What is the "Computer Track"?

Computer Track =

Instruction Set Architecture +

Machine Organization +

Digital Design + VLSI + Parallel Processing + Software + System Design + ……..
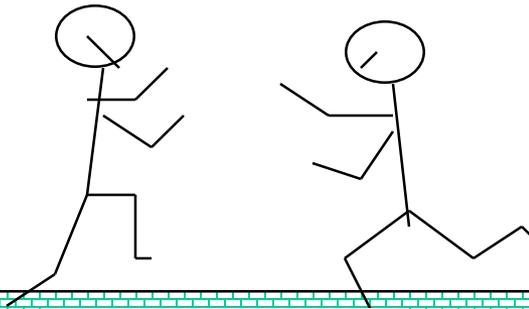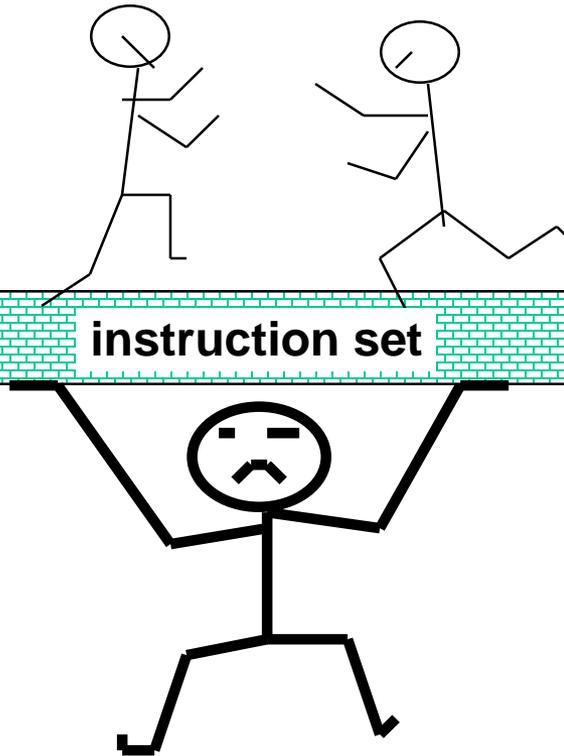
Computer System

Applications

software

OS

instruction set

hardware

communications

RT

architecture

Computer Track (CT)

Objectives:

Provide the students with a good basis, which should allow him/her to deal with complexity, abstraction and to unknown technological changes. This should prepare him/her to continue his education in the future.

Outline of the Track:

The student's training starts out by learning the basics hardware and software and goes on to study computer architecture (how to design computer systems), computer communications, circuit design, real time applications, etc. At the Computer track we teach how to use computers, how to make computers faster, more efficient, and more intelligent.

Outcome:

Graduates of the computer track have the ability to perform a wide range of jobs and will be hardware-software oriented.

Snapshot of the Computer Track

Core Curriculum

Intr. To Programming
Digital Systems
Introduction to Computers
Microcomputer Laboratory

Computer Track
CPU Architecture

Software Mandatory
Intr. to Parallel Processing
Data Struct. and Algorithms

Hardware Mandatory
Digital Computer Structure

Lab Mandatory
Advanced Computer Lab.

Selective Courses

Automata and Formal
Languages
Object Oriented Languages
Artificial Intelligence …

Digital Logic Design & Synthesis
Comp. System Design
VLSI Circuit Design
……

Status

- **Students Profile:** During the last three years the active number of students have been 100-120. About 80% of the students are taking the full program. About 40 – 60 students/year are taking the Advanced Micro Computer Laboratory. About 70% of the students take more than two hardware-design-oriented courses -oriented courses.

- **This Year: <u>120 students CPU & 100 students in the Computer Track</u>**

- **Resources:** The Computer track has three teaching laboratories (Introductory Microprocessing, Advanced, and System design) and one research/teaching laboratory (Parallel Distributed Processing, PDP) with a total area of 100 m^2. Eighty percent of the available space is used for the basic Microprocessor laboratory. House-Labs!!.

Research Areas

- Parallel Processing
- Real time Video Processing and Compression
- Real Time Signal Processing
- Real time Embedded Systems
- Autonomous Systems
- Robotics
- Learning Systems – DNN - AI
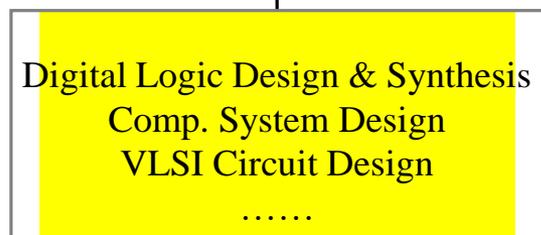
The Computer Track 2018-2019

Core Curriculum

Intr. To Programming
Digital Systems
Introduction to Computers
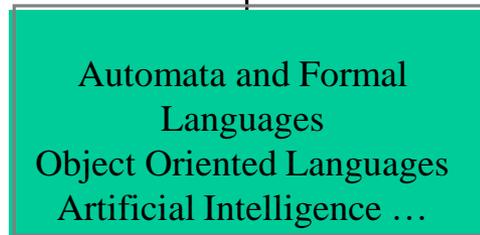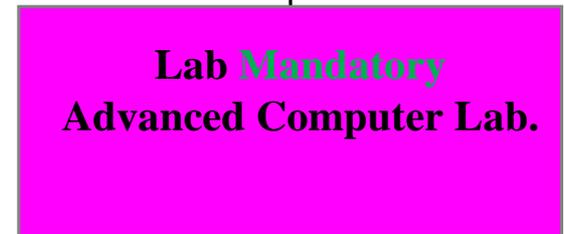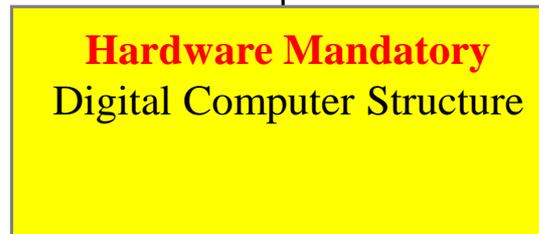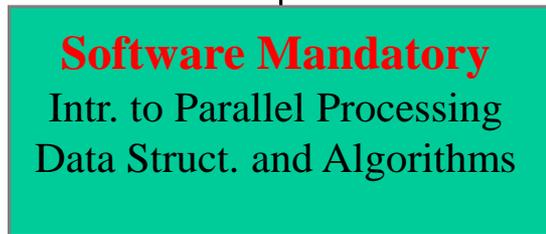**Microcomputer Laboratory**

No Parallel Courses !!

CT capacity 100 students!!!

Most courses 50 students x 2 semesters

Semester 6th
120 - 140 students

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Advanced Computer Lab.

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Selective Courses

Advanced Computer Lab