Course Name	Computer Architecture
Prerequisite course	Logic circuits
Corequisite course	Computer architecture lab
References	1. Morris Mano, Computer system architecture. Third Edition. 2. David A.Patterson, and John L. Hennessy. Computer organization and design: the hardware/software interface. Fourth Edition 3. Morris Mano, Digital Design, Fourth Edition
Course instructor	Dr. Babak Nasersharif
Syllabus	1. Introducing computer architecture- 2. Review on flip flops, counters, and registers 3. Register transfer language (RTL) 4. RTL 5. Algorithm state machine (ASM) chart 6. ASM chart 7. ASM chart 8. Basic computer design-addressing modes and registers 9. Basic computer design-common bus, ALU, and instruction set definition 10. Basic computer design-RTL for executing instructions-Timing and control unit-Input and output units 11. Basic computer design- completing architecture 12. Basic Computer programming 13. Basic Computer programming 14. Central Processing Unit (CPU)- Register banks and stacks 15. Central Processing Unit (CPU)- Addressing modes, status Register, MIPS processor 16. Pipelines-Arithmetic and instruction pipelines 17. pipelines-implementation in MIPS 18. Memory organization-Cache 19. Cache- Mapping from main memory to cache 20. Parallel Processing and GPU