

Memorandum

To: Judith Lothian, Ph.D.  
Chair, Faculty Senate

From: Karen E. Boroff, Ph.D.   
Interim Provost and Executive Vice President

Re: M.S. in Physics

Date: March 12, 2018

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The Office of the Provost is in receipt of the proposed MS in Physics, which passed by vote of the Faculty Senate on November 3, 2017. The approval by the APC and the Senate was conditioned on commitment of resources towards a tenure-track hire and graduate teaching assistant lines, as identified in the Department's request, prior to any student enrollment in the program.

No matter how comprehensive any initial academic proposal may be, there are always open questions. These include "will the proposed student enrollments actually be achieved?" This is a key question in evaluating whether the program is sustainable. In addition, while the design phase is one aspect of a program proposal, actually implementing the program provides a wealth of insights that bring to bear on a program's merit. These include the degree to which learning outcomes have been achieved, the ability to attract and retain faculty members to teach in the program, the kinds of support that may now be needed to sustain an active research agenda in the relevant field, the ability to earn grants and other forms of support, and how competition may react to what is now offered.

There is no need to repeat the elements of this proposal. I would also add that there is no crystal ball for picking programs that will resonate in the market. Sometimes, faculty determination and a measure of sweat equity can make all the difference between a highly successful program and one that fails. I have no doubt of the commitment of the faculty from the Physics Department, but decisions are driven by data. We asked for a business plan for enrollments, for expenses associated with this new program, a marketing strategy, and some analysis of space for a hire. While we realize there may be some additional expense in starting new programs, ultimately, the enrollment in the MS in Physics should be sufficient to offset these costs. Under shared governance, we all need a degree of clarity and agreement to understand that new initiatives need to contribute to our financial sustainability or to acknowledge that new resources from other areas in the college or University may require realignment to subsidize these ventures when enrollment falls short. To this end, a "sunset clause" for under achievement has to be in place.

As a way to balance the need for innovation with the uncertainty of program outcomes, I support the MS in Physics program, on the following provisional basis.

- The Office of the Provost commits to providing incremental dollars for the department to hire one term faculty member to start August 2018. As the department so decides, and in accordance with the *Faculty Guide*, this hire can be renewed for additional year(s) depending on the department's review and recommendation to the dean.

- The attached business plan, devised by the department, will be the guiding document on expenses and enrollment projections. If the enrollments (22 full time students) are not achieved by the end of the third year of the program, (1) students in the program will be “taught out” and (2) the program is automatically terminated. If the program does meet enrollment targets, the faculty can, through the normal EPC, Dean, Faculty Senate, and Provost channels, request to make permanent this program.

College of Arts and Sciences  
 Proposal for New Master of Science in Physics  
 Revenue and Expense Summary  
 As of 02/08/18

	Start-Up 2017-2018	Year One 2018-2019	Year Two 2019-2020	Year Three 2020-2021	Year Four 2021-2022	Year Five 2022-2023	Cumulative Total
<b>Revenue:</b>							
Tuition		179,712	362,370	444,864	564,696	623,820	2,175,462
Fees		2,608	5,868	7,172	8,476	9,780	33,904
Grants	0	182,320	368,238	452,036	573,172	633,600	2,209,366
		50,000	100,000	150,000	200,000	250,000	750,000
<b>Total Revenue</b>	<b>0</b>	<b>232,320</b>	<b>468,238</b>	<b>602,036</b>	<b>773,172</b>	<b>883,600</b>	<b>2,959,366</b>
<b>Expenses:</b>							
Personnel		222,571	268,195	437,473	410,017	448,165	1,786,421
Non-Personnel		74,000	54,500	79,500	55,000	55,000	318,000
<b>Total Expenses</b>	<b>0</b>	<b>296,571</b>	<b>322,695</b>	<b>516,973</b>	<b>465,017</b>	<b>503,165</b>	<b>2,104,421</b>
<b>Gross Contribution</b>	<b>0</b>	<b>(64,251)</b>	<b>145,543</b>	<b>85,063</b>	<b>308,155</b>	<b>380,435</b>	<b>854,945</b>
Estimated Administrative Overhead Allocation	0	(81,312)	(163,883)	(210,713)	(270,610)	(309,260)	(1,035,778) a
<b>Net Contribution</b>	<b>0</b>	<b>(145,563)</b>	<b>(18,340)</b>	<b>(125,650)</b>	<b>37,545</b>	<b>71,175</b>	<b>(180,833)</b>
Notes:							
a Overhead allocation was estimated at 35% of total revenue for this illustration							

