

**Multi-Year Plan for Professional Degree Supplemental Tuition (PDST) Levels
Effective Beginning Summer or Fall 2019
PART A**

The Regents approved the amended *Regents Policy 3103: Policy on Professional Degree Supplemental Tuition* at the March 2017 Regents meeting. Please review the amended policy and keep it in mind during your planning process and while completing Parts A and B of this form: <http://regents.universityofcalifornia.edu/governance/policies/3103.html>.

This approval did not directly rescind the authority delegated to the President by the Regents in November 2014 to approve PDST increases up to 5% through 2019-20. Programs with an approved multi-year plan on file that has not expired may submit requests for increases up to 5% for the President’s approval for PDST levels that become effective summer or fall 2019 (as long as the proposed increase does not exceed the amount previously indicated in the program’s current multi-year plan). Requests from these programs should be submitted using a short form. By fall 2020, the amended Regents Policy 3103 will apply to all PDST programs.

I. PROJECTED PROFESSIONAL DEGREE SUPPLEMENTAL TUITION AND PROGRAM DESCRIPTION

I.a. Specify your projected Professional Degree Supplemental Tuition (PDST) for each year of your multi-year plan. While programs typically craft three-year plans, programs are permitted to craft multi-year plans for two, three, four, or five years. If specified years in the table do not apply to your multi-year plan, please leave those columns blank (and continue to do so throughout the template). Please also refer to the planning assumptions for further details about fee increase rates.

	Actual	New Proposed Fee Levels					Increases/Decreases									
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2019-20		2020-21		2021-22		2022-23		2023-24	
							%	\$	%	\$	%	\$	%	\$	%	\$
Prof. Degr. Suppl. Tuition (CA resident)	\$7,224	\$7,440	\$7,662	\$7,890	\$8,127	\$8,370	3%	\$216	3%	\$222	3%	\$228	3%	\$237	3%	\$243
Prof. Degr. Suppl. Tuition (Nonresident)	\$7,224	\$7,440	\$7,662	\$7,890	\$8,127	\$8,370	3%	\$216	3%	\$222	3%	\$228	3%	\$237	3%	\$243
Mandatory Systemwide Fees (CA resident)*	\$12,570	\$12,966	\$13,368	\$13,788	\$14,220	\$14,670	3.2%	\$396	3.1%	\$402	3.1%	\$420	3.1%	\$432	3.2%	\$450
Campus-based Fees**	\$1,000	\$1,030	\$1,061	\$1,093	\$1,126	\$1,160	3.0%	\$30	3.0%	\$31	3.0%	\$32	3.0%	\$33	3.0%	\$34
Nonresident Suppl. Tuition	\$12,245	\$12,245	\$12,245	\$12,245	\$12,245	\$12,245	0.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
Other (explain below)***																
Total Fees (CA resident)	\$20,794	\$21,436	\$22,091	\$22,771	\$23,473	\$24,200	3.1%	\$642	3.1%	\$655	3.1%	\$680	3.1%	\$702	3.1%	\$727
Total Fees (Nonresident)	\$33,039	\$33,681	\$34,336	\$35,016	\$35,718	\$36,445	1.9%	\$642	1.9%	\$655	2.0%	\$680	2.0%	\$702	2.0%	\$727

* Mandatory systemwide charges include Tuition and Student Services Fee.

**Do not include the Student Health Insurance Program (SHIP) premium, since this may be waived for students with qualifying coverage under another program.

*** Include Course Materials and Services Fees but not health kits. Include disability insurance fee for medicine and dentistry.

Additional comments:

N/A

I.b. Please describe the nature and purpose of the program for which you propose to charge Professional Degree Supplemental Tuition.

The Master of Science in Health Informatics (MHI) program was established in fall 1999, and is considered one of the only in-person clinically based health informatics programs in the Western U.S. With the wide expanse of medical and biological information, innovative advances in storing, retrieving, and interpreting information have become essential for health professionals and scientists. Physicians can no longer expect to comprehensively master all of the information within their areas of expertise. Instead, they must increasingly rely upon problem solving strategies and the ability to systematically access the information required for thoughtful patient care. This course of study provides research-oriented training (with applicants ranging from working clinicians and information technologists, to undergraduates), that spans the use of computer systems in medicine today, including methods for clinical data acquisition, storage, and retrieval; the development, use, and implementation of the electronic medical record; management of clinical data; and the use of medical decision support systems. The program takes full-time students between 18 months and two years to complete all degree requirements, including a research-based thesis.

This program is highly interdisciplinary and designed to provide the skills, experiences, and preparation for students to excel in positions in health care, leadership, or research. Program faculty have diverse expertise and backgrounds, but share a common focus on improving human health. The MHI program aims to offer advanced training in health informatics so that students can develop as independent and applied professionals in future careers in academia (as faculty members and research project managers), medical facilities (as medical students, physicians (if student previously earned an MD), and informatics officers), industry (as engineers and staff scientists), and government (as policy developers and epidemiologists).

II. PROGRAM GOAL EVALUATION

II.a. Please identify the goals you listed in your last multi-year plan. Specifically, what were the purposes for which your program proposed to charge PDST, and what were your goals with respect to enhancing affordability, diversity, and program quality? Please feel free to describe other goals, as well. Describe how you used PDST revenue to advance the goals specified. Please elaborate on the extent to which your program has achieved each of the goals specified, and include quantitative indicators of achievement wherever possible.

The last multi-year plan extended from 2016-17 through 2018-19. Goals in that plan pertained to enhancing program quality by ensuring that our students were trained by experts, maintaining strong student support serves, and enhancing program affordability. Our specific goals included the following:

1. Maintain the quality of the program by recruiting and supporting instructors who hold expertise required by the program.

