



Ahmet Palazoglu
Chair, Assembly of the
Academic Senate
Faculty Representative,
UC Board of Regents

Academic Senate

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1111 Franklin Street
Oakland, CA 94607

senate.universityofcalifornia.edu

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March 26, 2026

Katherine S. Newman
Provost and Executive Vice President
University of California

Re: Approval of UCD Online Master of Engineering in Biomedical
Engineering for Healthcare Technologies

Dear Provost Newman:

In accordance with the Universitywide Review Processes for Academic Programs, Units, and Research Units (the “Compendium”), and on the recommendation of the Coordinating Committee on Graduate Affairs ([CCGA](#)), the Academic Council has approved the UC Davis division’s proposal to establish an online self-supporting Master of Engineering in Biomedical Engineering for Healthcare Technologies.

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.

Please do not hesitate to contact me if you have additional questions.

Sincerely,

Ahmet Palazoglu
Chair, Academic Council

cc: Academic Council
UCD Division Chair Russ
UCD Senate Division Executive Director Arevalo
Director of Academic Planning and Policy Corona
Senate Executive Director Lin



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COORDINATING COMMITTEE ON GRADUATE AFFAIRS

Partho Ghosh, Chair
pghosh@ucsd.edu

March 18, 2026

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Ahmet Palazoglu
Academic Senate Chair

Dear Chair Palazoglu,

At its March 4 meeting, CCGA reviewed the proposal for a self-supporting Online Master of Engineering in Biomedical Engineering for Healthcare Technologies from the Davis Division. After discussion, the proposal was approved 7-0-2.

The proposed self-supporting, online, Master of Engineering (M.Eng.) in Biomedical Engineering for Healthcare Technologies (HCT) at UC Davis is designed to address the growing demand for interdisciplinary professionals capable of navigating the rapidly evolving healthcare technology landscape. This one-year online program will build on the established strengths of the UC Davis Department of Biomedical Engineering, which has a proven track record of producing industry-ready graduates with expertise in engineering and design principles. With the program’s focus on industry-relevant competencies, students will be well-positioned for roles in medical devices, pharmaceuticals, and related sectors, where these specialized skills are in high demand.

As a fully online program, the self-supporting HCT will offer flexibility for working professionals seeking to advance their careers, while maintaining the academic rigor expected of a UC Davis degree. The curriculum is tailored to equip students with essential skills in regulatory affairs, quality management systems, and other skills critical to employment in healthcare technologies industries. The interdisciplinary focus of the program ensures it is uniquely positioned to meet employer demand in the biomedical sector, both regionally and nationally. Through partnerships with industry experts, UC Davis will leverage its strong academic foundation to deliver a program that not only aligns with industry needs but also strengthens the

UC system's role as a leader in higher education and advances its mission of serving the needs of society.

Comments were obtained from four reviewers (one internal to the UC system; three external), as well as from UCPB. UCPB determined the program to represent a net positive effect and recommended approval (the UCPB report is attached). All four reviewers viewed the program positively overall, with some concerns which were shared with the proposers. These are detailed in the Lead Reviewer's report, attached. The reviewers provided a thoughtful and detailed response that alleviated these concerns.

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 Senate. I submit this proposal for your review; please do not hesitate to contact me if you have further questions regarding it.

Sincerely,

A handwritten signature in black ink, appearing to read 'Partho Ghosh', with a long horizontal stroke extending to the right.

Partho Ghosh
CCGA Chair

cc: Academic Senate Chair Palazoglu
Academic Senate Vice Chair Scott
Academic Senate Executive Director Lin
Academic Senate Assistant Director LaBriola
CCGA Members
Director of Academic Planning and Policy Corona
UCD Dean of the Graduate Division Delplanque
UCD Senate Executive Director Arevalo
UCD Senate Analyst Adams

Summary and Recommendation of

A Proposal for an Online Self-Supporting Graduate Professions Degree Program M.Eng. in Biomedical Engineering for Healthcare Technologies University of California, Davis

Prepared by: Hyle Park
March 7, 2026

The proposed program for a Masters of Engineering (M.Eng.) in Biomedical Engineering for Healthcare Technologies (HCT) University of California at UC Davis is a self-supporting, online degree program intended to meet the growing need for professionals who can bridge the gap between engineering and clinical applications. While UC Davis has a strong track record in Biomedical Engineering education, this program will offer the additional flexibility needed for working professionals seeking to advance their careers as well as more diverse student populations seeking to transition from other engineering disciplines into healthcare technologies.

