

## Core Curriculum Annual Assessment

Year	2022-23
Course number and Name:	Math 2312: Precalculus II
Component area:	2: Mathematics
Number of sections offered:	9 sections
Number of students enrolled:	367 students
Contact Person (include email & Phone#)	Jacqueline Jensen-Vallin, <a href="mailto:jjensenvalli@lamar.edu">jjensenvalli@lamar.edu</a> , 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:

Math 2312 is the second semester of Precalculus, and therefore changes as Math 2311 changes, which has been often. In Fall 2020, we adjusted the curriculum of Math 2312, adjusting the topics covered. We were hoping that this would alleviate some of the challenges of pacing in the course, while still giving students the foundational skills that they need to be successful in the calculus sequence. In spring 2023, the calculus committee began a curriculum audit to make sure that students who are entering our calculus have the skills that they need. The calculus committee developed a list of skills from precalculus which are required for those courses. We are working during summer 2023 as we implement the redesigned course for Fall 2023 to make sure that we have included all of those required topics in the updated version of Math 2311 and Math 2312.

### Course highlights Since Last Report

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

Respond here:

We have also redesigned the core curriculum assessment and are using a new problem to assess the course, based on updated student learning outcomes. Based on instructor feedback from the first administration of this problem in Spring 2023, this was not an effective problem for assessing this course and will be amended starting in Fall 2023.

Additionally, this will be administered every semester to ensure continuity of data. We conducted a textbook review in spring 2023 and are continuing to use the same book, although we are redesigning the course from mastery-based to homework-based starting in Fall 2023.

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In Spring 2023, we received raw data from IR to allow for student tracking. Our assistant chair is examining student tracking data to verify that students who do well in Math 2312 are prepared for, and succeed in, Math 2413. This is allowing us to better respond to student need in a way that is beyond the information provided by the core assessment report, but is longitudinal and will not immediately reflect changes.

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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), 77% acceptable or proficient  On goal (b), 77% are acceptable or proficient  On goal (c), 77% are acceptable or proficient	We met this goal, but will measure this again without adjustment as we transition to new course materials.	
Critical Thinking (required)	Required core assessment problem	Student demonstrates an (a) explanation of issues, (b)	70% of students are acceptable or proficient based on departmental	On goal (a), 77% acceptable or proficient	We met this goal, but will measure this again without adjustment as we	

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		influence of context and assumptions, and (c) gives conclusions and outcomes demonstrating a synthesis of information	rubric in each area.	On goal (b), 75% are acceptable or proficient  On goal (c), 73% are acceptable or proficient	transition to new course materials.	
<b>Select One:</b> _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), 71% acceptable or proficient  On goal (b), 60% are acceptable or proficient  On goal (c), 62% are acceptable or proficient	We did not meet all these goals, but hope that the transition to new course materials will increase students' empirical skills.	
<b>Select One:</b> ___ Empirical & Quantitative Skills ___ Teamwork ___ Social responsibility ___ Personal Responsibility						

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Table 2. Continuous Improvement Results Since Last Report

STAGE 4: ACT		
<b>Actions/Goals based on data results</b> <i>*copy last cycles actions/goals and report on progress toward continuous improvement on those here</i>	<b>Status</b> <i>C=Complete</i> <i>P=Progressing</i> <i>N=No action taken</i>	<b>Discussion of status</b> <i>If C, describe efforts that led to accomplishment of actions/goals</i> <i>If P, provide update on progress made toward accomplishing actions/goals and what tasks remain</i> <i>If N, discuss why action toward accomplishing actions/goals has been delayed and what work will be initiated toward accomplishment.</i>