

## AGENDA

### COMMITTEE ON EDUCATIONAL POLICY

**Meeting: 4:55 p.m., Tuesday, January 25, 2011**  
**Glenn S. Dumke Auditorium—Open Session**

**8:00 a.m., Wednesday, January 26, 2011**  
**Glenn S. Dumke Auditorium—Open Session**

Debra S. Farar, Chair	William Hauck
Carol R. Chandler, Vice Chair	Raymond W. Holdsworth
Roberta Achtenberg	Linda A. Lang
Nicole M. Anderson	A. Robert Linscheid
Kenneth Fong	Peter G. Mehas
Margaret Fortune	Henry Mendoza
George G. Gowgani	Lou Monville
Melinda Guzman	Glen O. Toney

**Meeting: 4:55 p.m., Tuesday, January 25, 2011**  
**Glenn S. Dumke Auditorium—Open Session**

#### Consent Items

Approval of Minutes of Meeting of November 9, 2010

#### Discussion

2. Update on Implementation of the CSU Early Start and Early Assessment Programs, *Information*
3. Projections for Doctor of Nursing Practice and Doctor of Physical Therapy Programs, *Action*
4. Report on SB 1440 Implementation and Oversight Committee, *Information*
5. Faculty-Student Research and Mentorship Special Focus: Water Resources and Policy Initiatives, *Information*

**\*\*Note**

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4. Report on SB 1440 Implementation and Oversight Committee, *Information*
5. Faculty-Student Research and Mentorship Special Focus: Water Resources and Policy Initiatives, *Information*

**\*\*Note:** Depending on the length of discussions on Tuesday, January 25, 2010, Educational Policy items may have to be carried over to Wednesday, January 26, 2010, for consideration.

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

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

**November 9, 2010**

**Members Present**

Debra S. Farar, Chair  
Carol R. Chandler, Vice Chair  
Roberta Achtenberg  
Nicole M. Anderson  
Kenneth Fong  
George G. Gowgani  
Melinda Guzman  
William Hauck  
Linda A. Lang  
A. Robert Linscheid  
Henry Mendoza  
Lou Monville  
Glen O. Toney  
Charles B. Reed, Chancellor

Chair Debra S. Farar called the meeting to order.

**Approval of Minutes**

The minutes of September 22, 2010, were approved as submitted.

**California State University Partnerships with the Small Business Development Center Council**

This item, presented by Dr. Elizabeth Ambos, assistant vice chancellor of research initiatives and partnerships, informed the board of an emerging partnership between the California State University and the six Small Business Development Centers (SBDC) in the state of California. A description of the network, the activities it undertakes and its benefits to the state and nation were presented by Dr. Ambos and three of the SBDC lead Centers: Ms. Kristin Johnson of the SBDC headquartered at Humboldt State University; Ms. Priscilla Lopez of the SBDC headquartered at CSU Fullerton, and Ms. Sheneui Lam, of the SBDC headquartered at Long Beach City College. The SBDC in California is a large program serving more than 50,000 small business owners and entrepreneurs through technical assistance, including one-on-one consulting and also through

training and educational non-credit events. The California SBDC is part of a nationwide group of 1,000 and is made up of approximately 35 locations. It is a program focused on job creation, business start-ups and business success that received federal and state funding, Dr. Ambos said. Humboldt State University President Rollin C. Richmond, CSU Chico President Paul J. Zingg and CSU Fullerton President Milton Gordon discussed activities that are underway with emerging partners at their respective campuses.

Trustee A. Robert Linscheid asked if there would be an opportunity for the Memorandum of Understanding between the CSU and the SBDC to include the 12 Innovation Hubs created by the governor throughout the state. Dr. Ambos and Ms. Johnson responded that the SBDC is involved with California's Innovation Hubs, and actually was their first funding partner, pledging \$1.2 million. Dr. Ambos and Ms. Johnson said that it is a natural extension of the relationship between the Innovation Hubs and the CSU to form a three-way partnership focused on innovation, tech transfer and the idea of real living-wage jobs in the sectors that have to do with innovation.

