2020	2024	2024	MS	Bioanalytical Chemistry
	2020	2021	2021	MPH	Public Health
	2020	2023	2023	OTD	Occupational Therapy

Campus	Year Approved by BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
East Bay					

Campus	Year Approved by BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
Fresno	2016	2018	2020	MS	Athletic Training
	2018	2019	2020	MS	Construction Management
	2020	2021	2021	BS	Biomedical Engineering
	2020	2022	2022	BFA	Studio Art

Campus	Year Approved by BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
Fullerton	2013	2014	2021	MS	Accounting and Finance
	2016	2017	2021	MS	Engineering Management
	2019	2020	2021	MS	Applied Computer Science
	2019	2020	2022	MS	Construction Engineering & Management

Campus	Year Approved by BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
Humboldt	2013	2015	2019	BA	Child Development
	2017	2018	2020	BS	Nursing
	2021	2022	2022	BA	Cannabis Studies
	2021	2023	2023	BS	Data Science
	2021	2023	2023	BS	Marine Biology

Campus	Year Approved by BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
Long Beach	2015	2015	2021	MS	Hospitality Management
	2016	2016	2021	MA	International Affairs
	2016	2016	2021	MS	Sustainability
	2017	2018	2021	BS	Computational Mathematics
	2018	2017	2021	BS	Geographical Science
	2018	2019	2021	MA	Curriculum and Instruction in Physical Education
	2018	2019	2021	MS	Construction Management
	2019	2021	2021	BS	Environmental Engineering
	2020	2022	2022	BA	Multi-Disciplinary Science
	2020	2022	2022	MAT	Special Education

Campus	Year Approved by BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
Los Angeles	2017	2018	2021	MS	Business Analytics
	2017	2018	2021	MA	Pan-African Studies
	2018	2018	2021	BS	Hospitality
	2019	2019	2021	MS	Marketing
	2019	2021	2021	BS	Engineering Technology

Campus	Year Approved by BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
Maritime Academy					

Campus	Year Approved by BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
Monterey Bay	2015	2015	2021	MS	Accounting
	2016	2016	2021	BS	Mechatronics Engineering
	2016	2018	2021	BS	Public Safety
	2016	2018	2023	MA	Teaching English to Speakers of Other Languages
	2017	2018	2020	BS	Agricultural Plant and Soil Sciences
	2017	2018	2023	BA	Interdisciplinary Studies
	2017	2018	2021	MPH	Public Health
	2018	2019	2021	MS	Speech Language Pathology

Campus	Year Approved by BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
Northridge	2015	2020	2020	MS	Information Systems Management
	2016	2017	2019	BA	Earth and Environmental Sciences
	2016	2021	2021	MA	Sustainability
	2016	2021	2021	PhD	Complex Systems
	2018	2019	2019	MS	Athletic Training
	2019	2020	2021	MS	Nursing
	2020	2025	2025	MS	Accounting Analytics
	2020	2023	2023	MS	Business Analytics

Campus	Year Approved by BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
Pomona	2015	2016	2021	MS	Architecture
	2015	2018	2020	MS	Dietetics
	2017	2017	2021	BS	Regenerative and Sustainable Studies
	2018	2020	2021	BS	Materials Engineering
	2018	2020	2021	MS	Bioengineering
	2018	2020	2020	MS	Business Analytics
	2018	2020	2021	MUD	Urban Design
	2019	2020	2021	MS	Digital Supply Chain Management
		2017	2021	MS	Mechatronic and Robotics Engineering
	2020	2022	2022	MS	Financial Analysis

Campus	Year Approved by BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
Sacramento	2017	2019	2021	MFA	Studio Art
	2018	2019	2021	MS	Business Analytics
	2018	2020	2021	MA	Biotechnology
	2019	2020	2021	MS	Power Engineering
	2020	2022	2022	BA	Public Policy and Administration
	2020	2020	2020	BS	Hospitality and Tourism Management
	2020	2020	2020	MA	Educational Leadership and Policy Studies
	2020	2022	2022	MA	Environmental Studies
	2020	2021	2021	MS	Nutrition and Food

Campus	Year Approved by BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
San Bernardino	2007	2015	2021	MS	Kinesiology
	2015	2016	2020	MS	Information Systems and Technology
	2016	2017	2020	MA	History
	2016	2017	2020	MS	Finance
	2017	2018	2020	MS	Entrepreneurship and Innovation
	2018	2019	2020	DNP	Nursing Practice
	2019	2020	2020	BFA	Studio Art
	2019	2020	2020	BFA	Design
	2020	2021	2021	MA	Speech-Language Pathology
	2020	2022	2022	MS	Material Science
	2020	2022	2022	MS	Nutrition Science

Campus	Year Approved by BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
San Diego	2009	2014	2019	PhD	Hearing Science (with UC San Diego)
	2018	2019	2020	BS	Construction Management
	2018	2019	2020	MS	Athletic Training
	2020	2021	2021	MA	Critical Studies in Music
	2020	2020	2020	MS	Epidemiology
	2020	2020	2020	MS	Global Business Development

Campus	Year Approved by BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
San Francisco	2016	2016	2020	MA	Modern European Languages and Literatures
	2017	2018	2020	MFA	Broadcast and Electronic Communication Arts
	2019	2020	2020	BA	Human Services
	2019	2020	2020	MS	Data Science and Artificial Intelligence
	2020	2021	2021	BA	Bilingual Spanish Journalism
	2020	2021	2021	BA	Ethnic Studies
	2020	2021	2021	BA	Race, Ethnicity, and Health
	2020	2021	2021	MS	Environmental Science
	2020	2021	2021	AuD	Audiology

Campus	Year Approved by BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
San José	2017	2018	2020	MS	Hospitality, Tourism and Meeting Management
	2017	2019	2020	AuD	Audiology
	2018	2019	2020	MS	Athletic Training
	2018	2019	2020	MS	Finance
	2020	2020	2020	MS	Artificial Intelligence
	2020	2020	2020	MS	Data Science
	2020	2020	2022	OTD	Occupational Therapy
	2020	2021	2021	MAT	Teaching

Campus	Year Approved by BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
San Luis Obispo	2015	2016	2020	BS	Built Environments
	2020	2021	2021	MS	Statistics

Campus	Year Approved by BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
San Marcos	2008	2016	2022	BA	Philosophy
	2016	2016	2021	BA	Chicano/a Studies
	2016	2019	2024	BS	Computer Engineering
	2018	2019	2021	BA	Geography
	2018	2019	2021	MS	Applied Behavior Analysis
	2018	2019	2022	MS	Clinical Counseling
	2019	2020	2021	BS	Cybersecurity
	2019	2020	2020	MA	Multilingual and Multicultural Education
	2020	2022	2022	BA	Linguistics

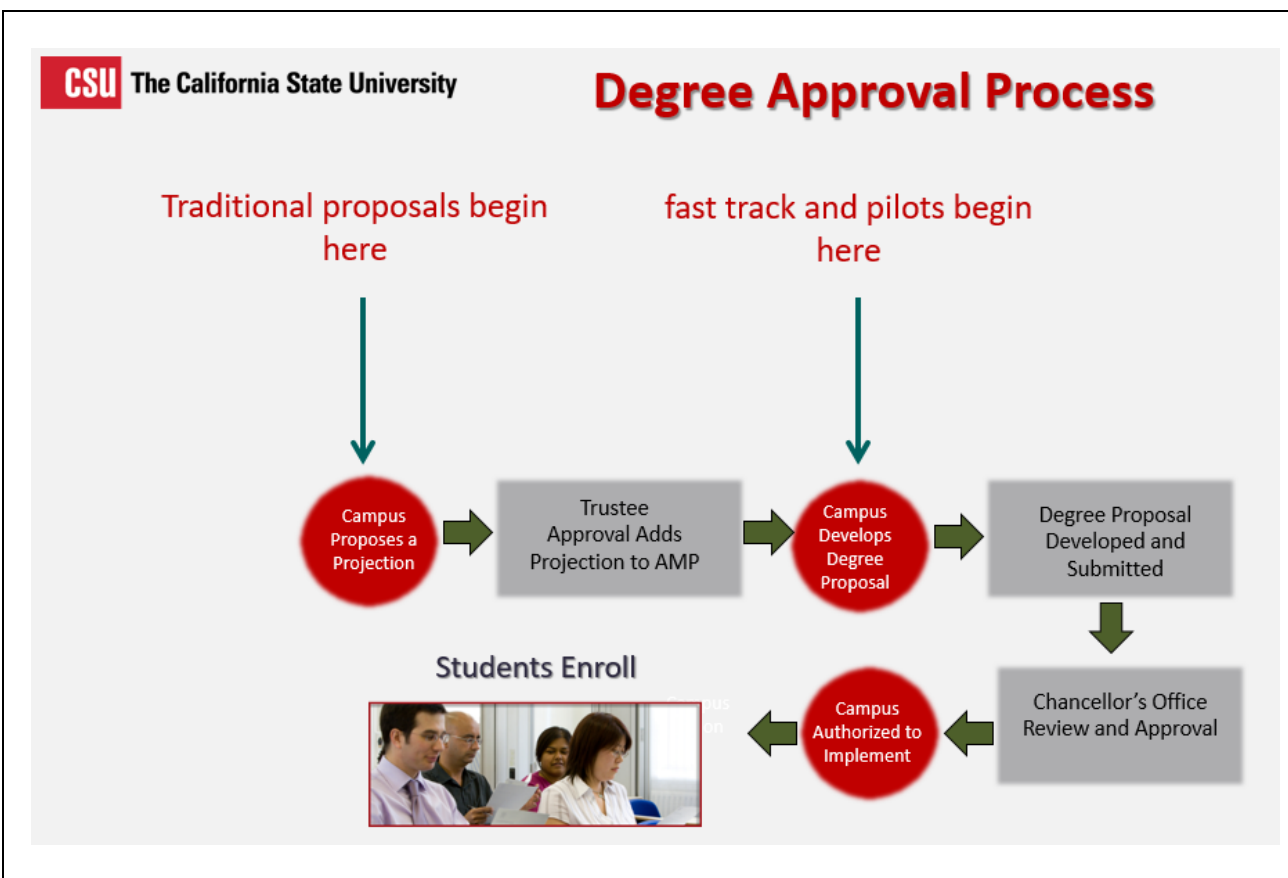
Campus	Year Approved by BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
Sonoma					

Campus	Year Approved By BOT	Year Originally Approved for Implementation	Currently Planned Implementation Year	Degree Designation	Title
Stanislaus	2015	2017	2021	MFA	Theatre Production

CSU Degree Proposal, Review and Approval Process

The CSU degree planning process begins with campus departmental plans and ends with a campus enrolling students in the program. Along the way, plans are subjected to review and approval by the campus, the Board of Trustees and the Chancellor's Office. Campuses may pursue one of three approaches to proposal review and approval, depending on the kind of program envisioned. The approaches are: (1) the traditional process; (2) the fast-track process; or (3) the pilot process. Each process will be explained in this review. The process is shown in Illustration 1.