College of Arts and Sciences  
 Proposal for New Master of Science in Physics

Expense Details

As of 02/08/18

Data in cells is deleted since fields contain personnel information

Acct. Code	Start-Up 2017-2018	Year One 2018-2019	Year Two 2019-2020	Year Three 2020-2021	Year Four 2021-2022	Year Five 2022-2023	Cumulative Total
6111 Faculty Salaries - Full Time Term							
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Total Full Time Faculty Salaries							
6141 Adjunct Faculty Salaries							
6141 Adjunct Savings from TA Coverage of Undergrad. Courses							
6142 Adjunct Faculty Summer PT							
Adjuncts & Other Faculty Payments							
Total Faculty Salaries							
6212 Dir, Graduate Studies							
Total Other Wages							
6531 Graduate Assistant Stipend							
6532 Graduate Assistant Tuition Remission							
Total Student Compensation							
Total Salaries and Wages							
6891 Fringe Benefits							
Total Personnel							
7111 Instructional Supplies							
7112 Office Supplies							
7113 Lab Supplies							
7121 Books and Publications (Library Resources)							
7124 Memberships							
7151 Lab and Instructional Equipment (Start-Up)							
7154 Furniture and Fixtures (Desks, Chairs, Accessories)							
7192 Advertising							
7211 Travel:							
Faculty Travel (New Hires)							
Student Travel (Conference Presentations)							
Total Non-Personnel							
Total Expenses							

Notes:

a Value of tuition remission for incremental GA positions must be funded by transfer to central pool maintained by Provost's Office

b Fringe based on 41.2% for full-time positions, 9% for adjuncts and other, and 0% for students

c Start-up costs estimated as 60k spread over 3 years for each new faculty member

College of Arts and Sciences  
 Proposal for New Master of Science in Physics  
 Revenue and Tuition Remission Details  
 As of 02/08/18

	Tuition Rate (a)	# of Students	Credit Load	Total Credits	Tuition Revenue	Fee Rate	Fee Revenue	Tuition & Fee Revenue	Grants Revenue
<b>2018-2019</b>									
Tuition:									
New Students	1,248	8	18	144	179,712	326	2,608	182,320	
Returning Students	1,248	0	12	0	0	326	0	0	
Total Enrollment		8		144	179,712		2,608	182,320	50,000
Tuition Remission:									
New Students	1,248	4	18	72	89,856				
Returning Students	1,248	0	12	0	0				
Total Awards		4		72	89,856				
<b>2019-2020</b>									
Tuition:									
New Students	1,285	11	18	198	254,430	326	3,586	258,016	
Returning Students	1,285	7	12	84	107,940	326	2,282	110,222	
Total Enrollment		18		282	362,370		5,868	368,238	100,000
Tuition Remission:									
New Students	1,285	2	18	36	46,260				
Returning Students	1,285	4	12	48	61,680				
Total Awards		6		84	107,940				
<b>2020-2021</b>									
Tuition:									
New Students	1,324	12	18	216	285,984	326	3,912	289,896	
Returning Students	1,324	10	12	120	158,880	326	3,260	162,140	
Total Enrollment		22		336	444,864		7,172	452,036	150,000
Tuition Remission:									
New Students	1,324	6	18	108	142,992				
Returning Students	1,324	2	12	24	31,776				
Total Awards		8		132	174,768				
<b>2021-2022</b>									
Tuition:									
New Students	1,364	17	18	306	417,384	326	5,542	422,926	
Returning Students	1,364	9	12	108	147,312	326	2,934	150,246	
Total Enrollment		26		414	564,696		8,476	573,172	200,000
Tuition Remission:									
New Students	1,364	2	18	36	49,104				
Returning Students	1,364	6	12	72	98,208				
Total Awards		8		108	147,312				
<b>2022-2023</b>									
Tuition:									
New Students	1,405	14	18	252	354,060	326	4,564	358,624	
Returning Students	1,405	16	12	192	259,760	326	5,216	274,976	
Total Enrollment		30		444	623,820		9,780	633,600	250,000
Tuition Remission:									
New Students	1,405	6	18	108	151,740				
Returning Students	1,405	2	12	24	33,720				
Total Awards		8		132	185,460				
Notes:									
a) Tuition rates assume 3% annual increases based on 1,212 in 2017-2018									