SRI VASAVI ENGINEERING COLLEGE (Autonomous)

(Permanent Affiliation to JNTUK, Kakinada), PEDATADEPALLI, TADEPALLIGUDEM-534 101

Department of Electronics & Communication Engineering

Program: M.Tech
Specialization: VLSI & Embedded Systems

Course Outcomes (V18 Regulation)

Year & Semester	Course Code & Name	Course Outcomes
I Semester	V18VLT01 Digital System Design	**After successful completion of the course, the student will be able to:** • Describe the algorithms for minimization of functions • Describe the algorithms for minimization of PLDs. • Design large scale digital systems. • Discuss the fault model and diagnosis in combinational and sequential circuits.
I Semester	V18VLT02 VLSI Technology And Design	**After successful completion of the course, the student will be able to:** • Describe the Microelectronics and MOS Technologies. • Describe various processes in IC Production. • Sketch the Layout Design. • Discuss the Floor Planning, Architecture Design.
I Semester	V18VLT03 CMOS Analog IC Design	**After successful completion of the course, the student will be able to:** • Describe the concept of MOS device and modeling of MOS drain current for large and Small Signal Analysis. • Design and analyze Analog CMOS Sub-Circuits. • Distinguish Large signal and small signal analysis of CMOS Amplifiers. • Describe the CMOS Op-Amps & Applications.
I Semester	V18VLT04 Embedded System Design - I	**After successful completion of the course, the student will be able to:** • Describe the basic concepts of an embedded system and its design. • Differentiate the hardware and software components required to develop an embedded system • Generalize the Embedded System design and development life cycle model and case studies
I Semester	V18VLT07 System On Chip	**After successful completion of the course, the student will be able to:** • Describe SOC System Approach, design and its Architecture. • Describe Memory Design for SOC. • Explain the concepts of bus models and Interconnect Architectures. • Describe Application Studies and Case Studies.
I Semester	V18VLT10 CPLD And FPGA Architectures And Applications	**After successful completion of the course, the student will be able to:** • Describe the Programmable Logic Devices. • Distinguish the various types of Field Programmable Gate Arrays. • Apply the typical applications on FPGAs.
I Semester	V18VLT12 VLSI Signal Processing	**After successful completion of the course, the student will be able to:** • Describe digital signal processing algorithms and processing. • Distinguish folding and unfolding algorithms. • Explain systolic architectures. • Explain various convolution algorithms. • Describe applications of DSP processor in low power design.

II Semester	**V18VLT13** **Design For Testability**	**After successful completion of the course, the student will be able to:** • Interpret the concepts of modeling digital circuits and simulation. • Describe modeling of faults and its testing for SSF. • Explain various techniques of testing.
II Semester	**V18VLT14** **CMOS Digital IC Design**	**After successful completion of the course, the student will be able to:** • Describe the concepts of MOS design. • Demonstrate the combinational, sequential and dynamic CMOS logic circuits. • Explain various semiconductor memories.
II Semester	**V18VLT15** **Embedded System Design - II**	**After successful completion of the course, the student will be able to:** • Describe the ARM architecture and its memory management. • Apply instruction set for Arm programming. • Develop basic ARM programs using C. • Describe the concepts of memory management.
II Semester	**V18VLT16** **Embedded Real Time Operating Systems**	**After successful completion of the course, the student will be able to:** • Describe the concepts of real time operating system. • Explain various RTOS and their programming concepts. • Express program modeling for case studies. • Construct an image for a target board. • Describe RT Linux.
II Semester	**V18VLT17** **Low Power VLSI Design**	**After successful completion of the course, the student will be able to:** • Identify various sources of power consumption. • Estimate the power consumption sing simulation and probabilistic approaches. • Discuss low power design at various levels of abstraction. • Discuss clock distribution for low power dissipation.
II Semester	**V18VLT23** **Design For Internet of Things**	**After successful completion of the course, the student will be able to:** • Describe M2M and IOT technologies. • Identify the layers and protocols in IOT. • Describe various communication technologies used in IOT. • Demonstrate various hardware components required for IOT applications.