

UNIVERSITY OF CALIFORNIA ACADEMIC SENATE

BERKELEY • DAVIS • IRVINE • LOS ANGELES • MERCED • RIVERSIDE • SAN DIEGO • SAN FRANCISCO



SANTA BARBARA • SANTA CRUZ

Chair, Academic Council and Assembly of the Academic Senate
Telephone: (510) 987-9303
Fax: (510) 763-0309
Email: John.Oakley@ucop.edu

Faculty Representative to the Board of Regents
University of California
1111 Franklin Street, 12th Floor
Oakland, California 94607-5200

July 10, 2006

ROBERT C. DYNES
PRESIDENT

RE: Academic Council Endorsement of the Science and Mathematics Initiative Group (SMIG) Recommendations for On-going Science and Mathematics Initiative Administration, Oversight and Implementation

Dear Bob,

I am pleased to transmit the enclosed recommendations of the Science and Mathematics Initiative Group (SMIG), which were endorsed by the Academic Council at its June 21, 2006, meeting. As you know the Academic Council created SMIG to “advise the Academic Council as it coordinates activities among the campuses and seeks to coordinate with UCOP ... assist in keeping the communications between all parties ongoing in both a timely and effective manner ... [and] report regularly to the Academic Council on its activities and the progress of the Science and Mathematics Initiative (SMI) along with any potential problems encountered.”

In prosecuting this charge, SMIG has been reviewing the current status of SMI implementation at UC in order to determine what steps need to be taken, both in the short and long term, to ensure continued success. SMIG has considered data and recommendations from both within and outside of UC, and on April 29, 2006, it held a workshop to review best practices by others, review the SMI program on each of the campuses, and develop final recommendations for the upcoming academic year.

SMIG’s recommendations are designed to facilitate communication between the campuses and the Office of the President, to ensure program stability in the long term, to guarantee parity and cooperation among the campus programs, and to preserve Academic Senate oversight of the quality of instruction offered under the Science and Mathematics Initiative.

Accordingly, on behalf of the Academic Council, I respectfully request your consideration of the enclosed recommendations for eventual adoption as UC policy. If you anticipate any problems or require additional information, please let me know. I look forward to your response.

Sincerely,

A handwritten signature in blue ink, appearing to read "JO", written over a light blue horizontal line.

John Oakley, Chair
Academic Council

Copy: Academic Council
SMIG
María Bertero-Barceló, Academic Senate Executive Director

Encl.: 1

**Science and Mathematics Initiative Group Recommendations
for On-going Science and Mathematics Initiative Administration,
Oversight, and Implementation**

Endorsed by the Academic Council June 21, 2006

The Science and Mathematics Initiative Group (SMIG) of the Academic Council strongly endorses continued support for the Science and Mathematics Initiative (SMI) and emphasizes the need for both systemwide and campus support to grow and sustain this important program. Increasing the number of qualified science and mathematics teachers, particularly in underserved communities, is vital for the state of California. The UC system must take responsibility for meeting this critical need as it should be considered an integral part of our teaching, research and service mission as a public university.

We note the timeliness of the California efforts in light of the national American Competitiveness Initiative, introduced by President Bush in his February 2006 State of the Union address, which was informed by Congressional testimony and the National Academies' recent report, *Rising Above The Gathering Storm: Energizing and Employing America for a Brighter Economic Future*. Both point to the goal of "10,000 Teachers, 10 Million Minds," which clearly echoes SMI's vision of "**1,000 Teachers, 1 Million Minds**," and both focus on the need to increase and diversify America's professional talent pool by vastly improving K-12 mathematics and science education. Moreover, both recommend changes to make the United States the most attractive setting in which to study and perform research so that the U.S. can develop, recruit, and retain top students, scientists, and engineers and thereby improve U.S. competitiveness. Clearly, the same arguments apply to California, a bellwether state in U.S. competitiveness and demographic changes.

Given the national significance of the challenge and the obstacles inherent in building a new program, we strongly believe there should be continued involvement from the Office of the President (OP) as the administrative structure for the SMI program evolves, with more detailed suggestions provided below.

Our recommendations are based on our review of the current program and in reaction to Provost and Senior Vice President for Academic Affairs Hume's vision of the Science and Mathematics Initiative being governed in future by an SMI consortium, composed of a single leader from each campus. We support a governing model that increases the degree of leadership from and on each campus as well as a reduction in the number of overlapping SMI committees that exist in the current organizational structure. While we appreciate the need to move SMI from a UCOP-driven "start-up" leadership model to a campus-driven sustainable model, we caution that an effective governing structure must be in place before dismantling the current one, lest the entire program be at risk.

