



## Department of Computer Applications National Institute of Technology, Tiruchirappalli

### COURSE PLAN – PART I

<b>Name of the programme and specialization</b>	M. Sc. (Computer Science)		
<b>Course Title</b>	FOSS Lab		
<b>Course Code</b>	CAS 757		
<b>Lab Hours</b>	3	<b>No. of Credits</b>	2
<b>Course Type</b>	Laboratory	<b>Course Teacher</b>	Dr. Mrs. B. Janet
<b>Pre-requisites</b>	CAS 765	<b>PAC Chairman</b>	Dr. R. Eswari
<b>E-mail</b>	janet@nitt.edu	<b>Telephone No.</b>	0431-2503741
<b>Course Type</b>	Lab Course	<b>Office</b>	Lyceum 108
<b>Course Page</b>	<a href="https://moodle.nitt.edu/moodle/course/view.php?id=11">https://moodle.nitt.edu/moodle/course/view.php?id=11</a>		

### SYLLABUS

To expose students to FOSS environment and introduce them to use and modify existing programs using open source packages/Technology listed below:

1. Linux
2. Android/Mozilla OS
3. GIMP: GNU Image Manipulation program
4. Apache Struts
5. PHP
6. Python
7. Ruby
8. Apache Cassandra Database
9. MongoDB, NoSQL
10. Hadoop

### Course Objectives

1. The student will be able to study an open source code
2. The student will be able to build open source software
3. The student will be able to analyze free code and adapt it to a problem
4. The student will be able to explore and learn open software

5. Course Outcome (CO)	Aligned Programme Outcome (PO)											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
To use github for software development and version control in teams.	H	H	A	A	H	A	H	A	H	H	H	H
To use open source software from its source code	H	H	H	A	H	A	H	L	L	H	H	H
To read a research paper and implement the open source code given for it	H	H	H	A	H	A	H	L	L	H	H	H
To create an application using open source code	H	A	H	A	H	H	H	H	L	H	H	H

### COURSE PLAN – PART II

#### LAB EXERCISE

Week	Topic
1.	Introduction: java code reuse
2.	Download Weka source code and run it from source.
3.	Statistical Models
4.	Project 1
5.	R Language visualization
6.	Python, Apache Cassandra Database, MongoDB, Hadoop
7.	Implement the open source code and use github
8.	Project 2
9.	IoT Application
10.	Mobile Application
11.	Machine Learning Application

Week	Topic
12.	Deep Learning Algorithm

### Exercise

The Moodle Course Page will be available for detailed lab exercise dissemination and discussion inside and outside the Laboratory, between students and with the teacher. Student engagement in the Moodle course Page will count towards assessment of student participation that has assessment weightage.

The assessment details for this course are given below. The assessment will be done for a total of 100 marks.

COURSE ASSESSMENT					
Sl. No.	Mode of Assessment	Nature	Tentative Schedule	Duration in Min.	Weightage (%)
1.	Project 1	Viva	4 <sup>th</sup> week	60	20
2.	Lab activity	Periodic	Lab duration	NA	30
3.	Project 2	Viva	8 <sup>th</sup> week	60	20
4.	Compensation Assessment*		11 <sup>th</sup> week	10	20
CPA	Final Assessment as Project	Summative	13 <sup>th</sup> week	120	30
	Total				100

### Lab Exit Survey

- The students may give their feedback at any time to the course Teacher or through an email message in moodle, which will be duly addressed.
- The students may also give their feedback during Class Committee meeting and fill up the feedback form in moodle site at the end of each test.

### Lab Policy

#### Lab Behavior

- Ensure that the course atmosphere, both in the Lab and discussions outside the Lab with Teacher, is conducive for learning. Participate in discussions but do not dominate or be abusive. Be considerate of your fellow students and avoid disruptive behavior.

#### Exam policy

- Each student is required to take all exams at the scheduled times. All exceptions must be cleared with the professor prior to the exam time. Exams missed for insufficient

reason and without being cleared with the professor prior to the exam time will be assigned a score of zero.

### Assignments

- iii) All assignments are due on or before the mentioned date and time and is to be uploaded on the Lab moodle site.

### Late assignments

- iv) Late submissions are not accepted.

### Plagiarism

- v) The students are expected to come out with their original work on term activity, assignments and tests/examinations. If found to be plagiarized, it will be assigned a score of zero.

### Attendance

- vi) Attendance is expected. If a student misses a Lab, the student is still responsible for the material that is studied and for completing any assignments by the due date that may have been handed out by the instructor during class.


### Academic Policy

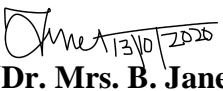
- Possessing a mobile phone, carrying bits of paper, talking to other students, copying from others during an assessment will be treated as punishable dishonesty.
- Zero mark to be awarded for the offenders. For copying from another student, both students get the same penalty of zero mark.
- The departmental disciplinary committee including the course faculty member, PAC chairperson and the HoD, as members shall verify the facts of the malpractice and award the punishment if the student is found guilty. The report shall be submitted to the Academic office.
- The above policy against academic dishonesty shall be applicable for all the programmes.


### 11. Additional Course Information

- The students can get their doubts clarified during Lab.
- Prior request for appointment through mail, stating the subject matter to be discussed, is required to fix a time for discussion of subject matter outside class. Appointment time will be communicated through reply mail.

### For Senate's Consideration

  
(Dr. R. Eswari)  
PAC Chairperson

  
(Dr. Mrs. B. Janet)  
Course Faculty

  
( Dr. P. J. A. Alphonse)  
Head