Department of Computer Science and Engineering
National Institute of Technology Calicut
Tentative Course Details : Winter Semester 2019-20
CS2093D HARDWARE LABORATORY

Lab Hours:

Slot : S (Thursday 2.00 pm 5.00 pm)
Lab : Networks Systems Lab (NS Lab), Software System Lab (SS Lab), Hardware Lab

Instructors:

Dr. Saidalavi Kalady, Dr. Jayaraj P B, Dr. Srinivasa T M, Dr. M Prabhu, Ms. Athira Manikuttan, Dr. Manjusha K, Ms. Seema Yadav, Mrs. Alphy George

Teaching Assistants:

Swapneel C Mhatre, Shahira K C, Faneesh Mishra, Farah Naz, Libina A, Krishnendhu S P, Prajisha C, Sharon Sunny, Suneera C M, Shamla Beevi A, Annie Julie Joseph, Harish Kumar, Ashish Kumar, Nagarajan K, Aviral Nigam, Ahamed Sajeel, B Mahesh Babu, Satyam Mishra

Course Outcomes:

CO1. Describe the x86 architecture, its instruction set and basics of NASM Assembler.

CO2. Use software interrupts for implementing input output operations in NASM programs.

CO3. Design programs using integer operations.

CO4. Develop programs in NASM using string related instructions.

CO5. Design and implement programs using 80x86 floating point instructions.

Syllabus:

1. 80X86 Assembly language programming:
   - Integer operations,
   - Operations on arrays,
   - Recursive subroutines,
   - String manipulation,
   - Floating point operations
   - SIMD operations
2. Familiarization of PC hardware and troubleshooting
3. Verilog Experiments

References:

1. Barry B Brey, Intel Microprocessors: Architecture and Programming, Prentice Hall, 2008.
2. Peter Abel IBM PC Assembly Language and Programming (5/e), Prentice Hall, 2001.

Grading: Exams and Daily Evaluations:

Daily Experiment Evaluation : 10
Test 1: 20
Test 2: 20
Viva : 20
Verilog experiments : 30

Grading Policy:

- Grading will be absolute.
- Here is a tentative grade distribution: 90-100: S; 80-89: A; 70-79: B; 60-69: C; 50-59: D; 40-49: E; < 40: F.
- Absence for exams/quizzes without prior written permission from the instructor will be equivalent to zero marks in the corresponding exam/quiz.
- All issues regarding valuation of exams must be resolved within one week after the marks are announced.

Standard of Conduct
Each student is expected to adhere to high standards of ethical conduct, especially those related to cheating. Any academic dishonesty will result in zero marks in the corresponding exam or quiz and will be reported to the department council for record keeping and for permission to assign F grade in the course. The department policy on academic integrity can be found at: *http://minerva.nitc.ac.in/cse/sites/default/files/attachments/news/Academic-Integrity.pdf*