

# **Academic Department and Program Review**

The Academic Program Review process at UNM-Los Alamos has been developed to complement the on-going institutional effectiveness process and to become a vital part of institutional planning. The program review is a comprehensive, systematic method of evaluation and review of achievement conducted every 3-5 years within academic programs for the following purposes:

- 1. To improve teaching and learning
- 2. To evaluate and analyze current practices
- 3. To promote faculty discussion about curriculum within a program
- 4. To ensure that program planning is related to goals at the institutional, programmatic, and course levels
- 5. To evaluate program support in the areas of technology, equipment, supplies, facilities and staffing

The program review process at UNM-LA is comprehensive and cyclical and consists of the following components:

- 1. The development of a written report by program faculty and Department Chair
- 2. Submission to Dean of Instruction for review
- 3. Submission to Institutional Effectiveness Committee
- 4. Recommendation report from the IE committee to the department
- 5. Response from the department about planned changes as a result of the process

## 1. Academic Department and Program Information

**Complete information regarding the Department** 

Full Official Name of Academic Department:

Mathematics and Engineering

Submission Date of Department/Program Review:

June 10, 2016

Names of Chairperson or Coordinator and any participating faculty:

Kay Willerton (Department Chair); Irina Alvestad (Program Chair-Engineering)

Purpose or Mission Statement for the Department

Our purpose is to provide quality courses and programs for our students and recruit, retain, and support qualified faculty.

List the goals/objectives (measurable) for the Academic Department:

- 1. Retain students to the end of our courses
- 2. Prepare students for transfer
- 3. Staff the department sufficiently to maintain high standards.

Explain How the Mission and Goals for the Academic Department Support UNM-LA's Mission and Goals:

The goals meet the "Preparation for Transfer" and "Pathways for Career" of the Mission and Goal #3, staffing, and Goal #4, Increase enrollment.

#### Complete for each Academic Degree program and certificate: Program 1.

Full Official Name of Academic Program:

AS in Pre-Engineering

Names of Chairperson or Coordinator and any participating faculty:

Program Coordinator—Irina Alvestad

Purpose or Mission Statement for the Academic Program:

Provide quality education for students in order to prepare them for transfer to a four-year degree program

List the goals/objectives (measurable) for the Academic Program:

Students in the Pre-Engineering AS program will demonstrate their ability to solve technical problems using mathematical/engineering problem solving techniques, and communicate effectively both written and orally.

Students will analyze, interpret and apply data that they collect, or that is specified for student use.

Students will analyze specified conditions, formulate solution approach and solve basic engineering problems.

Explain How the Mission and Goals for the Academic Program Support UNM-LA's Mission and Goals:

Students in this program are being prepared to transfer into a 4-year engineering program.

#### Program 2.

Full Official Name of Academic Program:

AS in Pre-Professional Elementary Education

Names of Chairperson or Coordinator and any participating faculty:

Kay Willerton\* This program has not been actively supported since the Bernalillo site closed.

Purpose or Mission Statement for the Academic Program:

Prepare students planning to transfer to a baccalaureate program upon completion or to meet Level III/Paraprofessional licensure for educational assistants

List the goals/objectives (measurable) for the Academic Program: No goals or objectives have been created for this program.

Explain How the Mission and Goals for the Academic Program Support UNM-LA's Mission and Goals: Students in this program are being prepared to transfer into a 4-year education program.

## 2. Assessment

Has a Program Assessment Plan been created and submitted for each program in the department?

🗆 YES 🖾 NO 🛛 NA

If "YES", please give date of submission for each and explain any changes you expect to make to each plan. (Please attach all plans to the end of this report.)

2014 for engineering

If "NO", when do you expect to have each plan completed?

Summer 2017 for pre-professional education

Has a Program Assessment Report been submitted for each program in the department? (Please attach the most current Assessment Report to the end of this review.)

□ YES ⊠ NO □ NA

If "YES", give the date of submission for each and describe any changes being planned as a result of the assessment?

If "NO", when do you expect to have each report completed? Summer 2017 for pre-engineering and Summer 2018 for pre-professional elementary education

Does the use of as	sessment processes result in continuous improvement in the program/unit?
🗆 YES	

If yes, describe some of the recent improvements that have come about in response to needs identified through these evaluation processes:

# 3. Personnel (Faculty)

Please answer these questions about your department.