Illustration 1



The Traditional Process

Degree Projections

The traditional process begins with degree projections. Each January, campuses submit projection proposals, which are very general long-term plans to develop and implement a degree program, to the Chancellor's Office for preliminary review. Projection proposals must make a supportable case that the desired degree program will meet the following criteria in order to obtain a Chancellor's Office recommendation for Board of Trustees approval at the March trustees meeting.

Chancellor's Office Projection Review Criteria (All Degree Levels)

1. Degree designation and title (e.g., BS Biochemistry);
2. Date approved by the campus-based academic senate;
3. Projected implementation date;
4. Delivery mode: fully face-to-face, hybrid or fully online program;
5. A brief summary of the purpose and characteristics of the proposed degree program;
6. Support mode: state-support or self-support;
7. Anticipated student demand;
8. Workforce demands and employment opportunities for graduates;
9. Other relevant societal needs;
10. An assessment of the required resources and a campus commitment to allocating those resources; and
11. As applicable:
 - a. If the projection is a pilot program, campuses will list the academic years during which the program will operate in pilot status.
 - b. For new degree programs that are not already offered in the CSU, campuses include a compelling rationale explaining how the proposed subject area constitutes a coherent, integrated degree program that has potential value to students and meets CSU requirements for an academic program at the undergraduate or graduate level.

Additional Criteria for Projected Bachelor's Degree Programs

Projected bachelor's degrees are general, characterized by breadth and are as enduring as possible in content and title, whereas graduate programs are more appropriately specialized.

Resource:

https://www2.calstate.edu/csu-system/administration/academic-and-student-affairs/academic-programs-innovations-and-faculty-development/Documents/breadth_epr85_13.pdf.

Additional Criteria for Projected Graduate Degree Programs

Master's degree programs should be projected only when the sponsoring department is well established and has achieved a level of quality that has been affirmed by a program review or in subjects for which national accreditation, including review by a visiting team, is available. Further requirements of new graduate programs include that:

1. There are at least five full-time faculty with the appropriate terminal degree;
2. The programs have enrollment sufficient to support offering at least four graduate-level courses each year;
3. Evidence is provided that the department can support the level of research required of a graduate program; and
4. Not less than one half of the units required for the degree shall be in courses organized primarily for graduate students.

Resources:

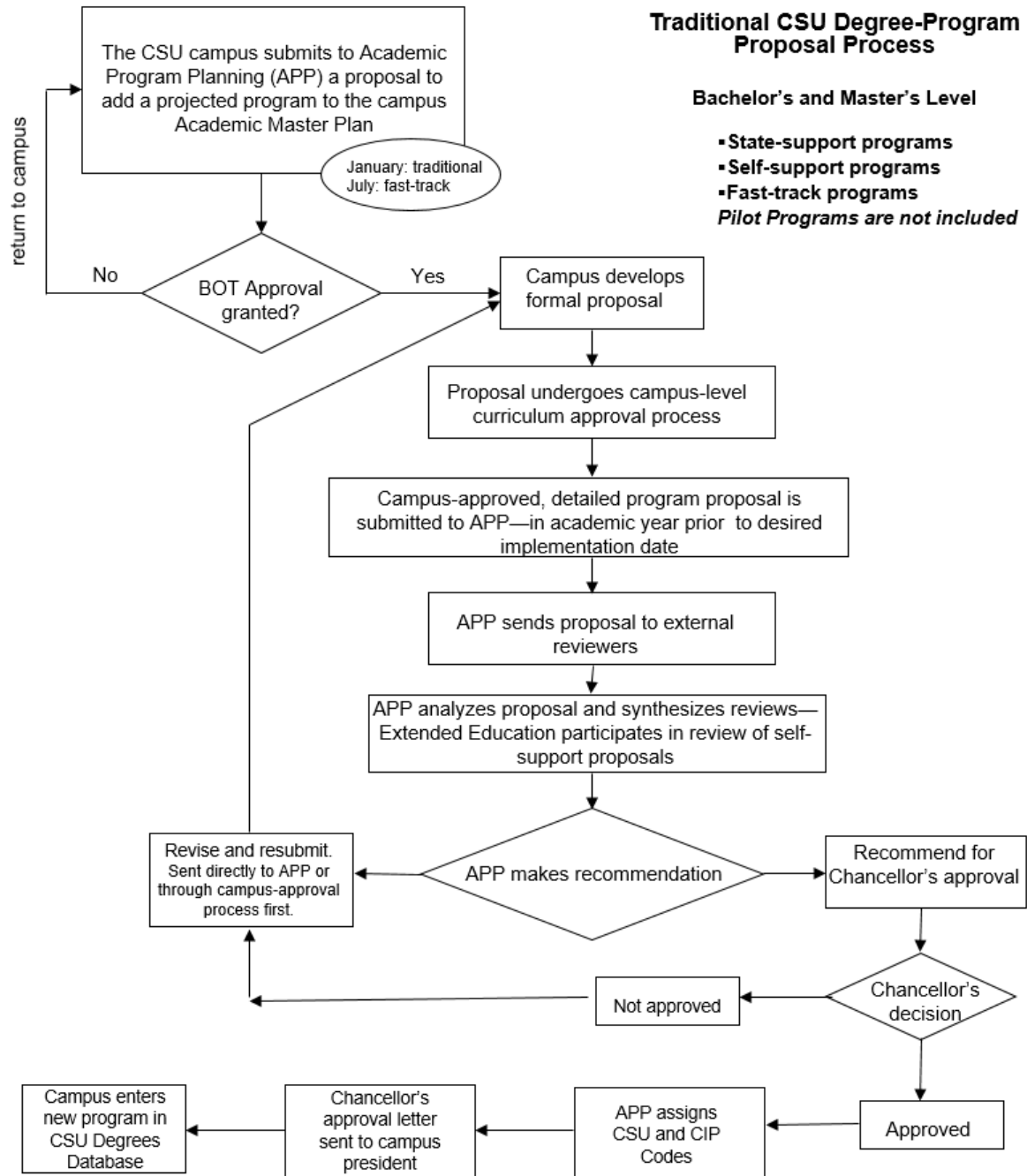
https://www2.calstate.edu/csu-system/administration/academic-and-student-affairs/academic-programs-innovations-and-faculty-development/Documents/Graduate_Level_EPR_82_39.pdf
and
https://www2.calstate.edu/csu-system/administration/academic-and-student-affairs/academic-programs-innovations-and-faculty-development/Documents/aap_91_04_recommendations_graduate_education.pdf

Degree Program Proposal Development and Review Process

After obtaining Board of Trustees approval for a proposed projection, the campus may begin developing a full degree proposal, which must obtain campus approvals before being submitted for system-level review. Campus-approved degree proposals are reviewed by Chancellor's Office staff who have faculty experience and curriculum-development and review experience. Additionally, as needed, external experts review degree programs that have highly specialized curricular requirements. It is not unusual for the Chancellor's Office to request modifications to the degree requirements or the assessment plans during the review process. Proposals must obtain the chancellor's approval before the degree program can be implemented and enroll students. All degree program proposals are governed by California Education Code and systemwide policy, including Title 5 regulations, executive orders and coded memoranda.

Illustration 2 depicts the process for the "traditional degree program proposal." This process is used for bachelor's, master's and doctoral programs that will be run either through state support or through self-support/extended education. In this process, the full degree proposal is submitted to the Chancellor's Office a year ahead of planned implementation.

Illustration 2



Degree Proposal Review Criteria

During the proposal review process, reviewers evaluate proposed programs and resources according to the following review criteria:

- **Faculty**

Do the faculty appear qualified to offer this program and at this level? Does the faculty expertise span all appropriate specializations, and are there sufficient faculty members for the projected size of the program? Do they appear to have appropriate research or professional experience? Are the arrangements for administering the program sufficient to ensure that it will operate effectively?

- **Curriculum**

Does the curriculum have appropriate breadth, depth and coherence for an undergraduate or a graduate program in this field? Is it up to date, incorporating the most recent developments in the field? Is it consistent with any pertinent recommendations of professional organizations? Is it responsive to employment opportunities for graduates? If it is a baccalaureate program, would it constitute desirable preparation for graduate or doctoral study in the fields indicated in the proposal? Does the proposed bachelor's degree meet the applicable Bachelor of Arts (BA) and Bachelor of Science (BS) requirements established in Title 5? If the proposal is for a BA or BS degree, does it require no more than 120 units, or does the proposal provide a well-defended rationale for exceeding the Title 5 limit of 120 units for BA and BS degrees? Does the graduate program meet Title 5 section 40510 master's degree requirements?

- **Resources**

Does the description of facilities, equipment and information resources indicate that the campus has the resources (or reliable access to resources) that will be needed for a high-quality program? If not, what information would be minimally necessary to ensure that the resources are adequate? For self-support programs, does the budget contain three-to-five years of operation, showing multiple cohorts? Does it show full cost recovery, and are the student costs within market ranges for similar extension programs?

- **Assessment of Program Quality and Student Learning**

Does the proposal provide an assessment plan that identifies program and student learning goals? Do the student learning outcomes match with the curriculum? Are goals measurable, and will the assessment process be manageable? Is the process meaningful, with assessment results used to influence changes in the curriculum or pedagogy?

- **State Need and Student Demand**

Is a program of this kind needed in California? Is there convincing evidence provided in the proposal to demonstrate student interest in the program and employer demand for graduates? Are the sources of information on need current and credible? If the information on need for

the program is not adequate, what other information might it be suggested that the campus include in the proposal?

- **Multi-Year Cost-Recovery Budget (Self-Support Programs)**

Does the budget include sufficient years to follow multiple cohorts? Is an appropriate level of student attrition built in? Are costs related to hybrid or online delivery and technical support included for programs not offered entirely in face-to-face mode?

The Fast-Track Process: Combined Projection and Proposal

To review, in the traditional proposal process, a campus requests Board of Trustee approval to include a projection on the campus Academic Plan. Subsequent to Board of Trustee approval of the projection, the campus may begin developing a degree proposal that will be submitted to the Chancellor's Office for system-level review and approval. In the traditional process, proposals are to be submitted in the academic year preceding planned implementation.

As adopted by the Board of Trustees in July 1997, a "fast-track" process shortens the time to implementation by allowing proposals to be submitted at the same time that the projection is proposed to the Board of Trustees. Fast-track proposals still undergo system-level review, and the fast track does not move the proposal through an expedited review process.

