



## Mathematical Sciences

#6 Plan cycle - 6  
Plan cycle 2019/2020  
7/1/19 - 6/30/20

## Introduction

**Unit Mission:**

The Department of Mathematical Sciences (DMS) supports the mission of McNeese State University by offering quality programs of study in the mathematical sciences and secondary mathematics education for degree and non-degree students. These programs include college-level courses for majors, college-level service courses for non-majors, and special courses by which professionals may update their knowledge in various areas of the mathematical sciences. The department fosters programs in cooperation with area agencies to upgrade the quality of mathematics education in the region. The department also promotes and encourages scholarly activities and community and University service from all DMS faculty.

**Institutional Mission Reference:**

The DMS supports the institutional mission of offering curricula distinguished by academic excellence. We offer a baccalaureate degree in mathematical sciences with concentrations in mathematics, mathematics education, physics education, statistics, and physics. We also offer a master's degree in mathematical sciences, with concentrations in mathematics, computer science, and statistics.



MSCI	MATH	1	0	1	2	4	0	1	1	1	4	7	2	1	3	1	3	8	4
	MPHY	0	0	0	0	0	0	3	0	0	0	3	0	2	0	0	0	2	0
	MTED	1	2	0	5	8	0	9	8	2	8	27	0	7	9	1	7	24	2
	PYED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	STAT	0	0	0	0	0	0	2	0	0	1	3	0	1	2	0	1	4	1
	(blank)	0	0	0	0	0	0	1	1	1	2	5	0	0	0	1	3	4	0
<b>Grand Total</b>		<b>2</b>	<b>2</b>	<b>1</b>	<b>7</b>	<b>12</b>	<b>0</b>	<b>16</b>	<b>10</b>	<b>4</b>	<b>15</b>	<b>45</b>	<b>2</b>	<b>11</b>	<b>14</b>	<b>3</b>	<b>14</b>	<b>42</b>	<b>7</b>

2016-2017:

Major	Conc.	Summer						Fall						Spring					
		F	S	J	Sr	T	CMP	F	S	J	Sr	T	CMP	F	S	J	Sr	T	CMP
MSCI	MATH	0	0	0	3	3	0	1	3	2	4	10	4	2	1	5	3	11	4
	MPHY	2	0	0	0	2	0	4	1	0	0	5	1	0	4	0	0	4	0
	MTED	0	3	1	0	4	0	8	10	5	6	29	1	2	5	7	3	17	2
	PYED	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	1	0
	STAT	0	1	0	0	1	0	0	0	1	0	1	0	0	1	1	0	2	0
	(blank)	1	0	0	0	1	0	0	2	0	0	2	0	0	1	1	0	2	0
<b>Grand Total</b>		<b>3</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>11</b>	<b>0</b>	<b>14</b>	<b>16</b>	<b>8</b>	<b>10</b>	<b>48</b>	<b>6</b>	<b>5</b>	<b>12</b>	<b>14</b>	<b>6</b>	<b>37</b>	<b>6</b>

2017-2018:

Major	Conc.	Summer						Fall						Spring					
		F	S	J	Sr	T	CMP	F	S	J	Sr	T	CMP	F	S	J	Sr	T	CMP
MSCI	MATH	1	0	3	1	5	0	1	3	6	4	14	2	0	2	4	11	17	2
	MPHY	0	0	0	0	0	0	1	3	1	2	7	0	0	1	2	2	5	1
	MTED	0	2	4	1	7	0	2	3	4	5	14	1	5	2	3	6	16	0
	PYED	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0
	STAT	0	0	0	0	0	0	0	0	1	2	3	0	0	0	1	1	2	0
	(blank)	1	0	1	0	2	0	1	0	1	3	5	0	0	0	0	0	0	0
<b>Grand Total</b>		<b>3</b>	<b>2</b>	<b>8</b>	<b>2</b>	<b>15</b>	<b>0</b>	<b>5</b>	<b>13</b>	<b>10</b>	<b>16</b>	<b>44</b>	<b>3</b>	<b>5</b>	<b>6</b>	<b>10</b>	<b>20</b>	<b>41</b>	<b>3</b>

2018-2019:

