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| **COMPUTER ARCHITECTURE** | |
| **code** | AIC201 |
| **title** | Computer Architecture |
| **type (compulsory/optional)** | Compulsory |
| **cycle (first/second/third)** | First |
| **year of study when the component is delivered (if applicable)** | 1 |
| **semester/trimester when the component is delivered** | Second |
| **number of ECTS credits allocated** | 5 |
| **name of lecturer(s), with information about how, when and where to contact them.** | Stavros Souravlas, Office 425, email: [sourstav@uom.edu.gr](mailto:sourstav@uom.edu.gr)  Online meeting (Google Meet, meeting can be arranged via email) |
| **learning outcomes** | Students must be able to explain the organization of a typical computer system, as well as the execution of a simple program on that system. Further, students must be able to design simple digital circuits, program in simple assembly language and estimate the performance of a simple computer system. |
| **mode of delivery (face-to-face/distance learning etc.)** | Face to face or distance learning |
| **prerequisites and co-requisites (if applicable)** | Digital design |
| **course content** | Introduction: Structured Computer Organization, Survey of Modern Computer Systems: Processor, Memory, Buses, I/O. Digital Logic: Information Representation, Logic Gates and Boolean Algebra, Basic Combinatorial Circuits, Basic Sequential Circuits and Memory, Buses. Microarchietcture: Data Paths and Memory Models, Execution of Instructions and Microisnstructions, Instruction Level Parallelism, Cache Memory, Performance Improvements. Instruction Set Architecture: Data Types, Instruction Formats, Addressing Modes, Instruction Types, Flow Control, Assembly Language Programming. |
| **recommended or required reading and other learning resources/tools** | - |
| **planned learning activities and teaching methods** | Power Point slides, recorded lectures |
| **assessment methods and criteria** | Project |
| **language of instruction** | English |