The additional funds from the increased PDST allowed the program to identify and secure instructors with expertise in health informatics, and provide funding commensurate with salary and benefits that increase over time. This allowed students to receive the best informatics education UC Davis had to offer.

2. Maintain the current level of staffing within the program to provide excellent student support and customer service.

PDST funds were used to support a Graduate Program Coordinator to run the day-to-day operations of the program. This position has not been fulltime in past years, but is now a fulltime position devoted to maintaining the program. This full time status has allowed the Program Coordinator to develop a recruitment plan and to assess and improve student services. Without this staffing position, the program would not have adequate support to fulfill the needs of the program.

3. Enhance program affordability through financial aid.

Per Policy, at least 33% of new PDST was used for need-based financial awards to the students. Details can be found below:

2015-16: 38% of students received need-based funding

2016-17: 35% of students received need-based funding

2017-18: 51% of students received need-based funding

III. PROGRAM GOALS AND EXPENDITURE PLANS

III.a. Please provide strong rationale for either initiating or increasing Professional Degree Supplemental Tuition during the years of this multi-year plan. What goals are you trying to meet and what problems are you trying to solve with your proposed PDST levels? How will the quality of your program change as a consequence of additional PDST revenue? What will be the consequence(s) if proposed PDST levels are not approved? What will be the essential educational benefits for students given the new PDST revenue?

The UC Davis Master of Science degree in Health Informatics is proposing a 3% increase in our PDST over the next five years to address fixed cost increases and achieve the following goals, which center on enhancing program quality and access:

- 1) Hire one additional lecturer to enhance program curriculum.** In 2019, the program plans to hire a 10% lecturer position to provide additional teaching and curriculum expertise. If the increase in PDST is not approved, the program will not be able to hire this additional lecturer, which will weaken the student-faculty ratio.
- 2) Maintain the current level of staffing required to run and support the program.** Student services are very important to our program. Currently we employ a Graduate Program Coordinator to manage the day-to-day operations of the program. We also hired a 100% lecturer to cover teaching and to help advise and mentor graduate students. The ability to have these employees available to our students is a key to our continued success and something we deem as a fixed cost to the program long-term. The proposed increase in PDST funds will ensure that we can provide excellent customer service to our students that keeps us competitive with other Informatics programs. Without the increased PDST rate, the program would struggle to keep both the Graduate Program Coordinator and Lecturer positions at full-time, and advising and student services options would suffer.
- 3) Enhance access by increasing student enrollment over the next five years.** The program seeks to slowly increase total enrollment. In Fall 2017 ten new students were admitted for a total of 14 students overall. In Fall 2018, eleven students were admitted for a total of 24 students overall. This demonstrates the program's recent upward trend in enrollment. In the next five years, the program aspires to double enrollment. This goal will hopefully be achieved through increased recruitment efforts. With the hiring of a Graduate Program Coordinator, the program has already increased visibility and outreach to prospective applicants through graduate fair attendance at several campuses throughout California, increased presence and interaction on social media platforms, and online advertising. The additional funds provided through PDST are vital to continue these recruitment efforts and attend these necessary recruitment events in future years. Without increased PDST funds, the program will be very limited in its ability to perform outreach and compete for the best and brightest health informatics applicants.

III.b. For established PDST programs, please indicate how you are using total actual Professional Degree Fee revenue in 2018-19 in the first column of the table below. In the remaining columns, please indicate how you intend to use the revenue generated by the Professional Degree Supplemental Tuition increase (if specified years in the table do not apply to your multi-year plan, please leave those columns blank).

	Proposed Use of Incremental PDST Revenue						Total Projected PDST Revenue in Final Year
	Total 2018-19 PDST Revenue	Incremental 2019-20 PDST revenue	Incremental 2020-21 PDST revenue	Incremental 2021-22 PDST revenue	Incremental 2022-23 PDST revenue	Incremental 2023-24 PDST revenue	
Faculty Salary Adjustments	\$8,287	\$248	\$2,086	\$2,579	\$3,116	\$4,089	\$20,404
Benefits/UCRP Cost	\$32,941	\$985	\$8,291	\$10,251	\$12,385	\$16,252	\$81,105
Providing Student Services	\$13,523	\$404	\$3,404	\$4,208	\$5,084	\$6,672	\$33,296
Improving the Student-Faculty Ratio	\$14,252	\$426	\$3,587	\$4,435	\$5,358	\$7,031	\$35,089
Expanding Instructional Support Staff	\$26,006	\$778	\$6,546	\$8,093	\$9,778	\$12,830	\$64,031
Instructional Equipment Purchases	\$8,669	\$259	\$2,182	\$2,698	\$3,259	\$4,277	\$21,344
Providing Student Financial Aid	\$57,214	\$1,711	\$14,401	\$17,804	\$21,511	\$28,227	\$140,867
Other Non-salary Cost Increases	\$3,814	\$114	\$960	\$1,187	\$1,434	\$1,882	\$9,391
Facilities Expansion/Renewal	\$8,669	\$259	\$2,182	\$2,698	\$3,259	\$4,277	\$21,344
Other (Please explain in the "Additional Comments" below)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total use/projected use of revenue	\$173,376	\$5,184	\$43,638	\$53,952	\$65,184	\$85,536	\$426,870

Additional Comments:

Not Applicable.

III.c. Please describe cost-cutting and/or fundraising efforts related to this program undertaken to avoid Professional Degree Supplemental Tuition increases even greater than proposed. Please be as specific as possible.