Trustee Kenneth Fong asked for projections for the next three years and how many jobs will be created from the program. Dr. Ambos responded that there will be a significant impact, adding that she will bring back more information to the board once there has been time for assessment. Ms. Johnson noted that in the last few years approximately 5,000 jobs have been created and retained with this partnership. She added that they expect to see increased resources for the program and new partnerships in cutting-edge industry-specific programs.

Trustee Farar adjourned the Committee on Educational Policy.

**COMMITTEE ON EDUCATIONAL POLICY**

**Update on Implementation of the California State University Early Start and Early Assessment Programs**

**Presentation By**

Ephraim Smith  
Executive Vice Chancellor  
and Chief Academic Officer

Beverly Young  
Assistant Vice Chancellor  
Academic Affairs

Jim Blackburn  
Interim Assistant Vice Chancellor  
Student Academic Support

Eric Forbes  
Director  
Enrollment Management Services

**Summary**

In keeping with the provisions of Executive Order 1048, a well-qualified and highly engaged CSU Early Start Implementation Team is meeting regularly to review campus plans, identify and resolve all percolating issues, and ensure a systemwide implementation by summer 2012 with full implementation no later than summer 2014. The relationship of the Early Assessment Program (EAP) as well as the importance of English Placement Test (EPT)/Entry Level Mathematics (ELM) testing to the Early Start initiative has not been overlooked, as the more students who demonstrate college-level competencies in English and mathematics, the more attention can be paid to those students not yet prepared for the rigorous academic experience that college requires. The continued expansion of the EAP has been a significant aid in bridging the overall achievement gap between high school preparation and college readiness.

## **Early Start**

Assisted by a set of guidelines developed by the Early Start Implementation Team, each of the university's 23 campuses complied with the requirement to provide their Early Start plans by November 2010. The plans are now being qualitatively assessed for best practices as well as for unacceptable, problematic, or unclear elements that will require correction. Responses will be provided to the campuses after the next team meeting scheduled for early February.

The Early Start Implementation Team has grappled with several important initial issues, including the identification of federal need-based financial aid for most potential Early Start students; the re-scheduling of CSU placement tests to ensure a timely delivery of results; significant resolution of concerns regarding whether these summer programs would be state-supported or self-supported; and the identification of a wide range of delivery options for workshops as well as traditional courses.

Several issues remain unresolved, chief of which would be the establishment of a common fee structure for the Early Start Program across all 23 participating campuses. A common fee will reduce unnecessary student "shopping," but will also streamline the delivery of financial aid services to the instructing campuses. While a solution for the infrastructure for keeping and transporting Early Start records between the campuses has been conceived, it remains to be worked out in detail, tested, and implemented. The enforcement or compliance mechanisms for Early Start will probably only be refined after we have actually launched the program in 2012.

Initial reviews of the campus plans are encouraging. Campus Early Start plans have included innovative and impressive ideas for the implementation of Early Start, which seem efficient and easily blended with other CSU graduation-related initiatives. Examples include:

- Expansion of existing summer Early Start programs, e.g., Summer Bridge and programs for new students, who *almost* pass the EPT/ELM
- Increased use of online learning, e.g., ALEKS
- Pilot Early Start programs for summer 2011 in preparation for the required implementation in summer 2012
- Renewed collaboration with California Community College (CCC) partners or local high school faculty
- Leveraging the CSU EAP results in order to encourage more high school students to complete the Expository Reading and Writing Course (ERWC) prior to high school graduation

The latter two examples are especially encouraging and appropriate because one of the goals of the new Early Start initiative is to make the transition from high school to college as seamless as possible. Each of these partnerships emphasizes the legitimate missions of each of the educational segments involved.

### **Update on the Early Assessment Program**

The Early Assessment Program (EAP) is the CSU's flagship initiative for improving the preparation of high school students for college. The following is an update for the Board of Trustees of the activities undertaken as a part of this initiative.

