

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI

COURSE PLAN – PART I								
Course Title	Algorithms Lab							
Course Code	CSLR41	No. of Credits	2					
Course Code of Pre-requisite subject(s)	CSPC42	Section (if, applicable)	B					
Session	Jan. 2021	Year	II					
Name of Faculty	Dr R Mohan Dr Kunwar Singh	Department	CSE					
Email	rmohan@nitt.edu kunwar@nitt.edu	Telephone No.	9442421326					
Name of Course Coordinator(s) (if, applicable)								
E-mail		Telephone No.						
Course Type	<input checked="" type="checkbox"/> Core course <input type="checkbox"/> Elective course							
Syllabus (approved in BoS)								
<ul style="list-style-type: none"> Estimating worst case / average case complexity of algorithms via programs Determining machine constants Programs involving some advanced data structures Implementing example problems Illustrating the different paradigms of algorithm design Solving micellaneous problems e.g. problems in string manipulation , graph theory, Optimization 								
COURSE OBJECTIVES								
<ul style="list-style-type: none"> To learn how to analyse the complexity of algorithms To compare and evaluate algorithms in terms of time and space complexity To program brute force, divide and conquer , Decrease and conquer, Transform and conquer, greedy and dynamic techniques. 								
COURSE OUTCOMES (CO)								
Course Outcomes	Aligned Programme Outcomes (PO)							
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8
1. Ability to solve and analyze general algorithms based on space and time complexity.	S	M	M	M	S	S	B	M
2. Ability to implement and empirically compare fundamental algorithms and data structures to real world problems.	S	S	M	M	S	S	M	M
3. Ability to design, develop and optimize algorithms in different paradigms.	S	S	M	M	S	S	M	M

COURSE PLAN – PART II**COURSE OVERVIEW**

This course mainly covers implementation of different Algorithm design techniques.

COURSE TEACHING AND LEARNING ACTIVITIES

S.No.	Week/Contact Hours	Topic	Mode of Delivery
1.	1 st week	Algorithm based on number theory such as Euclidean Algorithm	Online
2.	2 nd week	Divide and Conquer	
3.	3 rd week	Divide and Conquer	
4.	4 th week	Priority queue programs	
5.	5 th week	Greedy Algorithms	
6.	6 th week	Dynamic Programming	
7.	7 th week	Dynamic Programming	
8.	8 th week	Graph Algorithms : BFS, DFS	
9.	9 th week	Graph Algorithms: Prims, Kruskal, Dijkstra's Algorithm	
10.	10 th week	Approximation Algorithms	

COURSE ASSESSMENT METHODS (shall range from 4 to 6)

S.No.	Mode of Assessment	Week/Date	Duration	% Weightage
1	Continuous Assessment	Every Week	3 hours	20
2	Test1	6 th week	2 hours	25
3	Test2	12 th week	2 hours	25
4	Final Assessment*	15 th week	2 hours	30
			Total	100

COURSE EXIT SURVEY

- Feedbacks are collected before the end semester exam in the feedback forms.
- Suggestions from the students are incorporated for making the course more understanding and interesting.
- Students, through their class representative may give their feedback at anytime to the course faculty which will be duly addresses.
- Students may also give their feedback during class committee meeting.

COMPENSATION ASSESSMENT

The Students those have missed the test 1 or test 2 on medical or OD can appear for COMPENSATION ASSESSMENT (Retest) after showing the medical certificate or OD letter signed by competent authority.


ACADEMIC HONESTY & PLAGIARISM

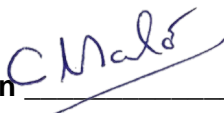
In cycle tests or semester exam, students who are caught copying from cell phone, paper chit or from neighboring students will be directly given zero marks. In addition, a letter to their parents may be sent reporting the incident. Again if students are caught copying will result in failure in the course.

ADDITIONAL INFORMATION

The students can get their doubts clarified at any time with prior appointment.

FOR APPROVAL


Course Faculty _____


CC-Chairperson _____


HOD _____

Guidelines:

- a) The number of assessments for a course shall range from 4 to 6.
- b) Every course shall have a final assessment on the entire syllabus with at least 30% weightage.
- c) One compensation assessment for absentees in assessments (other than final assessment) is mandatory. This is not applicable for project work/industrial lectures/internship.
- d) The policy for attendance for the course should be clearly specified.
- e) Necessary care shall be taken to ensure that the course plan is reasonable and is objective.