# The Hebrew University of Jerusalem

## Syllabus

## PROGRAMMING WORKSHOP IN C - Summer Course - 67321

Last update 04-03-2017

<u>HU Credits:</u>  2

<u>Degree/Cycle:</u> 1st degree (Bachelor)

<u>Responsible Department:</u> computer sciences

<u>Academic year:</u> 0

<u>Semester:</u>

<u>Teaching Languages:</u> Hebrew

<u>Campus:</u> E. Safra

<u>Course/Module Coordinator:</u> Yoni Sher

<u>Coordinator Email:</u> [yoni.sher@mail.huji.ac.il](mailto:yoni.sher@mail.huji.ac.il)

<u>Coordinator Office Hours:</u> Coordinate in advance

*Teaching Staff:*
   *Mr. Danny Barash*
*Mr. Yoni Sher*


*Course/Module description:*
   *Outline the programming paradigm of C language.*


*Course/Module aims:*
   *Familiarity with the C programming language syntax, and better understanding of how programming language and hardware interact.*


*Learning outcomes - On successful completion of this module, students should be able to:*
   *Read and write programs in C language.*
*Use pointers safely and correctly.*
*Understand memory management.*
*Apply generic programming in C.*


*Attendance requirements(%):*
   *0*


*Teaching arrangement and method of instruction: Frontal lectures and programming assignments.*


*Course/Module Content:*
   *The structure of a C Program*
*Built in data types and enumerators*
*Variables types (local, static, global)*
*Logical and arithmetic expressions*
*Bitwise operations*
*C standard library*
*Standard and File IO*
*Control-flow statements*
*Functions*
*Pointers*
*Static and dynamic memory understanding and management*
*Arrays*
*Structs, unions and bitfields*
*Strings*

Error handling
The C preprocessor (macros, directives)
Program organization
Multiple files compilation and linkage (static, extern)
Make utility and building a makefile
Command-line arguments
Generic programming in C
Function pointers
Code optimization
Variadic functions


Required Reading:
 NA


 Additional Reading Material:
  NA


 Grading Scheme:


Additional information:
  NA