

The Department of Mathematics

2021–22–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/spring2022/courses/introduction-to-computers-to-computer-science>

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

Abstract

Requirements and grading¹

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).

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