Health Informatics continues to build strong relationships with various health care organizations that employ our graduates, maintain a strong alumni network and work with informatics organizations in our attempts to secure any available funding. We are also working with community agencies to ensure our academic program is notified of and able to receive potential informatics scholarship offerings, such as the Sacramento Regional Technology Alliance and the American Medical Informatics Association.

The program's director is in communication with the UC Davis development office to ensure any funding opportunities are evaluated and sought after.

The program has undertaken a restructuring of the administrative unit associated with reducing program expenses. This reorganization moved the program to the Department of Public Health Sciences, and uses a shared services model with the Office of Medical Education to ensure that student support is maintained with fewer staff directly employed by the Health Informatics program. The Health Informatics program now has a program coordinator who is able to accomplish the same level of student and curricular support but at a lower cost to the program.

III.d. If your program proposes uneven increases (e.g., increases that are notably larger in some years than in others), please explain why.

Not Applicable

III.e. Please indicate your program's current and expected resident and nonresident enrollment in the table below.

	Enrollment					
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Resident	15	15	18	22	26	31
Domestic Nonresident	4	5	6	7	9	11
International	5	4	5	6	7	9
Total	24	24	29	35	42	51

Additional Comments

The program is working to increase student enrollment by roughly 20% each academic year through 2024, for a steady state goal of approximately 50 enrolled students. The program is increasing outreach efforts and potential target audiences (expanding to undergraduate students in addition to working professionals) to achieve this goal.

IV. MARKET COMPARISONS: TOTAL CHARGES

IV.a. In the following table, identify a *minimum* of 3 and *up to* 12 institutions that your program considers to be comparators, including a minimum of 3 public institutions. If it is the case that your program only compares to a small number of programs or only private comparators, please list those.

If the box is checked, the program has provided for each comparator the total charges to degree completion in the following table; otherwise, amounts for first year annual charges were provided by the program for each comparator.

UC Davis/Health Informatics/M.S.
Established Program
Established PDST

	First Year Annual Charges															
	Actuals	Projections					Increases/Decreases									
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2019-20	2020-21	2021-22	2022-23	2023-24					
Residents							%	\$	%	\$	%	\$	%	\$	%	\$
Oregon Health Sciences (public) Duration: 2 years/7 quarters	\$21,952	\$22,611	\$23,289	\$23,988	\$24,708	\$25,449	3%	\$659	3%	\$678	3%	\$699	3%	\$720	3%	\$741
University of Utah (public) Duration: 2 years/4 semesters	\$13,683	\$14,093	\$14,516	\$14,951	\$15,400	\$15,862	3%	\$410	3%	\$423	3%	\$435	3%	\$449	3%	\$462
University of Texas, Houston (public) Duration: 2 years/5 semesters	\$16,773	\$17,276	\$17,794	\$18,328	\$18,878	\$19,444	3%	\$503	3%	\$518	3%	\$534	3%	\$550	3%	\$566
University of Washington (public) Duration: 1.5 years/6 quarters	\$33,120	\$34,114	\$35,137	\$36,191	\$37,277	\$38,395	3%	\$994	3%	\$1,023	3%	\$1,054	3%	\$1,086	3%	\$1,118
University of San Francisco (private) Duration: 1 year/3 semesters	\$49,860	\$51,356	\$52,897	\$54,484	\$56,119	\$57,803	3%	\$1,496	3%	\$1,541	3%	\$1,587	3%	\$1,635	3%	\$1,684
Stanford (private) Duration: 1.5-2 years/ 4-5 quarters	\$32,970	\$33,959	\$34,978	\$36,027	\$37,108	\$38,221	3%	\$989	3%	\$1,019	3%	\$1,049	3%	\$1,081	3%	\$1,113
Public Average	\$21,382	\$22,024	\$22,684	\$23,365	\$24,066	\$24,788	3%	\$642	3%	\$661	3%	\$681	3%	\$701	3%	\$722
Private Average	\$41,415	\$42,658	\$43,938	\$45,256	\$46,614	\$48,012	3%	\$1,243	3%	\$1,280	3%	\$1,318	3%	\$1,358	3%	\$1,399
Public and Private Average	\$28,060	\$28,902	\$29,769	\$30,662	\$31,582	\$32,529	3%	\$842	3%	\$867	3%	\$893	3%	\$920	3%	\$947
Your program - UC Davis Duration: 2 years/6 quarters	\$20,794	\$21,436	\$22,091	\$22,771	\$23,473	\$24,200	3%	\$642	3%	\$655	3%	\$680	3%	\$702	3%	\$727
Nonresidents																
Oregon Health Sciences (public) Duration: 2 years/7 quarters	\$26,240	\$27,027	\$27,838	\$28,673	\$29,533	\$30,419	3%	\$787	3%	\$811	3%	\$835	3%	\$860	3%	\$886
University of Utah (public) Duration: 2 years/4 semesters	\$28,699	\$29,560	\$30,447	\$31,360	\$32,301	\$33,270	3%	\$861	3%	\$887	3%	\$913	3%	\$941	3%	\$969
University of Texas, Houston (public) Duration: 2 years/5 semesters	\$41,472	\$42,716	\$43,998	\$45,318	\$46,677	\$48,077	3%	\$1,244	3%	\$1,281	3%	\$1,320	3%	\$1,360	3%	\$1,400
University of Washington (public) Duration: 1.5 years/6 quarters	\$37,365	\$38,486	\$39,641	\$40,830	\$42,055	\$43,317	3%	\$1,121	3%	\$1,155	3%	\$1,189	3%	\$1,225	3%	\$1,262
University of San Francisco (private) Duration: 1 year/3 semesters	\$49,860	\$51,356	\$52,897	\$54,484	\$56,119	\$57,803	3%	\$1,496	3%	\$1,541	3%	\$1,587	3%	\$1,635	3%	\$1,684
Stanford (private) Duration: 1.5-2 years/ 4-5 quarters	\$32,970	\$33,959	\$34,978	\$36,027	\$37,108	\$38,221	3%	\$989	3%	\$1,019	3%	\$1,049	3%	\$1,081	3%	\$1,113
Public Average	\$33,444	\$34,447	\$35,481	\$36,545	\$37,642	\$38,771	3%	\$1,003	3%	\$1,034	3%	\$1,064	3%	\$1,096	3%	\$1,129
Private Average	\$41,415	\$42,658	\$43,938	\$45,256	\$46,614	\$48,012	3%	\$1,243	3%	\$1,280	3%	\$1,318	3%	\$1,358	3%	\$1,399
Public and Private Average	\$36,101	\$37,184	\$38,300	\$39,449	\$40,632	\$41,851	3%	\$1,083	3%	\$1,116	3%	\$1,149	3%	\$1,184	3%	\$1,219
Your program - UC Davis Duration: 2 years/6 quarters	\$33,039	\$33,681	\$34,336	\$35,016	\$35,718	\$36,445	2%	\$642	2%	\$655	2%	\$680	2%	\$702	2%	\$727

