

Class Schedule and Outline of Subjects MECH-01
Fall Semester '18 Rocklin Campus Room V-108

Sierra College MECH-01
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WEEK #	DATE '18	SUBJECT	QUIZ <i>DUE</i>	ASSIGNMENTS
1	22-Aug	Introductions. The usual first class period boatload of paperwork. Basic definitions. A brief history. Atoms, charge. Conductors & insulators. Basic soldering. LED Flashlight		
2	29-Aug	Units of measure. Engineering units. Pictorial vs. Schematic symbols. Measuring instruments. Analog & digital multimeters. Using Excel to simplify calculations. Introduction to "breadboard" techniques.	Quiz 1	
3	5-Sep	Methods of generating electricity. Direct and alternating voltage/current. Primary and secondary cells. Potato clock.	Quiz 2	
4	12-Sep	Inductors and capacitors. Resonance. Antennas.	Quiz 3	Sample Research Paper
5	19-Sep	Magnetism & electromagnetism. Transformers. Power transmission. DC elementary motors. Reed switch motor.	Quiz 4	Research Paper Subject Approval
6	26-Sep	Vacuum tubes and elementary semiconductors. Diodes.	Quiz 5	
7	3-Oct	Putting it all together. Transformers, rectifier diodes, capacitors, zener diode regulator. Power supply performance.	Quiz 6	
8	10-Oct	Bipolar junction transistors & Field effect transistors		Midterm Exam
9	17-Oct	Amplifiers, RF Transmission & Reception		
10	24-Oct	Integrated circuit fabrication. Linear integrated circuits. Op-amp introduction.	Quiz 7	
11	31-Oct	Elementary digital integrated circuits. Number systems. Buffers, or/nor, and/nand, exclusive or gates.	Quiz 8	
12	7-Nov	Advanced digital integrated circuits. Flip-flops, counters, and decoders. LED displays. <i>Extra Credit Opportunity</i>	Quiz 9	
13	14-Nov	Special function ICs -- timers & comparators. Photo bug construction	Quiz 10	
14	21-Nov	Microcontrollers/Microprocessors React game construction		
15	28-Nov	Research Paper Presentation (optional) <i>Extra Credit Opportunity</i> .		Research Paper
16	5-Dec	Evaluation of class. Pizza party		Final Exam
<u>HAVE A GREAT WINTER BREAK</u>				