

Course No.	C - 11
Name of the Course	<b>Exploring Everyday Chemistry</b>
Type of Course (Diploma/ Certificate/ Add on)	Certificate
Offered by	Department of Chemistry
Linkages	-
No. of hours	30 hours
Expected outcome	1. understand the pros and cons of using processed food stuffs 2. Understand the role of soaps and various cosmetic products , which claim to increase our quality of life and well being 3. Classify various types of plastic papers and can separate each type before disposal. 4. Understand different type of drugs and able to explain its mode of action 5. Understand the appropriate usage of pesticides and fertilizers for agriculture.
Course Objective	1.To understand the role of chemistry in everyday life 2. To create an awareness about the production, types, quality and mode of action of various chemical products which are used in day to day life 3.To understand the environmental aspects and harmful effects of various chemical products.
Brief Description	Chemistry is an integral part of everyday life. Whether it is the food we eat, the clothes we wear , the drugs we consume or the cosmetics we apply- there is chemistry in it. A general information of the chemistry behind these will create an awareness as to what is good and what is bad and to be discarded. For example, we come across a myriad of cosmetic products , which claim to increase our quality of life and well being. But in reality are they as advantageous as they claim to be? An insight into the processes involved in their production will give us ample information regarding these. Similarly we can also gather information as to what is the difference between the various types of soaps, their mode of action, why the disparity in their prices and why soaps are preferred over detergents. The above mentioned points are some of the benefits a student who opts to study this diploma course will receive.

Syllabus	<p>Unit 1: Food Additives (6 Hrs) 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. Soft drinks - formulation and health effects. Health drinks Unit</p> <p>2: Soaps and Detergents (3 Hrs) Soaps – Introduction. Types of soaps - Toilet soaps, washing soaps. Liquid soap. TFM and grades of soaps. Bathing bars. Cleansing action of soap. Detergents - Introduction. Types of detergents - anionic, cationic, non-ionic and amphoteric detergents. Common detergent additives. Enzymes used in commercial detergents. Comparison between soaps and detergents. Environmental aspects .</p> <p>Unit 3: Cosmetics (5 Hrs) Cosmetics - 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.</p> <p>Unit 4: Plastics, Paper (6 Hrs) Plastics in everyday life. Plastics and Polymers. Classification of polymers. Brief idea of polymerization. Use of LDPE, HDPE, PP, PVC and PS. Environmental hazards of plastics. Biodegradable plastics. Recycling of plastics. Paper – Introduction. Paper manufacture. Weight and size of paper. Types of paper - News print paper, writing paper, paperboards, cardboards. International recycling codes, and symbols for identification of plastics.</p> <p>Unit 5: Drugs (5 Hrs) Classification of drugs - Analgesics, Antipyretics, Antihistamines, Antacids, Antibiotics and Antifertility drugs with examples. Psychotropic drugs - Tranquilizers, Antidepressants and Stimulants with examples. Drug addiction and abuse. Prevention and treatment.</p> <p>Unit 6: Chemistry and Agriculture (5Hrs) Fertilizers – Introduction. Types of fertilizers - Natural, synthetic, mixed, NPK fertilizers. Excessive use of fertilizers and its impact on the environment. Bio-fertilizers. Plant growth hormones. Pesticides - Introduction. Classification - Insecticides, Fungicides, Herbicides. Excessive use of pesticides - Environmental hazards. Bio pesticides.</p>
Evaluation Pattern	<p>External Examination -100 marks (To be evaluated by examiner other than FIC)</p> <p>Internal Examination - Test Paper (1) -50 marks</p> <p>Assignment (1) -25 marks</p> <p>Attendance -25 marks (90% or above -25, 80%-90% -20 marks, 70%-80% -15 marks, 60%-70% -10 marks 50%-60% -5 marks, Less than 50%-0 marks, Attendance Greater than 50% is a must to attend external exam)</p> <p>Total -200 marks</p>
Mode of Class	Online (Google Class room)