Major	Conc.	Summer						Fall						Spring					
		F	S	J	Sr	T	CMP	F	S	J	Sr	T	CMP	F	S	J	Sr	T	CMP
MSCI	MATH	0	1	0	4	5	0	3	2	2	8	15	2	3	1	3	9	16	4
	MPHY	0	0	1	1	2	0	0	0	1	1	2	0	0	0	1	2	3	2
	MTED	1	1	2	3	7	0	11	3	7	4	25	2	3	9	3	4	19	1
	PYED	0	0	0	0	0	0	1	1	0	0	2	0	1	0	0	0	1	0
	STAT	0	0	1	1	2	0	2	0	2	2	6	0	0	1	0	2	3	0
	(blank)	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
<b>Grand Total</b>		<b>1</b>	<b>2</b>	<b>4</b>	<b>9</b>	<b>16</b>	<b>0</b>	<b>17</b>	<b>6</b>	<b>12</b>	<b>16</b>	<b>51</b>	<b>4</b>	<b>7</b>	<b>11</b>	<b>7</b>	<b>17</b>	<b>42</b>	<b>7</b>

2019-2020:

Major	Conc.	Summer						Fall						Spring					
		F	S	J	Sr	T	CMP	F	S	J	Sr	T	CMP	F	S	J	Sr	T	CMP
MSCI	MATH	1	0	2	3	6	0	3	1	2	5	11	2	3	0	2	6	11	3
	MPHY	1	0	0	0	1	0	1	0	0	1	2	0	0	0	0	3	3	1
	MTED	0	3	1	1	5	0	6	5	2	6	19	0	8	6	3	7	24	2
	PYED	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0
	STAT	0	0	0	0	0	0	0	1	0	1	2	0	0	0	1	0	1	0
	(blank)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Grand Total</b>		<b>2</b>	<b>4</b>	<b>3</b>	<b>4</b>	<b>13</b>	<b>0</b>	<b>10</b>	<b>8</b>	<b>4</b>	<b>13</b>	<b>35</b>	<b>2</b>	<b>11</b>	<b>7</b>	<b>6</b>	<b>16</b>	<b>40</b>	<b>6</b>

Percentage Change between 2017-2018:

Major	Fall	Total	% Change
MSCI	2017	44	15.909%
	2018	51	
<b>Total</b>	<b>2017</b>	<b>44</b>	<b>15.909%</b>
	<b>2018</b>	<b>51</b>	

Percentage Change between 2018-2019:

Major	Fall	Total	% Change
MSCI	2018	51	-31.37%
	2019	35	
<b>Total</b>	<b>2018</b>	<b>51</b>	<b>-31.37%</b>
	2019	35	

### 1.1.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:

The number of students with concentrations in MTED is up by one. Faculty are encouraged by this, considering the challenging environment that area educators are facing. Faculty will continue to monitor these numbers. Two faculty members will conduct a workshop on advising and retention for the other DMS faculty members.

2017-2018:

The number for the MATH concentration is up, while the number for the MTED concentration is down. Some students are switching from MTED to MATH. For fall 2017 to spring 2018, the MTED number has improved a bit. By increasing the number of faculty involved in recruiting we hope to improve the MTED number a bit more. We will be coordinating with the Department of Education Professions in their new recruitment effort.

Following up on the observations made by Jessica Hutchings regarding enrollment in the various concentrations, we have assigned a new advisor to work specifically with students in the statistics concentration in order to strengthen enrollment in this concentration. We are also coordinating with Dwight Bertrand who is leading recruitment efforts in STEM disciplines in the College of Science and Agriculture.

2018-2019:

Benchmark was exceeded in the period Fall 2017-2018, but not in the period Spring 2018-2019. Persistence from Fall 2018-Spring 2019 has decreased compared with previous periods. We plan to



<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>6</b>	<b>4</b>	<b>0</b>	<b>7</b>	<b>9</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>4</b>
--------------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------

Major	Conc.	2018-2019			2019-2020			2020-2021			2021-2022			2022-2023		
		U	F	S	U	F	S	U	F	S	U	F	S	U	F	S
MSCI	CSCI	0	0	0												
	MATH	2	1	2												
	STAT	0	0	0												
<b>Total</b>		<b>2</b>	<b>1</b>	<b>2</b>												

### 2.1.1 Analysis of Data and Plan for Continuous Improvement

2015-2016:

During the 2015-2016 academic year, enrollment remains steady in the mathematics and statistics concentrations. Faculty notice that enrollment is down in our computer science concentration.

2016-2017:

Roughly half of our graduate students are high school teachers who are not able to attend day classes. DMS continues to accommodate them by offering many graduate courses in the evening hours. We also try to offer graduate courses during the summer, which many of our students appreciate.

2017-2018:

The improvement in numbers can be partly explained by our efforts to provide courses in the evenings and the summer. This has been successful in attracting part-time students to our program.

Following up on the observations made by Jessica Hutchings regarding enrollment in the various concentrations, we have assigned a new advisor to work specifically with students in the statistics concentration in order to strengthen enrollment in this concentration. To strengthen enrollment and completion in CSCI, coordination with EECS will be necessary in order to provide additional 600-level CSCI electives. Increased demand for lower level CSCI courses has made it difficult for EECS to continue to offer these electives.

