Course Prerequisite: Calculus I
Course Corequisite: Calculus II (It’s fine if you have already taken Calculus II.)

Course Text: Functions in Mathematics: Introductory Explorations for Secondary School Teachers (no need to buy this - you will get a copy at the start of the course).

Course Materials: You will need a TI calculator (pref. a TI-84), an open mind, creativity, and enthusiasm for learning. There is no textbook for this course so bring a large notebook

Attendance Policy:
Since much of the work in this course hinges on group work done during class time, attendance is of utmost importance. Therefore, you are expected be in class each and every day. Two points will be deducted for each absence. If you contact your instructor before the class begins, only one point will be deducted. One point will be deducted for each tardy after the first. If you leave class early or consistently choose not to participate, points will be deducted. *Regarding consistent absences, I reserve the right to lower your grade by one letter or fail you for excessive absences.

Grading Policy:
Tests 40 % (dates: TBA)
Written Assignments/Labs/Homework 25 %
Attendance /Engagement and Contribution 10 % *
Midterm Project 10%
Final 15 % (date: TBA)
Total: 100 %

Final Grades will be determined by:
The standard university +/- grading system

Late Work
In general, late work will not be accepted. One quarter of the assigned points will be deducted for work that is submitted after the due date if there is a legitimate excuse.
Major Topics:
- Functions and Relations
- Qualitative Graphing
- Sequences/Patterns – Function Patterns
- Mathematical Modeling - Data, & Regression, Matrices
- Polar & Parametric Relations Complex
- Numbers and Properties Exponential
growth and Decay Models

Course Objectives
In revisiting secondary mathematics, prospective mathematics teachers are expected to:
- Deepen and broaden function-related mathematical content knowledge from Algebra through Calculus by exploring relevant topics in an inquiry based learning situation.
- Make connections between college mathematics and secondary school mathematics;
- Build preliminary knowledge of professional and state mathematics curriculum standards;
- Use reflective and collaborative learning, and develop a stronger sense of professionalism and leadership;
- Create efficient seekers of content knowledge;
- Explore and learn appropriate use of technology in the mathematics classroom

Tests/Labs/Homework:
There will be homework assignments, labs, and exams to test your knowledge of the concepts we are currently discussing in class. Tests and labs will be in class; homework needs to be finished outside of class time. You are expected to enhance classroom discussion with reflection and/or research on topics outside of the classroom. You are responsible for knowing all technology techniques presented in class.