H-Form ECE 461

A Brief Course Description			
College	Engineering		
Department/ Program	Electrical Engineering – Electronics Engineering Program		
Course Name	Digital System Design		
Course Code	ECE 461		
Year / Level	5/9		
Credit Hours	3		
Contact Hours	Lecture: 3	Lab/Tutorial: 0	Training: 0
Language	English		
Track	☐University ☐College ☐Department ☒Program		
	☐Required ☒ Elective		
Pre-requisites Course	ECE 342		
Co-Requests	-		
Course Description	Design of systems using PLDs and ASICs (in particular, gate arrays and standard cells). Design and implementation details of various systems and logic device technologies. Practical aspects of ASIC design, such as timing, testing, and fault grading. Topics include synchronous design, state machine design, ALU and CPU design, application-specific parallel computer design, design for testability, PALs, FPGAs, VHDL, standard cells, timing analysis, fault vectors, and fault grading.		