



**Department of Computer Science and Engineering
National Institute of Technology Tiruchirappalli**

1. Course Outline			
Course Title	Algorithms lab		
Course Code	CSLR23		
Programme & Department	B.Tech. - CSE	No. of Credits	2
Pre-requisites Course Code	CSPC21,CSLR21	Faculty Name	Dr. Kunwar Singh Dr. R. Mohan
E-mail	kunwar@nitt.edu rmohan@nitt.edu	Telephone No.	0431 - 2503212
Course Type	Lab course		
Session Academic Year:	in January – April Session (Even Semester)		

2. Course Overview
This course mainly covers implementation of different design techniques
3. Course Objectives
- To program brute force, divide and conquer, greedy, dynamic techniques and approximation algorithms etc.
4. Course Outcomes (CO)
- Ability to solve and analyze general algorithms based on space and time complexity - Ability to implement and empirically compare fundamental algorithms and data structures to real world problems - Knowledge about different algorithmic paradigms and optimization

5. Course Outcomes (CO)	Aligned Programme Outcome (PO)							
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8
Ability to solve and analyze general algorithms based on space and time complexity	S	M	M	M	S	S	B	M

Ability to implement and empirically compare fundamental algorithms and data structures to real-	S	S	M	M	S	S	M	M
Knowledge about different algorithmic paradigms and optimization	S	S	M	M	S	S	M	M

S = 0.6

M = 0.4

B = 0.0

6. Course Teaching and Learning Activities

SL.No	Title	Type		Mode of delivery			
		L	T	C & T	PP T	VL/V C	DEMO
1.	Algorithms based on number theory such as Euclidean algorithm etc.						√
2.	Divide and conquer						√
3.	Divide and conquer						√
4.	Priority queue programs						√
5.	Greedy algorithms						√
6.	Dynamic programming						√
7.	Dynamic programming						√
8.	Graph algorithms: BFS, DFS						√
9.	Graph algorithms: Prims, Kruskal, Dijkstra's algorithm						√
10.	Approximation algorithms						√

7. Course Assessment Methods

Sl. No.	Mode of Assessment	Week/Date	Duration	Marks
1	Continuous assessment	Every week	3 hour	40
2	Test 1	5 th week	2 hour	20
3	Test 2	9 th week	2 hour	20
4	Test 3	13 th week	2 hour	20
Total				100

8. Essential Readings (Textbooks, Reference books, Websites, Journals, etc.)

Text Books:

1. T. Cormen, C. Lieserson, R. Rivest, and C. Stein, "Introductions to Algorithms", Prentice-Hall/India, 3rd edition, 2009

COURSE EXIT SURVEY (Mention the ways in which the feedback about the course is assessed and indicate attainment also)

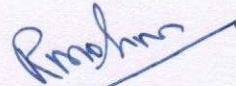
- Feedbacks are collected before the end semester exam in the feedback forms.
- Suggestions from the students are incorporated for making the course more understanding and interesting.
- Students, through their class representative may give their feedback at any time to the course faculty which will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

COURSE POLICY (including plagiarism, academic honesty, attendance, etc.)

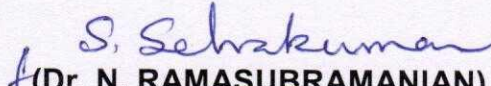
- **Attendance:** Minimum 75% is mandatory to write the end semester examination. Students having attendance 65%-74% are eligible for the end semester exam only after attending the extra classes and submitting assignments. Students have to redo the course, if they have less than 65% percentage of attendance.
- Medical certificate or on-duty certificate should be submitted immediately after rejoining.
- Please turn off electronic devices during lab sessions, such as cell phones, iPods, and laptops.

For Senate's Consideration


(Dr.KUNWAR SINGH)


(Dr. R Mohan)

Course Faculty


(Dr. N. RAMASUBRAMANIAN)
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Class Committee Chairperson


(Dr. R.LEELA VELUSAMY)

HOD / CSE