

Content

| Course Code | Course Name | Semester | Theory | Practice | Lab | Credit | ECTS |
|-------------|-----------------------|----------|--------|----------|-----|--------|------|
| INF320 | Computer Architecture | 5 | 4 | 0 | 0 | 4 | 6 |

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| Prerequisites | INF220 |
| Admission Requirements | INF220 |

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| Language of Instruction | |
| Course Type | Compulsory |
| Course Level | Bachelor Degree |
| Objective | Examine the units that make up the computer hardware, especially in the business line of microprocessor technology, including modern microprocessor, memory, and input-output units constitutes the purpose of this course. |
| Content | Course includes registers, arithmetic-logic unit (ALU), the assembly, the central processing unit (CPU), a general-purpose registers, stack, queue, the pipe-lining method, multiplication circuits and basic input-output units. |
| References | COMPUTER SYSTEMS ARCHITECTURE M. MORRIS MANO LITERATURE PUBLISHING HOUSE 2002 |

Theory Topics

| Week | Weekly Contents |
|------|---|
| 1 | Arithmetic, logic and shift microoperations |
| 2 | The design of ALU |
| 3 | The structure of memory and memory addressing modes |
| 4 | Special-purpose registers and functions |
| 5 | Identification and coding of machine instructions |
| 6 | Tasks of machine commands |
| 7 | Assembly programming |
| 8 | Mid-term exam |
| 9 | Technology background |
| 10 | RAM structure and control circuits |
| 11 | General-purpose registers |
| 12 | The pipe-lining method |
| 13 | FPU structure |
| 14 | Input-output units |