



GUJARAT TECHNOLOGICAL UNIVERSITY

Master of Engineering Syllabus

Subject Code : 3710401

Subject Name : Embedded System Design

Course Category / Type : Core I

Teaching and Examination Scheme :

Teaching Scheme			Credits	Examination Marks				Total Marks
L	T	P		Theory Marks		Practical Marks		
			ESE(E)	PA (M)	PA (V)	PA (I)		
3	0	2	4	70	30	30	20	150

Course Content :

Sr. No.	Content	Total Hrs.	Weight
1	Embedded Micro controller Cores, Embedded Memories, SRAM, DRAM Controllers.	8	20%
2	Embedded System Design Aspects : Interfacing between analog and digital sections, signal conditioning, Interfacing with external systems, User interfacing.	8	20%
3	Software aspects of Embedded Systems : Real time programming languages & operating systems for Embedded Systems, Embedded programming in C/C++, Scheduler, Multitasking, Threading concepts and implementation, Serial Communication Interface: UART, SCI applications, Modern Serial Interface Standards, Modems, SPI, I2C, USB, Introduction to JTAG Port	12	30%
4	Case study of Embedded Applications.	12	30%



GUJARAT TECHNOLOGICAL UNIVERSITY

Master of Engineering Syllabus

Subject Code : 3710401

Subject Name : Embedded System Design

Course Outcome :

Student should be able to

- Understand embedded system elements like memory, core, DRAM controller etc.
- Understand design aspect of embedded system.
- Understand concept of multitasking , threading , scheduler in Embedded system.
- Design and develop software code for various interface.

Reference Books :

1. J. W. Valvo, Embedded Micro computer system, Brooks/Cole.
2. K. J. Ayala, The 8051 Microcontroller, Pernam Intl.
3. Jack Ganssle. The art of designing Embedded Systems.
4. sDaniel W. Lewis, Fundamentals of Embedded Software.

* * * * *