ANAND
INTERNATIONAL COLLEGE OF ENGINEERING

Zero lectures

1) Name of Subject with Code: Microprocessor & Interface (4CS3-03 & 4CAI3-04)

2) Self-Introduction:

a) Name: Vivek Bhojak

b) Qualification: Phd, M.Tech, B.E. Diploma -(ECE)*

c) Designation: Assistant professor

2) Instructional Language: -70-80 % -English; 30 -20 %- Hindi

a). Relevance to Branch:

Microprocessor, any of a type of miniature electronic device that contains the arithmetic, logic, and control circuitry necessary to perform the functions of a digital computer's central processing unit. In effect, this kind of integrated circuit can interpret and execute program instructions as well as handle arithmetic operations.

b). Relevance to Society:

Microprocessors have transformed modern society. They affect the way we work and play, the way we travel and communicate. They offer remarkable processing power at infinitesimal cost.

c). Relevance to Self:

The key benefit of the microprocessor results from integrating all of the components of a computer that are involved in executing instructions together on the same microchip. Instructions are fetched from external memory (though often today this is cache memory on the same chip) and data are loaded and stored from external memory (again, often using on-chip caches), but the instruction decode and execute logic is all collocated, resulting in significant performance and energy benefits compared with splitting the processing functions across two or more chips, as was done prior to the arrival of the microprocessor. These benefits accrue because on-chip connections incur much lower parasitic capacitance than do off-chip connections, and most of the delays and energy consumed by a processor result from driving capacitive loads up and down during execution.

d). Relation with laboratory:

The Laboratory is used to provide intensive practical exposure to the students in the field of microprocessor architecture and industrial control through them. Different exercises in this lab includes Serial Data communication between PC and 8086 microprocessor trainer kit, writing on EPROM and microcontroller chip using UIP.

The lab also provides the facility to interface the microprocessor with different circuit such as A/D converters ,D/A converters stepper motors , multidigit displays,DMA,Timer , interrupt controller etc. The Lab also includes experiments with Nuvoton Boards such as implementation of UART, Temperature Sensor using Nuvoton Boards.

e). Connection with previous year and next year:

Study of this subject will be of great assistance to the students who want to go for research in interfacing of microprocessor. 3 year students can relate to the subject Computer Architecture.

5). Books/ Website/Journals & Handbooks/ Association & Institution:

a). Recommended Text & Reference Books and Websites:

1. *"Microprocessor Architecture, Programming and Applications with 8085" by R S Gaonkar.*
2. *"Fundamentals of Microprocessors and Microcontrollers" by B Ram*
3. *"Microprocessors and Its Interfacing" by Douglas Hall and S S S P Rao*

b). Journals & Handbooks: -

1. Computer Science and Information Technology
2. International Journal of Computer Science and Network Security
3. IET digital library

6.) Syllabus Deployment: -

A). Total weeks available for academics (excluding holidays) as per RTU, Kota calendar-

Semester	
No. of Working days available(Approx.)	
No. of Weeks (Approx.)	10

- Total weeks available for special activities (as mentioned below)- 02 weeks (Approx.)

Note: Individual faculty must calculate the exact no. of lectures available according to time table etc. after consultation with HOD.

b). Special Activities (To be approved by HOD & Dean & must be mentioned in deployment):

- Class Test- Once in a semester
- Quiz - Once in a semester
- Revision classes (Solving Important Questions):- 1 or 2 class before End Term Exam.

c). Lecture schedule per week -

As per RTU scheme - 03

Introduction & close with conclusion. In case of the subject, it is Zero lecture.

Place & Date: Name of Faculty with Designation