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*Chair of the Assembly of the Academic Senate
Faculty Representative to the Regents
University of California
1111 Franklin Street, 12th Floor
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June 29, 2017

**AIMÉE DORR
PROVOST AND EXECUTIVE VICE PRESIDENT
UNIVERSITY OF CALIFORNIA**

Re: Approval of Master of Management (M.M.) Degree Program at UC Merced

Dear Aimée:

In accordance with the *Universitywide Review Processes For Academic Programs, Units, and Research Units* (the "Compendium"), and on the recommendation of CCGA, the Academic Council has approved UC Merced's proposal to establish a Master of Management (M.M.) degree program.

Because this is a new degree, and the Assembly of the Academic Senate is not meeting within 30 days of CCGA's approval, Council must approve the program per Senate Bylaw 125.B.7.

I am enclosing CCGA's report on its review of the new degree, and respectfully request that your office complete the process of obtaining the President's approval.

Sincerely,

A handwritten signature in blue ink that reads "Jim Chalfant".

Jim Chalfant, Chair
Academic Council

Cc: Academic Council
Senate Director Baxter
Senate Executive Directors



COORDINATING COMMITTEE ON GRADUATE AFFAIRS (CCGA)

Kwai Ng, Chair
kwng@mail.ucsd.edu

ACADEMIC SENATE

University of California
1111 Franklin Street, 12th Floor
Oakland, California 94607-5200

June 26, 2017

ACADEMIC COUNCIL CHAIR JIM CHALFANT

Dear Jim,

At its June 7, 2017 meeting, the Coordinating Committee on Graduate Affairs (CCGA) voted unanimously to approve UC Merced's proposal for a new graduate program leading to a Master of Management (M.M.) degree offered by a new Graduate Group in Management, Innovation, Sustainability, and Technology (MIST) at the campus. It is a one-year Master of Management Program, state-supported, with PDST. The goal of the degree is to provide bachelor's graduates in science, engineering, or social sciences with a basic knowledge of management and some experience using and applying these concepts.

The new M.M. program will address the cross-functional challenges that managers and leaders are commonly faced with in for-profit and non-profit enterprises and public organizations. MIST focuses on adaptive management of complex coupled human and natural systems, including for-profit and not-for-profit organizations and public and private enterprises. The MIST M.M. curriculum will draw on diverse disciplines within the fields of Engineering, Science, Social Science, and Management. By 2022, a core group of 14 ladder-rank faculty drawn from these disciplines, supplemented by affiliated MIST faculty members drawn from disciplines across the campus, will deliver the research and educational missions collaboratively and cooperatively. Building from existing faculty and campus strengths, which include services, analytics, cognition, the environment, and technology, among other areas, MIST will target growth initially in technology-enabled services and in natural resource and land management.

As a professional degree that is intended primarily for students interested in non-academic careers, the program has a stronger focus on practical training than on theory. Admissions will focus on high-achieving students with undergraduate or graduate degrees from science, engineering, or social sciences who are seeking to become leaders and managers. The program is focused on serving recent graduates from any undergraduate major. Initial admissions will focus on recent graduates of UC Merced's undergraduate programs, with a goal of turning existing students into a new generation of leaders in the San Joaquin Valley and beyond. The curriculum will comprehensively address the basic skills of management with special emphasis on innovation, sustainability, and technology, aiming to enhance students' transition to successful careers in their fields of specialty.

Six reviews were solicited by CCGA: three from UC campuses, two from private universities, and one from a state university campus. Three have their academic appointments in business schools, and three in technology management programs in schools of engineering. Two have experience in directing one-year management programs.

The reviewers were unanimously broadly supportive of the program as proposed. Reviewers commended the proposal as innovative and noted the strengths of the proposed program in curriculum, facilities, support, and faculty. They ventured some criticisms and suggestions. Among these the key concerns were about curriculum design and its capstone requirement. The M.M program aims to attract students who have just completed undergraduate degrees in a variety of disciplines. This means that students in this one-year program will vary in their quantitative skills. Some reviewers suggested that adjusting course curricula to serve both those with strong and weak quantitative skills could be a challenge. The proposers responded that they plan to monitor the students' backgrounds and needs in the first years of the program's operation, with a willingness to make adjustments.

