DIFFERENTIAL TUITION REQUEST

College/School: Engineering **Department/Program:** Click here to enter text.

Contact: Joseph L. Cecchi Phone: 277-5522 Email: cecchi@unm.edu

Level: Undergraduate ☐ Graduate ☒

Proposed Differential to be applied as: by student type (major): ☐ by course: ☐
For Main Campus units, all new differential tuition will be charged by student type (major) and will follow the tuition block.

Requested Differential Tuition (shown as an amount per student credit hour):

Student Type	Current Differential	Proposed Differential	Increase/Decrease or New Differential
Residents	$0	$100 (phased in over 2 years)	$100 (phased in over 2 years)
Non-Residents	$0	$100 (phased in over 2 years)	$100 (phased in over 2 years)
Other	$0	$100 (phased in over 2 years)	$100 (phased in over 2 years)

Effective Academic Year: $50/student credit hour implemented in AY2016-17, and an additional $50/student credit hour (total of $100/student credit hour) implemented in AY2017-2018.

This $100/student credit hour will be assessed on the "12+ hours (full time." In addition, a differential tuition of $200 will be applied to a graduate student taking 1-6 hours of dissertation. $100 of this will be implemented in AY2016-17, and an additional $100 (total of $200/) implemented in AY2017-2018.

*If the differential tuition request is approved it will be applied in the following academic year **beginning in the fall semester**.*

Rationale for Request: *Please provide a detailed explanation on the reasoning for the increase/decrease or new differential tuition. Please refer to policy **UAP 8210 2.2** for qualifying justifications for differential tuition.*

Over the past number of years, the revenues of the UNM School of Engineering have not kept pace with our rising costs, nor with the revenues of our peer institutions, both in the region and around the US. As a consequence, the School of Engineering is facing increasing difficulty in continuing to deliver the high quality engineering and computer science graduate education that our students deserve. This is a particular problem for

our graduate programs, as those programs rely heavily on being able to hire and retain outstanding research-active faculty who bring in external support for our graduate students through research assistantships and the funds to build and operate our many research laboratories. The School is finding it increasingly difficult to remain competitive with our peers in this area.

Our accreditation commission, the Accreditation Board for Engineering and Technology, Inc. (ABET), does not permit accreditation of more than one degree program (i.e., BS, MS, or PhD) each discipline. Following the common practice at virtually all other Schools/Colleges of Engineering, the School of Engineering at UNM has chosen to accredit our undergraduate (BA) degree programs. Despite the fact that our graduate degree programs (MS and PhD) are not formally accredited, they are nevertheless, professional programs in every sense of the term. The program outcomes of each of our graduate degree programs are clearly professional outcomes, and they are regularly assessed.

As is the case for our undergraduate degree programs, engineering and computer science salaries are the highest among all graduate disciplines. Engineering and computer science graduates will be well-positioned to secure high paying jobs when they graduate from UNM. Data for the state's Workforce Solutions website, conveniently tabulated at http://workforce.unm.edu , show that UNM School of Engineering MS graduates from the 2007-08 academic year who were working in the state in 2014 were earning on average $87,300/year six years after graduation. This far exceeds the $58,600 average salary for all UNM MS graduates of that cohort. School of Engineering PhD graduates from the 2007-08 academic year who were working in the state in 2014 were earning on average $102,000/year six years after graduation, as compared to the overall UNM PhD average for that cohort of $87,300.

The national data from Payscale.com (http://www.payscale.com/college-salary-report/majors-that-pay-you-back/graduate-degrees?page=20) also indicates very high salaries for graduate engineers and computer scientists. The early career average MS salary for the engineering and computer science disciplines in the School of Engineering is $75,367 and the average mid-career salaries for those displines is $120,778. For PhD graduates, the average early career salary is $87,053, and the average mid-career salary is $129,267.

Market Analysis: *Please provide detailed information on whether the college/school or department/program cost of instruction is markedly higher than the university average program costs or market conditions warrant additional tuition.*

Like other professional programs, the cost of graduate education in the School of Engineering is substantially greater than the university average. Part of what underlies this is the fact that our graduate programs are research driven. Our ~100 tenure/tenure track faculty generate approximately $30M/year in research expenditures, which support research assistantships for

between 70 and 80% of our graduate students. Faculty salaries in the School of Engineering are also higher than the average UNM salary, due in part to competition with other universities in the adjancent states and around the US, as we hire nationally. This is particularly true for hiring the very research-active faculty who can be successful in raising a significant amount of external funding. In fact, the School's Engineering and Computer Science graduate programs are among the only professional graduate programs at UNM that do not have differential tuition.

Student Consultation: *A preliminary request should be submitted to the Provost Office (Main Campus) or Chancellor's Office (Health Sciences Center (HSC)) no later than October 1st. Per policy it must be posted to the unit's website no later than October 1st to allow for at least 30 days of constituent comment prior to final submission to the Provost or Chancellor by November 1st.*

Please provide an explanation on how you plan to communicate the proposed differential tuition request to students, and the feedback you have already received from students on this request, if any.

Going forward, we will communicate our proposal and plans for graduate differential tuition to our graudate students through email messages and town hall meetings, which will also be used to solicit input from the students. Importantly, however, only a small fraction of our graduate students pay their own tuition. We have been polling the students to find out how they are supported, and the indication is that between 70% and 80% of our graduate students have their tuition paid either through a Research Assistship, their employer, or from some other third party source. This means that through the 20% set aside for student aid, we will be able to cover from 67% to 100% of the differential tution for students who are paying their own tution.