Several years ago, through the CSU Early Assessment Program, the CSU developed a new senior year English course for high schools to offer to prepare their students for the demands of college-level work in English. The ERWC is an effective curriculum in English-Language Arts that has been approved by the University of California as fulfilling the "b" English requirement for college admission. Developed collaboratively by CSU faculty and high school teachers and administrators, the course was designed to incorporate the content of freshman composition courses and address the academic literacy skills identified by the Intersegmental Committee of the Academic Senates (ICAS) in *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities*. The course deepens students' critical reading, writing, and thinking skills and emphasizes in-depth study of expository, analytical, and argumentative writing.

Key principles of the course include the integration of interactive reading and writing processes; a rhetorical approach to texts that fosters critical thinking; materials and themes that engage student interest and provide a foundation for principled debate and argument; classroom activities designed to model and foster successful practices of fluent readers and writers; research-based methodologies with a consistent relationship between theory and practice; built-in flexibility to allow teachers to respond to varied students' needs and instructional contexts; and alignment with English-Language Arts Content Standards. The course is comprised of 14 modules of instruction that vary from one to three weeks in length. The ERWC Assignment Template is the central organizing feature of the curriculum; for each module, the template integrates instruction across three major domains: reading rhetorically, connecting reading to writing and writing rhetorically.

It has been suggested that the ERWC could be utilized as a way for students to fulfill their remediation requirement prior to the beginning of their freshman year at the CSU. Students who successfully participate in the ERWC would be identified as ready for college-level English. Although discussion of this option is in its initial stages, some of the conditions might include the following:

- Full implementation of the entire course in a model supported by the ERWC Advisory Committee
- Course taught by teachers who have completed professional development for the ERWC
- Writing assignments completed and evaluated by school ERWC teaching team in a standardized process
- Course grade of "B" or better

Additionally this option might only be available for students who score above a threshold level on the EAP test. Similar to the conditional status already in place for mathematics, this option would require that an appropriate score range be determined to identify students who are conditionally ready for college-level work in English, based on the results of the EAP. Students with this status would maintain their exemption from the EPT through successful completion of the ERWC as a twelfth grade course. A school or school district coordinator would certify that the conditions have been met and submit a list of qualifying students whose status would be changed from "conditionally exempt" to "exempt." At the regional level, these activities could be overseen by CSU EAP campus coordinators. Ongoing support for ERWC professional development and EAP coordination would still be required.

Initial discussions of this proposal are underway and thus far have included the EPT Development Committee, the ERWC Advisory Committee, the Academic Preparation and Education Programs Committee of the Academic Senate, and the Executive Committee of the CSU English Council. The full English Council has not yet fully considered the proposal but will do so in April 2011. Preliminary reactions from all groups have been positive about the concept.

### **Community College Use of the EAP**

Governor Schwarzenegger signed SB 946 in September 2008. This legislation authorized the California Community Colleges (CCC) system office and the colleges to access EAP data for assessment and placement purposes using the existing framework established by the CSU and the California Department of Education (CDE). The data were first made available to the CCC in 2010.

According to the California Community Colleges (CCC) website, <http://www.cccco.edu/ChancellorsOffice/Divisions/StudentServices/EarlyAssessmentProgram/CommunityCollegeEAPParticipants/tabid/1746/Default.aspx>, 37 community colleges accept the EAP results for English or mathematics or both; another 19 campuses are in discussion about their use. However, approximately 20 of the colleges that are accepting the math results are not accepting the conditional result.

Since no funds were attached to the authorizing legislation, the California Community Colleges Chancellor's Office (CCCCO) determined that participation in the EAP by individual community college campuses would be voluntary. Implementation of the program is being coordinated with the CSU and CDE. The CCCs are required to provide a report to the legislature and the governor on the progress of EAP implementation and its results by February 2015. The CCCCCO has established two levels of participation in the EAP for its colleges. At the first level, individual colleges choosing to accept EAP results simply inform the CCCCCO of their decision. At the second level, colleges may choose to develop a comprehensive outreach and curriculum development plan for using the EAP information. Colleges that opt for a more comprehensive approach may be eligible for mini-grants from the CCCCCO. These colleges must submit a plan to the CCCCCO agreeing to identify a campus EAP coordinator to work with the CSU and local K-12 districts, serve students within district boundaries, use the existing EAP infrastructure of academic opportunities (ERWC, Success websites, etc.), use EAP results for placement, and meet any CCCCCO reporting requirements.