Reviewers also expressed concern that the summer months might not allow enough time for sound capstone projects to come to fruition. They suggested formation of capstone project teams and initiation of preparatory work earlier in the 12 months of study. The program proposers welcomed the various suggestions and affirmed that course work prior to summer needs to be coordinated with initial work on capstones.

Reviewers also noted that the cost of the Merced program for its enrolled students is high, particularly for students lacking technical skills and the marketability that technical skills convey. Reviewers suggested that channeling more than the required 33 percent of PDST into student aid may be needed to meet enrollment targets while also attracting qualified applicants (especially in the first years of the program). The program proposers responded that they are willing to make adjustments here if needed. They would prefer to seek external funding sources (grants, gifts) to augment student aid.

UC Merced also responded to other comments raised by the reviewers at length. I attach the Lead Reviewer's final report for your reference.

CCGA believes the proposed UC Merced Master of Management Program has been rendered stronger by the review process. The six expert reviewers have confirmed that it meets the criteria for quality and rigor. Other aspects of the proposal also seem to more than satisfy the expectations of reviewers and CCGA members.

As you know, CCGA's approval is usually the last stop of the Academic Senate side of the systemwide review and approval process except when the new degree title must be approved by the President, under delegated authority from the Board of Regents. Given its status as a new graduate program title on the UC Merced campus, CCGA submits its approval of the Master of Management degree program for formal approval by the Assembly of the Academic Senate.

Respectfully submitted,



Kwai Ng
Chair, CCGA

cc: Shane White, Academic Council Vice Chair
CCGA Members
Hilary Baxter, Academic Senate Executive Director
Michael LaBriola, Academic Senate Analyst
Kimberly Peterson, Academic Planning Analysis Manager
Chris Procello, Academic Planning and Research Analyst

Susan Amussen, Merced Division Senate Chair
Laura Martin, Merced Division Senate Executive Director

Enclosures: (1)

Memo to CCGA regarding the UC Merced MIST Master of Management Proposal
Dick Arneson June 6, 2017

The proposal under review aims both to establish a new Graduate Group in Management, Innovation, Sustainability, and Technology (MIST) at the UC Merced campus, and to establish a new Master of Management Program to be run by the new Graduate Group. CCGA is reviewing the latter only.

The proposal is for a one-year Master of Management Program, state-supported, with PDST. The goal of the degree is to provide bachelor's graduates in science, engineering, or social sciences with a basic knowledge of management and some experience using and applying these concepts. In addition, the program will enhance students' skills in areas related to innovation, sustainability and technology, complementing their undergraduate backgrounds, with the goal of preparing them for jobs as leaders and managers in the fields of these undergraduate disciplines.

The initial plan is to recruit students mainly from among recent graduates of UC Merced undergraduate programs. The projected enrollment is 20 students in the first year of the program's operation, building to 100 students in five years. The PDST is to start at \$20000 and increase gradually to \$25000 in the first five years.

Faculty resources. In 2012, three new faculty were appointed with the aim of developing a stand-alone Management group. (From its onset UC Merced has offered a management undergraduate degree delivered by the Economics Department.) Five new faculty were recruited for this same purpose in 2015 and 2016. Four of these five remain, and in addition there are three faculty outside the Management group but with closely related research and teaching interests. By 2022 it is envisaged the new Graduate group in Management will have fourteen faculty members. At the currently planned steady state there will be a student: faculty ratio of seven:one, with 14 faculty, 1.5 lecturers, and 4 staff. The expected attrition rate in the first years of the program is expected to be ten percent. Most core faculty in the program will be housed in the School of Engineering.

The UC Merced Administration has steadily, for the past several years, supported the emergence of a Graduate Group in Management, Innovation, and Technology, which is expected eventually to offer a Ph.D as well as the Master's degree in Management. Judging by the steady new appointments, it looks as though the Merced Administration is firmly committed to the MIST group.