In light of the fact that most students are supported on Research Assistantships, we have been communicating with the faculty about our proposal, particularly with the SOE center directors and the "Category 3" center directors. The large majority of the center directors understand the critical need for graduate differential tuition and support the proposal. We will continue to communicate with all faculty as the proposal moves forward.

Accountability/Budget Information: *Please provide budgetary information about how the revenue generated will be expensed. It is highly encouraged to set aside a portion of the revenue generated by the differential for financial aid (**see policy UAP 8210 2.2.2**).*

Financial Aid Set Aside Amount: ___The lesser of the total differential tuition paid by students who are not funded or reimbursed and 20_%

Proposed Annual Revenue

Differential Tuition (per student credit hour)	$100 + $200 for dissertation
Projected # of Student Credit Hours (all student credit hours taken by student majors in the program).	9,600 SCH 360 Dissertation
Total Revenue	$1,032,000

Proposed Annual Expenditures

Financial Aid Set Aside (%)	$ 206,400
Faculty Expense	$ 450,000
Advising Personnel	$
Support Staff Expense	$ 300,000 (10 TAs)
Operating Expenses	$ 75,600
Total Program Costs	**$ 1,032,000**

Please provide a detailed explanation on how the revenue will be used for this program:

The general allocation of revenues will follow the above table, "Proposed Annual Expenditures," with the understanding that some flexibility will be necessary to best accommodate the actual needs as they arise. The lessor of the total amount of graduate differential tuition paid by students who are not funded or reimbursed and 20% of the revenue (estimated as $206,400) will be devoted to financial aid for graduate students paying their own tuition. Faculty expenses will include ~$450,000 that will be allocated for retention of outstanding faculty with strong involvement in graduate education and research. ~$300,000 will be used to hire additional gradute teaching assistants. ~$75,600 will be devoted to operating expenses for our graduate programs.

The Nano Science and Microsystems Engineering Program (NSMS) and Optical Science and Engineering Program are interdisciplinary programs administered by an Executive Committee comprising the deans of engineering, A&S, and the graduate school, along with the vice president for research. Given the nature of this program, the differential tuition that is generated by NSMS and OSE will be returned to the respective program to be allocated in a similar manner as described above, except that the program will not use any of the differential tuition for faculty salaries. The directors of the NSMS and OSE programs will propose allocation budgets annually and submit the budget to the Executive Committee for approval. Based on current enrollments, the NSMS program would generate approximately $39,000 of the estimated total above.

Student Access and Affordability: *Please explain how student access and affordability will be addressed.*

As described above, we will maintain student access and affordability by dedicating up to 20% of the increased revenue from the proposed differential tuition to financial aid for graduate students paying their own tuition. As noted above, we believe that the 20% set aside will cover between 67% and 100% of differential tuition for students paying their own tuition, thus greatly reducing their financial burden.

Peer Comparison Chart: *Please complete the Excel peer comparison spreadsheet. If the peer institutions listed does not have a similar college/school or department/program add an institution that most closely resembles your unit. Please note this adjustment below.*

A peer comparison chart (Chart 1) is provided for comparing graduate resident tuition for Engineering. The current (AY15-16) tuition base (and engineering tuition) at UNM is $6,102/year, assuming 12+ credit hours/per semester. The current average engineering tuition for our 22 peers is $8,677/year, exceeding UNM's base tuition by $2,575.

The proposed graduate differential tuition for the School of Engineering of $100/credit hour translates into $2400/year for two 12+ credit hour semesters. Students taking just dissertation would pay $400/year. Using the current base tuition, the $2400/year differential tuition translates into a total Engineering tuition at UNM of $8,502, which is below the average engineering tuition of our 22 peers.

However, there are two metrics which place the UNM School of Engineering above the average of our peers:

Chart 2 shows that the US News gradute program ranking of the UNM School of Engineering places us 11th out of the 23 Schools of Engineering (22 peers + UNM), i.e, slightly above the middle of all of these institutions.

Chart 3 shows that the UNM School of Engineering ranks 10th out of 23 in terms of annual research expenditures/faculty, which provides a good measure of the impact and success of our research programs and research-driven graduate degrees.

Thus, on the basis of graduate rankings and research expenditures/faculty, the UNM School of Engineering ranks above the average of our 22 peers, whereas the total engineering tuition with the proposed differential tuition for the UNM School of Engineering is less than the average of our 22 peers.

Other Information: *Please provide any additional information that supports this request for differential tuition.*

Dean/Director Approval:

Printed Name:__Joseph L. Cecchi_____10/23/2015_

Signature:_____ Date:_____

UNM + Peers Sorted by Engineering Tuition

	Base	Engineering
University of Colorado- Boulder	10530	13680
University of Texas- Austin	9412	11448
Arizona State University	10606	11410
University of Colorado- Denver	8544	11256
University of Houston	8568	11160
University of Arizona	11040	11040
Florida International University	9119	10888
University of Nebraska- Lincoln	6960	9624
University of Texas- Arlington	8710	9454
University of Utah	5172	8898
Texas A & M University	7203	8725
University of Kansas	7436	8712
UNM w/diff @ $100/SCH	**6102**	**8502**
University of Iowa	8396	8396
University of California- Riverside	7480	7480
University of Texas- El Paso	7016	7016
New Mexico State University	6588	6588
University of Missouri- Columbia	6568	6568
Texas Tech University	6477	6477
University of Nevada- Las Vegas	6336	6336
University of Oklahoma- Norman	5721	5721
University of Tennessee- Knoxville	5309	5309
Oklahoma State University	4704	4704