The new program will require completion of 36 units of graduate coursework. The curriculum calls for 20 units of core coursework in topics such as quality management systems, regulatory affairs, operations and manufacturing, scientific communication and integrity, and three quarters of a capstone design sequence. The remaining 16 units are elective coursework that span topics such as physiology for biomedical engineers, an introduction to biomaterials, and mechanobiology. The purpose of the 6 unit total, 3 quarter capstone course series is to provide parallel training and supportive instruction while students work toward a viable project that, while not necessarily yielding peer-reviewed publication, must contribute a novel refinement or new approach using engineering to solve a medical or biological problem. The program expects to enroll 20-30 students in its first year, with enrollment increasing to 60 in years 2 and beyond. Students will be able to complete the program within 3 quarter with full-time enrollment.

Comments were obtained from four reviewers (one internal to the UC system; three external), as well as from UCPB. UCPB determined the program to represent a net positive effect and recommended approval. All four reviewers viewed the program positively overall, but had the following concerns:

- While all reviewers were quite positive at the inclusion of a capstone project, there was some concern regarding the faculty workload required for project oversight
- There was some concern over the alignment of cited examples of capstone projects with that of the proposed program
- A lack of detail regarding student advising.

The reviewers provided a thoughtful and detailed response that alleviate these concerns. In particular, the proposers explained their expectation that the majority of HCT students will be working professionals. As such, the projects are expected to be distinct from but aligned with their actual work and will not require the same degree of faculty involvement that might be expected in an undergraduate capstone course sequence. Second, the listed core coursework subjects, such as quality management systems, were identified as important basic knowledge for working professionals but there is no programmatic expectation that students develop expertise in such areas through their capstone project. Rather, the emphasis for the capstone

remains centered around technical biomedical engineering topics. Finally, the program provided greater detail regarding their proposed advising structure, which critically includes how they intend to scale such efforts as enrollment in the program grows.

Given the comments from the reviewers and UCPB as well as the responses from the proposers, my recommendation is to approve the program.



Academic Senate

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UNIVERSITY COMMITTEE ON PLANNING AND BUDGET (UCPB)
Robert Brosnan
rjbrosnan@ucdavis.edu

September 24, 2025

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Partho Gosh
Chair, CCGA

RE: UC Davis Master of Engineering (M. Eng.) in Biomedical Engineering for Health Care Technologies Self-Supporting Graduate Degree Program Proposal

Dear Partho,

UCPB discussed the UC Davis proposed graduate program at its October committee meeting. This program is intended to bridge the gap between programs focused on the biological processes of tissue engineering, bioinformatics, and regulatory systems and those training for bioengineering devices. The program covers both sides of the field, and targets recent graduates as well as professionals already working in the field.

The program will use revenue to pay back the initial campus investment, used to scale up the program’s curriculum, pay for instructor buy-outs, and support program costs such as IT, marketing, and financial aid. Program proposers note that students in state-supported programs can use M. Eng. classes to satisfy their degree requirements.

Once completely staffed, participating senate faculty will teach on overload or through course buyout in the program. UCPB notes that faculty choosing to have their courses bought out raises the question as to who will cover the teaching duties in their home department.

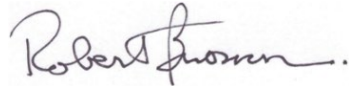
Five percent of tuition is earmarked for return to aid, and the program plans to advertise broadly to encourage a diverse student population. Need-based fellowships will be offered to students and enrolled students will be eligible to apply for external fellowships.

The program adequately addressed any concerns raised in a review from the campus budget committee, including the possibility that core-funded salary would be supporting the existing faculty during the development of the curriculum. The small number of new courses needed addressed that concern. UCDCPB suggested that the college should consider converting the existing graduate program in Medical Device Development into a SSGDP to maximize efficiency. They also raised concerns about the overlap with the UCR biomedical engineering program, which proposers acknowledged and highlighted areas of differentiation.

One possible gap in the program noted by some UCPB members is that no artificial intelligence training or coursework is included. For both technology development and regulatory issues, responsible use of AI may be a critical skill to teach.

The committee noted that the program represents a net positive effect with minimal risk and recommended approval of this proposal.

Sincerely,

A handwritten signature in black ink that reads "Robert Brosnan". The signature is written in a cursive style with a long horizontal line extending to the right.

