Department of Mathematics CSCI

LONG TERM ASSESSMENT PLAN: BS in Mathematics

Date Updated: 7/26/25 (AY 25-26, AY 26-27, AY 27-28, AY 28-29, AY 29-30)

PROGRAM MISSION
CSUEB Mission & Vision, CSUEB ILOs + Senate ILOs May 2012

PROGRAM LEARNING OUTCOMES (PLOs)	
Students graduating with a BS degree in Mathematics will be able to:	
PLO 1	Apply the definitions, techniques and theorems of mathematics.
PLO 2	Use mathematics to understand, explain and/or solve problems beyond a particular course.
PLO 3	Creatively conjecture and rigorously write, analyze and critique proofs.
PLO 4	Communicate mathematics effectively.

2025-2026	
Which PLO(s) to assess	PLO 4
Is it aligned to an ILO?	Yes
If yes, list ILO.	Communication: Oral Communication
Course name and number	Math 493 Senior Seminar
SLO from course	Upon completion of MATH 493 students will be able to communicate mathematics from a variety of areas effectively.
Assessment activity	A sampling of videos of student presentations will be viewed by the mathematics assessment committee and scored using a rubric.
Assessment Instrument	Communicating Mathematics Rubric
How data will be reported	Quantitative
Responsible person(s)	Math Assessment Committee
10. Time (which semester(s))	Spring 2026
11. Ways of closing the loop	Data will be reported in Mathematics Department Annual Report and discussed in faculty meetings to continuously improve the program.

2026-2027	
1. Which PLO(s) to assess	PLO 1
2. Is it aligned to an ILO?	Yes
3. If yes, list ILO.	Thinking and Reasoning: Quantitative Reasoning
4. Course name and number	MATH 320 Abstract Algebra I
5. SLO from course	Students who successfully complete MATH 320 Abstract Algebra I will be able to 1. Apply the definitions, techniques and theorems of advanced abstract algebra. 2. Creatively conjecture and rigorously write, analyze and critique proofs in advanced abstract algebra.
6. Assessment activity	Final Exams
7. Assessment Instrument	Re-score final exam questions using the Readability, Validity and Fluency Rubric
8. How data will be reported	Quantitative
9. Responsible person(s)	Math Assessment Committee
10. Time (which semester(s))	Spring 2027
11. Ways of closing the loop	Data will be reported in Mathematics Department Annual Report and discussed in faculty meetings to continuously improve the program.
2027-2028	
1. Which PLO(s) to assess	PLO 2
2. Is it aligned to an ILO?	Yes
3. If yes, list ILO.	Specialized Discipline
4. Course name and number	MATH 360 Number Theory
5. SLO from course	Students who successfully complete MATH 360 will be able to 1. Apply the definitions, techniques and theorems of number theory. 2. Creatively conjecture and rigorously write, analyze and critique proofs in number theory. 3. Communicate mathematics related to number theory effectively. 4. Explain the connections between number theory and the high school curriculum.
6. Assessment activity	Final Exams or Final Project
7. Assessment Instrument	Re-score final exam questions using the Readability, Validity and Fluency Rubric.
8. How data will be reported	Quantitative
9. Responsible person(s)	Math Assessment Committee
10. Time (which semester(s))	Collect exams Fall 2027, re-score and analyze Spring 2028

11. Ways of closing the loop	Data will be reported in Mathematics Department Annual Report and discussed in faculty meetings to continuously improve the program.
2028-2029	
1. Which PLO(s) to assess	PLO 3
2. Is it aligned to an ILO?	Yes
3. If yes, list ILO.	Thinking and Reasoning: Quantitative Reasoning
4. Course name and number	Math 330 Analysis I
5. SLO from course	Students who successfully complete MATH 330 will be able to 1. Apply the definitions, techniques and theorems of advanced analysis. 2. Creatively conjecture and rigorously write, analyze and critique proofs in advanced analysis.
6. Assessment activity	Final Exams
7. Assessment Instrument	Re-score final exam questions using the Readability, Validity and Fluency Rubric
8. How data will be reported	Quantitative
9. Responsible person(s)	Math Assessment Committee
10. Time (which semester(s))	Spring 2029
11. Ways of closing the loop	Data will be reported in Mathematics Department Annual Report and discussed in faculty meetings to continuously improve the program.

2029-2030	
1. Which PLO(s) to assess	PLO 4
2. Is it aligned to an ILO?	Yes
3. If yes, list ILO.	Communication: Oral Communication
4. Course name and number	Math 493 Senior Seminar
5. SLO from course	Upon completion of MATH 493 students will be able to communicate mathematics from a variety of areas effectively.
6. Assessment activity	A sampling of videos of student presentations will be viewed by the mathematics assessment committee and scored using a rubric.
7. Assessment Instrument	Communicating Mathematics Rubric
8. How data will be reported	Quantitative
9. Responsible person(s)	Math Assessment Committee
10. Time (which semester(s))	Spring 2030
11. Ways of closing the loop	Data will be reported in Mathematics Department Annual Report and discussed in faculty meetings to continuously improve the program.