

# Course Catalog

## COURSE CATALOG

Academic Year 2025-2026

### COMPUTER SCIENCE DEPARTMENT

CS 101 - Introduction to Programming (4 credits)

Prerequisites: None

Introduction to programming using Python. Topics include variables, control structures, functions, and basic data structures.

CS 201 - Data Structures (4 credits)

Prerequisites: CS 101

Study of fundamental data structures including arrays, linked lists, stacks, queues, trees, and graphs. Implementation and analysis of algorithms.

CS 301 - Database Systems (4 credits)

Prerequisites: CS 201

Design and implementation of database systems. Topics include relational model, SQL, normalization, and transaction management.

CS 401 - Artificial Intelligence (4 credits)

Prerequisites: CS 201, MATH 220

Introduction to AI concepts including search algorithms, machine learning, and neural networks.

### MATHEMATICS DEPARTMENT

MATH 101 - Calculus I (4 credits)

Prerequisites: High school algebra and trigonometry

Limits, continuity, derivatives, and applications of derivatives.

MATH 102 - Calculus II (4 credits)

Prerequisites: MATH 101

Integration techniques, applications of integration, and sequences and series.

MATH 220 - Linear Algebra (3 credits)

Prerequisites: MATH 101

Matrices, vector spaces, linear transformations, and eigenvalues.

### BUSINESS DEPARTMENT

BUS 101 - Introduction to Business (3 credits)

Prerequisites: None

Overview of business fundamentals including management, marketing, and finance.

BUS 301 - Marketing Management (3 credits)

Prerequisites: BUS 101

Principles of marketing, consumer behavior, and marketing strategies.

#### GENERAL EDUCATION REQUIREMENTS

All students must complete:

- English Composition (6 credits)
- Mathematics (6 credits)
- Natural Sciences (8 credits)
- Social Sciences (6 credits)
- Humanities (6 credits)
- Arts (3 credits)

Total General Education: 35 credits