Source(s):

- OHSU: https://www.ohsu.edu/xd/education/student-services/registrar/registrar-forms/upload/2018-19-Tuition-Fees_Final_Amended-8-30-2018.pdf
- University of Utah: <https://fbs.admin.utah.edu/income/tuition/school-of-medicine/>
- University of Texas, Houston: <https://www.uth.edu/fact-book/education/tuition-financial-aid/>
- University of San Francisco: <https://www.usfca.edu/nursing/programs/graduate/masters/health-informatics/faculty/faqs>
- Stanford: <https://registrar.stanford.edu/students/tuition-and-fees>
- Washington: https://www.health-informatics.uw.edu/uwmihim/media/mhihim/mhihim_total_costs-2018-19_2.pdf

Additional Comments: Making fee projects based on annual cost as opposed to quarterly cost. Most of the programs included in comparator table are 2 year programs, so we thought it was appropriate to compare on an annual basis.

IV.b. Why was each of these institutions chosen as a comparator? Include specific reasons why each is considered a peer – for example, competition for the same students and faculty, admitted student pools of similar quality, similar student-faculty ratios, similar program quality, an aspirational relationship between your program and the peer program, etc. What other characteristics do they have in common? If you have included aspirational programs, explain why your program aspires to be comparable to these programs and how it expects to do so within 5 years. Be specific (and if a program is unlikely to achieve comparability to an aspirational program within 5 years, the aspirational program should not be included).

The MHI program choose comparator programs based on program location and qualitative feedback received during recruitment and admissions seasons on where students apply. These programs are also located in the Western U.S., and have historically attempted to attract a large percentage of the same potential students. All of the comparator programs also offer similar training, and the opportunity for students to earn their master’s degree in 1.5 to 2 years at a full-time, in-person program. This is a distinguishing feature that separates the selected programs from several others that offer online, part-time options.

IV.c. Please comment on how your program’s costs compare with those of the comparison institutions identified in the table above.

First year annual charges for California residents in Davis’s MHI program are lower than the average charges of both the public and private comparators of the program, as noted in the table above. Davis falls in the middle of its public comparators with respect to resident charges. Specifically, charges at Oregon and Washington are projected to be higher than those of Davis, and charges at Texas and Utah are projected to be lower than those of Davis. The University of Utah and University of Texas, Houston programs appear to cost substantially less than the other public institutions listed for in-state students, and we assume this is partially due to

the cost of living. Additionally, our public comparators have the flexibility to offer degrees at a much lower tuition rate due to the teaching grants awarded by the National Library of Medicine, which require the offering of a PhD program in addition to an MS program. UC Davis currently has no plans to establish a dedicated PhD program in Health Informatics. With respect to nonresidents, the MHI program's charges are lower than its public and private comparator averages.

IV.d. Please comment on how the quality of your program is unique and/or distinguishable from your chosen comparison institutions.

For students seeking a top quality clinically-based informatics program, the UC Davis Health Informatics program is priced reasonably well, compared with the comparator programs. The Davis program has an established reputation of having an applied and responsive curriculum that inspires confidence in our program's ability to train both clinically and IT focused students to advance their expertise for careers in industry, government, and academics.

UC Davis is a thriving university unique in its extensive access to expertise and data assets ranging from its health system (with 2.5 million patients), to its expansive environmental, ecology, biology and agriculture programs which makes it an attractive program to attend. Davis is a university that can study the effect of the full environment, from farm to food, on the health of individuals, and in turn practice of health on our communities. Davis MHI students will have access to a broad range of systems, expertise and data at the intersection of health and technology.

V. ENROLLMENT AND DIVERSITY STRATEGY

V.a. In the following table, please provide details about enrollment in your program and in your comparison public and private institutions. For established programs, provide data for academic years 2015-16 to 2017-18 and include estimated fall 2018 data if available. In the columns shown, programs should provide as many figures for comparison public and private institutions as are available.