Relationship to other programs at UC campuses. Most UC campuses offer MBA degrees, and there are a variety of management and financial engineering and related Master's degree programs now in place at the various campuses. Perhaps the UC graduate Master's programs that are closest to the proposed Merced M.M. are at UC Santa Barbara, UC Santa Cruz, and UC Irvine. The Merced program proposers see their program to carving out a special market niche that recruits bachelor's graduates with a range of disciplinary specializations and enhances their job marketability by adding management skills oriented to their specialties. Reviewers concur. Reviewers also praise

the program proposers for fashioning a one year program, thus being in line with market trends. Also, the Merced program plans to recruit from the home campus and train students in considerable degree for the local San Joaquin Valley market.

Curriculum. In the twelve-month program, all students will take the same ten courses, four in each of the two semesters of the program, with the capstone project and a strategy course occupying a summer session. Completion of the capstone project will be the final degree examination. of the second-semester courses. The courses taken together are to be designed to inculcate a core set of skills described in the proposal under these headings: foundations of management, critical thinking for managers, communication for management, leadership and teamwork in practice, business ethics and societal context, and innovation, sustainability, and technology. The aim is “to provide a unique educational experience to prepare students for increasingly common types of complex management problems encountered in real-world management settings.”

The management courses offered will presuppose no undergraduate training in management. A business or management degree is not required for admission; nor are graduates with business or management degrees the target audience.

To graduate, the student must complete all courses with a “B” or better grade; a student who fails two or fewer courses can retake them in the next year. The capstone project involves working in teams in connection with a private sector or public sector participating enterprise, under the supervision of a faculty mentor and an external advisor. The project culminates in an individually prepared written report and a team presentation, on some actual or simulated real-world problem.

Diversity. Drawing on the diverse UC Merced student population as a prime recruitment base, the MIST Master of Management program is expected to train a high proportion of under-represented minority students.

Competitor programs. The Program proposers report that at present no UC campus offers a one-year generalist master’s program in management that seeks to recruit recent college graduates without prior business or management training. Somewhat similar one-year master’s programs have fairly recently been put in place within business schools at Michigan, Duke, Northwestern, and the University of British Columbia. The tuition cost of the Merced program will be \$33k for California residents and \$48k for nonresidents, a cost comparable to that charged by competitor programs.

Placement prospects. The program proposers report that in recent years the somewhat comparable one-year master’s programs at Duke, UBC, and Northwestern placed a high portion of their graduates within jobs within six months of graduation. The program proposers cite a study anticipating modest growth in natural resource management positions in the coming years.

The reviewers number six. Three are from UC campuses, two from private universities, one from a state university campus. Three have their academic appointments in business

schools, three in technology management programs in schools of engineering. Two have experience in directing one-year management programs.

The reviewers are unanimously broadly supportive of the program as proposed. They find the Merced faculty adequate to the task. None criticizes the proposed program as lacking academic rigor or coherence. In the market for programs of this broad type, a one-year program makes sense, they say. They venture criticisms and suggestions, but none seeks to land a knock-out punch that would provide reason to reject the program.

Some criticisms and suggestions, along with responses by the Program proposers.

A. Reviewers express concern that the summer months might not be enough time to allow sound capstone projects to come to fruition. They suggest formation of capstone project teams and initiation of preparatory work earlier in the 12 months of study. Another reviewer suggests that more faculty and staff resources may need go be concentrated on the summer capstone projects. Another reviewer observes that more attention needs to be paid to the question, how to evaluate the individual contributions of participants in team projects. In the absence of clear student accountability via workable assessment, individual participation in projects in by some may languish.

The program proposers welcome the various suggestions and affirm that course work prior to summer needs to be coordinated with initial work on capstones. Forming teams in advance of the start of summer may be desirable. More faculty may be needed. Time will tell.