Fast-Track Criteria

To be proposed via fast track, a degree program must meet all of the following six criteria:

1. The proposed program could be offered at a high level of quality by the campus within the campus's existing resource base, or there is a demonstrated capacity to fund the program on a self-support basis.
2. The proposed program is not subject to specialized accreditation by an agency that is a member of the Association of Specialized and Professional Accreditors, or it is currently offered as an option or concentration that is already recognized and accredited by an appropriate specialized accrediting agency.
3. The proposed program can be adequately housed without a major capital outlay project.
4. It is consistent with all existing state and federal law, trustee policy and executive orders.
5. It is either a bachelor's or master's degree program.
6. The proposed program has been subject to a thorough campus review and approval process.

Fast-Track Timelines

- The first Monday in January—for July approval
- The second Monday in June—for December approval

Fast-track proposals that are submitted to the Chancellor's Office by the first Monday in January, and that raise no major issues, can be acted on by the Board of Trustees in March, sent through system-level review and could receive Chancellor's Office approval in July.

Proposals that are submitted by the second Monday in June and raise no major issues can be acted on by the Board of Trustees in September, sent through system-level review and could receive Chancellor's Office approval in December.

Submitting Fast-Track Proposals

When submitting an update to the campus Academic Plan, the campus notes any fast-track degree proposals and includes a very brief description of the program and a rationale for offering it through the fast-track process.

Resource:

https://www2.calstate.edu/csu-system/administration/academic-and-student-affairs/academic-programs-innovations-and-faculty-development/Documents/fast_track_pilot_programs.pdf

The Pilot Degree Program Proposal Process

In support of the CSU tradition of experimentation in the planning and offering of degree programs, Board of Trustee policy established in July 1997 that a limited number of proposals meeting fast-track criteria might be implemented as five-year "pilot programs" without prior review and approval by the board. Instead, the Chancellor's Office conducts a review to confirm that all applicable policy requirements have been met. For self-support pilot programs, the Chancellor's Office also reviews proposed projected budgets to ensure all costs will be recovered through student fees and without relying on state funds.

Pilot-Program Criteria

Pilot degree programs must meet all of the following six criteria:

1. The proposed program could be offered at a high level of quality by the campus within the campus's existing resource base, or there is a demonstrated capacity to fund the program on a self-support basis.
2. The proposed program is not subject to specialized accreditation by an agency that is a member of the Association of Specialized and Professional Accreditors, or it is currently offered as an option or concentration that is already recognized and accredited by an appropriate specialized accrediting agency.
3. The proposed program can be adequately housed without a major capital outlay project.
4. It is consistent with all existing state and federal law, trustee policy and executive orders.
5. It is either a bachelor's or master's degree program.

6. The proposed program has been subject to a thorough campus review and approval process.

Pilot Program Implementation Procedures

1. Prior to implementation, the campus is obligated to (1) notify the Chancellor's Office of plans to establish the program, (2) provide a program description and list of curricular requirements and (3) confirm that each of the six pilot criteria apply to the pilot program.
2. While Chancellor's Office approval is not required, a pilot program must be acknowledged by the Chancellor's Office before the program is implemented.
3. A campus may implement a pilot program without first proposing the projection on the campus Academic Plan. In such cases, the program will be identified as a pilot program in the next annual update of the campus Academic Plan.

Pilot Operational Policy

1. A pilot program is authorized to operate only for five years.
2. If no further action is taken by the end of the five years, no new students can be admitted to the pilot program.
3. The campus is obliged to make appropriate arrangements for students already enrolled to complete the program.

Pilot Conversion Procedures

For the program to continue beyond the five-year limit, the campus must propose to the Chancellor's Office converting the program from pilot to regular status. A pilot program could be converted to regular-program status and approved to continue to operate indefinitely if the following conditions are met:

1. The campus committed the resources necessary to maintain the program beyond five years;
2. A thorough program evaluation (including an on-site review by one or more experts in the field) showed the program to be of high quality; to be attractive to students; and to produce graduates attractive to prospective employers and/or graduate programs, as appropriate; and
3. Approval by the chancellor after review and comment by the Chancellor's Office.

COMMITTEE ON EDUCATIONAL POLICY

Amendment to Title 5 Regulations: Credit for Prior Learning

Presentation By

Sylvia A. Alva
Executive Vice Chancellor
Academic and Student Affairs

Alison M. Wrynn
Associate Vice Chancellor
Academic Programs, Innovations and Faculty Development

Summary

This item proposes changes to the name and substance of Title 5 §40408. Currently titled *Credit Based on Examination*, the proposed title, *Credit for Prior Learning*, more accurately describes current practice in higher education as well as proposed revisions to existing policy. In addition to credit by examination, the proposed amendment seeks to expand the types of prior learning assessments from which credit may be earned to include portfolio assessment, interviews or other appropriate demonstrations of learning outcomes. Furthermore, the proposed amendment would allow graduate, as well as undergraduate, students to earn credit for prior learning outside of traditional collegiate coursework. In sum, these amendments would update best practices for evaluating and awarding credit for prior learning and would support revisions to CSU Credit for Prior Learning policy.

The Board discussed this as an information item in July 2021.

Background

Existing policy allows students to earn academic credit by passing a campus-authorized examination. In practice, eligible examinations may be developed by faculty or may be offered by an external entity such as College Level Examination Program (CLEP) or College Board/Advanced Placement (AP).

In addition to credit by examination, the proposed amendment seeks to expand the types of prior learning assessments from which credit may be earned to include portfolio assessment, interviews or other appropriate demonstrations of learning outcomes. Furthermore, eligibility for credit for prior learning is expanded to include graduate and as well as undergraduate students.

The proposed amendment supports recent proposed revisions to existing CSU Credit for Prior Learning policy (EO 1036) in recognition of the multiple means by which students could earn collegiate credit for learning that occurs outside of traditional settings. These proposed revisions have been shared with faculty and administrators for input. Returning adult students and veterans are most likely to benefit from policies that facilitate credit for prior learning. The proposed change to Title 5 §40408 and the related CSU Credit for Prior Learning policy reflect best practice in support of more timely graduation and reduction of equity gaps.

The following resolution is proposed to modify Title 5 by amending Section 40408:

RESOLVED, by the Board of Trustees of the California State University, acting under the authority prescribed herein and pursuant to Section 66600, 89030 and 89035 of the Education Code, that section 40408 of Title 5 of the California Code of Regulations is amended as follows:

Proposed Revisions - §40408. Credit Based on Examination

Title 5. Education
Division 5. Board of Trustees of the California State Universities
Chapter 1. California State University
Subchapter 2. Educational Program
Article 5. General Requirements for Graduation
5 CCR § 40408

§ 40408. Credit ~~Based on Examination~~ for Prior Learning.

Unit credit toward the undergraduate or graduate degree may be secured by: (1) passing an examination given or approved by the appropriate campus authority in courses offered by the campus and for which credit has not otherwise been allowed, (2) demonstration of learning, skills and knowledge acquired through experience, (3) learning acquired outside formal higher education, (4) education and training provided by the Armed Forces of the United States or (5) other appropriate means of assessment as determined and approved by the appropriate campus authority in accordance with system policy.

Note: Authority cited: Sections 66600, 89030 and 89035, Education Code. Reference: Sections 66600 and 89030, Education Code.

COMMITTEE ON EDUCATIONAL POLICY

Research, Scholarship and Creative Activities

Presentation By

Sylvia A. Alva
Executive Vice Chancellor
Academic and Student Affairs

Ganesh Raman
Assistant Vice Chancellor
Research

Summary

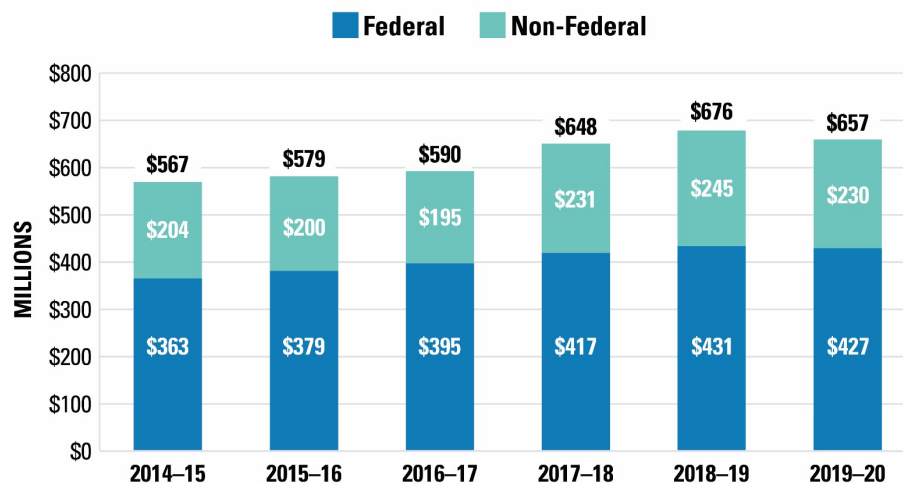
Research, scholarship and creative activities are intrinsic to California State University (CSU), providing students with hands-on learning opportunities where they can develop and test hypotheses and push boundaries in pursuit of new knowledge benefitting California, the nation and the world. The CSU is distinctive for making this high-impact practice available to undergraduate students throughout its 23 campuses and 10 multi-campus affinity groups. As a result, CSU graduates are better prepared to meet today's opportunities and challenges and help transform tomorrow.

Research, scholarship and creative activities also provide an effective strategy for improving student success. Undergraduate research, for example, develops purposefulness, perseverance and collaboration, empowering students and leading to their academic success. Students gain opportunities for deep learning when they work side-by-side with faculty on research, scholarship and creative activities.

External Funding

As demonstrated in the chart below, total external expenditure—from grant and contract revenue—for CSU research and sponsored programs has increased steadily over the past several years. In 2019-2020, the most recent year for which data are available, the total amount was \$657 million. This represents a growth of \$90 million over a five-year period.

CSU Research & Sponsored Programs



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.

These external funds include approximately \$83 million to cover institutional overhead, also known as indirect costs. Programs in research, scholarship and creative activities have associated infrastructure expenses that are recovered with indirect costs budgeted into the application for external funding.

External Funding Accomplishments

Examples of grants and contracts in areas of education, equity, student success, health research and creative activity received by CSU faculty during the 2020-21 academic year are listed below.

California State University, Bakersfield

A Culturally Responsive Student-Centered Pathway to Healthcare Careers

Funding agency: U.S. Department of Education

Total award: \$3 million

Investigator: Todd McBride

CSU Bakersfield received a \$3 million dollar award over five years from the U.S. Department of Education Title V program whose aim is to increase the degree completion of Hispanic students in high-demand healthcare fields through a comprehensive and evidence-based approach. The goals and objectives of this transformative project emerged from an intensive and widely inclusive institutional dialog about how best to improve student learning and completion outcomes for CSU Bakersfield's neediest students while addressing a dire healthcare need in the region.