Accordingly, the Science and Mathematics Initiative Group (SMIG) recommends the following measures to ensure the efficacy and success of SMI:

1) Leadership, Organizational Structure, and Partnerships:

- SMIG recommends that the commitment expected of the campus leaders who will be members of the SMI consortium steering committee, both in terms of time and dedication, be made clear at the outset; this can not be viewed as marginal, additional work passed to an overcommitted administrator or faculty member. We estimate that this commitment will require the equivalent of at least one-third release time. We also recommend that each campus leader have an alternate designated.

- The expectations and commitment of the chair of the SMI consortium comprised of the campus leaders will be much higher. Accordingly, SMIG recommends that the consortium identify a chair (or co-chairs) from the pool of campus leaders comprising the SMI consortium. The chair should be a member of the Academic Senate and given relief time so that the appointment is a 100% appointment (shared in the event of co-chairs). Although it is expected that this will be a rotating assignment, a minimum appointment of two years would be preferable for continuity.
- SMIG recommends that at least two additional members and alternates of the consortium be members of the system-wide Academic Senate, to be named by the system-wide Academic Council. Membership should be drawn from University Committee on Educational Policy (UCEP), the University Committee on Affirmative Action and Diversity (UCAAD), or the Academic Council in order to facilitate reporting and policy recommendations to the Academic Council.
- SMIG also recommends that some key systemwide functions be designated as separate assignments for consortium members, such as credentialing, multi-campus proposals, evaluation, etc. Release time and/or staff support should be allocated as appropriate.

Further, SMIG recommends the following responsibilities be supported by the Office of the President:

- maintaining the UC SMI Executive Director position until the consortium steering committee is in place and functioning fully;
- locating in OP an SMI lead contact under one of the academic vice provosts, such as the Vice Provost for Academic Affairs, given the academic responsibilities and intersegmental coordination required for success (SMIG is grateful for the attention Provost and Senior Vice President for Academic Affairs Hume has given to SMI but believes even more stewardship will be needed at OP once the Executive Director position is removed);
- obtaining and vetting funds, UC-wide, with a focus on state funding and other private and federal opportunities best performed systemwide;
- providing leadership for systemwide functions such as the OIS database tracking system, evaluation, administrative support, fiscal tracking, website management, and catalyzing the sharing of best practices and curricular resources; and
- liaising with the state on credentialing, given the level of expertise incumbent in doing so.

Moreover, SMIG recommends continuing consultation with successful pioneer programs, such as UT Austin's [UTeach](#) and Texas A&M's [MASS](#).

2) Curricula and Program Design:

- SMIG clarifies that the UC vehicle for teacher credentialing is not UC Extension and recommends that a task force be formed to continue working on credentialing;
- SMIG recommends that schools of education and engineering/math/science departments share equally in leading campus SMI programs;
- SMIG recommends a centralized website for dissemination of SMI resources and best practices models;
- SMIG recommends further OP support for Senate oversight meetings, such as the workshop on April 29, continue until such time as the consortium steering committee is in place and functioning fully with formal Senate representation; and

- SMIG recommends that campus-wide planning and coordination meetings, such as the May 19 “best-practices” meeting involving campus coordinators, continue to be funded by OP to ensure that best ideas are being communicated among the various campuses

3) Next steps:

- SMIG recommends its continuance as an ad hoc committee until such time as the proposed leadership structure is secure.
- At such time, SMIG recommends it evolve into a standing Academic Senate subcommittee within the University Committee on Educational Policy (UCEP).
- SMIG requests greater consultation with systemwide Senate committees, such as UCEP, the Board of Admissions and Relations with Schools (BOARS), and the Intersegmental Committee of Academic Senates (ICAS) to consider strategies to improve the pipeline and flexibility of SMI. Possible strategies include reserving admissions spaces and creating scholarships for freshman and community college transfers dedicated to enrolling in SMI and forging course articulation agreements and other intersegmental cooperation opportunities with the California State University (CSU) and California Community College (CCC) systems, as well as collaboration with UC Extension.
- SMIG recommends that SMI consider closer collaboration with and possible integration of staff, funding, and functions of related K-12 teacher preparation programs, such as the California Math and Science Teacher (CMST) program, during the course of the next two or three years .
- Finally, SMIG re-emphasizes the importance of fostering joint and dual leadership at the campus level between education departments and engineering/math/science departments. Because it is concerned about the cooperative nature of this enterprise, SMIG recommends careful and thoughtful selection of campus leaders and the program design. In doing so, SMIG emphasizes the importance of diversity in the composition of the students served as well as the leadership and staff associated with the SMI.