

Course: SEC
Skill based practical in Computer Organization

Semester: II	Credits: 2	Subject Code: BSSECCSE22302	Lectures: 60
---------------------	-------------------	------------------------------------	---------------------

Course Outcomes:

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

- CO1- Identify and test gates, Computer hardware and network devices
- CO2- Construct the combinational and sequential logic circuits, build and test circuits using simulation software.
- CO3- Classify different semiconductor memories; recognize the principal memory technologies from a hierarchical viewpoint with emphasis on cache memory.
- 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: SEC	30
<ul style="list-style-type: none"> • Study of Computer Hardware system • Study of network devices and their role • Code conversion from one base to another base • Logic gates • DeMorgan's theorem • Problems based on Boolean algebra • Binary to gray and gray to binary conversion 	

Unit 2: SEC	30
<ul style="list-style-type: none"> • PSpice -PN junction diode/Half Adder • Half Adder/Full Adder • Introduction to virtual lab-Components and gates • Study of read and write the action of RAM • Build and Test Diode matrix • PPT on Microprocessors 	

Reference Books:

- Floyd T.M, *Digital Fundamentals*, tenth edition, Pearson
- Jain R.P, *Digital Electronics*, Tata McGraw Hill
- M.Morris Mano, "*Digital Design*", 3rd Edition, PHI, New Delhi
- S.Salivahanan S. Arivazhagan-*Digital Circuits and Design*



Board Of Studies	Department	Name	Signature
Chairperson (HoD)	B.Sc(Comp. Sci.)	Swatee Sarwate	<i>Swatee Sarwate</i> 28/3/24

Websites:

- <https://www.vlab.co.in/broad-area-electronics-and-communications>
- <https://www.vlab.co.in/broad-area-computer-science-and-engineering>
- <https://cse11-iiith.vlabs.ac.in/exp/integers-arithmetic/>
- (<https://coa-iitkgp.vlabs.ac.in/exp/karnaugh-map/>)

Board of Studies	Name	Signature
Chairperson (HoD)	Swatee Sarwate, Asst. Prof.	<i>Swatee Sarwate</i> 23/3/24
Faculty	Anitha Menon, Asst. Prof,	<i>A. Menon</i> 23/3/24
Subject Expert (Outside SPPU)	Dr.Sangeeta Kale, Professor	<i>Sangeeta Kale</i> 23/3/24
Subject Expert (Outside SPPU)	Dr. Rajshree Jain -	<i>Rajshree Jain</i> 23/3/24
VC Nominee (SPPU)	Dr. Pravin Yawale –	<i>Pravin Yawale</i> 23/3/24
Industry Expert	Dr. Umesh N. Hivarkar	<i>Umesh N. Hivarkar</i> 23/3/24
Alumni	Ms. Prema Polekar	<i>Prema Polekar</i> 23/3/24



Board Of Studies	Department	Name	Signature
Chairperson (HoD)	B.Sc(Comp. Sci.)	Swatee Sarwate	<i>Swatee Sarwate</i> 23/3/24