Number of Core Faculty: 2, Math

Number of Part Time Faculty: 7, Math 4, engineering

Do the programs in the department have a "champion?" This could be a department/program chair or a volunteer. YES □ NO □

If Yes, please enter name(s) for each program.

Irina Alvestad, Rod Linn for engineering; no one for elementary education

Please list all existing Support positions: (Example: Lab Tech)

None

Is the number of personnel adequate to support your department and program areas?

🗆 YES 🛛 NO

If "NO", explain below.

We need to hire an engineer to serve as both a faculty member and a program champion in order to create a better cohort group to move through the program.

We also need a faculty member who can serve as program champion for elementary education if we decide to keep this program.

# Does the evidence exist to show that faculty members teaching in this department have involved themselves with our in-service training (Faculty orientation and/or Faculty Assembly events) and other professional development?

If "NO," please explain:

Please complete the faculty information in the table on the next page, including faculty credentials and courses each faculty has taught.

#### Faculty Roster Form Qualifications of Full-Time and Part-Time Faculty

Name of Department: Mathematics and Engineering Academic Term(s) Included: Fall 2015-Date Form Completed:

Complete the following table with faculty names (both core and TPT) and highest degree for each. Are Academic credentialing forms and transcripts and/or copies of relevant certifications on file?

Faculty Name	C, TPT D, UN, UT List all that apply	Courses Taught for the last 3 academic years (Include term & course number)	Academic degrees & graduate coursework (if needed to qualify to teach); Include certifications, work experience if needed to qualify to teach a	Completed Academic Credentialing form		Transcripts on file		Copies of certifi IF APPLICABLE		ations on file
Alizante di Leiran		List all that apply	Course	N		N V				57
Alvestad, Irina	С, D, UT	101/102/103, 106; 162/192, 123	PhD-Math	⊠ Yes		K Yes		L Yes		
Beard, Mary Anne	TPT, UT			🗆 Yes	🛛 No	🗆 Yes	🗆 No	🗆 Yes	🗆 No	
Dahl, Becky	TPT, D, UT	MATH 120; 118, 121, 150, 160,180	BA-Math (Minor-CS); MA-Math Education (Minor-Educ Psychology)	🛛 Yes	□ No	🗆 Yes	□ No	🗆 Yes	🛛 No	
Durakiewicz, Anna	ТРТ, UT	MATH 101, 102, 103, 120, 121, 123, 150, 162, 163, 264; STAT 145	MS-Math and Statistics	🛛 Yes	□ No	🛛 Yes	□ No	🛛 Yes	□ No	□ NA
Kaul, Ann	TPT, D, UT	MATH 162, 163, 180, 150	BSEd-Secondary Ed-Math; MS- Applied Math; PhD-Applied Math	🛛 Yes	🗆 No	🗆 Yes	🗆 No	🗆 Yes	🛛 No	□ NA
Laeser, Melissa	TPT, D, UT	MATH 121; 011/012; 021/022; 145; 101/102/103	BS-Math; MS-Mathematical & Computer Science	🛛 Yes	□ No	🛛 Yes	□ No	🗆 Yes	🗆 No	⊠ NA
Nava-Gaxiola, Citlalitl	TPT, D, UT	MATH 101/102/103, 121/107, 001/021	BSc-Physics, Math; PhD- Mathematical Sciences	🛛 Yes	□ No	🗆 Yes	🗆 No	🛛 Yes	🗆 No	
Schmidt, Andrea	TPT, D, UT	MATH 121; 150; 121; 107; 011/012/021/022; CS 151L; ECE 131	BS-Applied Math & CS; MS-Applied Math; PhD-ECE	🛛 Yes	□ No	□ Yes	□ No	□ Yes	□ No	⊠ NA
Willerton, Kay	C, D	MATH 011/012/021/022, 101/102/103, 121	BS-Math; MSE-Mathematics Education	X Yes	□ No	🗆 Yes	🛛 No	□ Yes	🗆 No	⊠ NA
Woods, Tadg	TPT, UT	STAT 145; MATH 150, 264	BS-Math (English-Minor); MA- Applied Math; MS-Math; PhD-Math	🛛 Yes	□ No	🛛 Yes	□ No	🗆 Yes	🗆 No	🖾 NA