California State University, Channel Islands

Initiative to Enhance Diversity in the Biomedical Research Workforce at CSU Channel Islands

Funding agency: National Institutes of Health

Total award: \$1,091,250

Investigators: Sonsoles de Lacalle, Melissa Soenke, Hugo Tapia and HyeSun Lee

This project strives to enhance diversity in the bio-behavioral workforce. As a primarily undergraduate institution and a Hispanic Serving Institution, CSU Channel Islands is uniquely positioned to identify factors that increase persistence in biomedical-relevant disciplines, boost baccalaureate graduation rates and encourage the pursuit of postbaccalaureate degrees among our students from historically underrepresented groups. As a result of this study, CSU Channel Islands will have a better understanding of effective approaches to student engagement and mentoring, research capacity building and faculty development. It is expected this knowledge will allow the university to exert a powerful contribution to the preparation of trainees from diverse backgrounds, helping them to succeed in biomedical research careers.

Channel Your Success – Believe. Belong. Become. (CYS-B³)

Funding agency: U.S. Department of Education

Total award: \$3 million

Investigator: Michelle Hasendonckx

Channel Your Success is a multi-faceted program designed to remove barriers preventing Latinx students from graduating on time, but benefits all students as well. The \$3 million Title V grant includes programs for both students and faculty. Faculty members benefit from professional development programs that enhance their knowledge of equity, diversity and methods to accommodate and welcome all types of students. The student portion involves faculty, staff and peer mentors who work with designated students (those enrolled in freshman math, first generation students and those with an undeclared major) to ensure their first year at CSU Channel Islands is successful.

California State University, Chico

Computational Literacy Across Secondary Settings” or “The Class Project”

Funding agency: U.S. Department of Education

Total award: \$1.9 million

Investigator: Jennifer Oloff-Lewis

Jennifer Oloff-Lewis is leading the \$1.9 million U.S. Department of Education award, “Computational Literacy Across Secondary Settings” or “The Class Project,” to achieve comprehensive reform in computational literacy. The project represents a major partnership of California State University, Chico’s School of Education and the Colleges of Engineering, Humanities and Fine Arts, and Natural Sciences, three school districts, three county offices of education and a community college district. The initiative involves teacher recruitment, innovative teacher preparation and retention enabling the graduation of 72 teacher residents, the delivery of improved teaching and learning support for over 10,000 rural students.

California State University, Dominguez Hills

Cannabis Industry in South Bay, L.A.

Funding agency: Bureau of Cannabis Control

Total award: \$1.87 million

Investigator: Anthony Samad

California State University, Dominguez Hills received a \$1.87 million award from the Bureau of Cannabis Control to conduct research on the cannabis industry in the South Bay and other local Los Angeles County communities it serves. The project is designed to understand the South Bay’s response to Prop. 64 across municipalities. Dr. Anthony Samad, executive director of the Dymally African American Political and Economic Institute, is the principal investigator. This grant represents a collaborative initiative between the Dymally Institute, CSU Dominguez Hill’s South Bay Economics Institute and the College of Business Administration and Public Policy.

Brackish Waters Los Angeles

Funding agency: The Getty Foundation

Total award: \$100,000

Investigators: Aandrea Stang and Debra Scacco

California State University, Dominguez Hills’ University Art Gallery has been awarded a \$100,000 grant from the Getty Foundation to conduct research related to the gallery’s contribution to the next Pacific Standard Time initiative in 2024. Led by CSU Dominguez Hills’ Art Gallery Director Aandrea Stang and exhibit co-curator Debra Scacco, the project reflects the concept of brackish water sites, areas where fresh and ocean water intermix. Investigated through marine

biology, hydroclimatology and Indigenous understandings of South L.A.'s coastal waterways, the exhibition will explore the paradox of the in-between, tracing the intricate ways ecology, culture and community intersect.

California State University, Fresno

USDA HIS Collaborative: The Agricultural Career Readiness Skills for the 21st Century (ACRS21) Certificate Pathway

Funding agency: U.S. Department of Agriculture-National Institute of Food and Agriculture

Total award: \$1 million over four years

Investigator: Sherri Freeman

The Agricultural Career Readiness Skills for the 21st Century (ACRS21) Certificate Pathway is a four-year program funded by the National Institute of Food and Agriculture within the United States Department of Agriculture. The project will create a transferrable certificated pathway uniting high school, community colleges and universities in the development of soft skills and career readiness training. ACRS21 will improve employability of underrepresented students through development of a sequenced, vertically aligned soft skills and career readiness pathway based on experiential learning activities.

Bridges to the Doctorate Program between Fresno State and UC Davis (T32)

Funding agency: National Institutes of Health

Total award: \$1,112,184 over five years

Investigator: Krish Krishnan

This program features a Bridges to the Doctorate program between the two major Hispanic Serving Institutions in California's Central Valley. It assists under-represented minority students from the California State University, Fresno with completing a master's program in the biomedical sciences before continuing and completing their Ph.D. program at the University of California, Davis.

California State University, Fullerton

Understanding the Electrochemical Properties of Physical HOL Defects on Functionalized b/c 2D Materials for the 2e-Reduction

Funding agency: National Science Foundation, CAREER Grant

Total award: \$422,198 over five years

Investigator: Michael Groves

Professor Groves is studying hydrogen peroxide, an environmentally friendly oxidant that is used in many applications including water treatment, the electronics industry and personal protective equipment sterilization. However, industrial production of hydrogen peroxide is dominated by an

environmentally destructive anthraquinone process. Under the funded project, Groves and his students will look for an alternative mechanism to synthesize hydrogen peroxide to be more environmentally friendly in industry uses. This work could also affect a wide range of applications, including the electrochemical reduction of greenhouse gases to usable fuels for fuel cells. Groves will integrate the project into his senior chemistry laboratory course to train students to prepare for the chemistry and biochemistry workforce and to pursue advanced degrees. Additionally, Groves and his students will participate in scientific outreach to the local community.

Humboldt State University

¡Échale Ganas!

Funding agency: U.S. Department of Agriculture

Total award: \$249,000

Investigators: Matt Johnson, Rafael Cuevas-Urbe and Fernando Paz

¡Échale Ganas! is a grant-funded program at Humboldt State designed to support hands-on learning and career advancement for Latinx students in science, technology, engineering and math (STEM). A Mexican expression that literally means to “throw some life into it,” ¡Échale Ganas! is often used to say, “Go for it!” The program will supplement existing STEM programs for Latinx students at Humboldt State, a Hispanic-Serving Institution since 2013. A hands-on program, ¡Échale Ganas! is geared toward Latinx students working at the nexus of agriculture and natural resources, providing them with experiential learning opportunities like working with sustainable fish farms or using owls for rodent control in vineyards.

Redwood Coast Airport Microgrid

Funding agency: California Energy Commission and U.S. Department of Agriculture

Total award: \$5 million and \$6.6 million loan

Investigators: Matt Johnson, Rafael Cuevas-Urbe and Fernando Paz

The Redwood Coast Airport Microgrid has been designed and developed by the Schatz Energy Research Center at Humboldt State University. Located at Humboldt County’s regional airport, it will be owned by the Redwood Coast Energy Authority and it will run on power lines owned by Pacific Gas and Electric Company (PG&E). This interagency collaboration is the first of its kind in California. This innovative project is funded by a \$5 million grant from the California Energy Commission’s EPIC program which invests in scientific and technological research to accelerate the transformation of the electricity sector to meet the state’s energy and climate goals. It is also funded by a \$6.6 million loan from the U.S. Department of Agriculture. Students gain hands-on experience with design and installation.

California State University, Monterey Bay

FUTURE-Ag: Fostering Undergraduate Student Training, Upskilling, and Retention through Interdisciplinary Experiential learning in Agricultural Sciences

Funding agency: U.S. Department of Agriculture

Total award: \$299,866

Investigator: Jose Pablo Dundore-Arias

This project is designed to attract, retain, support and graduate more Hispanic, first-generation and low-income students in agricultural and related biological sciences. It will improve student-learning through the implementation of scaffolded agricultural-relevant, course-based undergraduate research experiences in the classroom. It will support hands-on experience in interdisciplinary laboratory and field-based agricultural research internships. It also will organize a multi-institutions agricultural-centered career and internship fair for students in the Tri-County region, and enhance understanding of the diversity and function of indigenous soil bacteria.

Project POPPY: Preparing Observational Practitioners through Partnerships Yearlong

Funding agency: U.S. Department of Education

Total award: \$1,743,390

Investigators: Erin Ramirez and Megan Sulsberger

This project is intended to increase achievement among K-12 students by preparing highly-qualified prospective teachers through rigorous curriculum reform, a year-long clinical residency model and sustained intensive professional development opportunities in both STEM and literacy fields. The project has five goals, including: recruitment of teachers from underrepresented populations and high-needs subject areas; completion of a residency model that includes a year-long clinical experience with a highly-qualified mentor teacher and tightly-aligned rigorous graduate level coursework; a formalized two-year induction model for new teachers; sustained evidence-based and classroom-focused professional development opportunities around STEM and literacy integration; and improvement science to engage in continuous improvement throughout the duration of the project.

California State University, Northridge

U-RISE Training the Next Generation of Basic Biomedical Researchers: A Holistic Approach

Funding agency: National Institutes of Health

Total award: \$2,882,538

Investigators: MariaElena Zavala, Cheryl Hogue, and Ray Hong

Bridges to the Doctorate Research Training Program at CSUN

Funding agency: National Institutes of Health

Total award: \$2,297,224

Investigators: MariaElena Zavala, Cheryl Hogue and Ray Hong

Two new grants from the National Institutes of Health aim to increase the diversity of the biomedical workforce and build on more than two decades of Biology Professor MariaElena Zavala's leadership of NIH-funded research training programs at CSU Northridge. Both programs are developing a diverse pool of graduates who can transition into biomedical, research-focused higher degree programs. The Bridges program involves partnerships with five R1 universities, and each provide research experience and support students through tuition reduction, stipends and targeted mentorships.

CSUN CIRM Bridges 3.0 Stem Cell Research and Therapy Training Program

Funding agency: California Institute for Regenerative Medicine

Total award: \$3,606,500

Investigators: Cindy Malone and Lisa Banner

The CSUN-CIRM Stem Cell Scientist Training Program prepares 10 CSU Northridge students annually for research careers in stem cell biology and regenerative medicine. The undergraduate trainees complete intensive coursework and paid internships in leading UCLA research labs. Led by Biology Professor Cindy Malone, the California Institute for Regenerative Medicine renewed the training program founded in 2010 with a \$3.6 million grant for an additional five years.

California State University, Sacramento

UP-LIFT CA (Universities & Partners, Learning, Innovating, Fostering Equity, Transforming California ECE Degrees)

Funding agency: Early Educator Investment Collaborative

Total award: \$4,476,000 over three years

Investigators: Pia Wong, Ana Garcia-Nevarez and JaNay Brown-Wood

Sacramento State will lead a new statewide effort over the next three years to improve preparation for early childhood educators and diversify California's workforce of preschool teachers. UP-LIFT CA includes a partnership with several universities including CSU Bakersfield and Cal Poly Pomona. It aims to improve early childhood education throughout California by more closely aligning with state expectations the skills and competencies taught in preparation programs, and by developing a clearer path to the career through community and four-year colleges. The project will emphasize training teachers able to work with dual-language learners who are a significant portion of the state's preschool-age children, and recruiting a diverse pool of future early childhood educators.