	Actual	Actual	Actual	Estimated	Comparison (2016-17)	
	2015-16	2016-17	2017-18	Fall 2018	Publics	Privates
Ethnicity						
Underrepresented						
African American	0.0%	9.1%	10.9%	8.3%	N/A	N/A
Chicanx/Latinx	0.0%	0.0%	0.0%	0.0%	N/A	N/A
American Indian	0.0%	0.0%	0.0%	0.0%	N/A	N/A
<i>Subtotal Underrepresented</i>	<i>0%</i>	<i>9%</i>	<i>11%</i>	<i>8%</i>	<i>N/A</i>	<i>N/A</i>
Asian/East Indian	25.0%	27.3%	52.2%	50.0%	N/A	N/A
White	43.2%	36.4%	10.9%	20.8%	N/A	N/A
Other/ Unknown	0.0%	6.1%	0.0%	0.0%	N/A	N/A
International	31.8%	21.2%	26.1%	20.8%	N/A	N/A
Total	100%	100%	100%	100%		
Socioeconomic						
% Pell recipients	25.0%	0.0%	43.0%	N/A	N/A	N/A
Gender						
% Male	47.1%	46.7%	42.1%	45.8%	N/A	N/A
% Female	52.9%	53.3%	57.9%	54.2%	N/A	N/A

Sources: Ethnicity and Gender (fall 2018 only): UCD Academic Affairs, UC socioeconomic status and gender: UC Corporate data
 Comparison institutions:

V.b. For established programs, please comment on the trend in enrollment of underrepresented groups in your program over the past three years. How does your program compare with other programs in terms of racial and ethnic diversity, with particular attention to U.S. domestic underrepresented minority students? What is your strategy for creating a robust level of racial and ethnic diversity in your program? For new programs, how do you anticipate your program will compare with other programs in terms of racial and ethnic diversity, with particular attention to U.S. domestic underrepresented minority students? What will be your strategy for creating a robust level of racial and ethnic diversity in your program?

Health Informatics places a high premium on enrolling diverse cohorts. Although the program has enrolled between 8.3% and 10.9% African American students over the past few years, the program recognizes the need to increase racial/ethnic diversity across the board. Starting in 2018, MHI program staff started working with the leadership in Public Health Sciences to align recruitment strategies with the Masters of Public Health program. Recruitment fairs targeting underrepresented minorities, such as the California Diversity Forum, were identified as events to attend. In addition, the program hosted online webinars and has improved the online presence of the program. Comparator ethnicity data are not available. There is currently not a health informatics association collecting national ethnicity data.

In the next five years, the MHI program plans to increase URM enrollment by strategizing with the Department of Public Health Sciences and the Office of Graduate Studies each year about recruitment efforts. The program has plans to outreach to prospective students who identify as underrepresented minorities through different regional health care organizations and undergraduate campuses. The program has also expanded undergraduate outreach in the past year, and is expecting to develop undergraduate coursework at UC Davis. While health professions, in general, have made great strides at enrolling students from diverse backgrounds, informatics – as a field – has not achieved the same success. Increasing the pipeline of applicants who consider informatics as a career is a key – this has been done with medicine and nursing programs where we see best practices in outreaching to potential applicants through K-undergraduate programs.

The MHI program is also a member of several regional informatics organizations, such as the American Medical Informatics Association - NorCal, the regional Informatics associations, HIMSS NorCal, and others. These organizations are aware of the need to diversify the field of health informatics. The program continues to be a part of discussions around how to best approach this goal.

V.c. For established programs, please comment on the trend in enrollment of students from low socioeconomic backgrounds (e.g., students who received Pell Grants as undergraduates). What are your strategies for promoting access for students from low socioeconomic backgrounds?

Since the Health Informatics program targets different audiences (working clinicians, working information technologists, undergraduates), the socioeconomic background of the student population fluctuates greatly from year to year, as demonstrated by the uneven data in the table above. Some years more working professionals apply to the program, while in other years it receives stronger applicants from undergraduate and international populations. The program understands the need for a stronger emphasis on recruiting and promoting admissions to students with lower socioeconomic backgrounds, and the program believes it is well situated within regional and national informatics organizations that do outreach. The program recently hired a full-time Graduate Program Coordinator who can now attend recruitment events targeting undergraduate students, as well as community college

students. The program hopes to develop a pipeline for students from low-income backgrounds to learn about the field and the options available to them through the study of health informatics early on, so they can continue on to become successful working professionals in the field.

V.d. For established programs, how does your program compare with other programs in terms of gender parity? What is your strategy for promoting gender parity in your program? For new programs, how do you anticipate your program will compare with other programs in terms of gender parity, and why? What will be your strategy for promoting gender parity in your program?

The program does not see gender parity as an issue that needs to be addressed for our program. There has consistently been an even distribution of students by gender throughout the program. The program's strategy previously and moving forward is to maintain a healthy balance between male and female students while still reviewing each applicant's full application

V.e. In the final year of your multi-year plan, how do you expect the composition of students in your program to compare with the composition identified in the table above with respect to underrepresented minority students, Pell Grant recipients, and gender? Explain your reasoning.

The program expects to see a growth in the amount of underrepresented minority students who attend the program due to our additional outreach and recruitment effort, and pipeline development. We expect to have a similar proportion of international students at the end of this multi-year plan, as this program is very attractive and adaptable to careers for international students in their home countries. As acknowledged above, gender parity is expected to remain consistent.

V.f. In the tables below, please provide details about the faculty diversity of the school or department that houses your program. (If the program is offered primarily by a single department, please provide data for that department. If the program is offered by a school, please provide school-level data instead. If the program draws faculty from multiple schools or departments, please include two tables for each school/department.)

