SACRED HEART COLLEGE (AUTONOMOUS)

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Accredited by NAAC (4th Cycle – under RAF) with CGPA of 3.31 / 4 at 'A+' Grade

Name of the Programme: M.Sc Biochemistry

S No	Title of the Paper	Course Code	Course Objectives	Course Outcomes	**Relevance**
1	ELECTIVE II - ENVIRONMENTAL TOXICOLOGY	BC812C	• To gain knowledge on toxic substances and biochemical basis of toxicity. • To understand the sources and routes of the various toxic substances in the environment. • To learn about environmental impacts of pesticides and xenobiotics. • To study about the toxicity testing and their interpretations. • To understand the causes of organ toxicity.	• Demonstrate the degradable and non-degradable toxic substances and action mechanism of toxicity. • Define the transport of toxins by air, water and food chain; explain the combined effect of xenobiotics. • Determine the environmental impacts of various pesticides and effect of xenobiotics on aquatic organisms. • Outline the legal, regulatory and ethical considerations relating to toxicity within the broader societal context. • Find the lethal concentration and lethal dose of toxic substances by toxicity testing.	**Local developmental needs**

				• Compile the causes of hepatotoxicity, nephrotoxicity, pulmonary toxicity and neurotoxicity.	
2	ELECTIVE III-ECOLOGY, EVOLUTION AND BIODIVERSITY	BC914A	• To learn the fundamental principles of evolutionary theory to explore the evolution of biodiversity. • To make familiar with the major groups of organisms related to one another. • To learn the basic ecological theory and proposing solutions to the major environmental problems. • To understand the concepts of genetic variation, Mendelian genetics and recombination. • To gain the knowledge about aquatic biotic production and biodegradation in different ecosystems.	• Provide in-depth knowledge about emergency of evolutionary thoughts and Darwin concepts. • Review the origin of cell, unicellular evolution, Abiotic synthesis and prokaryotic evolution. • Analyze the population genetics with various types of selection like sexual selection, gene drift and gene flow. • Establish the ecological interaction between an organism and environment. • Manage the ecosystem dynamics, stability and complexity by knowing the N, P, C and S cycles. • Assess the various kinds of aquatic habitat in the eco-management process and biodegradation of different ecosystem.	**Local developmental needs**

3	ELECTIVE III - FOOD BIOCHEMISTRY	BC914B	• To learn the structure, composition, nutritional value, processing and storage of cereals. • To understand the importance, composition, classification, processing and toxic constituents of spices and pulses. • To know the classification of nuts and oils, fat and oils, milk and milk products; nutritive values and significance. • To understand the composition, classification, importance of vegetables and non-vegetable foods. • To learn about the sugar, sugar products, baking and beverages of food	• Identify the structure and composition, nutritional value, processing, storage and care of cereals. • Focus the importance, composition, classification of spices, composition, classification, nutritional value, processing and fermentations, toxic constituents of pulses. • Justify the nutritive value, importance and classification of nuts , oils, milk and milk products. • Integrate the selection, storage, uses and nutritional aspects of meat, fish and poultry. • Explain the composition, classification of egg products, storage of fruits and vegetables. • Determine the sugar products, baking products and processing of beverages.	**Local developmental needs**