

## Course Description:

"The thermodynamics is a sub branch of Physics Chemistry"

The branch of physical chemistry known as thermodynamics is concerned with the study of the transformations of energy and, in particular, the transformation of heat into work and vice versa.

## -- Syllabus:

### Classical Thermodynamics (Macro-Scale)

Chapter 1: The First Law

Chapter 2: The Second Law

Chapter 3: Physical transformations of pure substances

Chapter 4: Simple mixtures

Chapter 5: Chemical equilibrium

chapter 6: Phase Diagram

Chapter 7: Molecules in motion

Chapter 8: The rates of chemical reactions

Chapter 9: Reaction dynamics

Chapter 10: Catalysis

### Statistical Thermodynamics (Atom/Molecule)

Chapter 11: Statistical thermodynamics 1: the concepts

Chapter 12: Statistical thermodynamics 2: applications

## -- Evaluation:

30% Homework

30% Midterm exam

30% Final exam