



Jordan University of Science and Technology
Faculty of Computer & Information Technology
Cybersecurity Department

CY111 Assembly Language Laboratory - JNQF Level: 7
First Semester 2023-2024

Course Catalog
1 Credit Hours. This course emphasizes the organization and operation of computer systems at the assembly language level. Covers the mapping of statements and constructs in a high-level language onto sequences of machine instructions, as well as the internal representation of simple data types and structures. Offers programming practice with an assembly language to provide practical application of concepts presented in class.

Text Book	
Title	Assembly Language for x86 processor
Author(s)	K.R Irvine.
Edition	8th Edition
Short Name	Main Textbook
Other Information	Pearson; May 31, 2019

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref #1	Assembly Language Step-by-Step: Programming with Linux	Jeff Duntemann	3rd Edition	Wiley; (October 5, 2009)

Instructor	
Name	Dr. Qasem Abu Al-Hajja
Office Location	N2L0
Office Hours	Sun : 09:30 - 10:30 Sun : 11:30 - 12:30 Mon : 09:30 - 10:30 Mon : 10:30 - 11:30 Tue : 09:30 - 10:30 Thu : 09:30 - 10:30

Email	qsabuhaija@just.edu.jo
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Class Schedule & Room
Section 1: Lecture Time: Mon : 13:00 - 16:00 Room: LAB Section 2: Lecture Time: Sun : 13:00 - 16:00 Room: LAB

Prerequisites		
Line Number	Course Name	Prerequisite Type
1761120	SE112 Introduction To Object- Oriented Programming	Pre./Con.
821123	HSS112SE Introduction To Object- Oriented Programming	Pre./Con.

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	Course Overview + Syllabus	
Week 2	Overview of Microcomputer Systems	From Main Textbook
Week 3	Microprocessor System	From Main Textbook
Week 4	8086 Assembly Language (Preliminary and Principles)	From Main Textbook
Week 5	Data Definition and Directives	From Main Textbook
Week 6	Data Transfer Instructions	From Main Textbook
Week 7	Arithmetic Instructions	From Main Textbook
Week 8	Logical Instructions	From Main Textbook
Week 9	Midterm Exam	
Week 10	Branch Instructions	From Main Textbook
Week 11	Flags, Processor, and Iteration Instructions+ Input / Output Functions	From Main Textbook
Week 12	The Stack and Procedures/Subroutines +String/Arrays Instructions	From Main Textbook
Week 13	Addressing Modes	From Main Textbook
Week 14	Class Discussion and Review	
Week 15	Final Exam	

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Describe the basic computer organization and the internal/external architecture of the 8086 microprocessor. [1SO1] [1L7K1]	10%	
Examine the register contents, data memory contents, code memory contents, stack memory contents, ALU status, addressing modes, and others. [1SO2] [1L7S1]	20%	
Use assembly language to develop and evaluate different applications by applying fundamental programming constructs such as loops, conditions, and subroutine calls [1SO2] [1L7S2]	50%	
Analyze and Debug Assembly Codes to identify and fix errors in assembly language programs [1SO1] [1L7C4]	20%	

Relationship to Program Student Outcomes (Out of 100%)									
oldS1	oldS2	OldS3	OldS4	SO1	SO2	SO3	SO4	SO5	SO6
				30	70				

Relationship to NQF Outcomes (Out of 100%)			
L7K1	L7S1	L7S2	L7C4
10	20	50	20

Evaluation	
Assessment Tool	Weight
Lab Assignments	30%
Final Exam	40%
Mid Exam	30%

Policy	
Attendance	Attendance is very important for the course. In accordance with university policy, students missing more than 20% of total classes are subject to failure. Penalties may be assessed without regard to the student's performance. Attendance will be recorded at the beginning or end of each class.
Exam	All exams will be conducted from Textbook; necessary algorithms/equations/relations will be supplied if required.

Date Printed: 2023-10-30