2018-2019:

Our graduate program is mostly populated by graduates of our own undergraduate mathematics program. In the case of mathematics education, the qualification to teach dual enrollment courses is one of the main reasons to take graduate courses. Senior privilege for undergraduates has helped recruit a number of students to the graduate program. Our plan for continuous improvement is to inform students of the senior privilege option earlier in their undergraduate careers.

2019-2020:

From Spring 19 to Spring 20, the number of students in the Math concentration held steady, while the Stat concentration saw a nice increase.

The gain seen in the Stat concentration is due primarily to students who have taken an interest in doing research projects with Dr. Berken. She now advises both undergrad and graduate students in the statistics concentration. In an effort to continuously improve, Dr. Lee has also been added as a statistics advisor. Her area of research is different from Dr. Berken's and will provide another research outlet for students concentrating in statistics. This should draw additional students to the program.

We will continue our efforts to maintain and strengthen the Math concentration by reaching out to graduates from similar disciplines such as Engineering and Math Education. We have had good success recruiting students from these areas.

Recruitment and retention in the CS concentration is hindered by the lack of availability of 600 level CS electives.

## 3 Assessment and Benchmark

## Benchmarks:

- A persistence rate (retained students from fall Y1 to spring Y1) of 85%.
- A retention rate of 70% from Y1 to Y2.
- A retention rate of 55% from Y1 to Y3.
- A retention rate of 45% from Y1 to Y4.
- A 4-year graduation rate of 35%.
- A 5-year graduation rate of 40%.
- A 6-year graduation rate of 45%.

## Major:

- MSCI - Bachelor of Science in Mathematical Sciences
- MSCP - Bachelor of Science in Mathematical Sciences

## 3.1 Data

2012:

Major	Cohort Size	Same Major?	Persistence Rate		Retention Rate						Graduation Rate					
					Y1 to Y2		Y1 to Y3		Y1 to Y4		4-Year		5-Year		6-Year	
			#	%	#	%	#	%	#	%	#	%	#	%	#	%
MSCI	11*	Same	7	63.6	3	27.3	3	27.3	3	27.3	1	9.1	1	9.1	1	9.1
		Changed	4	36.4	7	63.6	5	45.5	3	27.3	4	36.4	5	45.5	5	45.5
		<b>Total</b>	<b>11</b>	<b>100</b>	<b>10</b>	<b>90.9</b>	<b>8</b>	<b>72.7</b>	<b>6</b>	<b>54.5</b>	<b>5</b>	<b>45.5</b>	<b>6</b>	<b>54.5</b>	<b>6</b>	<b>54.5</b>
MSCP	1	Same	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
		Changed	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
		<b>Total</b>	<b>1</b>	<b>100</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>
<b>Total</b>	12	Same	7	58.3	3	25.0	3	25.0	3	25.0	1	8.3	1	8.3	1	8.3
		Changed	5	41.7	7	58.3	5	41.7	3	25.0	4	33.3	5	41.7	5	41.7
		<b>Total</b>	<b>12</b>	<b>100</b>	<b>10</b>	<b>83.3</b>	<b>8</b>	<b>66.7</b>	<b>6</b>	<b>50.0</b>	<b>5</b>	<b>41.7</b>	<b>6</b>	<b>50.0</b>	<b>6</b>	<b>50.0</b>

\*2 students were previously undeclared before declaring MSCI.

2013:

Major	Cohort Size	Same Major?	Persistence Rate		Retention Rate						Graduation Rate					
					Y1 to Y2		Y1 to Y3		Y1 to Y4		4-Year		5-Year		6-Year	
			#	%	#	%	#	%	#	%	#	%	#	%	#	%
MSCI	6*	Same	6	100	3	50.0	2	33.3	1	16.7	1	16.7	0	0.0	0	0.0
		Changed	0	0.0	0	0.0	1	16.7	1	16.7	0	0.0	0	0.0	1	16.7
		<b>Total</b>	<b>6</b>	<b>100</b>	<b>3</b>	<b>50.0</b>	<b>3</b>	<b>50.0</b>	<b>2</b>	<b>33.3</b>	<b>1</b>	<b>16.7</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>16.7</b>

\*2 students were previously undeclared before declaring MSCI.