Activities implemented by the CCCCCO to date include the establishment of an implementation advisory committee and a technical work group; the CSU has representation on both groups. In addition, the CCCCCO has developed an internal process to support colleges that choose to implement the EAP in a more comprehensive fashion, created a joint website with the CSU ([www.collegeEAP.org](http://www.collegeEAP.org)) for students, selected several community colleges to receive mini-grants, and worked with the CSU, CDE, and the Educational Testing Service (ETS) to change the language on both the Standardized Testing and Reporting (STAR) test and reports to include the community colleges. CCCCCO has also collaborated with the CSU to distribute letters signed jointly by the State Superintendent of Instruction, Chancellor Reed, and CCCCCO Chancellor Jack Scott informing schools and students of the expansion of EAP to include the community colleges.

### **New Capacity to Access EAP Results**

Our contractor, ETS, has added a Web page that will allow CSU campus test officers to look up student results on EAP testing, in addition to the existing access to EPT and ELM testing. Community colleges will also have access to this feature, although only for the EAP results.

### **Professional Development**

The CSU offers professional development to high school teachers and other educators to inform them about college readiness, the EAP, and curricular and instructional strategies designed to prepare students for success in college. The following is an update on current activities.

**English:** Professional development for the ERWC is provided to high school English teachers through a 20-hour workshop series coordinated jointly by the CSU and the California County Superintendents Educational Services Association (CCSESA). Offered on three to four days over



the course of several months, these workshops provide teachers with the skills necessary to teach the ERWC. The sessions are facilitated by a two-person team, including one CSU faculty member and one high school teacher or county office of education specialist. Teachers are encouraged to take the curriculum back to their schools and begin using the materials with their students; in the final sessions of the workshop series, teachers examine their students' work and score their writing using the CSU EPT Scoring Guide.

In addition, the CSU offers a longer term professional development program, the Reading Institutes for Academic Preparation (RIAP), on a limited basis through five CSU campuses. These institutes provide professional development in academic literacy to teachers across all disciplines at the high school level. Integrated within institute offerings is professional development in ERWC as well.

The following chart summarizes professional development offerings in English/academic literacy related to EAP since 2002.

<b>Program</b>	<b>Time Span</b>	<b>Total # Participants</b>	<b>Annual Activity</b>
ERWC	2004-2011 (to date)	6,006 educators (500-700 more by year end)	30-37 workshop series offered each year
RIAP	2002-2011	3,666 educators	4-20 institutes offered each year

**Program Evaluation Results:** Findings of evaluations conducted by an independent evaluator for the ERWC and its accompanying professional development are noteworthy. More than four years of evaluations have consistently shown positive results from the schools and students involved.

Teachers reported making changes to their teaching in reading, use of ERWC strategies, and use of ERWC materials after attending the ERWC professional development. The great majority of participating teachers (83 percent) report using the modules in their later teaching. Participating teachers reported that the professional development impacted their students' reading and writing skills, increased students' enjoyment and motivation in class, helped students make better use of class time, and increased students' time on task. In addition, teachers reported improved student outcomes and stated that students were better prepared for college. Teachers cited student transfer of ERWC skills to other content areas and to other classes in college as an added benefit. A majority of participating teachers reported that the ERWC professional development affected their instruction in other courses in a positive way. A majority of teachers who were observed (86 percent) displayed fidelity of implementation according to ERWC principles.

When asked about ERWC by the evaluator in focus groups and questionnaires, 85 percent of the high school students reported that the ERWC course prepared them well for college work. A

majority of students who participated in focus groups reported satisfaction with the course and stated that they were now more proficient at reading texts critically, writing persuasive essays, and identifying different perspectives. They also reported transfer of skills learned in ERWC to other courses and content areas.