Robert Brosnan
Chair

cc: UCPB

UCPB Proposed Self-Supporting Professional Degree Program Review Template

Name and Location of Program:

Master of Engineering (M.Eng.) in Biomedical Engineering for Health Care Technologies
UC Davis

Lead reviewer(s):

Barry Giesbrecht

Academic justification:

Health care is rapidly changing, requiring training in medical device and instrumentation, but also biological processes involved in tissue engineering, bioinformatics, and regulatory systems. Many engineering programs offer training that emphasizes content on the devices or on biological processes. The proposed program is intended to bridge the gap, providing a biomedical engineering curriculum that covers both, complimented by instruction from expert faculty and instructors with experience in industry and government. The online nature will target recent graduates and professionals working in the field.

Planning and Budget overview:

1. Proposed initial tuition and any rate of increase:

Tuition: \$49,700

Potential increase: +3%/year to account for inflation and rising costs of operation, but this will be evaluated as a part of the annual budget review process done by the program leadership.

2. Target enrollments for years 1-3:

20-30	60	60
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3. Projected net revenues for years 1-3:

0.00	\$117,448	\$908,829
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4. Proposed indirect cost rate (IDC): 30%

The revenue will be distributed using a 30:70 split between the Campus and the College of Engineering. The 30% IDC has two components: 25% campus overhead fee to cover various costs incurred by the Continuing and Professional Education unit and a 5% online education infrastructure and technology fee. The

70% component is further split, such that 80% goes to the Department of Biomedical Engineering (56% of total) and 20% goes to the Office of the Dean of the College of Engineering (14% of total).

Detailed areas of review:

5. How was the proposed IDC rate determined? Does the proposed rate appear to cover all indirect costs (facilities, IT, etc.)? What are the space needs of the program?

The exact method of determining the IDC rate was not clearly described, although it appears to have been set through consultation with the department, college, Budget & Institutional Analysis, and Continuing and Professional Education (p. 41). A portion of the indirect costs are allocated to cover IT costs. The program is an online program, so the space requirements are minimal and primarily amount to the space needs of existing faculty and staff.

6. What are the proposed uses of net revenues? How will they supplement [enhance] state-funded programs? Are there other ways that the program, if successful, will benefit the UC mission (e.g., filling a need not covered by state-supported programs)?

Although a full analysis of the use of net revenues is not clearly presented in the proposal, some uses are identified. Initial returns over the first 5 years will be used to pay back the initial campus investment used to stand-up the program. Revenues will be re-invested into the program to allow for scaling the curriculum to include more electives. Revenues will also be used to pay for instructor buy-outs for Senate faculty who choose to teach “on-load”. Revenues will also be used to support additional program costs (e.g., IT), marketing costs, and financial aid as funds allow.

An additional beneficial impact on state-funded programs is that students in state-supported BME programs will be able to enroll in online HCT courses to satisfy degree requirements.

7. How are any potential negative impacts on state-funded programs and the research mission of the UC mitigated?

The proposal suggests that the primary negative impact of this online program is the potential increase in workload of the Senate faculty. This will be mitigated by giving instructors the option of teaching on-load or off-load and allowing students from the state-funded programs to take the online HCT classes. Additional mitigation strategies include minimizing the need for the development of completely new course material and leveraging the use of lecturers.

8. Describe disposition and compensation of **faculty** serving the program. What is the proposed ratio of UC Senate faculty to non-UC adjunct faculty? For the former

category, differentiate between ladder rank and P/LSOE. How will UC Senate faculty be compensated? On-load (i.e., course buyout), overload, or some combination thereof?

The proposal indicates that the target faculty will include 5 Senate faculty and 5 experts from Industry appointed as U-18 Lecturers or Adjunct Faculty. Three existing faculty from the Department of Biomedical Medical Engineering are named in the proposal and two are to be determined. Their appointments are in the professor series. The selection of new faculty will be done in consultation with the Biomedical Engineering Graduate Group. The proposal does not indicate if faculty with LPSOE appointments will be considered. One non-Senate instructor has been identified. This instructor has expertise in healthcare technology and has a history of instructing at UC Davis. The names of four other lecturers have been provided as examples of people with the kind of expertise that would be desirable for fulfilling the role of instructor within the program.

UC Senate faculty will be allowed to choose whether their teaching will be compensated as on-load or off-load. If on-load, the faculty will not be compensated separately, but rather program revenues will be used to buy-out the faculty member's home department. If off-load, the instructional responsibilities will be separated from the faculty member's regular responsibilities for covering state-funded programs. This appears to be feasible given that the standard instructional load for the senate faculty involved in the program is 2 courses/year, so off-load teaching could be added in the quarter in which the faculty member is not designated to be teaching for a state-funded program.

