

100-1 Preliminary Syllabus, Da-Yeh Univ

Information			
Title	先進車輛動力系統	Serial No. / ID	3023 / MAI3097
Dept.	機械與自動化工程學系	School System / Class	大學日間部3年1班
Lecturer	陳聖中	Full or Part-time	兼任
Required / Credit	Optinal / 3	Graduate Class	No
Time / Place	(一)BCD / B201	Language	Chinese

Introduction
Establish the capability to anaysis, evaluate, and the method to improve the performance of vehicle power plant system . Teach the principles and combustion modeling according to gasoline and diesel engine combustion control systems. Study the parameter effects on the engine torque, horsepower, fuel economy and exhaust emissions. The course also introduce the background and principles for electric and hybrid power plant systems .

Outline
<ol style="list-style-type: none">1.Vehicle powertrain system introduction2.Internal combustion engines subsystems3.Gasoline engine exhaust emission control4.Gasoline engine ignition system control5.Gasoline engine fuel system6.Diesel engine control system design7.Diesel engine spray atomization and fuel injection system.8.Engine dynamic simulation9.Vehicle transmission control system10.Continuous Variable Transmission control simulation11.Four wheel drive and anti-skid differential control.12.Vehicle traction motor system13.Motor performance and control14.Vehicle fuel cell performance requirements.15.Hybrid electric vehicle power requirement and control.

Prerequisite
Thermodynamics, Chemistry, Engineering mathematics, Mechanics of Materials, Automotive mechanics.