



# **Sree Narayana Mangalam College Maliankara**

*(Affiliated to Mahatma Gandhi University, Kottayam)*

## **CERTIFICATE COURSE SYLLABUS**

### **INDUSTRIAL CHEMISTRY**

Sree Narayana Mangalam College  
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## **Objectives of the Course:**

The programmes are designed to ensure that graduates who pass out after completing the courses would have knowledge, skills and aptitude for gainful employment in the wage sector in general and self-employment in particular.

Students expertise in the concerned skill will have more opening in service, industry and entrepreneurship development.

The certificate course is shaped and oriented to make the most relevant and career oriented with focus on quality and excellence.

## **Course Overview:**

- Our daily need is industry based. We cannot move a single step without the chemistry and industry.
- We need food which is based on Agricultural industry. We need shelter which is based on industry. What we use for 24 hours each day are coming from industry. So we must have knowledge about industrial chemistry.
- It is envisaged that professionally qualified graduates with a sound knowledge and expertise in the discipline, Industrial Chemistry will have more openings in service, industry and self-employment sectors.

## **Duration of the course: 30 Hours**

### **Module I**

Agro Based Chemicals

Chemistry of Pesticides and fertilizers (6 Hours)

### **Module II**

Drug Industry-Classification of drugs - Analgesics, Antipyretics, Antihistamines, Antacids, Antibiotics and Antifertility drugs with examples. Psychotropic drugs with examples. Drug addiction and abuse. Prevention and treatment. (6 Hours)

### **Module III**

Food Industry- Food additives – definition. Preservatives, Food colours - permitted and non-permitted, Toxicology. Flavours - natural and synthetic. Artificial sweeteners, Emulsifying agents, Antioxidants, Leavening agents and Flavour enhancers. (6 Hours)

### **Module IV**

Cosmetic Industry- Introduction. General formulation of different types of cosmetics - Dental cosmetics, Shampoos, Hair dyes, Skin products (creams and lotions, lipstick, perfumes, deodorants and antiperspirants), Bath oil, Shaving cream and Talcum powder. Toxicology of cosmetics. (6 Hours)

### **Module V**

Plastic Industry - Plastics in everyday life. Plastics and Polymers. Classification of polymers. Brief idea of polymerization. Environmental hazards of plastics. Biodegradable plastics. Recycling of plastics. (6 Hours)

## Reference

2. Principles of Instrumental analysis, 5th edition, D.A. Skoog, F.J. Holler, T.A. Nieman, Philadelphia Saunders College Publishing (1988)
3. Plastic Materials - Brydson
4. Rubbery materials and their compounds - Brydson.
5. Rubber Technology and manufacture - C.M. Blow