2014:

Major	Cohort Size	Same Major?	Persistence Rate		Retention Rate						Graduation Rate					
					Y1 to Y2		Y1 to Y3		Y1 to Y4		4-Year		5-Year		6-Year	
			#	%	#	%	#	%	#	%	#	%	#	%	#	%
MSCI	5	Same	1	20.0	1	20.0	0	0.0	0	0.0						
		Changed	2	40.0	0	0.0	2	40.0	1	20.0						





2020:

Major	Cohort Size	Same Major?	Persistence Rate		Retention Rate						Graduation Rate				
					Y1 to Y2		Y1 to Y3		Y1 to Y4		4-Year		5-Year		6-Year
			#	%	#	%	#	%	#	%	#	%	#	%	#
MSCI		Same													
		Changed													
		<b>Total</b>													

### 3.1.1 Analysis of Data and Plan for Continuous Improvement

2018-2019:

We have not met the stated benchmarks.

We have already taken a step toward improving retention in our program by revising the prerequisites for MATH 190. The prerequisites for MATH 190, beginning calculus, have been changed to ensure a stronger background in precalculus topics, specifically to ensure a stronger background in trigonometry. In this way we expect better pass rates in MATH 190. We consider MATH 190 to be a gateway course for our majors. We will continue to look for ways to help students succeed in their early coursework. We will also make a greater effort to determine the reasons (other than course performance) that lead to students leaving our program.

2019-2020:

**Performance Objective 2 Provide a comprehensive curriculum that reflects disciplinary foundations and remains responsive to contemporary developments, student and workforce demand, and university needs and aspirations.**

#### 1 Assessment and Benchmark

Benchmark: The BS in Mathematical Sciences program faculty meet once per academic year to review student progress, curricular offerings, and appropriate professional contacts and opportunities.

##### 1.1 Data

2016-2017:

Two full faculty meetings and several meetings of subgroups of faculty were held.

2017-2018:

One full faculty meeting was held, along with numerous meetings of smaller subgroups of faculty.

2018-2019:

Two full faculty meetings and several meetings of subgroups of faculty were held.

2019-2020:

Two full faculty meetings and several meetings of subgroups of faculty were held. In the later half of Spring 20, all communication took place remotely using email, moodle, and zoom in response to Covid 19.

##### 1.1.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:

Faculty discussed adding new courses to curriculum. A history of mathematics course was added to the curriculum.

2017-2018:

Faculty discussed curriculum changes. We are considering adding a minor in applied statistics and adding

a concentration in computer science. Faculty also discussed changes to the Mathematics Education concentration in response to the new state requirements.

2018-2019:

In the fall of 2018, the department added a minor in applied statistics and a concentration in computational science. We have coordinated with the education department to revise the math education concentration in accordance with new state requirements.

2019-2020:

Course designed for Elementary math teachers were redesigned this year. A great deal of discussion took place to determine whether these courses would be placed on the Statewide Articulation Matrix. At the request of Dr. Ogea, they were not added to the matrix. Plans are underway to eliminate Math 231 and retain Stat 231 in its place eliminating the need to crosslist these courses.

## 2 Assessment and Benchmark

Benchmark: The MS in Mathematical Sciences program faculty will meet once per academic year to review student progress, curricular offerings, and appropriate professional contacts and opportunities.

### 2.1 Data

2016-2017:

Faculty held one graduate faculty meeting to discuss the program. Subgroups of faculty met throughout the semester to discuss individual topics as needed.

2017-2018:

One full faculty meeting was held, along with numerous meetings of smaller subgroups of faculty.

2018-2019:

Two full faculty meetings were held, along with numerous meetings of smaller subgroups of faculty.

2019-2020:

Two full faculty meetings and several meetings of subgroups of faculty were held. In the later half of Spring 20, all communication took place remotely using email, moodle, and zoom in response to Covid 19.

#### 2.1.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:

Faculty discussed the use of the thesis option by graduate students and the impact that it has on our ability to populate graduate courses.

2017-2018:

Faculty discussed curriculum changes. The department is considering adding a graduate-level biostatistics course.

Update: In subsequent informal meetings, a firm decision was made to add the course mentioned above. This decision was made in response to a request from the biology department. They wish to use this course in their new graduate program. Other discussion in small group meetings has centered on finding ways to meet the needs of students in the statistics concentration. It is often difficult to populate the upper level/graduate applied statistics courses. To address this, faculty are proposing an applied statistics minor which will include cross-listed courses that serve both undergraduates and graduate students. The addition of students seeking the applied statistics minor should help to populate courses needed by our graduate students. Small group meetings were also held to track MSCI majors' progress and anticipate the need for course offerings.

2018-2019:

The department has added a biostatistics course offering, which is now available to all concerned majors. To attract students, and for the sake of greater clarity, course titles and course descriptions have been improved.

2019-2020:

A greater number of graduate level courses will be offered in hybrid or online format. This trend started before Covid 19 hit, but is now greatly spurred on by the need to move classes online. Faculty are redesigning courses to facilitate this change.

