**CSE DU**

**Course Structure**

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| Course Code | CSE3113 |
| Course Title | Microprocessor and Assembly Language Lab |
| Instructors | Dr. Md. Mustafizur Rahman  Contact: cell – (880)-2-9661900 Ext. 7433  Email: mustafiz@du.ac.bd, mustafiz1952@gmail.com  Tamal Adhikary  Contact: cell – 01676325072  Email: [tamal@cse.du.ac.bd](mailto:tamal@cse.du.ac.bd) |
| Introduction to the Course/Course Description | This course is the foundation of low level programming which is applied to control microprocessor and embedded system related applications. The course provides basic understanding about microprocessor level programming environment and the available resources that can be utilized by the programmer. |
| Specific Objectives/Course Goals | * To develop skills needed to understand, analyze and construct assembly codes. * To be able to work in the microprocessor environment. * To develop fluency in using low level programming language. |
| Student Learning Outcomes | After successful completion of this course, students should be able to:   * Get familiar with Assembly Language and Assembler (NASM, TASM and/or MASM). * Have efficiency in performing I/O operations, Integer programming, String programming etc. * Know about Graphics programming and operations to control graphical window. * Understand how to manage larger codes in assembly by applying modularity. |
| Prerequisites | None |
| Class Duration | 3 Hours |
| Contact Hour/Week | 3 Hours |
| Instructional Strategies | Lab tutorial documents, Practice sheets |
| Assessment Methods | Participation: 5%  Continuous evaluation: 35%  Final Examination: 10% |
| Schedule of Activities (Class breakdown) | |
| Lecture | Content covered |
| Class 1 | Introduction to Microprocessor and Assembly Language |
| Class 2-3 | Basic Assembly Coding, Use of Registers, Input-output operations |
| Class 4 | Use of Arithmetic Operations |
| Class 5-7 | Block, Jumping and Branching, Loop |
| Class 8-9 | String Manipulation |
| Class 10-12 | Procedure calling, Parameter Passing, Recursion |
| Class 13-14 | Special Instructions, Introduction to Graphics and Basic Graphic related instructions. |
| Class 15 | Lab final exam. |
| Reference (Reading list) | 1. Microprocessor and Interfacing (2nd edition) – Douglas V. Hall 2. Assembly Language Programming and Organization of the IBM PC – Ytha Yu, Charles Marut 3. Introduction to 64 Bit Intel Assembly Language Programming for Linux - Ray Seyfarth |