

CSCI 1302 Learning Outcomes

Ability to read and write medium sized programs (with many classes)

Ability to understand syntax/semantics, identify and fix syntax errors, compile, build and execute medium sized programs

Understand, design and implement abstract data types

Ability to identify the need for, and declare and/or use classes, objects, inheritance, and polymorphism

Ability to use input and output streams including object I/O

Ability to write code using a language API

Ability to understand and use event driven programming for developing GUI

Ability to analyse and understand event driven program logic

Ability to develop and communicate its understanding and descriptions of systems, problems, and requirements using text and diagrams (UML) for documentation

Ability to analyse and design UML class diagrams with many classes in an inheritance/composition hierarchy

Ability to analyse GUI programs and draw the window hierarchies from a program

Ability to identify the need for window listeners and layout managers

Ability to design GUI interface using 2-d layout and be able to convert to a program

Ability to understand and use existing classes to build bigger program components.

Ability to master basic software engineering concepts for object-oriented design and analysis.

Understand and use recursion

Mission Objectives

1. to provide a foundation in design, implementation, integration and testing of software systems integration
2. to promote the understanding of concepts that underlie computer science
3. to provide experience with computer hardware systems
4. to teach communication and interaction skills necessary for teamwork
5. to provide experience with practical and applied information technology

ABET Learning Outcomes

The program enables students to achieve, by the time of graduation:

1. General:

- (a) An ability to apply knowledge of computing and mathematics appropriate to the discipline;
- (b) An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution;
- (c) An ability to design, implement and evaluate a computer-based system, process, component, or program to meet desired needs;
- (d) An ability to function effectively on teams to accomplish a common goal;
- (e) An understanding of professional, ethical, legal, security, and social issues and responsibilities;
- (f) An ability to communicate effectively with a range of audiences;
- (g) An ability to analyze the local and global impact of computing on individuals, organizations and society, including ethical, legal, security and global policy issues;

- (h) Recognition of the need for, and an ability to engage in, continuing professional development;
- (i) An ability to use current techniques, skills, and tools necessary for computing practice.

2. CS Specific:

- (a) An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices;
- (b) An ability to apply design and development principles in the construction of software systems of varying complexity.

Mission Objective(s)	ABET learning Outcomes	Evaluation Instrument	Avg (%)	Program Outcome	Avg
1, 2, 5.	1a, 1i	hw 2-4, Project	85%	1a	83%
1, 2, 5.	1a, 1i	all labs, quizzes, hws, project and exams	82%	1b	85%
1, 2, 5	1a, 1i	all labs, quizzes, hws and exams	82%	1i	83%
1, 2, 5.	1a, 1i	all labs, quizzes, hws and exams	82%	2b	84%
1, 2, 5.	1a, 1i	hw1, hw4, MT2_Q3, MT2_Q15, final_Q14	82%		
1, 2, 5.	1a, 1i	hw 1-4, Project	85%		
1, 2, 5.	1a, 1i	Project, MT2_Q14, Final_Q20	86%		
1, 2, 5.	1a, 1i	Project, MT2_Q14, Final_Q20	86%		
1, 2, 5.	1a, 1i	hw2-3	84%		
1, 2, 5.	1a, 1i, 2b	hw2-3	82%		
1, 2, 5.	1a, 1b, 1i, 2b	Project, MT2_Q14, Final_Q20	86%		
1, 2, 5.	1a, 1i	Project, MT2_Q14, Final_Q20	86%		
1, 2, 5.	1a, 1i	Project, MT2_Q14, Final_Q20	86%		
1, 2, 5.	1a, 1i	hw 2-4, Project	85%		
1, 2, 5.	1a, 1b, 1i, 2b	hw 2-4, Project	85%		
1, 2, 5.	1a, 1i	final_Q21	71%		