When comparing school gains over time, the evaluators found that study schools significantly outperformed the state on graduation rates (90 percent sample vs. 80 percent state), on the Academic Performance Index gains (sample gain of 69 points vs. state gain of 31 points), and on the California Standards Test-English Language Arts (sample gain of 7 percent vs. state gain of 4 percent). Schools participating in a federal grant that the CSU operated from 2006-2010 through the Fund for the Improvement of Postsecondary Education (FIPSE) outperformed the state on gains over time in percent ready for college on the EAP test. In addition, FIPSE schools showed an almost 8 percent gain in percent ready for college from 2006 to 2010, while the state showed a 6 percent gain. FIPSE schools evidenced a gain of 2.74 percent proficient on the EPT, while the state showed a 4 percent decline from 2006-2010.

CSU college freshmen were surveyed in the fall of 2009 regarding their experiences with high school English courses. The survey results indicate that students who had taken Advanced Placement (AP) English or the ERWC had been required to write large numbers of essays, with 69 percent of AP students and 63 percent of ERWC students reporting two to four essays a month. Students who wrote at least two essays or more a month were much more likely to report being well prepared for college than students who wrote one essay or less a month.

**Mathematics:** CSU faculty, K-12 mathematics teachers, and state curriculum specialists redesigned the EAP professional development program for mathematics. The result is *Strengthening Mathematics Instruction* (SMI), which is designed to present a variety of strategies for teaching students how to solve complex mathematical problems. The professional development curriculum includes instruction on developing cognitively complex problems, analyzing student misconceptions, and understanding college readiness. Included in the program are teaching strategies to:

- Promote mathematical and numeric flexibility
- Incorporate multiple representations
- Help students extend procedures and emphasize structures

The focus of the program is on providing support for teachers to be able to increase student capacity to meet the CSU college readiness standards. The program also supports student performance on CSTs, SATs, ACTs, AP exams, and other standardized and diagnostic tests. The professional development stresses the following principles:

- Extending previously encountered tasks
- Integrating several topics and/or concepts

- Recognizing and using underlying mathematical structures
- Using multiple representations
- Considering multiple approaches to the problem
- Identifying patterns
- Being flexible and strategic in mathematical thinking

In 2009-2010, 330 teachers participated in SMI professional development. With the additional educators who completed the advanced “Trainer of Trainers” model, there were a total of 450 individuals who participated in professional development during the first year of SMI. For the 2010-2011 year, 10 to 15 workshops with 20 to 25 participants in each session are anticipated. An online bank of problems is being developed to support teachers in the classroom implementing SMI. The problem bank will include a series of differentiated problems that demonstrate the principles taught in professional development that teachers can use with their students on a regular basis.

In its first year of implementation, SMI has been well received by the K-12 math community, especially by algebra, geometry, and calculus teachers who feel that this is one of the few professional development opportunities at their level. The professional learning community model that has been implemented has proven essential for the success of the program, especially where math teachers are strong on pedagogy but weaker in some content areas. Having the school department in mathematics team together for this work enables them to help each other understand, remember, and further refine their understanding of complex mathematical concepts.

<b>Program</b>	<b>Time Span</b>	<b>Total # Participants</b>	<b>Annual Activity</b>
EAP Mathematics	2005-2009	1592 educators	5-20 workshop series offered each year
SMI (year 1)	2009-2010	450 educators	22 workshops offered
SMI (year 2)	2010-2011	250 educators (anticipated)	15 workshops (anticipated)

**Preservice Teacher Education:** Curriculum content to prepare future English and mathematics teachers who are currently in CSU preparation programs has been offered to CSU teacher education faculty for inclusion in preservice programs. Additionally, specific items about the quality of preservice preparation in these areas have been added to the CSU Annual Teacher Education Evaluation study. Future reports on program quality will include an assessment in these areas for each campus.

### **Online EAP Resources**

The Early Assessment Program enjoys robust online support from the following websites.

