



Ready for
Every Good Work

SACRED HEART COLLEGE (AUTONOMOUS)

Tirupattur – 635 601, Tamil Nadu, S.India

Resi : (04179) 220103

College : (04179) 220553

Fax : (04179) 226423

A Don Bosco Institution of Higher Education, Founded in 1951 * Affiliated to Thiruvalluvar University, Vellore * Autonomous since 1987

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

Name of the Programme: MSc Bio chemistry

S No	Title of the Paper	Course Code	Course Objectives	Course Outcomes	Relevance
1	INDUSTRIAL MICROBIOLOGY	BC712B	<ul style="list-style-type: none">To learn about the basic concepts of industrial microbiology and industrially important microbes.To understand the microbial fermentation process, fermenters types and fermentation techniques.To gain the knowledge about inoculum development, raw materials used in fermentation process.To become familiar with the food preservation techniques and fermented	<ul style="list-style-type: none">Identify the different types of fermenters and explain the various fermentation strategies and the growth of industrial microorganisms.Explain the inoculum development methods, various types of raw materials used in fermentation process and scale up process of fermentationManipulate the fermentation media, microbial inoculum and strain for different types of microbial fermentation process.Categorize the primary and secondary metabolites production techniques and Describe about industrially important	Regional developmental needs

			<p>dairy, brewers products.</p> <ul style="list-style-type: none"> To understand the food preservation techniques and uses of microbes in waste management. 	<p>microbes.</p> <ul style="list-style-type: none"> Evaluate the various food preservation methods and identify the fermented dairy, baker's and brewing products. Propose a waste management system, design new composting technique and biogas unit. 	
2	INSTRUMENTATION BIOCHEMISTRY	BC809	<ul style="list-style-type: none"> To study the principle, procedure and applications of electrophoresis. To understand the principle, procedure and applications of microscopes. To study the principle, procedure and applications of chromatography. To learn the principle, procedure and applications of centrifugation techniques. To know the principle, procedure and applications of spectrophotometry 	<ul style="list-style-type: none"> Understand the core concepts of all analytical techniques Describe the basic principle, types, procedure and applications of electrophoresis Acquire knowledge about advanced microscopy techniques Correlate the various types of chromatographic techniques Justify the principle, instrumentation and applications of various spectroscopy techniques Schematize the Principle and applications of Atomic flame and flameless spectrophotometry 	Regional developmental needs

3	ELECTIVE – II – PHARMACEUTICAL BIOCHEMISTRY	BC812B	<ul style="list-style-type: none"> • To gain the knowledge on basic concepts of pharmacology to understand the mechanisms of drug action and toxicity. • To understand the chemistry of drugs with respect to their pharmacological activity. • To learn the drug metabolic pathways, adverse effect and therapeutic value of drugs. • To know the mechanism of action of drug therapy. • To study about the natural drug development. 	<ul style="list-style-type: none"> • Enumerate the relevance, basic concepts of pharmacology, ADME properties and drug metabolism • Interpret the pharmacological actions of different categories of drugs and factor that modifies the effect of drug and drug potency • Apply the basic principle of genetic engineering and enzyme technology • Outline the mechanism of action of drugs used in therapy of Respiratory system. • Perceive the information of drugs used for cancer, inflammation, respiratory system, GIT, immune system and hormones. • Formulate natural products for chemotherapy, anti-hypertensive, anti-platelet, anti-inflammatory and anti-cholinergic drugs. 	Regional developmental needs
4	ELECTIVE IV HERBAL TECHNOLOGY	BC1011B	<ul style="list-style-type: none"> • To learn about the preparation of drugs. • To know about Herbal remedies for human ailments. • To evaluate the propagation of medicinal plants. 	<ul style="list-style-type: none"> • Discuss the importance of Nutritive and medicinal value of fruits • Acquire knowledge of Collection of wild herbs and its formulations • Perceive the knowledge of Systems of Indian Medicines–Siddha, Unani, 	Regional developmental needs

			<ul style="list-style-type: none"> To study the Nutritive and medicinal value of fruits. To know the applications of Herbal foods. 	<p>Ayurveda and Homeopathy.</p> <ul style="list-style-type: none"> Evaluate the Drugs for common disorders and its mechanism of action. Analyse the applications of Herbal foods– Food processing and packaging. Integrate the biotechnological principles in propagation of medicinal plants. 	
5	ELECTIVE IV MEDICAL DIAGNOSTIC TECHNOLOGY	BC1011C	<ul style="list-style-type: none"> To gain knowledge about good laboratory practices. To study the collection and preservation of biological specimens. To evaluate the knowledge of Hematological parameters. To study about the Microscopic and Macroscopic Examination of Urine and Feces. To learn culturing of organisms using microbiological techniques 	<ul style="list-style-type: none"> Understand the knowledge about good laboratory practices. Acquire a broad knowledge of collection and preservation of biological specimens. Perceive a broad knowledge of haematological parameters. Observe the microscopic and macroscopic examination of urine. Analyse the microscopic and macroscopic examination of faeces. Integrating the safety procedures in microbial culture techniques. 	Regional developmental needs