**Performance Objective 3 Graduates will find employment in mathematical science careers or further their education in the mathematical sciences.**

**1 Assessment and Benchmark**

Benchmark: 80% of graduates of the BS in Mathematical Sciences will find employment in mathematical science careers or further their education in the mathematical sciences within two years of graduation.

**1.1 Data**

2016-2017:

Of the 72 graduates from spring 2011 through spring 2017, there are 60 whose employment status is known. Of these 60 graduates, 53 have found employment in mathematical sciences careers or have furthered their education in the mathematical sciences within two years of graduation. This is approximately 88% of graduates for whom employment status is known.

2017-2018:

Of the 78 graduates from spring 2011 through spring 2018, there are 65 whose employment status is known. Of these 65 graduates, 58 have found employment in mathematical sciences careers or have furthered their education in the mathematical sciences within two years of graduation. This is approximately 89% of graduates for whom employment status is known.

2018-2019:

We consider only the Fall 2017-Spring 2018 cohort for this year's data. Going back to 17-18 fits within the two year window described in the benchmark. There are six people in this cohort. All are either pursuing further studies or are employed. One is teaching at the high school level. Three are in graduate school in math or math-related areas. Two are employed in math/computer science-related jobs.

2019-2020:

**1.1.1 Analysis of Data and Plan for Continuous Improvement**

2016-2017:

Faculty are satisfied with the results for this objective. Faculty are particularly pleased to have helped the local schools by providing them qualified mathematics teachers. Faculty continue to discuss ways of improving the tracking of our graduates.

2017-2018:

The department's efforts to update our records of the status of graduates (their employment or further studies) in a more timely manner have been mostly successful.

We will break down our data by cohort beginning next year. We have consistently exceeded our benchmark. In particular, our students have great success finding teaching positions regardless of their concentration.

2018-2019:

This is the first year that we have reported cohort data instead of cumulative data. The benchmark has been met. We have had 100% success with this cohort. Everyone is involved in math or math-related jobs or studies.

2019-2020:

**2 Assessment and Benchmark**

Benchmark: 80% of graduates of the MS in Mathematical Sciences program will find employment in mathematical science careers or further their education in the mathematical sciences within two years of graduation.

**2.1 Data**

2016-2017:

From spring 2011 to present, the program has graduated 74 students. 32/33 students whose status after graduation is known are working in a field related to the mathematical sciences or went on to continue their studies with further graduate coursework.

2017-2018:

From spring 2011 to present, the program has graduated 82 students. 39/41 (95%) of students whose status after graduation is known are working in a field related to the mathematical sciences or went on to continue their studies with further graduate coursework.

This year the department has information for all of our graduates. Seven of the eight have found teaching positions, two at the college level and five at the secondary level.

2018-2019:

We again consider only the Fall 2017-Spring 2018 cohort. There were seven graduates in this cohort. All of these graduates are involved in teaching.

There are five teaching at the high school level, one at the community college level, and one at the university level.

2019-2020:

**2.1.1 Analysis of Data and Plan for Continuous Improvement**

2016-2017:

Faculty began collecting contact information from graduates as they completed their comprehensive exams. Collection of data will continue and faculty plan to contact students two years after their graduation to collect information for this assessment item. Until that time, faculty will continue to try to collect information from as many students as possible.

2017-2018:

We will break down our data by cohort beginning next year. We have consistently exceeded our benchmark.

2018-2019:

We are happy to have our students filling teaching positions in mathematics. With one exception, these are local positions. There is a critical need for mathematics educators in our area.

2019-2020:

**Performance Objective 4 Engage in collaborative ventures and campus and community activities that enhance economic development, cultural and artistic growth, and or educational experiences for the SWLA region and beyond.**

**1 Assessment and Benchmark**

Benchmark: 50% of faculty will serve as academic advisors.

**1.1 Data**

Academic Year	Faculty members that served as faculty advisors
---------------	---

	#	%
2013-2014	-	60%
2014-2015	-	56%
2015-2016	-	50%
2016-2017	-	53%
2017-2018	8/14	57%
2018-2019	9/16	56%
2019-2020	11/16	69%

### 1.1.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:

Advising assignments will be adjusted due to loss of faculty.

2017-2018:

The department will appoint additional faculty members as advisors, specifically to advise students in the statistics concentration in order to help recruit and retain students in this concentration.

2018-2019:

The benchmark is met. With the added statistics advisor, we increased the number of advisors from eight to nine. Note that we also filled two vacant faculty positions prior to this academic year; hence, the total number of faculty changed from 14 to 16.

