

**IC (209)331                      Fuel and Fuel Technology                      3(3/3-0/0)**

**Abbreviation                      -**

**Prerequisite                      CHEM 203 and CHEM 207 and IC 201**

**This course is opened for      MAJOR ELECTIVE COURSE**

**Course Description**

Coal, petroleum and natural gas, production process, specification of fuels, testing method and equipment, purification of fuel, clean fuel, fuel cell, combustion, utilization of fuel in engines, and pollution and its control in fuel combustion.

**Objective**

Students will be able to understand principles of fuel, fuel technology, combustion and pollution control in fuel combustion.

<b>Course Content</b>	<b>Lecture Hours</b>
1. Introduction	1
2. Coal, petroleum, and natural gas	5
2.1 Source	
2.2 Classification	
2.3 Composition	
2.4 Properties	
3. Production process	8
3.1 Separation of petroleum and natural gas	
3.2 Alkylation	
3.3 Isomerization	
3.4 Cracking	
3.5 Transformation	
3.6 Carbonization	
3.7 Gasification	
4. Specification of fuels	2
5. Testing method and equipment	6
5.1 Solid fuel	
5.2 Liquid fuel	
5.3 Gaseous fuel	
6. Purification of fuel	2
7. Clean fuel	2
8. Fuel cell	3

9. Combustion	11
9.1 Solid fuel	
9.2 Liquid fuel	
9.3 Gaseous fuel	
10. Utilization of fuel in engines	3
11. Pollution and its control in fuel combustion	2
Total	<hr/> 45 <hr/>