

Class Schedule and Outline of Subjects MECH-01
Fall Semester '19 Nevada County Campus Room N7-107

Sierra College MECH-01
Jim Weir 530.272.2203
jweir@sierracollege.edu
www.rstengineering.com/sierra

WEEK #	DATE '19	SUBJECT	QUIZ <u>DUE</u>	ASSIGNMENTS
1	Aug 26/28	Introductions. The usual first class period boatload of paperwork. Basic definitions. A brief history. Atoms, charge. Conductors & insulators. Basic soldering. LED Flashlight		
2	Sep 2/4	Labor Day Units of measure. Engineering units. Pictorial vs. Schematic symbols. Measuring instruments. . Using Excel to simplify calculations. Introduction to "breadboard" techniques.	Quiz 1	
3	Sep 9/11	Methods of generating electricity. Direct and alternating voltage/current. Primary and secondary cells. Potato clock.	Quiz 2	
4	Sep 16/18	Inductors and capacitors. Resonance. Antennas.	Quiz 3	Sample Research Paper
5	Sep 23/25	Magnetism & electromagnetism. Transformers. Power transmission. DC elementary motors. Reed switch motor.	Quiz 4	Research Paper Subject Approval
6	Sep 30/Oct 3	Vacuum tubes and elementary semiconductors. Diodes.	Quiz 5	
7	Oct 7/9	Bipolar junction transistors & Field effect transistors	Quiz 6	
8	Oct 14/16	Amplifiers, RF Transmission & Reception		Midterm Exam
9	Oct 21/23	Integrated circuit fabrication. Linear integrated circuits. Op-amp introduction.		
10	Oct 28/30	Pic Microcontrollers. Introduction to BASIC Programming		
11	Nov 4/6	Programming Pic Microcontrollers.		
12	Nov 11/13	Veteran's Day Programming Pic Microcontrollers. LED displays.		
13	Nov 18/20	Programming Pic Microcontrollers. LED displays. Extra Credit Opportunity		
14	Nov 25/27	Special function ICs -- timers & comparators. Photo bug construction		Research Paper
15	Dec 2/4	Microcontrollers/Microprocessors React game construction		Final Exam
16	Dec 9/11	Research Paper Presentation (optional) Extra Credit Opportunity		
<u>HAVE A GREAT WINTER BREAK</u>				