

Course name: CENG313 Computer Organization and Assembly Design				Department: Computer Engineering				
Semester	Methods of Education							Credit (ECTS)
	Practice	Recitation/ (Etud)	Lab	Project/ Field Study	Homework	Other	Total	
2021 – 2022 Fall	42	-	-	20	60	28	150	5
Language	English							
Compulsory/Elective	E							
Prerequisites	-							
Face to Face Lecture	2							
Online	1							
Course Contents	Week 1 – Programming Model: Register Banks, Data types Week 2 – Programming Model : Endianness and memory Alignment Week 3 – Directives 1 Week 4 – Directives 2 Week 5 – Data Movement Week 6 – Load/Store Week 7 – Addressing Modes Week 8 – Program Status Register and Flags Week 9 – Arithmetic Operations Week 10 – Logic Operations Week 11 – Condition Codes and Testing Instructions Week 12 – Conditional Execution Week 13 – Control Structures Week 14 – Load/Store Multiple & The Stack Week 15 – Subroutines							
Course Objectives	1. Understand the way microprocessors are programmed 2. Understand the instruction set of Cortex M4 Microprocessor 3. Learn to write Assembly programs for Cortex M4 Microprocessor							
Learning Outcomes and Competences	To enable the students to write assembly programs and understand the way assembly instructions control and execute on CPU.							
Textbook and /or References	ARM Assembly Language: Fundamentals and Techniques, Second Edition 2nd Edition. William Hohl, Christopher Hinds							
Assessment Criteria							%	
	Midterm						30	
	Quiz						30	
	Final						40	
Instructors	Asst. Professor Tarek Najjar Eng. Mahir Sanli							