**Reaction Engineering & Combustion [EN 315]**

Marks distribution

Mid Semester exam – 25 %

End Semester exam – 45 %

Assignment – 15 %

Quiz - 15 % (two quiz unannounced)

Class timing

1A - Mon - LT 204(Class Room : LT 204) - 08:30:00 - 09:25:00

1B - Tue - LT 204(Class Room : LT 204) - 09:30:00 - 10:25:00  
1C - Thu - LT 204(Class Room : LT 204) - 10:35:00 - 11:30:00

Description

Fuels: Characteristics and Properties,

Combustion Thermodynamics and Thermo-chemisty,

Heat of Reaction, Calorific Value, Adiabatic Flame Temp,

Combustion Kinetics, Reaction Mechanism and Pathways, Rate constants, Activation Energy,

Introduction to Flame,

Formation of pollutants: CO, Soot, NOX and SOX,

Combustion Modelling: Gas, Liquid and Solid Combustion,

Formation of Ash.

Reference:

Fuels and Combustion; Samir Sarkar; 3rd Edition; Universities Press, 2009

Fundamentals of Combustion; D. P. Mishra; Prentice-Hall of India Pvt Ltd, 2008

An Introduction to Combustion: Concepts and Applications; Stephen Turns; McGraw-Hill, 2011

Elements of Chemical Reaction Engineering; H. S. Fogler; 3rd Edition; Prentice-Hall of India, 2005