The Department of Mathematics

2019−20−B term

Course Name Introduction to computers to Computer science

Course Number 361.1.3301

Course web page

https://www.math.bgu.ac.il//en/teaching/spring2020/courses/
introduction-to-computers-to-computer-science

Office Hours https://www.math.bgu.ac.il/en/teaching/hours

Abstract

Requirements and grading[1]

Course topics

1. Introduction: overall description of the multi-purpose digital computer operation, the central processing unit (CPU) organization, representation and processing of information (data and programs).

2. Machine language: representation of operations and commands, selecting the command set, designing the command architecture, addressing modes.

3. Control Unit: application methods by logic and micro-programming, interpretation and execution of command set.

4. Arithmetic Unit: numbers representation, basic arithmetic operations in digital systems, addition, subtraction, multiplication and division of fix and floating point numbers.

5. Memory Unit: memory types, addressing methods, memory organization, virtual memory, cache memory.

6. Input/Output Unit: I/O addressing modes, I/O data transferring control by serial polling, interrupt and direct memory access (DMA).

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[1]Information may change during the first two weeks of the term. Please consult the webpage for updates