

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. Embedded Systems (Branch Code - 54)

Year – I (Semester – I)

Subject: Embedded System Design (1710409) Institute Elective-I

Sr. No.	Course Content	Hours
1	Embedded Micro controller Cores, Embedded Memories, SRAM, DRAM Controllers.	6
2	Embedded System Design Aspects: Interfacing between analog and digital sections, signal conditioning, Interfacing with external systems, User interfacing.	10
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,	14
4	Serial Communication Interface: UART, SCI applications, Modern Serial Interface Standards, Modems, SPI, I2C, USB, Introduction to JTAG Port Case study of Embedded Applications.	10

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. Daniel W. Lewis, Fundamentals of Embedded Software