2019-2020:

The benchmark is met. Two new advisors were added, Dr. Christine Eastman and Dr. Meesook Lee, in order to better serve students in the MATH Education and Statistics concentrations.

## 2 Assessment and Benchmark

Benchmark: 50% of faculty will serve on college or University committees.

Prior to 2018-2019, the benchmark was 40% of faculty members.

### 2.1 Data

Academic Year	Faculty members that served on college or University committees	
	#	%
2013-2014	-	50%
2014-2015	-	50%
2015-2016	-	50%
2016-2017	-	53%
2017-2018	8/14	57%
2018-2019	8/16	50%
2019-2020	8/16	50%

### 2.1.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:

The DMS has encouraged faculty members to participate in college/University committee work as opportunities have arisen.

2017-2018:

There are more opportunities for instructors to serve on college and University committees now that we have fewer PhD faculty. We will raise our benchmark to 50% for 2018-2019.

2018-2019:

The benchmark was met. We will consider raising the benchmark to 60%.

University committees on which our faculty are serving include RNL, Graduate Council, Retroactive Withdrawals, GEAC, Athletic Advisory Committee, Faculty Senate, Academic Integrity, and Undergraduate Curriculum Committee.

2019-2020:

The benchmark was met.

In addition to the committees listed above, Dr. Christine Gorton now serves on the University Advising Committee.

### 3 Assessment and Benchmark

Benchmark: At least two meetings per semester of the local student chapter of the Mathematical Association of America (MAA) will be held.

Prior to 2016-2017, the benchmark was for monthly meetings, however, this was revised to two per semester.

#### 3.1 Data

2016-2017:

At least two meetings per semester of the local student chapter of the MAA were held.

2017-2018:

At least two meetings per semester of the local student chapter of the MAA were held.

2018-2019:

At least two meetings per semester of the local student chapter of the MAA were held.

2019-2020:

At least two meetings per semester of the local student chapter of the MAA were held.

#### 3.1.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:

Faculty advisors plan to better track student attendance at the meetings.

2017-2018:

Information on student attendees at the local MAA meetings was recorded. This information was used to recruit students for volunteering at MathCounts, AMC, etc., as well as the student team competition and integration bee at the MAA section meeting.

2018-2019:

Our student leaders did an excellent job recruiting their fellow students for competitions and volunteering by using data collected at our meetings.

2019-2020:

These meetings resulted in collaboration among students to not only participate in the annual regional MAA meeting and competitions, but also to carry out an impressive upgrade to the appearance of our tutoring center. Students involved in MAA gathered during fall break to paint formulas and helpful information on the walls of the tutoring center in a very aesthetically pleasing fashion.

### 4 Assessment and Benchmark

Benchmark: Student teams will participate in an MAA mathematics team competition in the spring in conjunction with the annual section meeting of the MAA. Individual students will compete in the annual integration bee held at the same meeting.

#### 4.1 Data

Academic Year	# of math students that attended the MAA meeting	# of students that competed in the integration bee	# of students that competed in the team competition	# of students giving talks
2013-2014	8	4	NA	NA
2014-2015	8	5	5	3
2015-2016	8	3	4	3
2016-2017	9	5	5	3
2017-2018	10	7	8	0
2018-2019	13	6	8	2
2019-2020	15	7	8	1

##### 4.1.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:

Faculty are very pleased by the 2017 results:

- Phat Ngo took third place in the integration bee.
- One of our student teams took third place in the team competition.
- Steven Dabelow took 2<sup>nd</sup> place in the grad student paper competition.

2017-2018:

Faculty are once again pleased with the results of both the integration bee (a top 10 of 45) and the student team competition (one team in the top three).

2018-2019:

Tracking student attendance (see above) and good student leadership resulted in more interest on the part of the students in attending and participating in our sectional mathematics meeting. We will continue to recruit our best students to leadership positions.

Britt Qualls took first place in the graduate student paper competition. Jason Jones took second place in the same competition. Undergraduate Tabitha Buford made the final round (top 10%) in the student integration bee. Two other students made the semi-final round (top 30%) in the same competition. One of our four-member undergraduate teams ranked 7/19 in the student team competition for undergraduates.

2019-2020:

Haile Gilroy took first place in the graduate student paper competition.

## 5 Assessment and Benchmark

Benchmark: The Department will organize volunteers to help at the McNeese annual Literary Rally; MathCounts, a national middle school mathematics competition; and the American Mathematics Competition, a high school mathematics competition. These events provide recruiting opportunities.

#### 5.1 Data

2016-2017:

The Department organized volunteers to help at the McNeese annual Literary Rally, for MathCounts, a national



middle school mathematics competition, and for the American Mathematics Competition, a high school mathematics competition. For the AMC, there were 37 high school student participants in 2015 and 74 participants in 2016.