Note: "All Faculty" represents academic appointees in a program of instruction and research that have independent responsibility for conducting approved regular University courses for campus credit. "Ladder Rank and Equivalent" faculty are faculty holding tenured or non-tenured titles in an appointment series in which tenure may be conferred. Academic title series that have been designated by the Regents as "equivalent" to the Professor series are termed equivalent ranks. Titles in the ladder-rank and equivalent ranks are also referred to as tenure track titles since they represent the titles which confer tenure or which permit promotion to tenure.

All Faculty (School or Department)**					Ladder Rank and Equivalent Faculty (School or Department)				
<i>Ethnicity</i>		2015-16	2016-17	2017-18	<i>Ethnicity</i>		2015-16	2016-17	2017-18
Black/Afr-American	Domestic	1.3%	1.0%	1.2%	Black/Afr-American	Domestic	1.0%	0.9%	0.0%
	International					International			
Chicano(a)/Latino(a)	Domestic	4.3%	4.2%	4.8%	Chicano(a)/Latino(a)	Domestic	5.7%	5.6%	6.2%
	International					International			
American Indian	Domestic	0.2%	0.2%	0.2%	American Indian	Domestic	0.0%	0.0%	0.0%
Asian/Pac Is	Domestic	29.6%	29.7%	30.1%	Asian/Pac Is	Domestic	21.1%	23.0%	24.6%
	International					International			
White	Domestic	64.2%	64.5%	62.8%	White	Domestic	72.2%	70.4%	69.2%
	International					International			
Other/Unknown	Domestic	0.4%	0.3%	0.9%	Other/Unknown	Domestic	0.0%	0.0%	0.0%
	International					International			
<i>Percentage by Gender</i>		2015-16	2016-17	2017-18	<i>Percentage by Gender</i>		2015-16	2016-17	2017-18
Female		37.1%	37.7%	40.5%	Female		30.1%	30.0%	33.2%
Male		62.9%	62.3%	59.5%	Male		69.9%	70.0%	66.8%

Sources: UCD Academic Affairs

Note: Please note that the faculty diversity tables for each UC Davis program proposing to assess PDST do not include domestic and international subcategories. These subcategories have been removed to ensure that these tables do not reveal the identity of specific faculty members. UC Davis programs have included one figure for each ethnicity noted in the tables, capturing both domestic and international faculty.

V.g. What are your program’s current and proposed efforts to advance the recruitment and retention of diverse faculty?

The UC Davis MHI Program, as well as all other entities of the University of California system, remains dedicated to building a more diverse faculty, particularly those from under-represented racial and ethnic populations in the U.S. The Department of Public Health Sciences, the administrative home of the MHI Program, has prioritized recruiting and retaining diverse faculty over the last several years. Since the 2015-2016 school year, the percent of underrepresented minorities (which includes Asian/Pacific Islander) on our faculty has increased from 35.8% to 36.7% (for academic federation faculty) and from 27.8 to 30.8% (for senate faculty). During this

timeframe, the number of female faculty at the federation and senate levels have also increased by 3.4 % (federation) and 3.1 % (senate). The MHI program participates in UC Davis diversity training for faculty recruitment. All faculty recruitment efforts involve national searches and maintain a diverse recruitment committee drawn from across the Department of Public Health Science and peer SOM and SON departments.

VI. FINANCIAL AID STRATEGY AND PROGRAM AFFORDABILITY

VI.a. What are your financial aid/affordability goals for your program? How do you measure your success in meeting them? How will your financial aid strategies (e.g., eligibility criteria, packaging policy) help achieve these goals?

The financial aid and affordability goal for the MHI program is to **provide financial aid to as many students with financial need as possible**. PDST revenue is put aside for return-to-aid, per policy, and spent for need-based grant awarding and merit based stipends. The program works closely with the School of Medicine Financial Aid Office to identify candidates eligible for aid. The program’s historical and current student populations have continuously demonstrated need and perform academically well. The program has not had any difficulty in utilizing the funds made available through this supplemental tuition.

We award aid to those students who have demonstrated financial need in as many cases as possible. In addition, we award merit-based aid for those showing strong promise in this area.

The program measures success by the number of students who benefit from financial aid. Below are figures mentioned earlier from the last three years:

- 2015-16: 38% of students received need-based funding
- 2016-17: 35% of students received need-based funding
- 2017-18: 51% of students received need-based funding

Need-based funding is given to students demonstrating financial needs and the program tries to spread that evenly among the students. Merit-based awards are granted based on student GPA.

Graduating Class	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Percent with Debt	33%	25%	25%	33%	0%	25%	13%
Cumulative Debt among Students with Debt	\$19,741	\$21,305	\$19,385	\$25,094	\$0	\$17,750	\$12,646

VI.b. For established programs, please comment on the trend in the indebtedness of students in your program. What impact do you expect your proposed Professional Degree Supplemental Tuition levels and financial aid plan to have on this trend?

The debt trends for MHI students have fluctuated between 13% and 33%. There are also students supported by their employers who receive a tuition reimbursement or credit. In the 2014-15 graduating class, there was no one who took out loans (this was confirmed with the School of Medicine Financial Aid Office).

	Graduates with Debt	2016-17 Average Debt at Graduation among Students with Debt	Median Salary at Graduation	Est. Debt Payment as % of Median Salary
This program	13%	\$12,646	\$84,666	2%
Public comparisons	NA	NA	\$84,666	NA
Private comparisons	NA	NA	\$84,666	NA

Sources:

UC: Corporate data

Median Salary data: www.glassdoor.com

Comparison institutions:

Additional Comments:

For Median Salary at Graduation: Data about salary is not collected at graduation by program or a national organization. Graduates from the program go into a large variety of positions from healthcare IT, to practicing as physicians to continuing on into medical school. Figure provided is pulled from www.glassdoor.com and is the average of the base pay for the following three job titles in the state of California. Clinical Informatics Specialist (\$90,000); Clinical Analyst (\$82,000); Clinical Informatics Analyst (\$82,000).

