



# SCHOOL OF STEM SYLLABUS



**TERM:**

**INSTRUCTOR:**

**COURSE CODE:** MAT-116

**OFFICE HOURS:**

**COURSE TITLE:** Precalculus for Business

**OFFICE LOCATION:**

**DAY(S) AND TIME(S):**

**EMAIL:**

**LOCATION:**

**PHONE:**

**COURSE PREREQUISITE:** Complete MAT-100 OR ABOVE

**CREDITS:** 4

**COURSE DESCRIPTION:**

A course in mathematics with special emphasis on applications to business, economics, and related fields. Topics include linear, quadratic, exponential and logarithmic functions with applications involving supply, demand, revenue, cost, profit and break-even points, matrices and systems of linear equations, graphing, Leontief Input-Output model, and mathematics of finance.

**TEXTBOOK AND SUPPLEMENTAL MATERIALS:**

**GRADING POLICY:**

Test 1	20%
Test 2	20%
Test 3	20%
Homework/Quizzes	15%
Final Exam	25%

**SAMPLE COURSE SCHEDULE:**

Chapter 2: Linear Equations and Functions

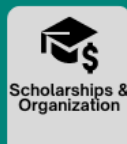
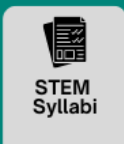
- Solution of Linear Equations in One Variable 1.1
- Functions 1.2
- Linear Functions 1.3
- Solutions of Systems of Linear Functions 1.5
- Applications of Functions in Business and Economics 1.6

Chapter 3: Quadratics and Other Special Functions

- Quadratic Equations 2.1

## STEM STUDENT HUB

Information & Resources tailored towards students taking any STEM courses



- Quadratic Equations: Parabolas 2.2
- Business Applications Using Quadratics 2.3

#### Chapter 3: Matrices

- Matrices 3.1
- Matrix Multiplication of Matrices 3.2
- Gauss-Jordan Elimination: Solving Systems of Linear Equations 3.3
- Inverse of a Square Matrices: Matrix Equations 3.4
- Applications of Matrices: Leontief Input-Output Open Models 3.5

#### Chapter 5: Exponential & Logarithmic Functions

- Equations Applications with Exponential & Logarithmic Functions 5.3

#### Chapter 6: Mathematics of Finance 360

- Simple Interest 6.1
- Compound Interest 6.2
- Future Value of Annuities 6.3
- Present Value of Annuities 6.4
- Loans and Amortization 6.5

#### **HCCC POLICIES, STATEMENTS, AND SERVICES:**

<https://www.hccc.edu/administration/academic-affairs/syllabus-addendum.html>



