**Introduction to Polymer Science & Engineering**

**Course Objectives:**

* Apply the basic principles of organic Chemistry in polymerization reactions
* Develop knowledge and confidence in industrial polymerization reactions
* Describe basic concepts that are used to describe polymers
* List and explain different classes of polymers that are used to describe polymers.
* Describe the structure, synthetic route, properties and applications of common industrial and engineering polymers
* Discuss the relationship between the structure and properties of polymers
* Describes basic mechanical, thermal, electrical and optical properties of polymers.
* Develop competence in the use of different properties of polymer materials in polymer design

**Course Outlines:**

* Introduction: Polymer as material of choice, historical perspective, and classification of polymers, Chemistry of Polymerization, Structural properties and molecular weight of polymers, Polymer properties: Mechanical, electrical, thermal and optical properties and Polymer materials: Thermoplastics, Thermosets, Elastomers, polymer blend and composites, Industrial and engineering polymers.

**Who Should Attend?**

* The managers, supervisor’s technicians, and operators from polymer plant or its associated industry could attend this course

**Duration:** 5 Days

**For more information:**

Industrial Relations- Special Programs Unit:

Tel.: +966 (013) 340-2011 / (013) 340-2140

Fax: +966 (013) 340-2060

Email: [specialprograms@jic.edu.sa](mailto:specialprograms@jic.edu.sa)