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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
Oakland, California 94607-5200

January 26, 2023

**KATHERINE S. NEWMAN
PROVOST AND EXECUTIVE VICE PRESIDENT
UNIVERSITY OF CALIFORNIA**

Re: Approval of Master of Computational Social Sciences (MCSS) at UC Berkeley

Dear Katherine:

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 Berkeley's proposal to establish a Master of Computational Social Sciences (MCSS) self-supporting graduate and professional degree program (SSGPDP).

Because this is a new degree title, 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 program, and respectfully request that your office complete the process of obtaining the President's approval.

Sincerely,

A handwritten signature in black ink, appearing to read "Susan Cochran".

Susan Cochran, Chair
Academic Council

Cc: Academic Council
IRAP Analyst Procello
UCB Senate Executive Director Banaria
Executive Director Lin

**COORDINATING COMMITTEE ON GRADUATE AFFAIRS (CCGA)**

Erith Jaffe-Berg, Chair
erithj@ucr.edu

ACADEMIC SENATE

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

December 21, 2022

SUSAN COCHRAN, ACADEMIC COUNCIL CHAIR

Dear Chair Cochran,

On December 5, CCGA met and reviewed the proposal from the Berkeley campus for a Master of Computational Social Sciences. After discussion, the proposal was approved 10-0-1.

The Master of Computational Social Science (MCSS) will provide students with practical skills in the analysis and presentation of social data. The training provided by the MCSS program will enable graduates to work effectively as analysts and data specialists in business, non-profit, and government settings. The program will be a Plan II master's degree program (capstone project) and take two semesters to complete but will require students to complete either a boot camp in advanced statistics and computational methods or successfully pass an exam on those subjects. Absent the boot camp, the program will require twenty-nine units, four of which will be connected to career development.

The program is intended primarily for people with BAs in the social sciences who are in the early career stage. It will train students in statistical analysis and computational methods, refresh their understanding of social-science research, and provide guidance about careers in data analysis. This training will be integrative, as all core courses involve applied statistics, computing tools and techniques, and social-science theory and empirics, albeit with different amounts of emphasis.

Four faculty agreed to review the proposal: two from UC, and two from other universities. All of them are experts in the area of computational social science and, in part, were selected for diversity in perspectives. All of the reviewers expressed support for the proposal. One reviewer and UCPB raised concerns about the preparedness of social science students and whether they can acquire the necessary skills in one year. The proposed Bootcamp partially addresses this concern, but the reviewers asked the proposers for additional information. The proposers of the program responded adequately to these concerns.

As you know, CCGA's approval is 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 Academic Council. I submit this for your review and have enclosed the Lead Reviewer's report. Please do not hesitate to contact me if you have further questions regarding the proposal.

Sincerely,

A handwritten signature in black ink, appearing to read "Erith Jaffe-Berg". The signature is fluid and cursive, with the first name "Erith" written in a smaller, more delicate script than the last name "Jaffe-Berg", which is written in a larger, bolder cursive.

Erith Jaffe-Berg
CCGA Chair

cc: James Steintrager, Academic Council Vice Chair
CCGA Members
Monica Lin, Academic Senate Executive Director
Michael LaBriola, Academic Senate Assistant Director
Chris Procello, Academic Planning and Research Analyst
Lisa García Bedolla, UCB Dean of the Graduate Division
Jocelyn Surla Banaria, UCB Senate Executive Director
Sumei Quiggle, UCB Senate Associate Director

DATE: December 13, 2022

TO: Erith Jaffe-Berg, CCGA Chair

FROM: Jeff Schank, CCGA Member

SUBJECT: CCGA Review of the Proposal for a Master of Computational Social Sciences Self-Supporting Degree Program from the University of California, Berkeley

The Coordinating Committee on Graduate Affairs (CCGA) reviewed a proposal for a Master of Computational Social Sciences Self-Supporting Degree Program from the University of California, Berkeley. After careful consideration, CCGA unanimously supported the proposal at its meeting on December 5, 2022.

The Co-Leads on the proposal are:

Heather A. Haveman, Professor of Sociology and Management, haveman@berkeley.edu

Andres Rodriguez-Clare, Edward G. and Nancy S. Jordan, Professor of Economics, andres@econ.berkeley.edu

Alan Karras, Associate Director, Interdisciplinary Social Science Programs, karras@berkeley.edu

Maximilian Auffhammer, George Pardee Professor of International Sustainable Development and Associate Dean, Social Sciences

The proposal is for a Master of Computational Social Science (MCSS) self-supporting graduate professional degree program (SSGPDP) at the University of California, Berkeley. The MCSS degree will be offered by a Graduate Group in Computational Social Science (GGCSS) and reside in the Interdisciplinary Social Science Program (ISSP) in the College of Letters and Science. This one-year SSGPDP (Plan II – capstone) is targeted at both U.S. and international students with social-sciences training. The MCSS aims to provide students with rigorous training in statistical and computing methods from a theoretical perspective of the social sciences that will allow them to (i) analyze and interpret social data and (ii) use computational tools and techniques to conduct practical research. The MCSS differentiates itself from other

programs by its emphasis on (1) the analysis of “social data” (e.g., survey, Census, website, cell phone records, Twitter, Internet); and (2) social issues in data analysis such as privacy, bias, fairness, and inclusivity. The MCSS is committed to improving the diversity of job candidates for analyst positions in finance, management consulting, and tech organization by using 20% of its income for students with financial needs and advertising the MCSS to students from HBCUs, HSIs, TCUs, and women’s colleges.

