

## **Engineering II**

### **Course Outline**

#### **Level Two ( Basic Concepts)**

The primary purpose of this second year is to review the basic Engineering concepts presented in year one: Engineering I. The estimated time for this higher level foray is somewhat less than one (1) semester. Second semester will delve into such appropriate technologies as:

1. Energy and Power Transmission
2. Lasers and Fiber-optics
3. Alternative Energy
4. Electricity and Electronics

## **Engineering III**

### **Course Outline**

#### **Level Three (Basic Concepts)**

The primary purpose of this third year is to quickly reinforce the Level 3 basic Engineering concepts, allowing just nine (9) weeks of review. The remaining time will be allocated to short modules covering the following topics:

1. Surveying
2. Robotics
3. Aerodynamics
4. Hydraulics
5. Pneumatics
6. Mechanisms
7. Structures
8. Invention, Innovation, and Design
9. Materials and Processes
10. Research and Development
11. Computer Integrated Manufacturing

## **Engineering IV**

### **Course Outline**

#### **Level Four (Basic Concepts)**

The primary purpose of this fourth year is to encourage students to develop a **PROJECT**, from start to finish, using all the concepts learned up to this Senior year. The Directed Individual Study (DIS) will focus primarily on Research and Development activities as related to some global problem that confronts our society.