

GBC Class/Course Assessment Report

MATH 181 Calculus I
Section Number(s): 1001
Instructor: Jinho Jung
Number of Students: 15

Academic Year: 2021-2022
Semester: Fall 2021

Course and general education outcomes are counted as achieved if 62% or more of students answered the problems associated with the outcome correctly. As needed, please attach supporting documents and/or a narrative description of the assessment activities. All the learning outcomes must be assessed otherwise the assessment is considered as incomplete.

General Education Objectives	Class/Course Outcomes	Assessment Measures	Course Outcome Assessment Results	General Education Outcome Assessment Results	Outcome Results Analysis
	In the boxes below, summarize the outcomes assessed in your class or course during the last year. If this is a GenEd class, include the appropriate GenEd objectives.	In the boxes below, list the proctored assignments and which problems on those assignments you used to assess each outcome.	In the boxes below, give the percentage of students who answered the problems correctly and indicate if the course outcome was achieved.	In the boxes below, give the average of the percentages of students who met course learning outcomes and indicate if the general education outcome was achieved.	In the boxes below, please reflect on this outcome's results and summarize how you plan to use the results to improve student learning.
Demonstrate knowledge Of mathematical notation and concepts	Outcome #1: Demonstrate an understanding of the concepts and terminology of limits through applications and examples.	Proctored assignment: Midterm Exam Problem numbers: 2.2.13 2.2.22 2.2.45 2.2.57	Results: On average 73.3 % of the students answers correctly. Criterion Met: Yes	Average percentage: On average of the course learning outcomes #1, 2 and 3, 63.3% of the students answered correctly. Criterion Met: Yes	1. Results Analysis: Two of the three course learning outcomes have not met the success criteria. 2. Action Plan: More hands-on activities to understand the concepts calculating the derivatives using the definition and the rule of differentiation will need to be developed. More assignments regarding the derivatives and integrals will be done.
	Outcome #2: Compute the derivative of a function using the definition, the rules of differentiation, slopes of tangent lines, and interpret it as a rate of change in various natural and physical phenomena.	Proctored assignment: Midterm Exam Problem numbers: 2.6.10 2.6.23	Results: On average 60 % of the students answers correctly. Criterion Met: No		

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	Outcome #3: Compute basic integrals using Riemann sums as well as the Fundamental Theorem of Calculus.	Proctored assignment: Final Exam Problem numbers: 4.2.5 4.3.17	Results: On average 56.7 % of the students answered correctly. Criterion Met: No		
Apply mathematical concepts and operations in proper written or graphical format	Outcome #4: Express algebraically, graphically, and numerically the concept of a continuous function.	Proctored assignment: Midterm Exam Problem numbers: 3.1.19 3.2.18	Results: On average 63.3 % of the students answered correctly. Criterion Met: Yes	Average percentage: On average of the course learning outcomes #4 and 5, 65% of the students answered correctly. Criterion Met: Yes	1. Results Analysis: Both course learning outcomes were achieve the success criteria. 2. Action Plan:
	Outcome #5: Express algebraically, graphically, and numerically the separate concepts of definite and indefinite integration and their relationship to differentiation.	Proctored assignment: Final Exam Problem numbers: 5.4.17 5.4.21 5.3.33	Results: On average 66.7 % of the students answered correctly. Criterion Met: Yes		

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<p>Apply relevant mathematical skills in solving real-world problems</p>	<p>Outcome #6: Apply basic applications of beginning calculus including but not limited to optimization, related rates, work, areas, volumes, and distances.</p>	<p>Proctored assignment: Final Exam</p> <p>Problem numbers: 6.1.21 6.2.24</p>	<p>Results: On average 46.7% of the students answered correctly.</p> <p>Criterion Met: No</p>	<p>Average percentage: On average of the course learning outcome #6, 46.7% of the students answered correctly.</p> <p>Criterion Met: No</p>	<p>1. Results Analysis: Students didn't do well on the course learning outcome #6 and it is also the General Education Learning Outcome. One reason that the students' low performance can be more visualization and find equations relating to variables</p> <p>2. Action Plan: More related homework assignments to be assigned and relative classroom hands on activity would be helpful for students to understand better.</p>
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Notes: Students achieved the two of the three-success criteria of the general education learning outcomes. One general education learning outcome that students did not achieve was “Apply relevant mathematical skills in solving real-world problems”. There are also five course learning outcomes that were assessed for this course. Two of the five course learning outcomes were met the success criteria. However, the other three course learning outcomes weren't achieved the success criteria. From the upcoming semester, more hands-on class activities can be developed for students' better understanding.

I have reviewed this report:

Department Chair

Date_____

Dean

Date_____

Vice President of Academic Affairs and Student Services

Date_____