

UTKAL GOURAV MADHUSUDAN INSTITUTE OF TECHNOLOGY, RAYAGADA

DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION ENGINEERING

PRACTICAL LESSON PLAN (WINTER 2026)

SEMESTER / DISCIPLINE:	3RD / ETC Engineering	PERIODS PER WEEK:	4 (Mon-2, Wed-2)
SUBJECT:	Electric Circuits & Networks Lab (PR-2)	TOTAL PERIODS:	60 Hours
FACULTY NAME:	Hemanta Sethi, Lecturer (ETC)	SEMESTER DURATION:	01.07.2026 to 05.11.2026
MARKS EVALUATION:	Progressive Assessment: 35 End Sem Exam: 15 Total: 50	CLASS TIMETABLE:	Monday (2) & Wednesday (2)

Week / Month	Period	Experiment	Practical Topic / Activity to be Covered
1st Week / July	1st-2nd (01.07.2026)	Intro	1. Introduction to Electrical Circuits & Networks Laboratory, essential instruments, bench power supplies, and safety precautions. 2. Briefing on maintenance of practical record notebooks and lab protocols.
	3rd-4th (06.07.2026)	Expt.-1	Experimental verification of Superposition Theorem in DC network.
2nd Week / July	5th-6th (08.07.2026)	Expt.-1	Experimental verification of Thevenin's Theorem in DC network.
	7th-8th (13.07.2026)	Expt.-1	Experimental verification of Norton's Theorem in DC network.
3rd Week / July	9th-10th (15.07.2026)	Expt.-1	Experimental verification of Maximum Power Transfer Theorem in DC network.
	11th-12th (20.07.2026)	Expt.-2	Use Voltmeter and Ammeter to determine current through given branch of electric network by applying Mesh Analysis.
4th Week / July	13th-14th (22.07.2026)	Expt.-3	Use Voltmeter and Ammeter to determine current through given branch of electric network by applying Node Analysis.
	15th-16th (27.07.2026)	Expt.-4	Observe an AC waveform on CRO and calculate its peak value, average value, RMS value, frequency, and time period.
1st Week / August	17th-18th (29.07.2026)	Expt.-5	Analysis of charging phase of RC circuit with CRO (calculating time constant, rise time, etc.).
	19th-20th (03.08.2026)	Expt.-5	Analysis of discharging phase of RC circuit with CRO (calculating time constant, fall time, etc.).
2nd Week / August	21st-22nd (05.08.2026)	Expt.-6	Design of Series Resonance Circuit with a particular cut-off frequency and plot its frequency response.
	23rd-24th (10.08.2026)	Expt.-6	Determination of resonant frequency, bandwidth, and Q-factor for Series Resonance Circuit.
3rd Week / August	25th-26th (12.08.2026)	Expt.-7	Design of Parallel Resonance Circuit with a particular cut-off frequency and plot its frequency response.
	27th-28th (17.08.2026)	Expt.-7	Determination of resonant frequency, bandwidth, and Q-factor for Parallel Resonance Circuit.
4th Week / August	29th-30th (19.08.2026)	Expt.-8	Designing Low Pass Filter considering specific cut-off frequency and plotting frequency response curve.
	31st-32nd (24.08.2026)	Expt.-9	Designing High Pass Filter considering specific cut-off frequency and plotting frequency response curve.
1st Week / September	33rd-34th (31.08.2026)	Expt.-10	Simulation of DC Network Theorems (Superposition, Thevenin, Norton, MPTT) using circuit simulation software.

Week / Month	Period	Experiment	Practical Topic / Activity to be Covered
	35th-36th (02.09.2026)	Expt.-10	Simulation of Mesh & Node Analysis and AC waveform parameters using circuit simulation software.
2nd Week / September	37th-38th (07.09.2026)	Expt.-10	Simulation of RC Transient Charging & Discharging characteristics using circuit simulation software.
	39th-40th (09.09.2026)	Expt.-10	Simulation of Series & Parallel Resonance and Passive Filter circuits (LPF, HPF) using simulation software.
3rd Week / September	41st-42nd (14.09.2026)	Review	Intermediate evaluation, record notebook checking, and viva-voce practice on Experiments 1 to 5.
	43rd-44th (21.09.2026)	Review	Intermediate evaluation, record notebook checking, and viva-voce practice on Experiments 6 to 10.
4th Week / September	45th-46th (23.09.2026)	Practice	Repeat performance of hardware experiments (DC Theorems, Mesh/Node, CRO AC measurements).
	47th-48th (28.09.2026)	Practice	Repeat performance of hardware experiments (RC Transients, Resonance, LPF/HPF Filters).
1st Week / October	49th-50th (30.09.2026)	Practical Test	Internal Practical Examination - Batch A (Hardware setup, software simulation & viva-voce).
	51st-52nd (05.10.2026)	Practical Test	Internal Practical Examination - Batch B (Hardware setup, software simulation & viva-voce).
2nd Week / October	53rd-54th (07.10.2026)	Verification	Final Practical Record Notebook submission, checking, and signature verification.
	55th-56th (21.10.2026)	Viva Voce	Mock Viva-Voce preparation covering all hardware setup and circuit software simulations.
1st Week / November	57th-58th (28.10.2026)	Assessment	Compilation of Progressive Assessment marks (Practical Performance, Attendance & Record Note).
	59th-60th (02.11.2026)	Final Review	Final Lab Review, instrument calibration verification, and preparation for SCTE&VT End-Semester Practical Examination.

Key Schedule & Academic Calendar Notes:

- **1st Internal Assessment:** 01.09.2026 to 08.09.2026 | **2nd Internal Assessment:** 26.10.2026 to 31.10.2026
- **Institute Level FEST:** 12.10.2026 to 16.10.2026 | **Closing of Attendance:** 05.11.2026
- **Excluded Public Holidays:** Birthday of Prophet Mohammad (26 Aug), Jhulana Purnima (27 Aug), Ganesh Puja / Nuakhai (14–16 Sep), Gandhi Jayanti (02 Oct), Durga Puja / Vijaya Dasami (17–20 Oct).

Hemanta Sethi
Lecturer (ETC)
UGMIT, Rayagada