2017-2018:

For MathCounts the department provided eight faculty and one student volunteer. There were nine faculty volunteers for the Literary Rally and 10 faculty volunteers for the AMC.

2018-2019:

For MathCounts and the Literary Rally the numbers were similar to last year. Due to time conflicts and faculty out on sick leave we were unable to support the AMC competition for high school students.

2019-2020 :

For MathCounts the department provided seven faculty and three students volunteers. There were nine faculty volunteers for the Literary Rally and eight faculty and 5 student volunteers for the AMC.

### 5.1.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:

Efforts to recruit our own student volunteers to help with these competitions were difficult this year as all three events (MAA section meeting, MathCounts, and AMC) all took place on the same day. DMS faculty discussion of ways of increasing participation in the American Mathematics Competition lead to an increase in the number of participants.

2017-2018:

The department is pleased with the strong turnout of faculty volunteers in all of the events mentioned for this benchmark.

2018-2019:

We will try to resume support for the AMC next year.

2019-2020:

Volunteer participation for MathCounts was exceptionally good this year. The Engineering Society which sponsors the event expressed gratitude for our help. We are also pleased that we were able to resume our AMC competition this spring before Covid 19 became an issue.

## 6 Assessment and Benchmark

Benchmark: 40% of faculty will be involved in recruiting students.

Prior to 2016-2017, the benchmark was 25% of faculty members.

### 6.1 Data

Academic Year	Faculty members involved in recruiting students	
	#	%
2013-2014	-	50%
2014-2015	-	62%
2015-2016	-	50%
2016-2017	-	40%
2017-2018	-	29%
2018-2019	7/16	44%
2019-2020	5/16	31%

### 6.1.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:

Departmental tours on career opportunities in mathematics were made available during Fall/Spring Preview Days.

2017-2018:

The benchmark was not met. Efforts will be made to increase faculty involvement in recruiting. We will coordinate with Dwight Bertrand to implement the College of Science and Agriculture recruiting project as well as the DEP Geaux Teach project.

2018-2019:

The benchmark was met. The new event for us this past year was the Geaux Teach recruitment fair held by the education department. We will continue to look for new avenues for recruitment.

2019-2020:

The Benchmark of 40% was not met. Recruitment coordinators for our department tend to try to cover all recruiting duties themselves rather than creating new obligations for other faculty members. Efforts will be made to change this practice in the coming year.

## **Performance Objective 5 Demonstrate excellence in teaching in order to enhance student recruitment, retention, and graduation.**

### **1 Assessment and Benchmark**

Benchmark: The department will achieve an average score of at least 80% on the student evaluations of instruction (SEIs).

Prior to 2016-2017, the benchmark was 70%.

#### **1.1 Data**

Academic Year	Average score
2013-2014	90.84%
2014-2015	91.00%
2015-2016	90.02%
2016-2017	90.00%
2017-2018	91.00%
2018-2019	91.00%
2019-2020	89.20%

#### **1.1.1 Analysis of Data and Plan for Continuous Improvement**

2016-2017:

The benchmark was raised to Student Evaluation of Instruction (SEI) average will be at least 80% in light of historical data.

2017-2018:

The SEI benchmark will be raised to 90% starting next year.

2018-2019:

This year's number included Spring 18, Fall 18, and Spring 19. We remain committed to raising the benchmark to 90%.

2019-2020:

Since the benchmark is still listed as 80% (rather than the proposed 90%), we have met the benchmark. We saw a small decrease in our SEI average. We feel that this is due to SEIs moving online.

We are actually pleasantly surprised that the SEI average did not dip lower than 89%. We now propose that a new benchmark of 85% be set given that we will continue to administer SEIs online.

## 2 Assessment and Benchmark

Benchmark: Graduating seniors in the Mathematical Sciences will rate the quality of their academic experience in the DMS at 3.00 or greater on a 4-point scale on the departmental exit survey.

### 2.1 Data

Academic Year	Graduating seniors' quality of academic experience rating
2013-2014	3.80/4
2014-2015	3.80/4
2015-2016	3.40/4
2016-2017	3.30/4
2017-2018	4.00/4
2018-2019	3.78/4
2019-2020	

#### 2.1.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:

Faculty will review student comments to better understand their view of their experience. Continue to encourage math students to staff the learning center, so as to better their experience.

2017-2018:

Although numerical data is not available for this item this year, we had the opportunity to speak with several of our graduates about their academic experience. As a result, the department is exploring ways to better prepare students who are going on to work on PhDs in mathematics.