#### Revised March 2016

Linn, Rodman	TPT, UT	CE 202	🗆 Yes	🗆 No	🛛 Yes	🗆 No	🗆 Yes	🗆 No	
Canfield, Jesse	TPT, UT	ME 160L, 260L	🗆 Yes	🗆 No	🛛 Yes	🗆 No	🗆 Yes	🗆 No	
Hand, David	TPT, UT	ME 260L	🗆 Yes	🗆 No	🗆 Yes	🛛 No	🗆 Yes	🗆 No	
Wentz, Kip	TPT, UT	ME 160L, 260L	□ Yes	□ No	🗆 Yes	🛛 No	🗆 Yes	□ No	

C, TPT: Core, Temporary Part-time (adjunct); D, UN, UT: Developmental, Undergraduate Nontransferable, Undergraduate Transferable

# 4. Student Success and Achievement

Please answer these questions about each program within your department. (Enrollment, Retention, Graduates and Licensing Exams)

Degree Program Name: AS in Pre-Engineering

Academic Year	Fall number of Maiors	Spring number of majors	Number of Annual	Name of State or National Licensing/Certification Examinations, # of Studer and % of Students Passing Examinations for each acade IF APPLICABLE	nts Taking Examir mic year	ations, and
(At least Past Three Years)			Graduates	Name of Examination	Number of	Number of
inice reality					students	students
					taking exam	passing exam
AY 2013	47	51	0	NONE		
AY 2014	48	48	1			
AY 2015	52	51	10			
AY 2016	53	60	4			

#### Degree Program Name: AA Pre-Professional Elementary Education

<b>Year</b> (At least Past Three Years)	Fall number of Maiors	Spring number of majors	Number of Annual	Name of State or National Licensing/Certification Examinations, # of Studen and % of Students Passing Examinations for each acade IF APPLICABLE	ts Taking Examir mic year	nations, and
		majoro	Graduates	Name of Examination	Number of	Number of
					students	students
					taking exam	passing exam
2015-2016	6	7	0			
2014-2015	1	1	0			
2012-2013	1	1	0			
2011-2012	3	3	0			
2010-2011	3	4	0			

### **Course Completion Rates**

Please enter all courses taught by the department.

#### Face-to-Face courses

Course		Number	r and % of	Students	with A, B,	C		Numbe	r and % o	f Students	s with D, F	•	Number and % of Students with W or I					
	2013	-2014	2014-20	15	2015-20	16	2013	-2014	2014	-2015	2015	-2016	2	)13-2014	2014	-2015	2015	-2016
	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
CE 202 (3)		3-	4-80%			4-57%		0	0			1-14%		0	1-20%			2-29%
		100%																
ECE 131 (3)	6-75%				6-75%		0				0		2-25	6			2-25%	
ECE 203 (3)	7-						0						0					
	100%																	
ECE 213 (3)		3-						0						0				
		100%					_											
ENGF 293 (3)	1-50%		0.700/		0.000/	_	0		4.00/				1-50	6			-	
MATH 011 (2)			8-73%	6-	8-89%	5-			1-9%	0	1-11%	0			2-18%	0	0	0
			5.500/	100%	0.000/	100%			2.200/	•	0				2.200/	•	4.440/	4.220/
MATH 012 (2)			5-50%	4-100	8-89%	2-67%			3-30%	0	0	0			2-20%	0	1-11%	1-33%
			23- 0E0/	7-88%	20-	10-			4-15%	0	1-5%	U			0	1-12%	1-5%	2-17%
			03 <i>7</i> 0	<u> </u>	90% 19	03%			1 16%	1 10%	0	0			2 1 2 9/	1 10%	1 5%	0
WATT 022 (2)			72%	0-0070	95%	100%			4-1070	1-1070	U	U I			J-12/0	1-1070	1-370	0
MATH 099 (4)	5-83%	0	7270		5570	10070	1-17%	0					0	1-				
	5 6576	Ŭ					1 1770	Ŭ					Ŭ	100%				
MATH 100 (4)	19-	14-					12-	12-					2-6%	1-4%				
	58%	52%					36%	44%										
MATH 101 (1)			28-	26-	34-	22-			2-6%	1-3%	0	0			1-4%	2-7%	3-8%	1-4%
			90%	90%	92%	96%												
MATH 102 (1)			21-	19-	33-	21-			4-15%	2-6%	1-2%	0			1-4%	8-28%	8-19%	9-30%
			81%	66%	<b>79%</b>	70%												
MATH 103 (1)			11-	19-	18-	12-			4-19%	0	2-9%	2-6%			6-29%	8-30%	3-13%	11-
			52%	70%	78%	48%												44%
MATH 106 (1)	17-	15-	27-				0	0	0				5-23	6 10-	1-4%			
	77%	60%	96%											40%				
MATH 107 (1)	22-	19-	29-	17-	20-	14-	0	0	0	0	0	0	2-8%	4-17%	5-15%	6-26%	4-17%	3-18%
	92%	83%	85%	74%	83%	82%	 						4.47	,				
MATH 110 (1)	5-83%	12	1.500/				0	2.00/	1.50%				1-1/	6	0			
MATH 120 (3)	18-	13-	1-50%				U	2-8%	1-50%				6-25	6 10- 40%	U			
	75%	52% 17	26	16	20	14	11	0 200/	12	0.200/	0 2 40/	6.25%	2.00/	40%	E 110/	6 100/	E 1E0/	4 170/
WATH 121 (3)	20- 50%	1/- 50%	20- 50%	10- 52%	20- 61%	14- 58%	11- 32%	8-28%	13-	9-29%	ð-24%	0-23%	3-9%	4-13%	5-11%	0-19%	2-12%	4-1/%
MATH 122 (2)	<u>3</u> 8-73%	15-	11-	7-36%	1-33%	0_52%	JZ/0 1_0%	5-20%	1-5%	6-32%	6-50%	6-35%	2-19	6 5-20%	0_/13%	6-32%	2-12%	2-12%
WATT 125 (3)	0-7370	60%	52%	7-30%	4-3370	5-3570	1-370	J-2070	1-370	0-3270	0-30%	0-33%	2-18	J-20%	5-4370	0-3270	2-1270	2-1270
		3070	5270	I														I

