

## **Course name: Engineering chemistry**

**Name of the School: Basic Sciences**

**Course code: CY 243**

**Course-Credit: 3**

**Instructor: Subrata Ghosh**

**Weekly lecture hours: 3**

**End-sem Exam: 3 hours**

**Relative Weightage: End Term Exam: 60% Quizzes: 40 % (20% each).**

**Timings: Monday (2.00-2.50), Wednesday (12.00-12.50), Friday (12.00-12.50)**

**This 3-credit course is to be given over 10-weeks of instruction providing for 34 lecture hours.**

**A schedule for the 32 classes is given below, leaving two hours for two '1 hour' quizzes.**

**Unit 1:** Fats, oils, soaps and detergents, explosives and propellants, lubricants.

**Unit 1** is to be covered in 6 Lectures

**Unit 2:** Synthetic dyes, cements, insulators, paints, composite materials.

**Unit 2** is to be covered in 6 Lectures

**Unit 3:** Natural and synthetic rubbers, liquid crystals, ionic liquid, polymers.

**Unit 3** is to be covered in 7 Lectures

**Unit 4:** Petroleum and petrochemicals, plastics, corrosion and its control, water treatment.

**Unit 4** is to be covered in 7 Lectures

**Unit 5:** Fuel and combustion, environmental chemistry, Adhesives, Ceramics.

**Unit 5** is to be covered in 6 Lectures

### **Books Recommended:**

- 1. Engineering Chemistry: by P C Jain & Monika Jain**
- 2. A Text Book of Engineering Chemistry: by Shashi Chawla**
- 3. Organic Chemistry: by P. Y. Bruice**
- 4. Organic Chemistry: by Morrison R.T. and Boyd R.N.**