VI.c. Please describe your program’s perspective on the manageability of student loan debt for your graduates in light of their typical salaries, the availability of Loan Repayment Assistance Programs, loan repayment plans, and/or any other relevant factors.

A majority of our student population is working adults who come to this program knowledgeable about the financial needs necessary to complete the master’s degree in health informatics. Newer students from clinical backgrounds are entering the program with support from their departments or other clinical fellowships. For these types of students, there are few issues managing their loans or other professional sources of funding. Many of these students continue to work during the program which helps them manage the cost of education. New students enrolling directly from undergraduate programs will need to seek financial

support to complete the program full time. Those students revealing issues managing their debt are and have been directed to the Schools of Health Office of Financial Aid for support and resources in debt management.

Many of our students and graduates have tuition reimbursement aid opportunities through their current employer and many find some assistance once they acquire a new informatics role. Based on the median salary at graduation, the average debt of students leaving the program would be affordable at only 3% of their average monthly income.

VI.d. Please describe any resources available to students in your program, while enrolled or following graduation, to promote lower-paying public interest careers or provide services to underserved populations. Examples may include targeted scholarships, fellowships, summer or academic-year internships, and Loan Repayment Assistance Plans.

The students in the Health Informatics program are required to take three quarters of MHI 290, a weekly seminar course in which professionals from many different areas of informatics are invited to come in and give a presentation regarding a specific topic in informatics. The majority of these presentations are given by professionals working for the State of California or the University of California and pertain to their informatics based positions in the public sector. The program works closely with these contacts and program alumni to aid us in identifying open public sector positions. Additionally, the program frequently emails students and alumni regarding open positions that are sent to us for distribution. We make sure students are aware of these opportunities, especially those that will allow our students to utilize their informatics knowledge in rural clinics and other clinics focused on helping the underserved.

Many of our students are already serving in these areas and are gaining much needed informatics knowledge that will be brought back to their place of employment. Our students work within different public health agencies, many non-profit health organizations and consistently volunteer their time throughout their time with our program.

VI.e. Do graduates of your program who pursue public interest careers (as defined by your discipline) typically earn substantially less upon graduation than students who enter the private sector? If so, what steps does your program take to ensure that these careers are viable in light of students' debt at graduation?

Graduates work in a broad spectrum of roles and there is great variation in the salaries of our alumni. Many graduates are employed at the executive level in both public and private organizations (e.g. Chief Information Officer, Chief Informatics Officer, Chief Executive Officer) while others have worked for public agencies such as the State of California and California Department of Health Care Services, and some go to work with the Peace Corps. As would be expected, the pay for the public service positions tends to be

less than the salaries commanded by our graduates who work for larger health organizations. The market for our graduates continues to grow given the increasing dependency on data for decision making in healthcare. Many of the public service positions do offer some loan relief, which is supplied to graduating students as the agencies determine their future staffing model needs.

In many cases students become aware of the potential employment security public service positions offer. This tends to attract a specific graduate that has already found interest in this area of informatics. The rewards of creating national, state and regional informatics platforms is sometimes very attractive to students and the difference in pay doesn't play as much of a role in their decisions.

Students in the UC Davis Health Informatics program receive information about various public sector positions available in informatics throughout the program curriculum (see description of MHI 290 above). The program works hard to ensure students are aware of the many job opportunities available in the public sector, but the program does not take any additional steps to ensure that the public sector positions are seen as equally viable options in regard to debt management following graduation.

VI.f. Please describe your marketing and outreach plan to prospective students to explain your financial aid programs.

The program utilizes the staff of the UC Davis Schools of Health Financial Aid Office. In addition to providing financial aid information on the program's public website, any students who have detailed financial aid questions and reach out to the Health Informatics Program Office will be directed to the Schools of Health Financial Aid Office. These experts respond to both phone calls and email questions from prospective students to answer their questions and to get them set up in the systems necessary to get them aid. This registration also makes them eligible for any meritorious awards the program may have available.

The Schools of Health Financial Aid Office provides students with information on how to deal with student loans and debt is covered to better ensure the students are fully aware of managing their potential debt.

VI.g. Does your program make information available to prospective students regarding the average debt and median salary of program graduates? If so, how does your program approach sharing this information? If not, why not?

The program informs all prospective students regarding program fees. Program fees are provided on the website and accessible to all who wish to access this information. Historically average debt has not been provided to prospective students, however new informational handouts are currently being created to provide these data to all incoming students at program orientation. The information will also be available upon request for any prospective applicants that contact the program office.

Median salary of program graduates is not provided to prospective graduates because graduates work in a very broad spectrum of roles upon completing the program and there is a great variation in salaries. Some alumni go on to work in executive level positions in both public and private organizations, some continue as practicing physicians or begin medical school, while others take on public service positions for larger public health organizations. These many various career opportunities are presented to all prospective applicants, however salary information is not provided as that data point is highly variable based on student interests and previous education and professional experiences.

VII. OTHER

VII.a. Please describe any other factors that may be relevant to your multi-year plan (such as additional measures relating to your program's affordability, measures that assess the quality of your program, etc.).

The program accounts the minor increase, commensurate with a cost of living increase, will aid our program in its goals to offer students the finest Informatics education on the west coast. The plan is to increase the program's ability to secure instructors in this area and to aid students who are in need and show great promise.

