

Course: VSC
Electronics Practical in Computer Instrumentation
SEM II

Semester: II	Credits: 2	Subject Code: BSVSCCSE22302	Lectures: 30
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Course Outcomes:

At the end of this course, the learner will be able to:

- CO1- Calculate the frequency and amplitude of the sine and square wave.
- CO2- Describe the characteristics of semiconductor devices.
- CO3- Demonstrate the working of OP-AMP, ADC and DAC, analyze and interpret the data for relating electronics to computer science.
- CO4- Work effectively and responsibly as a team member to perform experiments, report writing, using modern tools and techniques.

The practical course consists of 8 experiments out of which one will be activity equivalent to two experimental sessions. Activity will carry 15% marks at internal and external semester examinations. Internal marks will be calculated in continuous assessment of each practical weekly based on viva.

Unit 1 - Sem 2	30
<ul style="list-style-type: none">● Activity - Study of CRO● Study of forward and Reverse biased characteristics of PN Junction Diode● Study of Opto-coupler using photo sensor (its application as burglar alarm)● Study of Half wave and Full wave rectifier● Introduction to the virtual lab - Rectifier , diode	



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Unit 2-Sem 2	30
<ul style="list-style-type: none"> ● Build and test adder and subtractor circuits using OPAMP. ● Introduction to the virtual lab - Opamp as inverting ● To study temperature sensor LM35/AD 590 ● Study of PIR and TILT sensor with presentation and project ● Build and test 4-bit DAC using R-2R Ladder Network ● 3-bit Flash ADC using discrete components ● Hobby Project- equivalent to two practicals based on sensors to be continued in the second year 	

Board of Studies	Name	Signature	
Chairperson (HoD)	Swatee Sarwate, Asst. Prof,		
Faculty	Anitha Menon, Asst. Prof,		
Subject Expert (Outside SPPU)	Dr.Sangeeta Kale, Professor		
Subject Expert (Outside SPPU)	Dr. Rajshree Jain -		
VC Nominee (SPPU)	Dr. Pravin Yawale –		
Industry Expert	Dr. Umesh N. Hivarkar		
Alumni	Ms. Prerna Polekar -		



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