- CSU Math Success Website - <http://www.csumathsuccess.org>
- CSU English Success Website - <http://www.csuenglishsuccess.org>
- CSU Expository Reading and Writing Online Community - <http://writing.csusuccess.org/>
- CSU Calibrated Peer Review - [http://www.csuenglishsuccess.org/practice\\_ept\\_essays](http://www.csuenglishsuccess.org/practice_ept_essays)
- CSU Math Professional Development Website- <http://pd.csusuccess.org/>

In 2010, there were approximately 175,000 total visits to the *CSU Math and English Success websites*. This reflects a 17 percent increase from 2009. Students are making good use of the online college prep resources:

- More than 35,000 students have used the website to determine their EAP status and have created personalized roadmaps with customized advising tips to prepare for math and English at the CSU
- More than 15,000 students have taken an online practice math exam
- More than 60,000 students have taken an online practice English exam

The *CSU Expository Reading and Writing Course (ERWC) Online Community* provides discussion forums for teachers around the state to collaborate in helping students prepare for college-level English. More than 4,000 high school teacher accounts have been created for the site, and the site's discussion boards are heavily used.

The *CSU Calibrated Peer Review* is a free Web based tool that allows California high school English teachers to help their students improve their writing skills and prepare for the essay portion of the EPT. More than 100 English teachers used the Calibrated Peer Review tool in their classrooms in 2010, serving more than 4,000 students.

The *CSU Math Professional Development Website* provides high school math teachers with a one-hour interactive tutorial about the importance of the EAP. More than 2,200 math teachers have accessed the tutorial since its creation. More than 500 teachers have submitted evaluations of the tutorial, showing it to be incredibly successful:

- 98 percent reported that they gained a basic knowledge of the EAP, its purposes, and its scoring as a result of the program.
- 99 percent reported that by taking the tutorial they understood the options for 12th grade students and the costs to them of not being college-ready.
- 99 percent found the online program easy to use.

**COMMITTEE ON EDUCATIONAL POLICY**

**Projections for Doctor of Nursing Practice and Doctor of Physical Therapy Programs**

**Presentation By**

Ephraim Smith  
Executive Vice Chancellor  
and Chief Academic Officer

In fall 2010, AB 867 (Nava) — now Education Code section 89280 et seq. — and AB 2382 (Blumenfield) — now Education Code section 66042 et seq. — authorized the California State University to offer academic programs leading to the Doctor of Nursing Practice (D.N.P.) and Doctor of Physical Therapy (D.P.T.) degrees, respectively. These degree programs may be offered solely by the CSU, independent of any other universities.

The Division of Academic Affairs requests trustee approval to add the following degree projections to campus academic plans and to the California State University Academic Master Plan. Board approval will allow immediate development of degree implementation proposals.

**Doctor of Nursing Practice**

**Planned for fall 2012 implementation**

Fresno and San Jose, joint program  
Fullerton, Long Beach and Los Angeles, joint program  
San Diego

**Doctor of Physical Therapy**

**Planned for summer 2012 implementation**

Fresno  
Long Beach  
Northridge  
Sacramento  
San Diego

**Proposed Resolution**

The following resolution refers to changes in the campus Academic Plans and is recommended for adoption:

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**RESOLVED**, by the Board of Trustees of the California State University, that the proposed projections for Doctor of Nursing Practice degree programs and Doctor of Physical Therapy degree programs set forth in Agenda Item 2 of the January 25-26, 2011 meeting of the Committee on Educational Policy, be approved and accepted for addition to the CSU Academic Master Plan and be used as the basis for necessary facility planning; and be it further

**RESOLVED**, that those proposed degree program projections be included in campus Academic Plans and be authorized for development, with implementation at approximately the dates indicated—subject in each instance to the chancellor’s approval and determination of need and feasibility, and provided that qualified faculty, financial support, facilities, and information resources sufficient to establish and maintain the programs will be available.