Professional Masters in Stem Cell Research

Funding agency: California Institute for Regenerative Medicine

Total award: \$3 million

Investigators: Kimberly Mulligan and Kelly McDonald

This program funds cohorts of 10 students through a two-year master's program, including an eight-month paid research internship with faculty at UC Davis Medical Center. The award is just shy of \$3 million from the California Institute for Regenerative Medicine.

MRI: Acquisition of a Multi-nuclear 400 MHz NMR Spectrometer Equipped with an Autosampler to Support Undergraduate Research at a Hispanic Serving Institution

Funding agency: National Science Foundation

Total award: \$352,157

Investigators: Jeremy Mallari, Kimberly Cousins, David Smith and Jason Burke

The National Science Foundation awarded a \$440,000 grant to Assistant Professor Jason Burke to lead eye-cancer research that could lead to future breakthroughs in cancer treatments. As part of this new research, undergraduate students will receive training in laboratory techniques such as gene engineering and X-ray crystallography.

San Diego State University

The Latinos Understanding the Need for Adherence in Diabetes using Care Coordination, Integrated Medical and Behavioral Care and E Health ("LUNA-E")

Funding agency: National Institute of Minority Health & Health Disparities (RO1)

Total award: \$621,867

Investigators: Greg Talavera and Linda Gallo

Drs. Talavera and Gallo started the SDSU South Bay Latino Research Center in 2006 to focus on reducing health disparities in cardiovascular disease, diabetes and colon cancer in the Latinx community. LUNA-E will address health disparities in diabetes care and outcomes for primarily Spanish-speaking, Mexican-born U.S. Hispanics/Latinos receiving care for type 2 diabetes. The study will advance understanding of optimal approaches to diabetes healthcare services in a large, growing U.S. population at high risk for diabetes and related complications.

Repurposed Electric Vehicle Batteries

Funding agency: California Energy Commission

Total award: \$1.9 million

Investigators: Chris Mi and Kevin Wood

The project will develop and integrate commercial scale PV systems with reliable and cost effective, repurposed electric vehicle (EV) batteries. The goal is to ensure that second life EV batteries will last for a minimum of 10 years as part of a grid storage application with a degradation rate of three percent or less annually. It also will create a “second life battery genome”; pilot demonstration projects at Chula Vista’s Veterans Park and the SDSU Children’s Center; improve battery management system technologies to increase battery efficiency; and demonstrate that the second life EV battery can operate reliably and satisfy grid demand.

Advancements in Drone-Based Applications

Funding agency: National Science Foundation
Total award: \$550,000
Investigator: Junfei Xie

The prestigious National Science Foundation CAREER Award, one of three received by San Diego State faculty this year, will develop a system for drones to have networked airborne computing capability. This means the drone can perform complex calculations while in the air, communicate with other drones in its network and harness artificial intelligence to provide smart services, such as crowd control, traffic monitoring and emergency response. Besides creating advancements related to drone-based applications, the innovative education and outreach activities will have a positive impact on the community and significantly benefit students, especially underrepresented minorities in San Diego County and beyond.

San Francisco State University

Scholars: Affective Economies in Crowdfunding for Cancer

Funding agency: National Science Foundation
Total award: \$145,801
Investigator: Martha Lincoln

Of the 250 million new campaigns launched annually to offset costs related to medical treatment, almost half are fundraisers for individuals diagnosed with cancer. The median crowdfunding campaign for a cancer patient receives just 25 percent of its funding target. Crowdfunding for cancer thus represents an increasingly important, but understudied, phenomenon. This project investigates the social dynamics shaping this new form of micro-philanthropy by researching how and why donors’ sentiments and emotions motivate giving in some crowdfunding campaigns, but not in others, creating significant disparities among cancer patients.

San José State University

Career Exploration Lab: 3D Printing and STEM Engagement for High School Students with Visual Impairments and their Educators

Funding agency: National Science Foundation

Total award: \$1,499,733.00

Investigator: Thomas Madura

The grant is intended to support the development of STEM curricula for students with blindness and visual impairments. The funding will support research and development of STEM Career Exploration Labs, where students will participate in hands-on activities using 3D printed models and sound to learn astronomical topics. Students with visual impairments use touch and sound to gather information about their surroundings and to form mental images. This program will use this spatial thinking to teach STEM topics. The program also includes interactions with STEM professionals with visual impairments and field trips to local businesses to provide insight into career possibilities. The project will serve high school students, their sighted peers, high school teachers and teachers of the visually impaired. The work will be conducted in partnership with The Ohio State University and the Space Telescope Science Institute located at John Hopkins University.

California Polytechnic State University, San Luis Obispo

TIER, Teaching for Inclusivity and Equity Residency

Funding agency: U.S. Department of Education

Total award: \$2.1 million

Investigator: Briana Ronan

The U.S. Department of Education awarded a team of faculty and staff in the Cal Poly School of Education a \$2.1 million Teacher Quality Partnership grant to develop a residency program to train new teachers in the areas of special education and bilingual education, while receiving a living stipend. The program recognizes the need for educators who are representative of the communities in which they teach and are culturally responsive, and is expected to support and train 44 new teachers to work on the Central Coast.

California State University, San Marcos

Employing Metagenomic and Chromatin Capture Techniques to Map the Evolution of Antibiotic Resistance in Coastal Microbiomes

Funding agency: National Institutes for Health

Total award: \$446,909

Investigator: Elinne Becket

The spread of microbial antibiotic resistance (AR) is a global healthcare problem driven by the extensive clinical and agricultural use of antibiotics. Natural environments serve as massive harbors of antibiotic resistance reservoirs, known as the “resistome”. Genes that encode AR exist on mobile genetic elements and are transferred between microbes through horizontal gene transfer; this transfer can be triggered in response to antibiotic exposure. Coastal environments have increased exposure to antibiotic waste from anthropogenic inputs such as waste- and stormwater runoff, which influence the spread of AR genes from non-pathogenic microbes to human pathogens. The program seeks to explore the changes in resistome distribution in coastal microbial populations, specifically in response to antibiotics and storm runoff, through a combination of metagenomic approaches.

Sonoma State University

A Collaborative Rural Distance Family Nurse Practitioner Program

Funding agency: Office of Statewide Health Planning & Development

Total award: \$192,000

Investigator: Mary Ellen Wilkosz

The Family Nurse Practitioner Program at Sonoma State offers a Master of Science as well as a Post Masters Certificate Program with a full and part-time option. The mission of the program is to serve the underserved populations in Northern California. With the help of grant funding it will provide an opportunity for Advance Practice Nurses in rural areas to become nurse practitioners while staying in their community to provide the care to those patients in need. Faculty are used to both coordinate and supervise over 120 students in primary care settings all over Northern and Central California to facilitate education and curriculum delivery so that working registered nurses can remain in their communities to provide care.

NASA’s Neurodiversity Network (N3): Creating Inclusive Informal Learning Opportunities across the Spectrum

Funding agency: National Aeronautics and Space Administration

Total award: \$4,962,523

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. Sonoma State 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 Sonoma State Physics majors, including the use of a robotic telescope for astronomical observations as well as model rocketry and payload development.

California State University, Stanislaus

Vaping Nicotine and Cannabis Across Adolescence and Youth Adulthood

Funding agency: The National Cancer Institute

Total award: \$215,235

Investigator: Wura Jacobs

The National Cancer Institute Diversity Supplement grant leverages the University of Southern California grant to conduct a population-based cohort study aimed at understanding the determinants of substance use behaviors among adolescent and young adults (AYAs). The NCI diversity supplement expands the USC grant's aims by examining the racial/ethnic patterning in the determinants of vaping initiation and trajectory of vaping and cannabis use/co-use among AYAs. Findings from the project will be foundational for subsequent research grants to further understand and address the disparities in AYAs' substance use and substance use disorders.

Civic Action Fellows Program at Stanislaus State

Funding agency: California Volunteers

Total award: \$370,414

Investigators: Miriam Ureno and Erin Littlepage

The Civic Action Fellows Program supports 47 AmeriCorps Fellows who serve the needs of the community in Stanislaus County and the wider five-county region served by Stanislaus State. Recognizing that college and career readiness does not start in a student's senior year in high school, the work of the Fellows supports and empowers K-12 students and their parents starting with information sharing and resources in middle school. The focus of the Fellows spans a large segment of the educational pipeline, from middle school college and career readiness, high school near peer mentorship, transfer near peer mentorship and involvement in the broader Stanislaus Cradle to Career Movement.

Research in the CSU

Examples of faculty-led and student-led research can be found at all 23 CSU campuses. The following research focuses on addressing the needs facing local communities, California, the nation and the world. Selected examples are included below.

California State University, Bakersfield

Collaborative Capacity Building in Research and Entrepreneurship/Leadership for Handling Agricultural Wastes in the Leading Agriculture Region

Investigator: Zhongzhe Liu

Sponsor: U.S. Department of Agriculture-National Institute of Food and Agriculture

This project builds the capacity for engineering and business program students, women and underrepresented minorities in investigating sustainable agricultural waste treatment methods and developing sustainable entrepreneurship and leadership through integrated research and education outreach in the world's most productive agricultural region, the Central Valley of California. The project will help students develop hands-on skills via experiential learning in assessing new technologies for energy/resource recovery from agricultural wastes. The project will also conduct outreach with the valley communities to develop experiential learning internships and build new startups.

California State University, Channel Islands

CIRM Graduate Student Training Grant for the Implementation of a STEM Cell Technology & Lab Management Program: Training in STEM Cell Sciences and Regenerative Medicine

Funding agency: California Institute of Regenerative Medicine

Total award: \$3,606,500

CSU Channel Islands received a five-year continuation grant from the California Institute of Regenerative Medicine. This grant allows continued funding for a successful professional biotechnology master's program in the California State University system, as well as an innovative Master of Science (M.S.) Biotechnology and MBA dual degree program. Together, these programs have a current enrollment of regionally and demographically diverse students. Since their initiation, the programs have graduated 428 M.S. students; all are either employed in the biotech industry, academic sector or pursuing doctoral degrees. In the past six years, 122 students were extensively trained in stem cell sciences within the Stem Cell Technology and Lab Management emphasis which offers a robust curriculum and partnerships with 16 different institutions providing year-long internship opportunities to CSU Channel Islands students. For this next grant cycle, 10 M.S. Biotechnology students per year will be supported for a total of 75 interns over five years.

