

Year & Sem: E1S2	Course Code: EC3609	Course Name: Embedded systems	No. of Credits: 4	L 2	T&PS 2	P 0
UNIT-I: OVERVIEW OF EMBEDDED SYSTEM: Embedded system, types of embedded systems, requirements of embedded system, issues in embedded software development, applications. UNIT-II: PROCESSOR & MEMORY ORGANIZATION: Structural units in a processor, processor selection, memory devices, memory selection, memory allocation & map, interfacing. UNIT-III: DEVICES, DEVICE DRIVERS & BUSES FOR DEVICE NETWORKS: I/O devices, timer & counter devices, serial communication, communication between devices using different buses. Device drivers parallel and serial port device drives in a system, interrupt servicing mechanism and context & periods for context switching, deadline and interrupt latency. UNIT-IV: PROGRAMMING & PROGRAM MODELING CONCEPTS: Program elements , modeling processes for software analysis, programming models, modeling of multiprocessors systems, software algorithm concepts, design, implementation, testing ,validating, debugging, management and maintenance , necessity of RTOS. UNIT-V: HARDWARE AND SOFTWARE CO-DESIGN: Embedded system design and code sign issues in software development, design cycle in development phase for embedded systems, use of ICE & software tools for development of ES, Issues in embedded system design. References/Text Books: 1. 2. Lecture Plan: Unit-I & -II syllabus for MID-I, Unit-III & -IV syllabus for MID-II and Unit-V & -VI syllabus for MID-III examinations. Video Lectures (Web Links): 1. 2. Study Materials (Web Links): 1. 2. Problems & Solutions (Web Links): 1. 2. Assignments (Web Links): 1. 2.						