INTRODUCTION TO FUEL TECHNOLOGYLABORATORY

Course Type	Course Code	Name of Course	L	T	P	Credit
DC	FMC254	Introduction to fuel Technology Laboratory	0	0	2	2

Course Objective
The main aim of the course is to give practical exposure of coal and other fuel characterization techniques and their significance.
Learning Outcomes
At the end of this course students should able to characterize fuel based on their properties and their significance during utilization.

Exp. No.	Name of Experiment	Practical Hours	Learning Outcome
1	Proximate analysis of coal	2	Determination of ash, moisture, volatile matter and fixed carbon contentsin coal
2	Ultimate Analysis of coal.	2	Elemental analysis of coal
3	Free Swelling Index of coal	2	Swelling characteristics of coal
4	Caking index of coal	2	Caking and binding properties of coal
5	LTGK of coal	2	Coking properties of coal at low temperature
6	GCV of fuel	2	Heating values of fuel
7	Comparative proximate analysis of coal and coke	2	Property changes during carbonisation
8	HGI of coal	2	Grindability of coal
9	Characterisation of liquid fuels -I	2	Measurement of cloud point, pour point, smoke point, flash point and fire point of liquid fuels
10	Characterisation of liquid fuels -II	2	

Text Books:

1. Fuels and Combustion: Samir Sarkar, University Press (India) Pvt Limited, India.

Reference Books:

1. Elements of Fuels, Furnaces and Refractories: O P Gupta, Khanna Publishers, India
2. Fuels, Furnaces and Refractories: R C Gupta, PHI Learning Private Limited, India
3. An Introduction to Chemistry and Technology of coal utilization: James P Speight