B. By design the M.M program aims to attract students who have just completed undergraduate degrees in a variety of disciplines. Students in this one-year program will then vary in their quantitative skills. How does the program envisage adjusting course curricula to serve both those with strong and weak quantitative skills?

The Program proposers acknowledge the difficulty, and acknowledge they are not sure how best to meet it. They say that they do not envisage their courses to be traditional business school courses, but “mash ups and application focused.” But this just describes the setting in which the problem will occur and does not point out possible ways to solve it. They also say that they plan to monitor the students’ backgrounds and needs in the first years of the program’s operation, with a willingness to make adjustments. At least initially there is to be a lock-step curriculum, the same for all, so no channeling of students into different courses requiring different levels of technical skill will possible at the start. In their courses the students will be working in teams, which could sort by technical skill level. One idea might be to consult with each student upon entry to encourage each to develop an individual study plan that fits their competences and strengths. The program organizers say they are willing to consider remedial courses if needed, though how these would be fit within the one-year curriculum is unclear. Another possibility is to put in place some minimal mathematics or other quantitative course requirements for admission ton the program. The proposers express the hope that

the practical applications to be emphasized in the program will challenge even those with more business and management disciplinary backgrounds.

Another reviewer suggestion is that a boot-camp orientation experience prior to start of formal study might help weld a heterogeneous mix of admitted students into a group better able to get the most possible from the program.

C. Reviewers note that the cost of the Merced program for its enrolled students is high, particularly for students lacking technical skills and the marketability that technical skills convey. Reviewers suggest that plowing more than the required 33 percent of PDST into student aid may be needed to meet enrollment targets while also attracting qualified applicants especially in the first years of the program. The program proposers say they are willing to make adjustments here if needed. They would prefer to seek external funding sources (grants, gifts) to augment student aid.

D. Reviewers suggest that enrolled students with weak quantitative and technical skills may need special help with finding suitable capstone project enterprise sites and with finding employment opportunities following program completion. Staff dedicated to these tasks may be needed.

E. If the program attracts more international students than the program organizers are now anticipating, these students will need special help and counseling.

F. Reviewers ranged in their responses to the Merced program enrollment projections. Some saw the projections as optimistic and suggested there should be contingency plans for adjusting to lower than expected enrollment. The program organizers suggest that such coping would not be difficult, which perhaps suggests they are assuming any enrollment shortfall will not be severe.

G. One reviewer suggested that interviewing applicants (perhaps by Skype or the like) should be incorporated into the application process. The program proposers indicate that they will adopt this suggestion. Another reviewer doubts that three letters of recommendation per applicant will provide useful guidance for admissions committees. There is too much noise in the signals such letters provide.

H. A business school professor with experience managing a one-year management program commented, "It may prove a challenge to deliver the practical business education experience leading to employment that students are seeking with this type of degree." This caution points to more outreach and publicity directed at local industry, and perhaps more staff devoted to career counseling.

I. Two reviewers report that the relationships among the program foci of innovation, sustainability, and technology are not made clear in the proposal.

The program proposers respond that the program is organized around two themes, technology-enabled services, and resource management, which could be described as

“technology-enabled ecosystem services.” Between these two themes great synergies lie; so it is said. The program proposers suggest that greater difficulty may arise in balancing the needs of students oriented to public sector and private sector employment.

J. One reviewer tentatively suggests shifting focus and seeking to build a program that recruits mainly recent graduates with undergraduate degrees in STEM fields. This would eliminate the problem of teaching a student body that is heterogeneous in mastery of quantitative and technical skills.

K. One reviewer asks, Is the viability of the budget plan contingent on the development and approval of a complementary management/engineering Ph.D. program? Answer from program organizers: No.

L. One reviewer expresses concern about the adequacy of the facilities and space planned for the program. The proposal organizers offer reassurance.

M. One reviewer wonders whether there will be adequate faculty in each of the fields represented in the program. Again, the program organizers offer detailed reassurance.

My recommendation: I don't see in these reviewer comments grounds for quashing the proposal. The program proposers' are a bit on the perfunctory side, but adequate.