

CCS3403 Computing Algorithms**COURSE INFORMATION**

Prerequisites	Academic Year & Level		Teaching Methods			Credit Hrs.
	Year	Semester	Lecture	Tutorial	Laboratory	
CCS2401	3	6	2	2	0	3

COURSE AIM

- Apply asymptotic time complexity analysis to choose among competing algorithms.
- Construct and solve recurrence equations describing the asymptotic time complexity of a given algorithm.
- Identify the best algorithm design technique for a given problem.
- Implement efficient algorithms using the appropriate data structures.

COURSE WEEKLY CONTENTS

- 1 Introduction
- 2 Algorithms analysis and sorting techniques part 1
- 3 Algorithms analysis and sorting techniques part 2
- 4 Recurrences part 1
- 5 Recurrences part 2
- 6 Brute Force Algorithms part 1
- 7 Brute Force Algorithms part 2
- 8 Greedy Algorithms part 1
- 9 Greedy Algorithms part 2
- 10 Dynamic Programming part 1
- 11 Dynamic Programming part 2
- 12 Divide and Conquer
- 13 Graph Algorithms
- 14 Parallel Algorithms
- 15 Distributed Algorithms

STUDENT GRADING & ASSESSMENT

Weeks	Exams	Assign.	Quizzes	Reports	Present.	Lab.	Total
1 to 7	←		30	MARKS		→	30
8 to 12	←		20	MARKS		→	20
1 to 15	←		10	MARKS		→	10
16 or 17	40	Final					40

REFERENCES

Textbook Anany Levitin, An Introduction to the Design and Analysis of Algorithms, Pearson.