## **COMMITTEE ON EDUCATIONAL POLICY**

### **Report on SB 1440 Implementation and Oversight Committee**

#### **Presentation By**

Ephraim P. Smith  
Executive Vice Chancellor  
and Chief Academic Officer

Eric Forbes  
Director  
Enrollment Management Services

Ken O'Donnell  
State University Associate Dean  
Academic Programs and Policy

#### **Summary**

SB 1440, which authorizes the creation of Associate of Arts Degrees for Transfer to the California State University (CSU), was signed into law in the fall of 2010. To facilitate the implementation of SB1440, the chancellors of both the California Community Colleges (CCC) and the CSU agreed to establish a committee comprised of leaders of both segments. This committee has met twice and is expected to meet again in early February. At the same time, the discipline faculty of both segments has been working through the core and elective curriculum design to ensure that the emerging AA/AS transfer degrees will be similar to the BA/BS degrees offered in the CSU. As each CSU campus determines which baccalaureate programs are similar, the programs will be coded into a newly created degree database for reporting and other purposes.

The implementation of SB 1440 does not come without its own set of challenges as the legislation guarantees students who complete the AA/AS transfer degrees admission priority to similar degree programs at their local CSU campus. As many of our CSU campuses are now impacted or have impacted programs, care must be exercised in describing what priority actually means. Moreover, the legislation stipulates that students with AA/AS transfer degrees who are admitted to similar CSU programs will have only 60 units remaining to complete the BA/BS degrees. Care must be exercised at each CSU campus in listing the specific upper-division courses that each student must complete before these students actually enroll. As several of



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these programs are expected to “go live” during the fall 2011 term, adjustments to CSUMENTOR will be required along with the encouragement of the electronic transmission of CCC transcripts to verify the actual completion of these degrees.

The CCC is planning to launch a major communications drive to promote these new transfer degrees as the optimum way to transfer to the CSU. The CSU is planning to describe these programs at each of the transfer and high school counselor conferences at the outset of the fall 2011 term. As these programs are populated with students during the next several semesters, the legislation requires both segments to monitor the development and to provide status reports, particularly regarding the overall persistence of students and their progress to both degrees.

**COMMITTEE ON EDUCATIONAL POLICY**

**Faculty-Student Research and Mentorship Special Focus: Water Resources and Policy Initiatives**

**Presentation By**

Ephraim P. Smith  
Executive Vice Chancellor  
and Chief Academic Officer

Elizabeth L. Ambos  
Assistant Vice Chancellor  
Research Initiatives and Partnerships

David Zoldoske  
Executive Director, CSU Water Resources and Policy Initiatives  
Director, California Water Institute  
California State University, Fresno

John D. Welty  
President  
California State University, Fresno

Susan L. Longville  
Associate Director, CSU Water Resources and Policy Initiatives  
Director, Water Resources Institute  
California State University, San Bernardino

Albert K. Karnig  
President  
California State University, San Bernardino

**Summary**

Applied faculty-student research that addresses the pressing needs of California's communities is one of the hallmarks of the California State University's (CSU) contributions to the state. One of the most valuable aspects of a CSU education for many students is the opportunity to work closely with faculty members, industry professionals, and community organizations on research,

creative activities, community service, and/or internships. Students actively involved in research and creative activities with faculty mentors develop critical thinking, creative and innovative approaches to problem-solving, and communication skills. It also provides students with valuable experience and understanding that allows them to contribute effectively amid the varied - and often competing - dynamics of water management and policy issues that exist beyond the academic environment. Also, faculty-mentored student research often leads to broadened professional opportunities and accelerated career development.

In this presentation, we highlight the singular achievements of CSU Water Resources and Policy Initiatives' researchers and educators, with a focus on California State University, San Bernardino. The presentation will underscore the critical connections between regional applied research and education needs; faculty research, teaching, and mentoring; and student scholarly growth, retention, graduation, and career success. The research projects highlighted address critical issues in California's water supply and quality; engage citizens and communities; have potential economic impact; and build the state's workforce. These projects have also attracted appreciable grant and contract funding from federal, state, and private sources.

