GUJARAT TECHNOLOGICAL UNIVERSITY
B. E. SEMESTER: V
Computer Engineering/Computer Science & Engineering

Subject Name: **Advance Processors**
Subject Code: **150701**

Teaching Scheme				Evaluation Scheme		
Theory	**Tutorial**	**Practical**	**Total**	**University Exam (Theory) (E)**	**Mid Sem Exam (Theory) (M)**	**Internal Assessment (I)**
3	0	2	5	70	30	50

Sr. No.	Course content
1.	Introduction to 16-bit microprocessors, 8086 architecture, Segments, Flags, Instruction set assembly language programming on 8086 using assembler, Interrupts, Writing interrupt services routines, Debugging programs, 8086 pin functions, Minimum and maximum mode operations, Memory banks.
2.	80286/386/486 register set, Data types, Overview of instruction set, Memory segmentation with descriptor tables including LDT and GDT, Privilege levels, Changing privilege levels, Paging including address translation, Page level protection, MMU cache, Virtual memory, Paging and segmentation, Multitasking with TSS, Context switching, Task scheduling, Extension and I/O permission, Managing interrupts with IDT, Gates and exception handlers.
3.	Technical overview (only features) of the Pentium architecture including Pentium-Pro, MMX, Hyper Threading, Core-2-duo, Concepts of RISC, RISC vs. CISC architecture of SUN SPARC.

Reference Books:

1. Microprocessor & Interfacing - Douglas Hall, TMH.
2. Advanced 80386 Programming Techniques: James Turley, TMH .
3. Advance Microprocessor - Deniel Tabak, TMH.
4. The Intel Microprocessors (Eight Editions): Barry B. Brey, Pub: Pearson (Prentice Hall).
5. The 8086 Microprocessor, Kenneth Ayala, Cengage Learning.
6. The 8088 and 8086 Microprocessors, Triebel & Singh, Pearson Education.
7. IBM PC Assembly Langauge & Programming, Peter Abel, PHI.