

Course: MATH 209 Division: 10 Also Listed As:

Term Effective: 200930, INACTIVE COURSE

Short Title: GRAPHING CALC/COMPU

Full Title: Introduction to Graphing Calculators and Computers

<u>Contact Hours/Week</u>	<u>Units</u>	<u>Number of Weeks</u>	<u>Total Contact Hours</u>
Lecture: .3	.5	17.34	Lecture: 5.2
Lab: .7			Lab: 12.14
Other: 0			Other: 0
Total: 1			Total: 17.34

Credit Status: C - Credit - Degree Non Applicable

Grading Modes: L - Standard Letter Grade

Repeatability: Repeatability: N - Course may not be repeated

Schedule Types: 02 - Lecture and/or discussion
 03 - Lecture/Laboratory
 04 - Laboratory/Studio/Activity

Course Description:

An introduction to the use of the graphing calculator in mathematical applications such as functions, graphing, matrices, statistics, and applications to other mathematics courses, business, and natural sciences. Students will also use a personal computer for basic operations such as drawing and text editing. The focus will be on application programs for statistics, science, and technical courses. This is a 9 week course.
 ADVISORY: Mathematics 205

ARTICULATION and CERTIFICATE INFORMATION

Associate Degree:

CSU GE:

IGETC:

CSU TRANSFER:

Not Transferable

UC TRANSFER:

Not Transferable

PREREQUISITES:

COREQUISITES:

STUDENT LEARNING OUTCOMES:

1. Ability to use graphing calculator to solve complicated equations, graph functions, solve systems of linear equations, and set up a table.
2. Ability to use a computer to access statistics and physics packages and solve basic problems.
3. Ability to analyze problems in later courses in business, computer graphics and design, physics, chemistry, and mathematics among others, and use the graphing calculator to model and solve the problems.

TOPICS AND SCOPE:

Inactive Course: 12/08/2008

- 1 2 Introduction to the graphing calculator--keyboard, contrast, display cursors, entering expressions and editing, mode settings, menus and menu trees, storing and recalling variables. Students will get familiar with their calculator.
- 2 2 Function graphing--defining a function, displaying a graph, multiple function graphing, shading, TRACING, ZOOMING, using CALC operations. Students will be able to analyze graphs and solve equations using their calculators.
- 3 2 Working with tables--setting up tables, independent and dependent variables, editing and displaying tables, using a split screen. Students will be able to work with tables to interpret data. d d
- 4 2 Matrices--defining and editing a matrix, performing math operations with matrices, using the MATRIX MATH operations, using matrices to solve a system of linear equations. Students will be able to manipulate matrices and use them to solve equations.
- 5 2 Lists--create, store, and display lists, attach formulae to list names, using lists in expressions, using the LIST OP menu. Students will be able to create and manipulate lists.
- 6 2 An introduction to statistics--using the STAT list editor, the STAT EDIT menu operations, the STAT CALC menu, plotting statistical data in lists. Students will become familiar with some basic statistical terms and will use the calculator to evaluate some basic statistical values.

7 2 A brief introduction to the personal computer-- turning it on and off, use of keyboard and mouse, using installed programs for text editing and drawing, using a floppy disk for saving data, printing data. Students will acquire a rudimentary understanding of how to use a computer.

8 2 Using Minitab--accessing this statistic program, using menus, entering data, analyzing and graphing data, saving and printing results. Students will be able to evaluate and interpret statistical data using Minitab.

9 2 Using EXCEL--an introduction to the use of spreadsheets, entering labels and data, math and statistical functions, graphing, importing external data and templates. There will be a review and final project. Students will use EXCEL and will demonstrate their ability to use the graphing calculator and personal computer in their final project.

Out of class projects will be assigned for each performance objective. There will also be cooperative, group learning projects assigned.

METHODS OF INSTRUCTION:

Lecture, demonstration, in-class lab projects with cooperative group learning.

REPRESENTATIVE TEXTBOOKS:

^uA Guided Tour of the TI-85 Graphics Programmable Calculator^s
^uWith Emphases on Calculus^s, John F & Christine A Lucas. 1992.

SUPPLEMENTAL DATA:

Basic Skills: B

Classification: A

Noncredit Category: Y

Cooperative Education:

Program Status: 2 Stand-alone

Special Class Status: N

CAN:

CAN Sequence:

CSU Crosswalk Course Department:

CSU Crosswalk Course Number:

Prior to College Level: A

Non Credit Enhanced Funding: N

Funding Agency Code: Y

In-Service: N

Occupational Course: E

Maximum Hours:

Minimum Hours:

Course Control Number: CCC000185422

Sports/Physical Education Course: N

Taxonomy of Program: 493042