California State University, Chico

Cultivating a Culture of Entrepreneurial Mindset and Undergraduate Research (CEMUR)

California State University, Chico is working to transform the undergraduate experience and enhance student success with a new program to cultivate entrepreneurial mindsets and research opportunities in the classroom. Led by Principal Investigator David Alexander and three co-investigators, the project is funded by a \$2.2 million National Science Foundation grant to train faculty in STEM courses to launch the Course-Based Undergraduate Research Experience (CURE) model into university classrooms over the next five years. Efforts will impact over 7,000 students taking reformed courses and produce outcomes that will inform institutionalize effective changes in STEM education.

California State University, Dominguez Hills

Fulbright Specialist Award to Teach in Colombia

Associate Professor of Social Work Maria Avila received a Fulbright Specialist Program award to teach pedagogical skills at the Universidad Francisco de Paula Santander in Cúcuta, Colombia. Avila's research focuses on creating change in and outside of higher education through civic engagement and community organizing. Her work also examines the larger context of the role of higher education in democratic societies, particularly through teaching and research. In Colombia, Avila will be working with educators in the university's electronic engineering program.

California State University, East Bay

Mexican Whiskey: An Archaeology of Industry and Inter-Ethnic Dynamics in Old New Mexico

Funded by the National Science Foundation, this project centers on the ruin of Turley's Mill, aiming to understand the cultural factors that led to its destruction by insurgents in 1847. Cal State East Bay and UC Berkeley students will pair with Northern New Mexican elders and high school students in archaeological experimentation, survey, excavation and historical research. The project is expected to produce several substantial contributions to the historical archaeological literature as it pertains to the cultural impact of industrial colonization in the nineteenth-century American West.

Workforce Development: Learning & Earning

This six-month project is funded by The Public Health Initiative's Together Towards Health through the Contra Costa Regional Health Foundation to advance its "COVID-19 Career Pathways" initiative. The project aligns workforce development efforts of existing regional collectives committed to eliminating both health and economic inequities for diverse communities disproportionately burdened by the pandemic. Career Path "coaches" (a mix of post-secondary, college and adult education students working alongside health leaders) equipped with expertise and experience in workforce development, education resources and community health-focused and culturally-competent expertise will help participants navigate their career paths successfully.

California State University, Fresno

Deciphering the Molecular Mechanisms of TNT Formation and Function Using a Multi-Omic Approach

Dr. Karine Gousset received a \$1.3 million grant to further support the fight against three major health problems plaguing society: persistent viral infections; neurological diseases; and cancer. The four-year grant from the National Institutes of Health will be used to expand her research. Gousset's research is focused on the role that tunneling nanotubes (TNT) play in the spreading of viruses involved in neurological diseases such as Alzheimer's, Huntington's, Parkinson's and cancer. TNTs were also shown to mediate the direct transfer of critical cellular material between tumor cells and their surrounding tissue in some of the most aggressive cancers. Students working in Gousset's lab will have the unique opportunity to be amongst the first in the world to work on this type of research.

Humboldt State University

Expanding and Diversifying Aquaculture and Conservation

Humboldt State University researchers will add 0.33 acres to its existing seaweed farm and create a kelp hatchery onshore at the Humboldt State Marine Lab. The farm, called HSU-ProvidenSea, sits in a permitted area just a few hundred yards off the shores of Humboldt Bay. Students will gain practical ocean farming experience, monitor the reproduction and growth of the bull kelp, track factors like water quality and temperature and evaluate the cost of seeding and production. This aquaculture expansion is funded through CSU's Agricultural Research Institute and matched by a U.S. Department of Agriculture grant. The kelp hatchery at HSU's Marine Lab will supply seeded rope for aquaculture needs.

California State University, Long Beach

Building Blocks in Health-Related Research

In 2014, CSU Long Beach received a \$24 million five-year award from the National Institutes of Health, one of 10 awards nationwide. The initiative, Building Infrastructure Leading to Diversity (BUILD), identified important themes to inform strategic planning for engaging and retaining underrepresented students who aspired to be a scientist or researcher in behavioral and biomedical sciences and engineering. The CSULB BUILD program consists of three central cores: undergraduate research training; faculty mentor support and professional development; and infrastructure for research. Of the 140 students who had completed the BUILD program by spring 2019, 66 percent matriculated into graduate programs. The CSULB BUILD program was so

successful that it was awarded a \$19.8 million award for BUILD II. The goal for BUILD II is to make the program a permanent part of CSU Long Beach.

California State University Maritime Academy

Evaluating the Impact of Wastewater Nutrient Reductions

Associate Professor of Oceanography Alex Parker continues his work in examining the role of nutrients in shaping ecosystem function within the California Delta on an extramurally-funded state grant. Using a combination of observational and experimental approaches, Parker is evaluating the impact of large-scale wastewater nutrient reductions to the estuarine food web. To extend and share this knowledge, this project supports Cal Maritime B.S. Oceanography cadets as summer research assistants in order to develop their research and technical skill sets and expose them to careers in natural resource science and management. His project is in partnership with Drs. Frances Wilkerson and Richard Dugdale of San Francisco State University with extramural support from the State Water Contractors Agency.

California State Polytechnic University, Pomona

Venus' Mass Spectra Shows Signs of Disequilibria in the Middle Clouds

Signs of biologically relevant chemicals, including phosphine, have been found in the clouds of Venus by a team led by Rakesh Mogul, professor of biological chemistry at Cal Poly Pomona. The data was discovered in archived data from NASA's Pioneer Venus Multiprobe, which arrived at Venus and collected data almost 42 years ago. Their study was published and can be found in the journal *Geophysical Research Letters*.

California State University, Sacramento

New Treatments for COVID-19

A team of researchers led by Sacramento State Chemistry Professor Katherine McReynolds has demonstrated that therapeutic agents that appear to block transmission of HIV might also work against the coronavirus and other potentially deadly infections. The agents could be developed into drugs that slow the spread of diseases like AIDS and COVID-19, and might also be used as a front-line attack against potential future pathogens. The paper, which was published in *Advanced Therapeutics*, is one of two recent journal articles on COVID-19 that cites work by McReynolds. McReynolds has been researching substances that bind to HIV, the virus that causes AIDS. Her work at Sacramento State has received ongoing funding from the National Institutes of Health.

Bushy Lake Restoration Work Reaping Tangible Rewards

For the past five years, Sacramento State Professor Michelle Stevens and her Environmental Studies students have quietly been working to restore wetland and riparian acreage along the lower American River. Recently, the project received \$350,000 in funding from the California Wildlife Conservation Board. The nonprofit Environmental Council of Sacramento has honored both Stevens and Moiz Mir, a Sacramento State graduate who supervised student plant experiments at Bushy Lake. The organization named Stevens its Environmentalist of the Year and honored Mir, now program coordinator at the sustainability nonprofit 350 Sacramento, with its Early Career Environmentalist award.

California State University, San Bernardino

Grant Focuses on Improving Mental Health Services for Latinos

Latinos are a hard-to-reach population in great need of effective, accessible and high-quality mental health services for first-episode psychosis (FEP), which refers to when a person first shows signs of beginning to lose contact with reality. Acting quickly with the right treatment during FEP can be life-changing and radically alter that person's future. Research suggests that immigrants experience higher rates of psychotic spectrum disorders and are more likely to stop treatments than nonimmigrants. Latinos with FEP are at higher risk to stop treatments compared to non-Latinos with FEP. With a \$670,000 grant from the National Institutes of Mental Health grant, Assistant Professor Maria Santos is conducting a five-year study focusing on improving engagement in community mental health services among Latinos with FEP and their families. The study, "Optimizing Engagement in Services for First-Episode Psychosis (FEP) in the Community Mental Health Setting," is done in collaboration with the L.A. County Department of Mental Health, USC Department of Psychology and UCLA Department of Psychiatry and Biobehavioral Sciences.

San Diego State University

Communities Fighting COVID!

In fall of 2020, San Diego's Latinx residents were three times more likely than white residents to become infected with the COVID-19, and they accounted for 61 percent of local hospitalizations. Underserved populations, often immigrants and people of color, had less access to resources and higher rates of COVID-19 transmission than affluent communities. San Diego State's Communities Fighting COVID! Project, supported by more than \$8 million in funding from the National Institutes of Health and County of San Diego, works to curb these disparities by using a robust contact tracing program and mobile testing to reach immigrants and people of color. At the center of the project are community health workers, culturally sensitive individuals who connect people with resources and reduce barriers to health care. Faculty also launched CommuniVax, a

vaccine outreach program in early 2021 that aims to educate people about the vaccine and increase vaccination uptake.

San José State University

Evaluating Agricultural Management Practices Benefiting Monterey Bay

In the central coast region of California, farm-derived nutrient runoff is a widely-known problem. In Monterey Bay, runoff contributes to the growth of offshore algal blooms, which produce harmful effects on virtually all marine life. At Moss Landing Marine Laboratories, a team of San José State scientists seek to find and implement solutions. A nearly one million dollar research grant by the U.S. Environmental Protection Agency strengthens a partnership between the Central Coast Wetlands Group and the Environmental Biotechnology lab, combining systems to reduce agricultural nutrient run-off with expertise in harmful algae monitoring and detection capabilities. By expanding watershed monitoring systems and estimating how much removal is needed to reduce algae in Monterey Bay, the team will demonstrate exactly how farm runoff treatment systems reduce nutrient discharges into waterways.

California Polytechnic State University, San Luis Obispo

Study Shows Humans Contribute to Nuisance Tidal Flooding

Human interventions in many coastal areas across the U.S. — including construction of piers and jetties and harbor dredging — have contributed to nuisance flooding, according to a study co-authored by engineering Professor Stefan Talke. The interventions have combined with rising sea levels in these areas to exacerbate the impact of climate change. While the so-called “sunny day flooding” might not be deadly, it can destroy property, overload stormwater systems, impact travel and cost municipalities money, according to the study funded by the National Science Foundation and published in the journal *Science Advances*.

Cal Poly’s 12th CubeSat Mission Will Wing Its Way Into Space

A Cal Poly CubeSat will ride aboard Virgin Orbit’s LauncherOne rocket on its second attempt to reach space. The rocket includes nine other NASA-sponsored small satellites on the space agency’s next Educational Launch of Nanosatellites (ELaNa) mission. This is the first payload carried by Virgin Orbit’s rocket that will be carried aloft under the wing of a modified Boeing 747 to an altitude of 35,000 feet, released and fired into orbit. The mothership jet, named Cosmic Girl, will take off from Mojave Air and Space Port, which will release the two-stage LauncherOne off the coast of Southern California. The mission includes ExoCube 2, a satellite about the size of a loaf of bread that was built over several years by a group of about 50 multidisciplinary Cal Poly students.

California State University, San Marcos

Bringing Quantum Information Science to Diverse Undergraduate Populations

Education and workforce training in quantum information science and technology (QIST) exists primarily at the graduate and postdoctoral positions. To maximize the impact of these efforts in undergraduate QIST education, this project aims to bring together faculty in the California State University system and other primarily undergraduate institutions to analyze the state of undergraduate QIST education, identify the challenges associated with implementing QIST curriculum at primarily undergraduate institutions and develop strategies and solutions to address them. The project is funded by a \$82,000 grant from the American Physical Society Innovation.

