

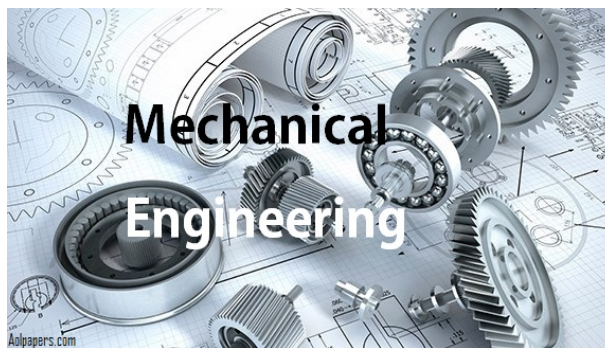
Engineering 11/12
Lesson #1
Introduction to Engineering



1. The word engineer comes from the latin word “ingenerare”, meaning to **invent, create, or regulate**.



2. Engineering is simply the application of **scientific knowledge to design and build devices, structures and systems to help solve problems**.

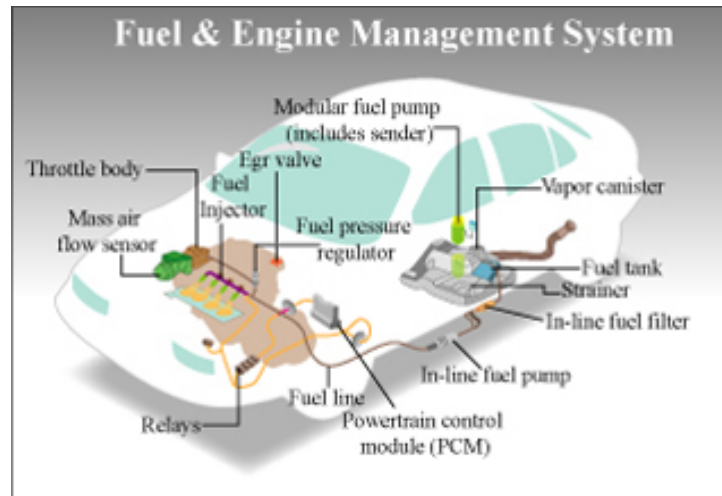


3. There are many different disciplines under the engineering umbrella: **civil, mechanical, aeronautical, electrical, chemical, and computer science engineering** are a few of the major disciplines practiced in engineering.



4. This course will focus on the cyclical process of engineering which consists of **inception (coming up with an idea), design, modelling/prototyping, testing and**

8. In addition to scientific knowledge, engineers need to develop social skills necessary to work effectively and collaboratively in a systems approach to solving problems.



9. A systems approach breaks down the engineering challenge into smaller manageable parts. For example, an aircraft has a(an) flight control system, navigation system, electrical system, hydraulic system, pressurization system, engine system, fuel system, oil system and so on. It would be far too difficult for any one individual to keep track of and design all the systems for a complex machine such as an aircraft, car, or building.
10. This course will help develop intellectual and well as social skills in students as they progress through the course.