Course Calendar for Mechatronics (EGMN416) for Fall 2021- Class Room W101

(Please treat this as a general guideline. You may expect small changes to it)

Week	Date	Topics	Reading	Lab	Assignments
1	Friday 8/27	Introduction and class policy	Ch. 1		
2	Monday 8/30	Analog: Basic electronics review: R, C, L, KCL, KVL, Grounding	2.1 – 2.3 2.10	NO LABS	
	Friday 9/03	Analog: Voltage and current sources, Thevenin and Norton circuits, impedance matching	2.4 – 2.5 2.9		
3	Monday 9/06	Labor Day Holiday, no classes		NO LABS	Assignment-1
	Friday 9/10	Analog: AC circuits, Power	2.6—2.8		
4	Monday 9/13	Analog: Semiconductors, diodes	3.1-3.3	Lab 1: Introduction, Ohms Law, RC circuit	
	Friday 9/17	Analog: Transistors: BJT	3.4		
5	Monday 9/20	Analog: Operational Amplifiers	Ch. 5	Lab 2: Data acquisition: resolution, sampling rate, diode	
	Friday 9/24	Digital: Analog vs. digital signals, quantizing theory	Ch. 6		Assignment-2
6	Monday 9/27	Data acquisition	8.1 – 8.2	Lab 3: Op-amps and data acquisition	
	Friday 10/1	Quiz			
7	Monday 10/4	Digital: Binary numbers, Gates	6.1-6.5	Lab4: Arduino Voltmeter	
	Friday 10/8	Digital: Boolean Algebra, Gates	6.6-6.7		Assignment-3
8	Monday 10/11	Digital: Flip-flops, Timers	6.8 – 6.9	Lab 5: Bionic Hand	
	Friday 10/15	Review for Exam-1			
9	Monday 10/18	No class: I am at a conference		Reading week-No Labs	
	Friday 10/22	VCU Reading, no classes			Assignment-4
10	**Monday 10/25**	**Midterm EXAM 1-1.50pm; Best of luck!**		MAKE-UP LAB	
	Friday 10/29	Solution to midterm exam			
11	Monday 11/1	Digital: Flip-flops and Timers Applications	6.10, 6.12	Lab 6: Arduino Sensors	
	Friday 11/5	Adv Digital: Intro' to Microcontrollers	Ch. 7		Assignment-5
12	Monday 11/8	Adv Digital: Microcontroller (simple programs)	Ch. 7	PROJECT	
	Friday 11/12	Actuators: DC motor and dynamics	10.1-10.5		
13	Monday 11/15	Actuators: Stepper motor and its control	10.6	PROJECT	Assignment-6
	Friday 11/19	Actuators: DC Servos	10.6 and 9.2		
14	Monday 11/22	Thanksgiving: No classes			
	Friday 11/26	Thanksgiving: No classes			
15	Monday 11/29	Sensors: position and angle	9.1-9.2	FINAL PROJECT DEMONSTRATION	
	Friday 12/3	Sensors: position and angle	9.1-9.2		
16	Monday 12/6	Review for Final Exam -1	Study for your final exam!		Assignment-7
	Friday 12/10	Review for Final Exam -2			
17	Monday 12/13	Study week, no classes		EXAM WEEK	
	Friday 12/17	**FINAL EXAM 12.30-3:20 pm Best of Luck!**			