### **Overview of the CSU Water Resources and Policy Initiatives Program**

Water Resources and Policy Initiatives (WRPI) represents a consortium of more than 230 CSU faculty members with expertise in a broad range of water resource and policy issues. Under the leadership of Chancellor Charles B. Reed, the CSU created the WRPI in 2008 as an opportunity to leverage the CSU's systemwide academic excellence into an important resource for addressing the complex issues about water confronting California. Major goals of the WRPI include:

1. Development of partnerships with the water industries and government agencies, leveraging CSU and other educational partners' resources to connect high-quality research to policy and decision-making;
2. Increasing education and training opportunities, and raising awareness among CSU students of careers in water-related disciplines; and
3. Commercializing innovations and research outcomes in water industries, services, and related professions in California.

With the leadership of WRPI Founding Executive Director David Zoldoske from California State University, Fresno and joined in 2010 by Associate Director Susan Lien Longville from California State University, San Bernardino, both well-known California water experts, WRPI has developed programs and external support for a variety of applied research and education services. In partnership with state agencies such as the Department of Water Resources (DWR),

and leading water groups such as the Association of California Water Agencies, the WRPI has helped develop context for legislation and policy related to water issues, created communication pathways that link CSU water expertise to the needs of business and industry, held several convocations bringing CSU research and education experts together with state and federal water agency leadership, and published water efficiency articles on a quarterly basis in a highly regarded professional journal. More information about WRPI may be found at: <http://www.calstate.edu/water>.

### **Faculty-Student Research and Mentorship in Water Resources and Policy Initiatives: California State University, San Bernardino**

Faculty and students at CSU San Bernardino, in common with several other urban Southern California CSU campuses, conduct research to better understand specific water resource availability and quality concerns in the arid southwestern United States. The Water Resources Institute (WRI) at the CSU San Bernardino campus (<http://wri.csusb.edu>) has been in existence since 1999. Five notable CSU San Bernardino projects that leverage public and private funds for research, education and training are aimed at raising awareness among CSU San Bernardino students of careers in water-related disciplines. Training California's future water leaders is one of many shared goals of the WRI and the WRPI Program.

1. One of WRI's most successful partnerships, leveraging federal funds from the U.S. Department of Agriculture's Hispanic Serving Institutions Education Grant Program, trains underrepresented students for careers in water resource management. The USDA has provided more than \$415,000 for paid internships in watershed management for 80 graduate and undergraduate students.
2. A new U.S. Department of Education grant from the Minority Science and Engineering Improvement Program will provide 60 paid geospatial internships to graduate and undergraduate students. The students, mentored by faculty and WRI staff, will assist in the design of a 3-D Model of the Santa Ana Watershed that will be located in CSU San Bernardino's new Natural Science Museum currently under development.
3. In 2010, CSU San Bernardino partnered with the University of California, Riverside to acquire guardianship of the nationally-acclaimed Water Resources Center Archives (WRCA), which has moved from its previous home on the University of California, Berkeley campus. In April of 2011, the WRCA will re-open under joint management by CSU San Bernardino and UC Riverside. The WRCA will be housed jointly by CSU San Bernardino's Pfau Library and UC Riverside's Orbach Science Library. Chancellor Reed supported this partnership pointing out that "It will be a high priority for the WRPI to support the needs of this collaboration in an effort to make the WRCA collection accessible throughout the CSU system via a shared database with UC."

4. CSU San Bernardino collaborated with a local water agency, resource conservation district and tribal government to raise \$600,000 to construct a new Water Conservation Demonstration Garden on the campus. Construction is now underway.
  
5. In March of 2007, the DWR announced a \$650,000 partnership with the WRI to coordinate the Governor's Alluvial Fan Task Force. The task force was mandated by Southern California legislation after 16 people lost their lives in a 2003 post-fire flooding event. In July of 2010, CSU San Bernardino published three news management tools developed by the Governor's Alluvial Fan Task Force: *An Integrated Approach for Sustainable Development on Alluvial Fans* that provides a comprehensive process for evaluating alluvial fan hazards and resources; a *Findings and Recommendations Report* that provides measures local governments should consider when planning or considering future development on alluvial fans; and a *Model Ordinance for Governing, Planning and Development on Alluvial Fans* that cities and counties may voluntarily adapt and adopt to meet local needs.