MATH 150 (3)	10- 71%	16- 84%	20- 100%	14- 67%	7-50%	4-36%	4-29%	2-11%	0	3-14%	5-36%	4-36%	0	1-5%	0	4-19%	2-14%	3-28%
MATH 162 (4)	9-75%	9-90%	9-82%	7-50%	12- 80%	8-73%	2-17%	0	0	4-29%	0	0	1-8%	1-10%	2-16%	3-21%	3-20%	3-27%
MATH 163 (4)	3-43%	4-40%	3-75%	10- 77%	6-75%	10- 100%	0	2-20%	1-25%	2-15%	0	0	4-57%	4-40%	0	1-8%	2-25%	0
MATH 180 (3)	5-83%	5- 100%					0	0					1-17%	0				
MATH 181 (3)		3- 100%				3- 100%		0				0		0				0
MATH 192 (1)				6-75%	4-80%	3- 100%				0	0	0				2-25%	1-20%	0
MATH 264 (4)	10- 100%	1-25%	15- 88%	1-50%	16- 100%	8- 100%	0	1-25%	1-6%	0	0	0	0	2-50%	1-6%	1-50%	0	0
ME 160L (3)		8-89%		4-67%		10- 100%		0		0		0		1-11%		2-33%		0
ME 260L (3)	4- 100%		6-86%		4- 100%		0		0		0		0		1-14%		0	
STAT 145 (3)	15- 94%	10- 91%	9- 100%		5-83%	12- 75%	0	0	0		0	0	1-6%	1-9%	0		1-7%	4-25%

#### Online Instruction, if applicable

Course		Number	r and % of	Students	with A, B,	C	Number and % of Students with D, F Number and % of Students wi						vith W or I					
	2013	-2014	2014-20	15	2015-20	16	2013	-2014	2014	-2015	2015	-2016	2013 <sup>.</sup>	-2014	2014	-2015	2015	-2016
	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
MATH 101 (1)					8-40%	5-42%					0	1-8%					12-	6-50%
																	60%	
MATH 102 (1)					6-33%	5-42%					1-6%	0					11-	7-58%
																	61%	
MATH 103 (1)					0	2-17%					0	0					10-	10-
																	100%	83%
MATH 120 (3)	7-44%	13-	8-25%	8-25%			4-25%	4-12%	6-19%	4-12%			5-31%	17-	18-	20-		
		38%												50%	56%	63%		
MATH 121 (3)	16-	12-	6-40%	15-	12-	14-	4-15%	8-24%	5-33%	5-25%	4-24%	8-29%	6-23%	12-	4-27%	0	1-5%	6-21%
	62%	38%		75%	71%	50%								38%				
MATH 150 (3)	4-44%	9-43%	6-30%	5-50%	6-50%	7-44%	2-23%	2-9%	6-30%	2-20%	1-8%	2-12%	3-33%	10-	8-40%	3-30%	5-42%	7-44%
														48%				
MATH 180 (3)				24-	26-	20-				5-15%	2-6%	5-15%				5-15%	5-15%	7-22%
				70%	79%	63%												
STAT 145 (3)	12-	38-	57-	53-	38-	49-	7-30%	5-9%	1-2%	7-9%	11-	20-	4-16%	16-	12-	12-	17-	30-
	52%	64%	81%	74%	58%	50%					16%	20%		27%	17%	17%	26%	30%

