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## **The one day program for Chemical Principles course**

09:00 - 09:30	Arrival and introduction to the course
09:30 - 10:00	Principles of Chemistry
10:00 - 10:30	Petroleum as Energy Source
10:30 - 11:00	Coffee Break
11:00 - 11:30	Methods of Purification and Characterization
11:30 - 12:00	Human Energy Source
12:00 - 14:00	Lunch
14:00 - 14:30	Chemical Balance for Healthy Outlook
14:30 - 15:00	Food as Source of Chemical Reaction
15:00 - 15:20	Coffee Break
15:20 - 16:00	Quiz, Discussion and Concluding Remarks

## **Course outline for Chemical Principles**

This course covers a short introduction about chemistry and biology. The emphases on basic principles of energy, catalyst, and food as essential elements in our daily use will be introduced. How petroleum as a source of energy is formed and utilization of raw material and synthetic carbon compounds, including plastics, resins and solvents, which are mainly derived from compounds produced from petroleum and natural gas, will be discussed. Process of separation, purification and characterization of hydrocarbons will be described. Food as a source of energy for human, which include proteins, fats, carbohydrates and minerals, will be presented and their impact on our health and environment will be mentioned.

### **Who will benefit**

Since the course will provide a comprehensive understanding of chemical principles, which will be focused mainly on the energy sources, and its application in our daily life, this course is extremely useful for personnel from all levels particularly interested in energy source, petroleum, health, nutrient, and food.

### **What you will learn**

After completing this course, the participant will be able to understand how energy can be utilized in our daily life. In addition to that participant will become familiar with rational use of energy and the relationship between food and therapy.

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