California State University, Stanislaus

Characterizing and Engineering Toluene O-xylene Monooxygenase for the Synthesis of Common Drug Metabolites

Dr. Gönül Schara has received a \$408,000 four-year grant from the National Institutes of Health that will aid her research of an enzyme's ability to synthesize high-value drug metabolites and use protein engineering to generate further improvements. Schara, a biochemist in the College of Science's Department of Chemistry, received a Support of Competitive Research (SCORE) grant for her proposal. She is the first faculty member from Stan State to receive an National Institutes of Health SCORE grant. Metabolites are the "break-down" products of pharmaceutical drugs when ingested and can impact human health and disease. Scientists study metabolites' toxicology and pharmacokinetic effects during pre-clinical and clinical studies, a crucial part of developing safe and effective medicines. Researchers need large amounts of metabolites for investigative studies but producing the quantities needed can be problematic and expensive. Schara's project aims to generate drug metabolites using the native and protein-engineered activities of an oxygenase enzyme.

Scholarship and Creative Activities in the CSU

California State University, Fullerton

Assessing the Relationship Between Immigration Status, Crime, Gang Affiliation, and Victimization

Funding agency: U.S. Department of Justice/National Institute of Justice
Total award: \$462,165.00
Investigator: Lidia Nuno

This project implements a multi-methodological study that will elucidate the prevalence of criminal involvement, gang membership and violent victimization of immigrants by immigration status. Results from this project will provide a more comprehensive understanding of the relationship between immigration status and crime, gang involvement and victimization as well as an understanding of immigrants' social networks and transnational criminal capacity and the relationship between nationality and likelihood of criminal involvement. These findings will serve as empirical basis upon which to shape policies and practices targeted at the immigration issue.

California State University, Northridge

Preserving History of Farmworker Movement through Photos

A vast collection of photographic images documenting the U.S. farmworker movement of the 1960s and 1970s will be preserved and digitized for the public as part of a \$350,000 National Endowment for the Humanities grant led by Journalism Professor José Luis Benavides in collaboration with students spanning five disciplines. The farmworker movement forged a broad coalition of workers, students, activists and religious allies that won most of its early battles by leveraging its diversity and pushing the country toward a pluralistic democratic form. The Farmworker Movement Collection will consist of a digital archive of approximately 22,000 images by John Kouns (1929-2019) and Emmon Clarke (1931-) held by the Tom & Ethel Bradley Center at CSU Northridge. A multimedia website will display digital resources and oral histories of farmworker participants to tell the stories of the diverse group of people who made the movement initially successful, paying particular attention to the roles of women. The Center will additionally create a DIY educational exhibition for schools, community centers and union groups, enabling them to print the exhibition on demand for public display.

A Photojournalist's Win of the Pulitzer Prize

An alumnus of California State University, Northridge, Julio Cortez was awarded a Pulitzer Prize this past year for his photo documenting protests in Minneapolis following the murder of George Floyd. Mr. Cortez, who works as a photojournalist for the Associated Press, was an undocumented student while attending CSUN where he earned a degree in journalism. He is quoted as saying: "My goal was to someday take pictures that would end up in history books." The prestigious Pulitzer Prize serves as validation of the creative activity exposure and training that students receive during their educational experience in the CSU.

San Francisco State University

Design Professor Wins NSF Grant to Study How VR Can Improve Online Meetings

Virtual reality (VR) could transform online meetings of the future and make them more effective than meeting face to face, predicts Assistant Professor of Design Joshua McVeigh-Schultz. With a new three-year, \$125,996 National Science Foundation grant, McVeigh-Schultz will explore how social augmentations in VR could improve networked meetings. His research incorporates creating social augmentations enticing enough that even people meeting in the same location will want to jump into VR or XR, mixed-reality environments that blend shared online worlds. This research proposes VR meeting tools that are not merely a substitute for face-to-face interaction but could actually improve on it for workplace meetings.

San José State University

Grounding the Digital Humanities at San José State University

Funding agency: National Endowment for the Humanities

Total award: \$375,000

Investigator: Shannon Miller

To support the growing research and teaching in digital humanities at San José State, the Dr. Martin Luther King, Jr. Library and H&A were awarded a Challenge Grant from the National Endowment for the Humanities to establish a Digital Humanities Center. The funding will be used to purchase equipment and to extend the functionality its current technology infrastructure that will help the university build an open, collaborative and technology-enabled Digital Humanities Center. The King Library is a shared partnership between San José State and the City of San Jose; thus, the Digital Humanities Center will serve both the communities of the university and the residents of the City of San Jose.

Systemwide Collaborations

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

The Agricultural Research Institute (ARI) enables applied research that benefits California agriculture, natural resources and food systems while cultivating the next generation of agricultural

leaders. The ARI maximizes research dollars and provides actionable, quality research that solves real world challenges and builds opportunity. Six campuses comprise ARI: Chico, Fresno, Humboldt, Monterey Bay, Pomona and San Luis Obispo, but faculty from multiple disciplines across the CSU system often contribute their expertise as collaborators in its applied research projects.

Lack of water and climate are critical long-term issues that threaten the sustainability of California's agriculture industries and natural resources. The ongoing COVID-19 pandemic exposed vulnerabilities to the resiliency of California's food systems, particularly to workers. ARI faculty conduct research issues related to climate change and sustainability—and growing areas of research, including biodiversity, regenerative agriculture, healthy soils, A.I.-enabled automation and mechanization and human nutrition. ARI students are scientists- and agricultural-leaders-in-training. Working closely with faculty on research projects, they gain comprehensive understanding about their discipline and build critical thinking skills. By providing matching funds to industry and agency research dollars, the ARI leverages resources and research funds to provide actionable, quality research that solves real-world challenges and builds opportunity for students and California. Reflecting the nature of agriculture, its projects address broad issues facing agriculture, with a common goal to advance knowledge, offer solutions and develop future leaders to sustain California's agricultural and natural resource industries well into the future.

Council on Ocean Affairs, Science and Technology (COAST)

The CSU Council on Ocean Affairs, Science and Technology (COAST) was established in 2008 to integrate systemwide expertise and resources and promote research to advance our knowledge of marine and coastal systems. Today, COAST is an active and robust network of hundreds of faculty and student researchers from many different disciplines actively working to address critical ocean and coastal issues. In the last year, COAST awarded over \$2 million to CSU faculty members through its State Science Information Needs Program, a new initiative that focuses directly and exclusively on supporting California's highest priority marine, coastal and coastal watershed-related needs for scientific information. The funding supports research on microplastics and microfibers, sea-level rise, sustainable aquaculture, and fisheries management.

COAST also has initiated a sustained campaign to promote equity and inclusion of students from groups that are historically underrepresented in marine science. Programming includes speakers, panels and professionally-facilitated training for faculty members. This year COAST will launch a new funding program to help students afford to participate in costly field experiences, which are often a barrier to students of color and those who are first-generation or economically disadvantaged.

CSU Program for Education and Research in Biotechnology

The CSU Program for Education and Research in Biotechnology (CSUPERB) mission is to develop a professional biotechnology workforce by catalyzing and supporting collaborative CSU student and faculty research, innovating educational practices and partnering with the life science industry. CSUPERB faculty give CSU biotechnology students access to experiential learning through team-based research and entrepreneurial projects. Howell-CSUPERB Scholars conduct CSU faculty-mentored undergraduate research in their third or fourth year of college and are supported by CSUPERB and philanthropic partner, the Doris A. Howell Foundation for Women's Health (DAHf).

After 20 years of data, we can trace career trajectories of CSU alumni as they enter graduate and medical schools, accept jobs in biotechnology and pharmaceutical companies and begin practicing as physicians and become assistant professors. In spring 2020, \$642,855 was awarded to undergraduate researchers (2000-2020), of which \$334,287 of those funds were donated by DAHF.

California Desert Studies Consortium

The CSU Desert Studies Consortium (CDSC) – supported by seven CSU campuses (Dominguez Hills, Fullerton, Los Angeles, Long Beach, Northridge, Pomona and San Bernardino) – was formed to encourage the understanding of, and appreciation for, the California deserts through a desert studies program that includes instruction, research and special programs. The CDSC supports desert-related research and scholarly activity through many varied programs and events. It also operates the CSU Desert Studies Center (DSC), a leading facility for research and education in desert geology, geography, biology and anthropology – among others. Although the DSC was closed to visitors throughout 2020-21, the DSC staff continued to facilitate regional desert research activities conducted by CSU and other investigators. The DSC also provided virtual field experiences for CSU students through programs such as the Virtual Field Project, an National Science Foundation-funded collaboration with colleagues from Sonoma State and the Organization of Biological Field Stations. Other virtual workshops and meetings supported by the CDSC included a Desert Sciences session at the 2021 Southern California Academy of Sciences meeting and an NSF workshop on developing best practices for anti-harassment in field and ocean sciences.

CSU Shiley Haynes Institute for Palliative Care

In March 2020, as the COVID pandemic took hold in the U.S., the CSU Shiley Haynes Institute for Palliative Care published a blog on the role of Palliative Care in an overwhelming acute care crisis. It noted that the core skills of palliative care clinicians – managing pain and symptoms in illnesses beyond cure, rapidly assessing patient's goals, triaging cases in resource-scarce

environments, establishing communication with loved ones not present at the bedside and providing support to stressed colleagues – were not tangential to the crisis but at its heart.

The Institute obtained two small grants from the California Health Care Foundation in April 2020 to support frontline clinicians. \$25,000 funded a collaboration with ResolutionCare (Humboldt County) to offer six open-forum sessions featuring techniques for conducting patient visits using telemedicine. \$75,000 covered costs associated with offering 21 of the Institute's self-paced online courses in topics relevant to the COVID crisis at no charge. Courses included the What Every [Clinician] Needs to Know About Palliative Care series, Crisis Communication Skills, Self-Care and Resilience, and others.

Moss Landing Marine Laboratories

The San José State University Moss Landing Marine Laboratories (MLML) is a 60,000-square-foot field laboratory with state-of-the-art research equipment. MLML delivers a Master of Science and undergraduate courses for CSU campuses in central California. San José State faculty and researchers at MLML are known for their hands-on, field-oriented approach that places students and research at the forefront of marine science worldwide. With funding from the National Oceanic and Atmospheric Administration and COAST, San José State MLML is collaborating with CSU Monterey Bay on effects of ocean acidification and hypoxia on fishes. San José State MLML is also home for several other CSU-wide research collaborations including the work by scientist from Humboldt State and Cal Poly San Luis Obispo to monitor marine-protected areas statewide, the CSU Agricultural Research Institute project with CSU Monterey Bay using metagenomic methods to characterize microbial gene activity in groundwater and California Sea Grant-sponsored work with San Diego State assessing vessel impacts on rhodolith beds.