9. Describe how the program will ensure accessibility and encourage diversity. Note: these concerns may be addressed through return-to-aid used for need-based fellowships, although programs may address accessibility and diversity in a variety of ways and UCPB does not set a standard return-to-aid percentage.

The program will advertise broadly including at MSIs, HBCUs, HSIs, and TCUs. The participating faculty will engage in outreach activities at national conferences that empower communities historically underrepresented in STEM and engineering especially (e.g., National Society of Black Engineers).

The application review process will be holistic, ensuring reviewers weigh all achievements and experiences.

5% of the tuition is designated as return-to-aid, to be used on need-based fellowships. Students will also be eligible for external fellowships. Students will also have access to financial aid advisors for guidance.

10. Describe the market analysis used to justify demand and price point for the proposed program. Will the program compete with others in the system? What are

projected percentages of California resident, domestic non-resident, and international students in the program?

The market analysis assessed student demand, employer demand, estimated salary returns, program value, and differentiation. The analysis was conducted using a labor market analytics package that aggregates data from a wide range of sources. The details of the market analysis are provided in Appendix A.

A portion of the market analysis included a comparison of the number of BME job ads and the number of BME graduates across several states. In California there were 178 more job ads that required a BME than the number of BME master's degrees awarded. This pattern was present in about half of the states presented in the proposal. The pattern within the state suggests that the demand could possibly support the enrollment targets in the short term and leverage the demand across the country once the appropriate approvals are in place.

The tuition was determined by assessing tuitions for other similar SSGDP and the expected income upon graduation. The tuition was set near the median price of the distribution of tuitions from the market analysis. Based on the analysis of expected income upon graduation, the estimated time for recovery of tuition is approximately 4 years.

There are three other online master's degrees in engineering in the UC system: UCR, UCLA, and UC Berkeley. The UCR program is perhaps the most similar to the proposed program, but it offers a core engineering curriculum and a limited set of biomedical engineering electives. UCLA enrolls students in a particular area, with elective courses in subdisciplines. UC Berkeley does not include biomedical engineering as a concentration area.

Student enrollment is expected to be majority California resident. Approvals for state-by-state enrollment need to be acquired.

11. Describe relevant consultation and assessment from lower levels of review, external assessments of the proposal, and the like.

The proposal was reviewed by multiple UC Davis agencies and ultimately approved by the UC Davis Graduate Council and with enthusiastic support. The other reviewing agencies included the UC Davis Council on Planning and Budget (UCDCPB), the UCD Library Committee, and the unit on Budget and Institutional Analysis (BIA).

UCDCPB raised four main concerns. First, concern was raised about the possibility that core-funded salary would be supporting the existing faculty during the development of the curriculum. Second, UCDCPB suggested that the college should consider converting the existing graduate program in Medical Device

Development into a SSGDP to maximize efficiency. Third, concerns were raised about the overlap with the UCR biomedical engineering program. Fourth concerns were raised about the time to degree and the impacts on student debt. The proposal submitted for UCPB's review appears to address these concerns because the number of newly developed course units is small (~12), the program is distinguished from UCD's MDD and UCR's program, and the tuition is paid by the course not by annual tuition so no additional student debt should be accrued for multi-year completion.

The Library Committee indicated that the current holdings could accommodate the needs of the new program, they also suggested that the needs of the program may evolve and change the burden on the library.

BIA reviewed the proposal and found it to be compliant with the relevant policy covering the financial model of SSGDP. BIA offered some suggestions, but ultimately endorsed the proposal viewing the program as a "relatively low financial risk for the unit and the campus."

12. Any other planning and budget concerns?

None noted.

13. Any academic-quality or related concerns to flag for CCGA?

The curriculum does not indicate any training and/or coursework in the responsible use of artificial intelligence in HCT. This seems like an absolutely essential in this day and age, both in terms of technology development and regulatory practice, both of which are core topics in the curriculum.

14. Are there specific areas of concern that the mandated review after the third year of operation ought to capture?

The third-year review should pay close attention to assess the impact on state-funded programs and facilities, both negative and positive. Progress in obtaining the appropriate approvals for out-of-state and international enrollments should also be monitored.

Conclusions and recommendation:

The proposal makes a clear argument that there is sufficient need and demand for this online self-supporting Master's of Engineering in Health Care Technologies. The potential negative impacts on state-funded programs and facilities appear to be minimal, but should be closely evaluated at the mandated third-year review. The program will repay initial campus investments within five years. The positive impacts of the net revenues are not well-articulated and should be documented for subsequent reviews. The program itself should also consider adding content on the responsible use of artificial intelligence in health care. UCPB endorses the proposed program.