Year	2022-23
Course number and Name:	Math 1314: College Algebra
Component area:	2: Mathematics
Number of sections offered:	12 sections
Number of students enrolled:	824 students
Contact Person (include email & Phone#)	Jacqueline Jensen-Vallin, jjensenvalli@lamar.edu, x7859

Summary of Continuous Improvement Efforts since Last Report

Provide a brief description of how assessment results have been used for core course improvement. Point to a specific example of how an assessment provided the department with data it could use for improvement and what that improvement was, if possible, also show evidence of the improvement. You may look at data from the two previous academic years to support this case.

Respond here:

Our QEP has been focused on math pathways, and so we have been trying to move students out of college algebra (unless it is significantly indicated for their major) and into other first-year math pathways. This has been working and there are fewer students taking college algebra than previously. In Fall 2021, there were 547 students registered for college algebra, while in Fall 2022, there were 502 students registered. In spring 2022, there were 372 students registered, while in Spring 2023, there were 322 students registered. This means that there are 1-2 fewer sections of this course in each semester.

Throughout this process, we have been adjusting the curriculum to make sure that it is appropriate for the students left in that course. Since STEM majors take a different course, we have removed physics and chemistry applications from Math 1314. Since business majors take Math 1324, we have removed business applications from this course. The majors still requiring Math 1314 are nursing, biology, sociology, criminal justice, psychology, and political science. This allows us to focus on those disciplines more regularly in application problems and make the course more palatable for the majors who remain.

The last assessment of Math 1314 occurred in Spring 2021. At that time, in an aggregate measure, 61% of students score acceptable or proficient in communication, 65% scored acceptable or proficient in critical thinking, and 66% scored acceptable or proficient in quantitative skills.

In fall 2022, we rewrote the core assessment problem to be used to assess this course. This new problem is more in line with the current focus and goals of this course. This new core assessment problem was first administered in Spring 2023 and we are gathering feedback from faculty about whether this new assessment measure is a more appropriate assessment of their students.

Course highlights Since Last Report

Identify and briefly discuss any changes made to the course since the last report.

Respond here: The last assessment of Math 1314 occurred in Spring 2021. At that time, in an aggregate measure, 61% of students score acceptable or proficient in communication, 65% scored acceptable or proficient in critical thinking, and 66% scored acceptable or proficient in quantitative skills. We have continued to adjust the curriculum to distinguish Math 1314 (College Algebra) from Math 2311 (Precalculus), particularly in the area of applications. We also continue to adjust our corequisite courses to better support students who are starting in Math 1314 and are underprepared.

Table 1. Assessment Results and Analysis for Current Cycle

Stage 1: PLAN			**STAGE 2: DO**		**Stage 3: STUDY**	
General Education Competencies Addressed in this Course:	**Assessment Method(s)** – e.g. pre/post tests, embedded questions, portfolio evaluation, rubric-scored essay; list only activities for which you are reporting assessment data	**Proficiency** – e.g. the proficient student will correctly answer 5 out of the 6 embedded questions on the final exam	**Benchmark** – e.g. 80% of students taking the final exam will correctly answer 5 of the 6 embedded questions on the final exam	**Results of course assessment(s)**	**Analysis of results** – e.g. strengths and weaknesses What does this data tell you? How will you use this data? How were data from the last cycle used to make changes during this cycle, and what were the results of those changes?	**Recommendations for Course based on assessment**
Communication (required)	Required core assessment problem	Student demonstrates (a) control of syntax and mechanics, (b) content and purpose, and (c) develops the content and provides an interpretation	70% of students are acceptable or proficient based on departmental rubric in each area.	On goal (a), 31% acceptable or proficient On goal (b), 57% are acceptable or proficient On goal (c), 52% are acceptable or proficient	Our percentage of students earning a score of acceptable or proficient in this area has fallen since our last assessment. However, since our previous assessment in Spring 2021 was given entirely online, to fully online classes, this may have	We need to implement more communication assignments into our Math 1314 curriculum starting in Fall 2023. Our program director for first-year courses is working on this change.

					inflated their success. Additionally, we have seen a significant increase in the number of students in our corequisite sections (129 in Spring 2023 compared to 96 in Spring 2021). Students in these corequisite sections often struggle with communication, as well as the mathematical topics.	
Critical Thinking (required)	Required core assessment problem	Student (a) demonstrates an explanation of issues, (b) influence of context and assumptions, and (c) gives conclusions and outcomes demonstrating a synthesis of information	70% of students are acceptable or proficient based on departmental rubric in each area.	On goal (a), 36% acceptable or proficient On goal (b), 47% are acceptable or proficient On goal (c), 52% are acceptable or proficient	Our percentage of students earning a score of acceptable or proficient in this area has fallen since our last assessment. However, since our previous assessment in Spring 2021 was given entirely	We need to implement more critical thinking (instead of skill drill) assignments into our Math 1314 curriculum starting in Fall 2023. Our program director for first-year courses is working on this change.

					online, to fully online classes, this may have inflated their success. Additionally, we have seen a significant increase in the number of students in our corequisite sections (129 in Spring 2023 compared to 96 in Spring 2021). Students in these corequisite sections often struggle with critical thinking, as well as the mathematical topics.	
Select One: _x__Empirical & Quantitative Skills ___Teamwork ___Social responsibility ___Personal Responsibility	Required core assessment problem	Student can (a) represent mathematical ideas symbolically, (b) can calculate and analyze information, and (c) can finalize their analysis	70% of students are acceptable or proficient based on departmental rubric in each area.	On goal (a), 31% acceptable or proficient On goal (b), 57% are acceptable or proficient	We have seen a significant increase in the number of students in our corequisite sections (129 in Spring 2023 compared to 96 in Spring 2021).	In Fall 2022 we started creating policies to move as many corequsite students as possible to face-to-face (instead of online) sections so that we can offer better support of

				On goal (c), 52% are acceptable or proficient	This indicates more students entering at a deficit.	their quantitative skills. These initiatives are ongoing.
Select One: ___Empirical & Quantitative Skills ___Teamwork ___Social responsibility ___Personal Responsibility						

Table 2. Continuous Improvement Results Since Last Report

STAGE 4: ACT		
Actions/Goals based on data results **copy last cycles actions/goals and report on progress toward continuous improvement on those here*	**Status** *C=Complete* *P=Progressing* *N=No action taken*	**Discussion of status** *If C, describe efforts that led to accomplishment of actions/goals* *If P, provide update on progress made toward accomplishing actions/goals and what tasks remain* *If N, discuss why action toward accomplishing actions/goals has been delayed and what work will be initiated toward accomplishment.*
Update the core curriculum assessment to better reflect topics still covered in Math 1314 after the QEP pathways have been implemented.	C	A new problem was developed in Fall 2022 and implemented in Spring 2023. We will review and revise this problem for next year's assessment.
Update the curriculum to better serve the students whose pathway involves Math 1314.	C	We have been continuing to update the application problems used in this course to better reflect the content relevant to majors required to take this course. This is continuing as the QEP math pathway work continues.