

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI

COURSE PLAN – Part I			
Course Title	ELECTRONIC CIRCUITS LABORATORY		
Course Code	EELR12	No. of Credits	02
Course Code of Pre-requisite subject(s)	EEPC14		
Session	January 2018	Section	A
Name of Faculty	Dr. N. Ammasai Gounden	Department	EEE
Email	mmas@nitt.edu	Telephone No.	0431-2503253
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"> • Frequency analysis of Common Emitter amplifier. • Measurement of input/output impedance of Common Collector amplifier. • Design and verification of characteristics of RC oscillators. • Design and characterization of Monostable multivibrator. • Design and characterization of Astable multivibrator. • Characteristics of UJT and applications of UJT oscillator. • Frequency analysis of FET Amplifier. • Frequency response of series voltage negative feedback Amplifier. • Square waveform generation using transistor based Schmitt trigger. • Design and characterization of Bistable Multivibrator. • Mini-Project 			
COURSE OBJECTIVES			
Design of amplifiers, oscillators and multi vibrators to satisfy specifications.			

COURSE OUTCOMES (CO)			
Course Outcomes			Aligned Programme Outcomes (PO)
Upon completion of the course the students would be able to			
1.	Design a complete electronic circuit using a top-down approach which starts from specifications.		1, 2, 3
2.	Design and analyze electronic circuits using BJT and FET.		1, 2, 3
3.	Design and characterization of electronic circuits using UJT.		1, 2, 3
4.	Waveform generator circuit design using electronic devices.		1, 2, 3
5.	Prepare the technical report and provide solutions to real time problems.		2
COURSE PLAN – Part II			
COURSE OVERVIEW			
Design of electronic circuits to satisfy the specifications			
COURSE TEACHING AND LEARNING ACTIVITIES			
S.No.	Week/Contact Hours	Topic	Mode of Delivery
1	2 nd Week of January (9 & 12)	Instruction and introduction of the Lab Experiments	PPT
2	3 rd Week of January (16 & 19)	Frequency analysis of Common Emitter amplifier	Practical Experiments
3	4 th Week of January (23 & 30)	Frequency analysis and measurement of input/output impedance of Common Collector amplifier	Practical Experiments
4	1 st Week of February (2 & 6)	Frequency analysis of FET Amplifier	Practical Experiments
5	2 nd Week of February (9 & 13)	Uni Junction Transistor as a Relaxation Oscillator	Practical Experiments
6	3 rd Week of February (16 & 20)	Design and analysis of series Voltage negative feedback amplifier	Practical Experiments
7	4 th Week of February (23 & 27)	Design and analysis of RC Phase Shift Oscillator	Practical Experiments

8	2 nd Week of March (6 & 9)	Design and analysis of Wien Bridge Oscillator	Practical Experiments
9	3 rd Week of March (13 & 16)	Design and analysis of Astable Multi-vibrator	Practical Experiments
10	4 th Week of March (20 & 23)	Design and analysis of Monostable Multi-vibrator	Practical Experiments
11	Last Week of March & 1 st Week of April (27 & 3)	Compensation Lab	Practical Experiments
12	2 th Week of April (6 & 10)	Comprehensive Viva voce	Oral Examination
13	3 rd Week of April (13)	Mini project	Practical Examination

COURSE ASSESSMENT METHODS

Assessment No.	Mode of Assessment	Week/Date	Duration	% Weightage
1	Design calculation, Experimentation, Viva, Graph and Results	During regular lab session	--	50
2	Comprehensive Viva voce	2 nd Week of April	--	20
3	Mini Project (max of 3 members per group)	3 rd Week of April	--	30

COURSE EXIT SURVEY (mention the ways in which the feedback about the course shall be assessed)

- Feedback from the students during class committee meetings
- Anonymous feedback through questionnaire (Mid of the semester & End of the semester) End semester feedback on Course Outcomes

COURSE POLICY (preferred mode of correspondence with students, policy on attendance, compensation assessment, academic honesty and plagiarism etc.)

MODE OF CORRESPONDENCE

1. All the students are advised to check their NITT WEBMAIL regularly. All the correspondence (schedule of classes/ schedule of assessment/ course material/ any other information regarding this course) will be done through their webmail only.
2. Queries (if required) to the course teacher shall only be emailed to ammas@nitt.edu

ATTENDANCE

1. Every student should maintain **minimum 75 % attendance**. If not, they have to redo the course.

COMPENSATION ASSESSMENT

Student who have missed the regular lab session, should get prior permission for attending the compensation lab session.

ACADEMIC HONESTY & PLAGIARISM

1. All the students are expected to be genuine during the course work. Taking of information by means of copying simulations, assignments, looking or attempting to look at another student's paper or bringing and using study material in any form (paper, mobile phone etc.,) for copying during any assessments is considered dishonest.
2. Tendering of information such as giving one's program, simulation work, assignments to another student to use or copy is also considered dishonest.
3. Preventing or hampering other students from pursuing their academic activities is also considered as academic dishonesty.
4. **Any evidence of such academic dishonesty will result in the loss of marks on that assessment.** Additionally, the names of those students so penalized will be reported to the class committee chairperson and HoD of the concerned department.

ADDITIONAL INFORMATION

- The faculty is available for consultation at times as per the intimation given by the faculty.
- Queries may also be emailed to the faculty directly at to ammas@nitt.edu

FOR APPROVAL

Course Faculty _____

CC-Chairperson _____

HOD _____