Ocean Studies Institute

The Ocean Studies Institute (OSI) is a consortium of CSU campuses that is pooling resources to more effectively explore the ocean and coastal regions. 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. A recent example of OSI research is a continuing investigation into the life history of juvenile giant sea bass raised in captivity.

Social Science Research and Instructional Center

CSU's Social Science Research and Instructional Center (SSRIC) supports the development and use of quantitative research skills among CSU students, faculty and staff. Activities include hosting a student research conference each spring, allowing students to present their work, receive feedback and gain experience presenting to others. SSRIC also provides awards that facilitate CSU

faculty participation in statistical training workshops and allows CSU faculty to place questions on CALSPEAKS surveys of California public opinion. Additional stipends are awarded to CSU faculty for developing new instructional materials—including teaching modules and exercises—that are made freely available to CSU students and faculty members via the SSRIC website. SSRIC also provides CSU campuses access to more than 70,000 behavioral, health and social science databases.

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

It is critical for today's students to have a strong foundation in STEM to meet the workforce needs and the needs of California's burgeoning innovation economy. The CSU is the largest supplier of engineers and leading supplier of top-tier talent to California's high-tech companies. STEM-NET connects and strengthens faculty research and educational collaborations across the CSU system and across disciplines thereby building research and educational capacity. 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. STEM-NET provides opportunities for students to pursue STEM careers via involvement in research activities.

Water Resources and Policy Initiatives (WRPI)

Founded in 2008, Water Resources and Policy Initiatives (WRPI) is developing and executing solutions for sustainable water resource management that changes the way California manages water. It is composed of more than 250 water experts from all 23 campuses across the CSU and is focused on developing water management solutions through research, partnerships, education and training, while providing students directed research opportunities. Through WRPI, the CSU has developed internship programs with the U.S. Department of Agriculture and the Environmental Protection Agency so that students enter the workforce ready to develop solutions for business, government and the public.

In 2020-2021 WRPI wrapped up its fourth and final year of a \$2 million award with the U.S. Department of Agriculture. The grant served 216 interns totaling 61,335.23 hours and invested \$794,975.95 in students' success. WRPI continues to work with communities and partners to promote water education with its WaterTalks program, which launched a community assessment survey in September 2020. Both the community surveys and institutional interviews will be used to inform the distribution of Proposition 1 grant funding as well as to involve disadvantaged communities and economically distressed areas in the Integrated Regional Water Management planning process. WRPI will soon begin Phase 4 of the Ventura County DAC Involvement Program and will develop and provide technical assistance training and project development support for entities that serve disadvantaged and tribal communities.

Economic and Workforce Development

With four million living alumni, the CSU plays an essential role in meeting California's growing demand for a highly skilled and educated workforce. The following are selected examples of how campuses are leading the way in economic and workforce development.

Transforming Workforce: From Education to Service (TWES)

Funding agency: U.S. Department of Health and Human Services

Total award: \$2.8 million over four years

Investigator: Heidi He

The project goal is to increase the number of nurse practitioners who are committed to providing primary care in rural or underserved areas. With the grant support, CSU Bakersfield was able to offer scholarships; enhance students' clinical readiness by integrating telehealth and clinical simulations into the curriculum; and form an academic community partnership with a regional federally qualified health center to enhance students' clinical experience and inform curriculum development.

Tech Park Expansion

Funding agency: U.S. Economic Development Administration

Total award: \$6.7 million

Title of proposal: Tech Park Expansion

The U.S. Economic Development Administration awarded the Cal Poly Corporation \$6.7 million to expand the existing Cal Poly Technology Park. This expansion is expected to create 150 local jobs and generate \$20 million in private investment. In addition to connecting technology- and research-based companies to campus, the Tech Park has become an important opportunity for student employment and Learn by Doing.

National Cybersecurity Designation and \$10.5 Million Grant

The United States has hit a crisis situation as it faces a 500,000 shortage in the cyber workforce. But the CSU San Bernardino Cybersecurity Center is committed to solving the workforce problem. Last year it was named the Centers of Academic Excellence in Cybersecurity (CAE-C) Community National Center by the National Security Agency, which selected the center for a \$10.5 million grant and directed the university to be a leader of the agency's core workforce development initiative, the Centers of Academic Excellence in Cybersecurity Community. In its designation, the center has worked to establish and manage three CAE-C Communities of Practice, coordinate cutting-edge research, establish and support five regional hubs around the country and support cybersecurity education nationally.

The Long Beach Accelerator

Several CSU campuses partner with public and private entities to support regional economic development. Most recently CSU Long Beach's Institute of Innovation and Entrepreneurship has joined forces with the City of Long Beach and Sunstone Management to develop the Long Beach Accelerator. The tech accelerator focuses on supporting the unique needs of start-ups including office space, access to operating capital, mentorship and coaching and investor relations.

Conclusion

CSU research, scholarship and creative activities contribute to the intellectual and creative vibrancy of campus life while offering solutions to real-world problems. As a high-impact practice, these activities are critical to the success of Graduation Initiative 2025 and to fulfilling the CSU mission of student success, faculty excellence and service to California and beyond.

COMMITTEE ON EDUCATIONAL POLICY

Graduation Initiative 2025

Presentation By

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Academic Success and Inclusive Excellence

Summary

This written item provides a subsequent update to recommendations set forth in a report by the Graduation Initiative 2025 Advisory Committee. The committee, comprised of a cross-representational group of California State University (CSU) stakeholders, was charged by CSU Chancellor Joseph I. Castro with identifying creative and innovative ways to eliminate student equity gaps systemwide. Emergent themes from their collective work included increasing greater opportunities for student success through expanded course availability, fostering greater collaboration systemwide through shared best practices and technology platforms and encouraging shared responsibility through data sharing, transparency and on-site strategic support from the Office of the Chancellor.

Background

The CSU launched Graduation Initiative 2025 in 2015 as an ambitious plan to increase graduation rates, eliminate student equity gaps and meet the workforce needs of California. The initiative is centered on six key priorities identified as having significant impact on degree completion and student success. Those priorities are: academic preparation; enrollment management; student engagement and well-being; financial support; data-informed decision making; and removal of administrative barriers.

In spring 2021, CSU Chancellor Joseph Castro convened an Advisory Committee with the charge to "...explore bold and creative ways to not only maintain but accelerate our progress toward GI

2025's goals – with a special focus on eliminating equity gaps.” The 19-member committee, comprised of CSU trustees, campus presidents, vice presidents for student affairs, provosts, faculty, staff and students, presented a series of recommendations, strategic imperatives and guiding principles for the Chancellor's review.

Charting a Path to Equity and Excellence

The committee was unanimous in asserting that the CSU must redouble efforts to eliminate equity by further promoting a culture of equity across all campuses. Given the disruptive impact of the last year and a half on both incoming and current CSU students, there is a renewed sense of urgency to ensure that consistent and comprehensive academic and co-curricular supports are in place for greater student success. The following section provides opportunities to build a more equity-focused culture throughout the CSU.

Expanding Opportunity to Learn and Achieve

Creating greater access to courses that students need, when they need them, will be essential in eliminating equity gaps. While course availability is a core component to timely degree completion, campuses are often faced with competing needs which can impact course schedules. This can create additional hardship for students of color and first-generation students who often arrive to the CSU with few Advanced Placement or dual enrollment credits. These students are also more likely to hold jobs while enrolled – making course availability even more critical.

The committee also recommended that Graduation Initiative 2025 funding be allocated to support summer and intercession student enrollment.. By providing students with additional opportunities to complete requisite courses and earn needed credits throughout the year, more students will have the flexibility to complete their degree according to their preferred timeline. Many campuses already offer “completion grants” and additional funding will amplify these student-centered investments. Scaling the [CSU Fully Online](#) program also will enable students to seamlessly and concurrently enroll in online courses offered at other CSU campuses, thereby facilitating their path to a high-quality CSU degree.

Encouraging Collaboration Within and Across CSU Campuses

Sharing best practices within and across campuses to better address equity gaps will require administrators, faculty and staff to step out of established siloes and engage together with a new spirit of collaboration to support students throughout their academic journeys. For example, implementing guided student pathways that provide consistent, personalized support from orientation through graduation is a strategy that has been proven successful on many CSU campuses. Underrepresented students and first-generation students benefit significantly when they have the knowledge to better navigate the course registration process and acquire more credits

earlier in their academic journey.

To foster and accelerate a cross-pollination of ideas, the Chancellor's Office will lead a series of campus support visits beginning this fall. These visits will leverage the collective expertise of faculty, staff, and administrators to provide campuses with targeted strategic and technical guidance along with implementation support in areas critical to eliminating equity gaps.

Sharing Responsibility for Student Success

As a community of nearly 500,000 students – from Humboldt to the north, San Diego to the south and all the vibrant coastal, urban and valley communities in between – the footprint of the California State University touches countless lives. It is privilege to be in service to California's next generation of educators, healthcare practitioners, entrepreneurs and other professionals that will drive the state's economy. And it is the duty of all campuses to support student success. The achievement of one campus can only be truly celebrated when it is felt across all campuses.

As a result, new Graduation Initiative 2025 funding and support will be focused on creating the greatest impact with the broadest reach. This will include investing in faculty professional development and providing enhanced tools to improve equity in the classroom. For example, the Chancellor's Office will partner with campuses to empower faculty with the data and resources to address the root causes behind courses that have high equity gaps as measured by DFW rates – in other words, those courses in which historically underserved students receive a significantly higher percentage of non-passing grades than their peers. Currently, students of color and first-generation students are more likely to earn non-passing grades in lower division courses, creating more obstacles to timely degree completion.

Fall Convening

In October, the Chancellor's Office will host the second virtual Graduation Initiative 2025 Convening: Advancing Equity Together. This online celebration of the CSU's commitment to student success will review the latest data on graduation rates and equity. It is also an opportunity for faculty and staff to renew a collective commitment to fostering student success across the CSU. Registration for the convening is free and open to the public. The event will be livestreamed on Friday, October 22, 2021 at www.calstate.edu/GradInitiative2025Convening.

Conclusion

Among the thousands of CSU students beginning classes in fall 2021 will be the final four-year cohort for Graduation Initiative 2025. Unlike any other student cohort in recent history, these students come to the CSU having navigated through one of the most challenging times. Some may have experienced personal losses to COVID-19; many have experienced learning loss. Even prior

Ed. Pol.
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to the pandemic, they along with their new CSU peers have struggled with housing and food insecurity and faced significant challenges to their mental health. Since the onset of the pandemic, they are reckoning with issues of social justice and climate change. It is within this context that a sense of urgency calls the CSU today to recommit to the promise of Graduation Initiative 2025. This class, and the many classes to follow, will reflect this moment in time when the CSU doubled its efforts to place students first and harnessed the collective contributions of all 23 campuses for their success.