PART B

IX. STUDENT AND FACULTY CONSULTATION

The Regents' *Policy on Professional Degree Supplemental Tuition* requires each plan to include information about the views of the program's student body and faculty on the proposed multi-year plan, which may be obtained in a variety of ways. Campuses are expected to have engaged in substantive consultation with students and faculty only in the year in which a new multi-year plan is prepared. At the program level, consultation should include information on (a) proposed new or increased PDSTs for 2018-19 and multi-year plans for any proposed increases thereafter, (b) uses of PDST revenue, (c) PDST levels/increases in the context of total charges, (d) issues of affordability and financial aid, (e) opportunities and support to pursue lower-paying public interest careers, (f) selection of comparator institutions, (g) diversity, and (h) outcomes for graduates of the program (e.g., career placement of graduates, average earnings, indebtedness levels).

Consultation with students in the program (or likely to be in the program)

IX.a. How did you consult with students about the PDST levels proposed in your multi-year plan? Check all that apply.

- (For proposed new PDST programs and one year programs) A good faith effort was made to discuss the plan and solicit feedback from prospective students and/or students from a related program (please describe):
- Scheduled town-hall style meetings with students in the program to discuss the plan and solicit feedback
- Convened focus groups of students in the program to discuss the plan and solicited feedback
- Described the plan to students in the program via email, solicited their feedback, and reviewed the comments received
- Other (please describe): Education Director, Amber Carrere, met with students on 10/23/18 to discuss proposed fees increases. Graduate Program Coordinator, Kelly Byrns, also followed up the meeting with an email and anonymous survey.

IX.b. Below, please provide a summary of student feedback acquired during the opportunities for consultation selected above. If students provided written feedback, please also attach that feedback to this document. Lastly, please describe below any proposal changes that resulted from this feedback.

Students were invited via email on 10/18/2018 to attend a short information session on the proposed changes in PDST. Also included in this email was a short summary form on the background of PDST and the proposed PDST changes. The information session was scheduled in between core required courses in the late afternoon so as to target as many students and increase attendance as much as possible. Ten students attended the information session. Directly following the session, an additional email was sent with the summary form attached again, as well as a link to an anonymous survey. The students provided no feedback in person. Below is the feedback that was submitted to the anonymous survey link and relates to resident/nonresident tuition as opposed to the Professional Supplemental Tuition. There were no changes made to the PDST proposal as a result of this feedback, as the feedback related to NRST is unrelated to this proposal and the PDST fees.

1. “Can you charge more for nonresidents and International students and less for CA resident students? Why are the rates [not] the same for all incoming students?”
 1. This feedback is regarding differentials in the Nonresident Supplemental Tuition rate (NRST). NRST is separate from the Professional Degree Supplemental Tuition rate. All students, both residents and nonresidents, are charged the same for PDST currently and in this proposal.

IX.c. In addition to consultation with program students and faculty, please confirm that this multi-year plan has been provided to the campus graduate student organization leadership and, if applicable, the program graduate student organization leadership. Each program is also encouraged to engage campus graduate student organization leadership (i.e., your GSA president) in the program's student consultation opportunities. The program should provide graduate student leadership with an opportunity to provide feedback on the proposals. Full comments or a summary of those comments must be provided by the program.

Plan shared with Jonathan Minnick on 11/09/2018.
Campus graduate student organization (i.e., your campus' GSA president)

- Comments or feedback was provided.
 Comments or feedback was not provided.
Nature of feedback or full comments:

If applicable, plan shared with Jade (J) Alota – GSA Rep for Health Informatics on 10/24/2018.
Program graduate student organization (i.e., your program council or department GSA)

- Comments or feedback was provided.
 Comments or feedback was not provided.
Nature of feedback or full comments:

Consultation with faculty

IX.d. How did you consult with faculty about the PDST levels proposed in your multi-year plan? Check all that apply.

- Agenda item at a regularly scheduled faculty meeting
 Scheduled town-hall style meetings of faculty to discuss the plan and solicit feedback
 Convened focus groups of faculty in the program to discuss the plan and solicit feedback
 Described the plan to faculty in the program via email, solicited their feedback, and reviewed the comments received
 Other (please describe): MHI Faculty were sent an email from Kelly Byrns, Graduate Program Coordinator, asking for them to review the proposed fee increases and to complete an online anonymous survey.

IX.e. Below, please provide a summary of faculty feedback acquired during the opportunities for consultation selected above. If faculty provided written feedback, please also attach that feedback to this document. Lastly, please describe below any proposal changes that resulted from this feedback.

Several faculty members responded to an anonymous survey, which was emailed out on 10/17/2018 and 10/22/2018. Below are the written comments that were submitted regarding the PDST proposal. The feedback received did not result in any changes to the proposal, as the feedback was positive overall.

- “Although I hate the increase or even the maintaining of the PDST, I understand its worth”
- “I think the tuition increase is reasonable under two conditions – first, that the program truly reflect the qualities of a professional degree rather than an academic masters, with a focus on practical skills and significant role in job placement. Second, that the program is not otherwise intended as a feeder to the PhD program, which would be contrary to the program’s role as a professional program.”

IX.f. Please confirm that this multi-year plan template was provided to the campus Graduate Dean and endorsed by the Chancellor.

Plan shared with Jean-Pierre Delplanque on November 08, 2018.
Graduate Dean

Plan endorsed by Gary S. May on November 26, 2018.
Chancellor¹

¹ Per the *Policy on Professional Degree Supplemental Tuition* Section 4, found at <http://www.universityofcalifornia.edu/regents/policies/3103.html>