

Department of Computer Science and Engineering

Semester: 5th

📄 **Course Code:** CSE 53020

📄 **Course Title:** Peripheral and Interfacing

📄 **Section:** All

📄 **Instructor's Information:**

- **Name:** Md. Imtiaz Ahmed
- **Designation:** Lecturer, CSE
- **Office Location:** 5th Floor, Lazz Pharma Building
- **Cell phone No.:** 01717430880
- **Class Code of the Course on Google Classroom:** yzvfmp2
- **Email Address:** imtiaz_nu@diit.info
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📄 **Academic Integrity:**

Daffodil Institute of IT is committed to the highest standards of academic excellence, integrity and honesty under National University of Bangladesh. Students are expected to abide by these standards regarding academic honesty and to uphold the policies of the University in this respect and avoid any behavior which could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offense. Academic dishonesty is a serious offense and can result in suspension or expulsion from the Institute.

📄 **Course Objectives:**

This course will develop student's knowledge of

- How computer or laptop connected with the auxiliary devices like Mouse, Keyboard, Monitor, Printer etc.
- How the auxiliary devices communicate with the processor of a computer.
- Microprocessor input or response system regarding the auxiliary devices communication.
- The functions of the memory that can be used for the basic operation of the peripheral devices.
- Overview and details of the peripheral devices that usually used in Computer.

- Interfacing systems overall structure and how it communicates with the peripheral devices.

Course Contents:

- Introduction to Peripheral devices and basic types.
- Introduction to Interfacing and basic types.
- Memory Interfacing basics, Programmed I/O, Interrupt driven I/O, Priority interrupt I/O, Memory mapped I/O, Direct Memory Access (DMA).
- Communication Interfacing: Serial and Parallel communication interfacing, ports using serial and parallel communication in computer.
- Digital Interfacing: PPI, 8255A IC, Interfacing microprocessor to keyboards, Relay Interface, Stepper Motor, Incremental Encoder, Optical shaft encoder, etc. with details and elaboration.
- Modern Data Entry Devices, types of data entry devices and example.
- Scanner: Drum Scanner, Flatbed scanner, Hand scanner, how scanner works and procedures of scanning.
- Barcode reader: Barcode structure, UPC types, EAN, ISBN, Code, How UPC barcode works.
- Touch Screen: Main components of touch screen and touch screen technology full elaboration.
- Printer: Printer technology, Impact and non-impact printers, Laser printer details, Liquid inkjet printer details elaboration, Toner based printer's detail elaboration.
- Monitor: Aspect ratio, resolution, VGA cable, DVI, CRT, LCD, Plasma Display, etc. with full elaboration.
- Storage Devices: Floppy Disk, Magnetic hard disks, Compact Disk, Magnetic tapes, these storages working module and structures.
- Data Communication and Network, Asynchronous Serial Communication, RS232, USART, Null Modem, IEEE 488, HPIB ports details.
- Macro Assembler basic codes and registers.

Text and Reference Books:

1. Douglas Hall, (1986), Microprocessors and Interfacing, 2nd Edition, McGraw Hill, New Delhi.
2. Jyoti Snehi, (2006), Computer Peripheral and Interfacing, 1st Edition, India

📝 **Midterm & Final Exam:**

Midterm & Final examination will be conducted as per the schedule declared by the department.

📝 **Academic Dishonesty Policy:**

Each student will be expected to do his/her own work on tests and assignments. If a student is found to be cheating (or helping someone else to cheat) on a test or any assignment, he/she will receive a grade of zero for that assignment or test.

📝 **Special Instructions:**

- All students are encouraged to attend all the classes on time.
- There will be 3 (three) unannounced class tests and all of them will be counted.
- There will be no make-up for the class tests. 📣

-----*Best of Luck with this Semester*-----