Department of Computer Science and Engineering
National Institute of Technology Calicut
Tentative Course Details : Winter Semester 2017-18

CS2093 HARDWARE LABORATORY

Lab Hours:

Slot   : S (Thursday 2.00 pm 5.00 pm)

Lab   : Networks Systems Lab (NS Lab), Software System Lab (SS Lab)

Instructors:

Mr. Jayaraj P B, Mr. Srinivasa T M, Ms. Jyothsna S Mohan, Mr. Krishna Kumar, Mr. Maddaiah PN,
Ms. Athira P K, Ms. Rekha Thankappan

Teaching Assistants:

Mr. Shree Prakash, Mr. Rajath Porwal, Mr. Ponna Sunil Kumar, Ms. Vaishali Gupta, Mr. Sushrut Wante,
Mr. Savinu T Vijay, Ms. Sreeshma C M, Ms. Seema Yadav, Mr. Manu Madhavan, Mr. Visakh R, Ms. Athira K,
Mr. Sunil Kumar P V, Ms. H V Pratima, Ms. Shamna

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:

- **80X86 Assembly language programming:**
    - Integer operations, arrays, 2-D arrays, procedures, sub-routines, recursive subroutines.
    - String manipulation, floating point operations
    - Linux system calls, int 80h(interrupt calls)
- NASM programs practices
- Familiarization of PC hardware and trouble shooting

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   : 20%
Test 1   : 25%
Test 2   : 25%
Final Test   : 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:

$http://minerva.nitc.ac.in/cse/sites/default/files/attachments/news/Academic-Integrity.pdf$