The MCSS requires 29 units from 10 courses developed specifically for the MCSS but draws content from existing courses. Students take 15 units (5 courses) in the fall and 14 units (5 courses) in the spring with no electives in either semester. To better prepare students, two online summer Bootcamp courses (i.e., an applied statistics course that focuses on data analysis and a course on computational skills that focuses on computer languages, tools, and repositories) are required unless a student passes two waiver exams (i.e., one for each course, 90-minutes in length taken in the May before beginning the MCSS curriculum). If a student does not pass the Bootcamp courses, they will be counseled on their options, such as taking remedial courses to not enrolling.

Admission does not require prior work experience. Experience is obtained through a spring capstone course (4 units), in which students work in small groups with a sponsoring organization outside campus to gather, process, and analyze data. These small groups will be mentored by faculty advisors who supervise 1-2 groups. Faculty advisors are primarily responsible for developing ideas and identifying the outside sponsoring organizations and data for the students to work with. The estimated enrollment is 40% in-state, 25% out-of-state, and 35% foreign.

The proposed initial tuition is \$70,486 for the first year, followed by a 3% increase yearly. The target enrollment for fall 2023 is 25 students, followed by an additional 25 students per year until the steady-state target of 100 students is reached in the fall of 2026. The program will start with a \$5,000,000 donation, and the net revenues are expected to be \$972,646 by the fall of 2025. The program budgets \$35,000 to UC Senate faculty on an overload basis to teach the semester-long course, with an additional \$30,000 for a course-development grant and \$15,000 for a course refresh. The program can offer these incentives to faculty before becoming profitable because of the \$5,000,000 startup donation. After the ramp-up period of four years to reach 100 students, funds will be used as follows: tuition financial aid discount (20%), teaching (9% of which ladder faculty receive 3%), staff (8%), classroom space and marketing (5%), indirect costs (15%), and profits (43%). UCPB concluded that the program will be profitable in three years and has no concerns about the program’s funding especially given the \$5,000,000 startup donation. UCPB broadly supports the program, with some concerns discussed below.

Four reviewers agreed to review the proposal; two are from other UC campuses, and two are from other universities. All of the reviewers are experts in the area of computational social science and, in part, were selected for diversity in perspectives. The reviewers are:

1. Ravi Shroff, Assistant Professor of Applied Statistics and Urban Informatics, Steinhardt School of Culture, Education, and Human Development, Center for Urban Science and Progress, New York University. He teaches in Applied Statistics for Social Science Research M.S. program, which might be considered a competitor to the proposed program.
2. Catie Hausman, Associate Professor, Gerald R. Ford School of Public Policy, University of Michigan. She teaches quantitative methods in their Master of Public Policy and Masters of Public Affairs degree programs. She currently serves on the Executive Committee and is one of the school's Diversity Equity and Inclusion leads.
3. Olivier Deschenes, Professor, Department of Economics, University of California, Santa Barbara. He is co-director of The Environmental Markets Lab, which is an interdisciplinary group at the University of California Santa Barbara that conducts data-driven research and designs market-based approaches to address environmental problems.
4. Martin Hilbert, Professor, University of California, Davis, Dr. Economics, Ph.D. Communication, Chair DE Computational Social Science, which has three tracks: Computational & Mathematical & Statistical Foundation, Social Science Theory and Substance, and Applied Computational Social Science.

All of the reviewers expressed support for the proposal. Some of the strengths identified were: (1) "leveraging UC Berkeley's faculty, who are at the forefront of quantitative social science methods" and "building on the considerable strength and international reputation of social science departments and units at UCB"; (2) "leveraging proximity to Silicon Valley"; (3) there will likely be "high demand among prospective applicants"; (4) "giving students training that will position them well in today's marketplace"; (5) "offering a program that complements existing UC Berkeley strengths without detracting from existing programs"; (6) "giving students training that will serve a societal need"; (7) the program is "well thought out from a financial perspective"; (8) the program has a "laudable focus on diversity"; and (9) "there are unique aspects of the curriculum should prepare graduates for subsequent careers."

One reviewer and UCPB raised concerns about the preparedness of social science students and whether they can acquire the necessary skills in one year. The proposed Bootcamp partially addresses this concern, as both the reviewer and UCPB acknowledge, but they were only partially convinced though they were still supportive of the proposal. The proposers of the program were asked to respond to this. The proposer note that "Students from some social-

science fields – including economics, political economy, political science, psychology, and sociology – are required to take at least one statistics course, and often more than one.” For those who do not have this background, the MCSS program is intended appeal to them because they have “designed the program with a Bootcamp and considerable tutoring to help them move along that learning curve.” They also state that they “will assist students in forming study groups that will provide extra scaffolding.” They also note that it “is also possible that more resources will be required for tutoring; fortunately, the terms of the gift [\$5,000,000] provide enough of a financial cushion to pay for that in the early years when the program is small and runs a deficit.”

CCGA unanimously supports this proposal with its unique focus on students from the social sciences, making it a unique SSGPDP master’s program in the UC system nationally as well. Because of the concerns raised by UCPB and a reviewer, we recommend that the three-year reviews of the program collect data on career trajectories and which students leave the program without finishing.

Sincerely

A handwritten signature in black ink, appearing to read "Jeffery Schank". The signature is fluid and cursive, with the first name "Jeffery" being more prominent than the last name "Schank".

Jeffery Schank
CCGA Member
Chair Graduate Council, UC Davis
Professor, Department of Psychology, UC Davis