

Title : Advanced Power Technology

Type : Essential

	September				October				November				December				January				February				March				April				May				June				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
September/Week 1 - September/Week 3																																									
Review of class expectations and safety. Measuring engine performance																																									
September/Week 4																																									
Measuring Bore and stroke																																									
October/Week 5 - October/Week 6																																									
Ignition and electrical systems: General electrical, Ohm's law, electrical components. Battery ignition, Magneto ignition. Ignition system diagnosis. (3 weeks)																																									
October/Week 7 - October/Week 8																																									
Fuel system: Gasoline as a fuel. Fuel delivery; pumps, tanks, lines. Carburetors, governors, diagnosis .(3 weeks)																																									
November/Week 9 - November/Week 11																																									
Drive systems: Belt, chain and gear drives. Applications of drive systems. Calculating gear ratios and speeds. (3 weeks)																																									
November/Week 12																																									
Vehicle design: Students will design a vehicle, including drive system to be fabricated in class. Must include all associated safety features such as brakes, kill switch																																									
December/Week 13 - December/Week 16																																									
Vehicle fabrication: Fabrication techniques, welding, fastener review, steering component construction. Fabrication of parts and assembly of vehicle. (4 weeks)																																									
December/Week 17 - January/Week 18																																									
Vehicle testing and revision, reflective writing project. (2 weeks)																																									
January/Week 19 - January/Week 20																																									
Review, Lab cleanup. Project wrap up, Career exploration																																									