Please describe any observed trends in the enrollment and retention of students in the program.

Stats enrollment has increased significantly due to increase in online offerings. The success rate went down in AY 16 which is concerning.

# 5. Curriculum, Facilities, Equipment, and Financials

#### Curriculum

In the first box, list all catalog courses which are service courses in the department. This would include course taught by the department which are general education courses or other courses for general use, and not necessarily for a specific degree in the department. For areas such as Math and Communications, this would include most of the courses. In the remaining boxes, list courses which are specific to departmental degrees. Do not include courses taught by a different department. Indicate how many sections were successfully offered during each of the last six semesters (3 years); include courses that have not been taught at all.

Course		Fall Semester			Spring Semester	
Number	2015	2014	2013	2016	2015	2014
Math	2	2	2	1	2	2
099/Math						
011/012						
Math	2	2	2	1	2	2
100/Math						
021/022						
Math	3	2	3	3	2	4
120/Math						
101/102/103						
Math 121	3	3	4	3	4	4
Math 123	1	1	1	1	1	1
Math 150	2	2	2	2	2	2
Math 162	1	1	1	1	1	1
Math 163	1	1	1	1	1	1
Math 264	1	1	1	1	1	1
Math 180	1		1	1	1	1
Math 181				1		1
STAT 145	2	3	2	4	4	3

**Department Service Courses: Mathematics** 

#### **Program Name: Pre-engineering**

Course		Fall Semes	ter		Spring Sem	ester
Number	2015	2014	2013	2016	2015	2014
ME 260	1	1	1			
CE 160			1			
ECE 131	1		1			
ECE 203		1	1			
ME 160				1	1	1
ECE 213					1	1
CE 202	1	1		1		1

#### **Facilities and Equipment**

#### Briefly describe the facilities occupied by your Department/Academic program. (i.e. classrooms, offices, labs, etc.)

2 math offices, no special classrooms or labs for math; engineering uses the computer labs and the electronic labs

Is the space adequate to support the mission of your program for day and evening classes, if applicable? UNM-LA Program Review Page 11 of 14 ⊠ YES ⊠ NO

If no, please explain

Engineering sharing with electronics and robotics is becoming problematic

# Briefly describe current types equipment (does not need to be extremely detailed) used by your Department/Academic program and indicate.

Engineering shares electronics equipment as well as welding and machine shop equipment. We also have Elvis boards

#### Is the equipment adequate to support the mission of your program for day and evening classes, if applicable?

🖾 YES 🛛 NO

If no, please explain

#### **Financial Information**

Is the budget information available to department and program chairs?  $\hfill YES \hfill DNO$ 

What is the total budget for the department including adjunct faculty (TPT) for the last academic year (2015-2016)?

Indicate departmental (program courses and/or departmental support courses) enrollment for the past 5 years for fall and spring.

MATH

Numbers	2013-20	14	2014-20	15	2015-2016		
	Fall	Spring	Fall	Spring	Fall	Spring	
Course Enrollments (number of students)	299	217	478	412	470	433	
Total Course Enrollments for Academic year	51	16	89	90	90	03	
	2013-20	14	2014-20	15	2015-20	16	
	Fall	Spring	Fall	Spring	Fall	Spring	
Student Credit Hours for Department/Program	861	1025	1110	1005	1032	1052	
Total Student Credit hours for Academic year	18	86	21	15	20	84	

