

I.

A.

Final exams were collected by the department assessment coordinator. Each problem was scored by the undergraduate committee for readability, validity and fluency using the rubric found in appendix A.

Courses Assessed:

MATH 3300 Analysis I and MATH 4750 Numerical Analysis

	Missing	Emerging	Developing	Mastering
Readability	0	13%	29%	58%
Validity	4%	17%	8%	71%
Fluency	8%	17%	42%	33%

These scores indicate 58% of the students have mastered the ability to write a readable proof using a basic definition, 71% mastered the ability to write a valid proof, and 33% of the students mastered the ability to write a proof with fluency. These scores are considerably higher than the abstract algebra scores and slightly higher than the Analysis II scores were last year. This may indicate that the Analysis I course should be recommended prior to Algebra for students for whom this is practical. The department should discuss whether there is a preferred order for students to enter the upper division major courses.

These scores indicate most of the students have developed or mastered the ability to write a readable proof about a continuous function, most of the students have developed or mastered the ability to write a valid proof and 67% of the students have developed or mastered the ability to write a proof with fluency.

E.

New PLO's

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

CSU East Bay Mathematics

SLO 4: Creatively conjecture and rigorously write, analyze and critique proofs

SLO 1 RVF Rubric – Readability, Validity, Fluency

	Missing (0)	Emerging (1)	Developing (2)	Mastering (3)
Readability	Informal or non-mathematical language is used. There is misuse of notation/symbols.	Some improper mathematical language or notation is used.	Mostly proper mathematical language and notation is used.	Proper mathematical language and notation is used.
Validity	Significantly inaccurate or irrelevant statements in definitions, techniques and/or theorems are present. Important information is missing.	Mostly accurate statements in definitions, techniques and/or theorems are present. May include some irrelevant or unjustified statements.	Statements in definitions, techniques and/or theorems are accurate and relevant.	Statements in definitions, techniques and/or theorems are accurate and relevant and connected/deduced correctly.
Fluency	No coherent flow of ideas Listing facts without a sense of how to link them to obtain or apply a valid definition, technique or proof of a theorem.	Partially coherent and organized, but inconsistent. Appeals to intuition. Some unjustified or improperly justified statements/ conclusions in definitions, techniques or proofs of theorems are present.	A correct and essentially complete definition, solution, or proof given. Logic and flow overall sound. Some small gaps in presentation may require “benefit of the doubt.”	A correct and complete definition, solution, or proof given. Elegance or mathematical maturity present.

