


*Provide a brief description of how assessment results have been used for program improvement. Point to a specific example of how an assessment provided the program 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.*

Green				Blue		Grey




*\*Copy last cycle's actions/goals and report on progress toward continuous improvement on those here.*

*C=Complete  
P=Progressing  
N=No Action Taken*

*If C, describe efforts that led to accomplishment of*


## APPENDIX A: Fall 2022 Rubric

### 1: Written Communications

**Means of Assessment for Outcome 1:** Each mathematics major will have a portfolio that will contain, from each of the core courses MATH 3322, MATH 3350, and MATH 4325, a minimum of two graded work samples with written feedback and one proof of reasonable difficulty from the final exam. The department chair will assist in the maintenance of student portfolios. After the graduating senior's portfolio is complete, the department chair will ask the appropriate faculty members to review the student portfolio, using standard rubrics, to ascertain whether growth in this area has been sufficient.

**Rationale:** A student completing an undergraduate degree in mathematics should demonstrate growth over time in mathematical maturity and self-sufficiency in the proof process.

**Decision rule to be used to determine successful performance for Outcome 1:** The appropriate faculty members will determine if the candidate has passed or failed. If the candidate achieves an average of 70% on the assessment rubrics, the candidate passes.

Rationale: The experts most able to assess student achievement are those who teach the courses involved.

*Statement of the problem (5 points is the maximum - 0-2 Unacceptable, 2-*









Goals

**MATHEMATICS SCORING RUBRIC: A GUIDE TO SCORING EXTENDED-RESPONSE ITEMS**  
Minimum passing score is 10 points, including at least 3 points for each column

Score	<b>MATHEMATICAL KNOWLEDGE</b> Knowledge of mathematical principles and concepts which result in a correct solution of a problem.	<b>STRATEGIC KNOWLEDGE</b> Identification and use of important
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terminology and  
notations  $\emptyset$  may contain  
major algorithmic or  
computational errors

evidence of a strategy for  
solving the problem

**Means of Assessment for Outcome 3:** No less than one-third of the questions of the final examination for the course, MATH 3370 - Introduction to the Theory of Statistical Inference, will include applications of the Central Limit Theorem. At least half of the problems involved will be common problems, developed by the faculty who teach the course.

**Decision rule to be used to determine successful performance for Outcome 3:** The instructor of record will score the problems for correctness of the final answers.

**Target:** To be considered proficient in the use of the Central Limit Theorem, each mathematics major who completes this course with a grade of "C" or better, must earn at least 70% of the points available for CLT problems on the final exam for MATH 3370.

**Rationale:** The Central Limit Theorem is fundamental in both the study of and the applications of statistics. A student completing an undergraduate degree in mathematics she should be able to demonstrate proficiency in solving problems involving this theorem.



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