#### ENGINEERING

Numbers	2013-20	14	2014-20	15	2015-2016		
	Fall	Spring	Fall	Spring	Fall	Spring	
Course Enrollments	37	26	21	6	12	14	
(number of students)							
Total Course	6	3	2	7	2	6	
Enrollments for							
Academic year							
	2013-20	14	2014-20	15	2015-20	16	
	Fall	Spring	Fall	Spring	Fall	Spring	
Student Credit Hours for	<b>63</b>	45	36	18	36	51	
Department/Program							
Total Student Credit	10	08	5	4	8	7	
hours for Academic year							

Please give an approximate cost of the department per credit hour. (Budget ÷number of credit hours generated) for each academic year. Math

	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Amount	\$152882.07	\$176679.23	\$188.671.78	\$144478.88	\$155,347.30
expended for					
the year					
Cost per credit			\$100.04	\$68.31	\$74.54
hour					

#### Engineering

	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Amount spent				\$22,289.01*	\$8432.83
Cost per credit				\$228.46	\$96.93
hour					

\*This included \$9952.20 spent on computers at the end of the term. This amount was subtracted when figuring the cost per credit hour

#### Has the department pursued any external sources of funding such as grants?

🗆 YES 🛛 NO

Please explain.

#### Does the department have any plans to pursue external sources of funding?

$\boxtimes$	YES		NO
-------------	-----	--	----

Please explain.

Engineering grants are being considered.

#### Indicate the approximate amount of fee dollars generated for the last 3 years.

2013-2014	2014-2015	2015-2016
<b>\$0</b>	\$1 <b>50</b>	\$315
\$420	<b>\$0</b>	\$240
\$200	<b>\$0</b>	<b>\$0</b>
\$3480	\$3420	\$3240
\$615	\$9 <b>30</b>	\$630
<b>\$0</b>	<b>\$0</b>	<b>\$180</b>
	2013-2014 \$0 \$420 \$200 \$3480 \$615 \$0	2013-2014   2014-2015     \$0   \$150     \$420   \$0     \$200   \$0     \$3480   \$3420     \$615   \$930     \$0   \$0

#### \*Totals

Course Fees Collected (live)	2013-2014	2014-2015	2015-2016
Math	\$3480	\$3420	\$3420
Engineering	\$1235	\$1080	\$7785

#### \*Totaled by area

Is adequate financial support available to meet the needs of this program?  $\boxtimes$  YES  $\hfill\square$  NO

If "NO", please explain.

# 6. SUMMARY

After completing the above review of your program, synthesize the data you have provided, focusing on both the program's strengths and weaknesses. Answer the following questions:

- a. Is the program contributing to the mission/strategic plan?
- b. Is the program contributing to the general education of students?
- c. Describe the overall strengths of the program.
- d. Describe the overall weaknesses (opportunities for improvement) of the program.
- e. Within existing resources, how can the program be improved, more students recruited, obtain certification (if applicable)?
- f. Describe actions to be taken as a result of this review, including instructional resource and practices, and curricular changes to be made.
- a. Both Math and Engineering are contributing to the Preparation for Transfer portion of our mission as well as the Pathways for Careers portion.
- b. Mathematics is a foundation of general education and these courses provide rigorous work for students who have an ultimate goal of a baccalaureate or advanced degree as well as those looking for a terminal career oriented degree.
- c. We have well-qualified caring faculty who truly care about educating their students.
- d. We have no one in charge of developmental education at the moment, nor anyone who has the patience needed for these students.
- e. We have funds to hire one faculty this year for math and one next year for math. There are not enough funds to hire an engineering faculty as those were "given up" during this year's budget cycle. Without more resources in engineering, I don't see how we can improve much. We need to reduce the cost per credit hour for both math and engineering. The most likely way is to recruit more students and offer fewer sections of courses to decrease costs.
- f. We will look for grant funding for engineering, do a major advertising and recruitment push for that program, and see if we can make this program much more viable. We will hire a developmental math instructor. We will look at our online classes and set more firm standards for both course design and for faculty engagement in the courses.

## 7. Subsequent reviews

After completing the above template, compare it to your most recent past review and answer the following questions

Describe and evaluate any major changes in the program (a. changes in the overall discipline or field; (b) student demand;
(c) societal need: (d) institutional reason for offering the degree; (e) other elements appropriate to the discipline in questions; and (f) other)

NO PREVIOUS REVIEWS

2. Describe actions taken since the last review, including instructional resources and practices, and any curricular changes.