

**2020 - 2021 ACADEMIC YEAR SPRING SEMESTER
SYLLABUS**

COURSE CODE AND TITLE	ECE 530 Advanced Computer Architecture IT 531 Computer Architecture
TEACHING MEMBER	Prof. Dr. Hasan Huseyin Balik
GRADING PROCEDURE	Final Assignment
TEXT BOOK	<p>1-Computer Organization and Architecture Designing for Performance, 11th Edition (William Stallings)</p> <p>2-The Essentials of Computer Organisation and Architecture, 5th Edition (Linda Null and Lulia Lobur)</p> <p>3-Advanced Computer Architecture And Parallel Processing (Mostafa Abd-El-Barr & Hesham El-Rewini)</p> <p>4-The Essentials of Computer Architecture, 2nd Edition (Douglas Comer)</p> <p>5-Computer Architecture A Quantitative Approach, 6th Edition (John L. Hennessy & David A. Patterson)</p> <p>6-Computer Organisation Design and Architecture, 5th Edition (Sajjan G. Shiva)</p>
COURSE OUTLINE	<p>1-Overview</p> <p>2-A Top-Level View of Computer Function and Interconnection</p> <p>3-Instruction Sets: Characteristics and Functions</p> <p>4-Instruction Sets: Addressing Modes and Formats</p> <p>5-Processor Structure and Function</p> <p>6-Reduced Instruction Set Computers (RISCs)</p> <p>7-Instruction-Level Parallelism and Superscalar Processors</p> <p>8-Parallel Processing</p> <p>9-Multicore Computers</p> <p>10-Control Unit Operation</p> <p>11-Microprogrammed Control</p>