MATH G066N: EXPONENTIAL FUNCTIONS

Item	Value
Curriculum Committee Approval Date	03/04/2025
Top Code	170200 - Mathematics Skills
Units	0 Total Units
Hours	6-10 Total Hours (Lecture Hours 0; Lab Hours 6-10)
Total Outside of Class Hours	0
Course Credit Status	Noncredit: Support Course (U)
Material Fee	No
Basic Skills	Basic Skills (B)
Repeatable	Yes; Repeat Limit 99
Open Entry/Open Exit	Yes
Grading Policy	P/NP/SP Non-Credit (D)

Course Description

This noncredit course introduces the basic concepts of exponential functions and is designed to provide complementary support for college-level mathematics courses. COREQUISITE: MATH G100, MATH G103, MATH G104, MATH G115, MATH G115S, MATH G120, MATH G140, MATH G140S, MATH G170, MATH G180, MATH G185, MATH G280, MATH G285, MATH G287, STAT C1000, STAT C1000E, PSYC G140, SOC G125, or ECON G160. Open Entry/Open Exit. NOT DEGREE APPLICABLE. Not transferable.

Course Level Student Learning Outcome(s)

1. Course Outcomes
2. Determine the equation of an exponential function given two points on its graph.

Course Objectives

- 1. Find the equation of an exponential function.
- 2. Graph exponential functions using transformations.
- 3. Use the compound interest formulas.
- 4. Sketch the graph of an exponential function.

Lecture Content

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Lab Content

Exponential Functions Evaluating exponential functions Domain and range Find the equation using two points Growth and decay Graphing Exponential Functions Plotting points, asymptotes, and y-intercept Exponential function transformations Curve sketching Compound Interest Models Compound interest formulas Continuous compound interest Earned interest and future value

Method(s) of Instruction

- Enhanced NC Lab (NC2)
- Online Enhanced NC Lab (NC6)
- Live Online Enhanced NC Lab (NCA)

Reading Assignments

Textbook and instructor handouts.

Writing Assignments

Writing up solution methods to course concept problems within assignments and course assessments.

Out-of-class Assignments

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Demonstration of Critical Thinking

Students will demonstrate critical thinking and problem-solving skills by solving, analyzing, and interpreting exponential functions. Such as using compound interest models to deduce earned interest and future value. Demonstrations will be shown by completing assignments, participating in discussions, and completing required assessments.

Required Writing, Problem Solving, Skills Demonstration

Students will demonstrate their problem-solving skills through completing assignments and course assessment by showing their step-by-step processes to solving problems from start to finish.

Eligible Disciplines

Mathematics: Master's degree in mathematics or applied mathematics OR bachelor's degree in either of the above AND master's degree in statistics, physics, or mathematics education OR the equivalent. Master's degree required.

Textbooks Resources

1. Required Marecek, L., Honeycutt Mathis, A.. Intermediate Algebra (Classic), 2nd ed. OpenStax (OER), 2020 Rationale: .