Update: Since our last submission, we were able to locate the data needed for this item. Our results showed improvement.

2018-2019:

There were 9 responses for this report. The comments included with these ratings indicated that the students were pleased with their experience. One comment suggested that a greater emphasis be placed on solving real world problems within the program.

2019-2020:

## 3 Assessment and Benchmark

Benchmark: At least 50% of College Algebra students participating in the Developmental Education/Co-requisite Delivery Pilot will achieve a passing grade in both MATH 113P and MATH 110P.

### 3.1 Data

Academic Year	Students who passed 113P and 110P	
	#	%
2013-2014	N/A	44%
2014-2015	89/182	49%
2015-2016	102/187	55%
2016-2017	76/123	62%

2018-2019	117/183	64%
2019-2020		

### 3.1.1 Analysis of Data and Plan for Continuous Improvement

2015-2016:

A new attendance policy was implemented last year. Attendance improved in the fall of 2015. Five sections of MATH 110 have been scheduled for fall 2016.

2016-2017:

A diagnostic test will again be administered to all MATH 110 students at the beginning of the semester to help instructors create individualized instruction.

2017-2018:

Based on the greater level of success achieved last year, the benchmark will be raised to 60% for next year.

2018-2019:

The benchmark is met. Based on all years of data and factors related to the students populating these courses, we would like to raise the benchmark to 60% at this time.

2019-2020:

## Performance Objective 6 Demonstrate commitment to research and creative and scholarly activity.

### 1 Assessment and Benchmark

Benchmark: At least 25% of faculty members who hold doctorate degrees will be involved in publication or presentations.

#### 1.1 Data

Academic Year	Faculty members that are involved in publication or presentations	
	#	%
2013-2014	-	30%
2014-2015	-	57%
2015-2016	-	43%
2016-2017	-	33%
2017-2018	-	43%
2018-2019	4/7	57%
2019-2020	3/7	43%

#### 1.1.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:

The DMS continues to generate funds to support scholarly activity in the form of travel money. The DMS had six faculty members receive endowed professorships in 2016-2017.

2017-2018:

For next year, the DMS is considering including all faculty in the above data instead of just doctorates since over half of our faculty are at the rank of instructor.

2018-2019:

For this year we consider only doctorate degrees. Of the four listed, two made submissions; one was a publication and one was a presentation.

2019-2020:

Benchmark is met. Of the three listed, one made submissions; one was a publication and one was a presentation.

## 2 Assessment and Benchmark

Benchmark: At least 40% of faculty members will be involved in individual or directed research.

### 2.1 Data

Academic Year	Faculty members that are involved in individual or directed research	
	#	%
2013-2014	-	38%
2014-2015	-	44%
2015-2016	-	44%
2016-2017	-	40%
2017-2018	-	50%
2018-2019	6/16	38%
2019-2020	7/16	44%

#### 2.1.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:

Encouragement from DMS faculty of directed research projects has resulted in four student conference presentations. Faculty are pleased and will encourage more directed research, which should result in more conference presentations.

2017-2018:

A greater number of faculty at the rank of instructor were involved in directed and individual research this year. The benchmark will be raised to 50% for 2018-2019.

2018-2019:

The benchmark was not quite met. We will make an effort to involve more faculty in undergraduate directed research for capstone projects.

2019-2020:

The benchmark of 40% was met. We were successful in involving more faculty in undergraduate directed research for capstone projects. A new effort is underway to have students participate in interdisciplinary projects. Dr. Merchant (Chemistry) will jointly work with Dr. Ornas to mentor a student project this fall.

## 3 Assessment and Benchmark

Benchmark: At least 40% of faculty will attend at least one professional meeting.

Prior to 2016-2017, the benchmark was 30% of faculty.

### 3.1 Data

Academic Year	Faculty members that attended at least one professional meeting

	#	%
2013-2014	-	63%
2014-2015	-	56%
2015-2016	-	56%
2016-2017	-	53%
2017-2018	-	86%
2018-2019	9/16	56%
2019-2020	14/16	88%

### 3.1.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:

The location of the professional meetings and the availability of funds will impact the success of this benchmark.

2017-2018:

This year the MAA section meeting was held in nearby Lafayette, Louisiana. This explains the relatively high number of 86%. The benchmark will be raised to 50% for 2018-2019.

2018-2019:

In the interest of continuous improvement, we request to raise our benchmark to 60%.

2019-2020:

We reached an all time high of 88% this year. This year the MAA section meeting was held in New Orleans, Louisiana and most of the faculty attended. This was just prior to the Covid outbreak in that area and we are happy to report that NONE of the faculty or students who attended contracted Covid as a result. Praise God!!