



**PARVATHANENI BRAHMAYYA
SIDDHARTHA COLLEGE OF ARTS & SCIENCE**

Autonomous

Siddhartha Nagar, Vijayawada-520010

Re-accredited at 'A+' by the NAAC

ELECTRONICSIC –VERSION

Offered to : M.Sc.(PHYSICS)	Course Code : 22PH3L2
Course Type: Core(P)	Course: ElectronicsIC-Version
Year of Introduction : 2004	Year of offering : 2022
Year of Revision : 2021	Percentage of Revision : Nil
Semester : III	Credits : 4
Hours Taught: 60 hrs. per Semester	Max.Time : 3 Hours

Course Description:

In this course, students design different circuits learnt in the theory using IC741 op amp and basic gates

Course Objectives:

1. To understand the construction of various circuits using IC's.
2. To learn the construction and working of IC-741 in different circuits.
3. To learn the construction and working of IC-555 in various circuits.
4. To understand the frequency response of various filters.
5. To understand the working of wave form generators.

Course Outcomes: At the end of this course, students should be able to:

CO1: Design integrator, differentiator circuits using op amp.

CO2: Design different oscillators using op amp.

CO3: Construct filters using opamp

CO4: Apply the concepts of different circuits in various devices

CO5: Analyse different characteristic graphs and frequency responses of different circuits

CO-PO MATRIX								
	CO-PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
22PH3L2	CO1			H	M		L	M
	CO2			H	M		L	M
	CO3			H	M		L	M
	CO4		H				L	M
	CO5			H			L	M

Syllabus

PRACTICAL – VI:(22PH3L2) ELECTRONICSIC–Version (Minimum10experimentsaretobedone)

1. RectangularwavegeneratorusingIC555
2. AstablemultivibratorusingIC555
3. IC555timer–SchmittTrigger
4. IC741timer–SchmittTrigger
5. Twin-Toscillator
6. Colpittsoscillator
7. IntegratorusingIC741
8. Differentiatorusing IC741
9. Wien bridge oscillator using IC74110.Voltagefollower
11. LowPassFilter
12. HighPassFilter
13. Bandpass filter usingIC74114.TriangularwavegeneratorusingIC741
- 15.Anytwoonlinevirtuallabexperimentswithinthesyllabushave tobearriedout(using MHRDwebresource).