

COMP B14: Discrete Structures

Student Learning Outcomes	Measure	PLO	ILO	GE
1. Describe how formal tools of symbolic logic are used to model real-life situations, including those arising in computing contexts such as program correctness, database queries, and algorithms.	<ul style="list-style-type: none"> • Written exams • Homework 	1	I III	
2. Relate the ideas of mathematical induction to recursion and recursively defined structures.	<ul style="list-style-type: none"> • Written exams • Homework 	1	I III	
3. Analyze a problem to create relevant recurrence equations.	<ul style="list-style-type: none"> • Written exams • Homework 	1	I III	
4. Demonstrate different traversal methods for trees and graphs.	<ul style="list-style-type: none"> • Written exams • Homework 	1	I III	
5. Apply the binomial theorem to independent events and Bayes' theorem to dependent events.	<ul style="list-style-type: none"> • Written exams • Homework 	1	I III	

PLOs:

1. Identify the appropriate software development technologies, algorithms, and scientific and mathematical principles to apply to a given problem.

Assessment: The department will evaluate using examinations.

2. Effectively design and implement programming constructs, including functions, control structures, arrays/lists, classes and objects for a given programming problem.

Assessment: The department will evaluate using examinations.

3. Effectively implement the appropriate data structures using the principles and techniques of object-oriented programming for a given programming problem.

Assessment: The department will evaluate using examinations.

ILOs:

- I. Think critically and evaluate sources and information for validity and usefulness.
- II. Communicate effectively in both written and oral forms.
- III. Demonstrate competency in a field of knowledge or with job-related skills.
- IV. Engage productively in all levels of society – interpersonal, community, the state and nation, and the world.