



Course Outcome Summary

Required Program Core Course

CIS 167 Discrete Structures

Course Information

Division	Business
Contact Hours	4
Total Credits	4

Prerequisite: MATH 159 or MATH 164 or MATH 171

Corequisite: CIS 250 must be successfully completed prior to or concurrently.

Course Description

This course covers mathematical principles and techniques required for analysis, proofs and general understanding of algorithms used in computer science. Topics include: algorithms, advanced counting, sets, Boolean algebra, graphs, trees, functions, mathematical induction and understanding and doing proofs.

This course is a required core course for students pursuing an AAS in Computer Science.

Program Outcomes Addressed by this Course:

Upon successful completion of this course, students should be able to meet the program outcomes listed below:

- Demonstrate and utilize necessary technical knowledge and skills both in breadth and depth, to pursue the practice or advanced study of computer science.
- Understand the importance of life-long learning, and be prepared to learn and understand new technological developments in their field.
- Understand the ethical and technical context of their computer science contributions and their obligations therein.

Course Outcomes

In order to evidence success in this course, the students will be able to:

- Create a complete functioning program that solves a problem.
Applies to Program Outcome
 - Demonstrate and utilize necessary technical knowledge and skills both in breadth and depth, to pursue the practice or advanced study of computer science.
- Describe the advantages of using object oriented programming for program development.
Applies to Program Outcome
 - Understand the importance of life-long learning, and be prepared to learn and understand new technological developments in their field.
- Demonstrate some of the methods used to secure data and communications.
Applies to Program Outcome
 - Understand the ethical and technical context of their computer science contributions and their obligations therein.