



*Ready for
Every Good Work*

SACRED HEART COLLEGE (AUTONOMOUS)

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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: B.Sc. Microbiology

1	MICROBIAL DIVERSITY AND CLASSIFICATION	MB104	<ul style="list-style-type: none"> • To learn the Taxonomy of microorganisms. • To analyze the Ultrastructure of Fungi, Algae and Protozoa. • To understand the Classification of microorganisms. • To recognize the fundamentals on Economic importance of microorganisms. • To impart knowledge on Molecular identification of microorganisms 	<ul style="list-style-type: none"> • Understand the knowledge of Classifications and Taxonomy of Microorganisms in detail. • Acquire the basic knowledge on the Ultrastructure, Classification, Mode of nutrition and Reproduction of Fungi, Algae and Protozoa. • Discuss the Economic importance of Fungi, Algae and Protozoa. • Examine and define the structure, properties and classification of Human, Plant and Animal viruses. • Explore and recommend the Molecular techniques applied in identification of microorganisms. • Compile the basic information on the diversity and classification of Fungi, Algae, Protozoa and Algae. 	National and global developmental needs
2	BIOINSTRUMENTATION	MB204	<ul style="list-style-type: none"> • To provide knowledge about Safety measures in Microbiology laboratory and First aid methods. • To understand the principles and applications of various instruments used in Life science. • To learn the techniques for operating the Microbiological instruments. 	<ul style="list-style-type: none"> • Determine the Safety measures in Microbiology laboratory and First aid methods. • Define and explain the principles and applications of various instruments used in Life science. • Explain the Working principles and Applications of Various Microbiology laboratory instruments. 	Local, national and global developmental needs

			<ul style="list-style-type: none"> To explain the principles and applications of types of Chromatography techniques. To learn principles, types and applications of Calorimeter and Spectrophotometer. 	<ul style="list-style-type: none"> Analyzing the principles and applications of types of Chromatography techniques. Evaluate the Working principle and Applications of Electrophoresis techniques. Perform the detailed analysis on Calorimeter and Spectrophotometer. 	
3	IMMUNOLOGY	MB301	<ul style="list-style-type: none"> To make the students to understand the Immune system. <p>To strengthen the knowledge of students through a detailed study on Antigens, Antibodies and Immunoassays</p>	Introducing the Immunology to study various types of Cells and Organs in Immune systems and Mechanism of immune activation	National and global developmental needs
4	BIOINOCULANT TECHNOLOGY	MB401	<ul style="list-style-type: none"> To study about the Production, Formulation, Method of application and Quality control of Bioinoculants. To understand the role of Nitrogen fixers, Phosphate solubilizers, AM fungi and Algal biofertilizers. <p>To learn the ability of Biofertilizers and Biocontrol agents</p>	The course Bioinoculant Technology has been designed to provide the knowledge to the students about Natural organic farming. This paper also provides the details of Production, Formulation, Method of application and Quality control of Bioinoculants	Local, National and Global developmental needs

5	SSP – 1: NUTRITION AND DIETICS	MB507SP1	<ul style="list-style-type: none"> To know about importance of food, nutrition and nutrients. To understand the nutrients associated health risks. <p>To learn about the various diets used for various disease conditions</p>	<p>Nutrition is the study of nutrients in food, how the body uses nutrients, and the relationship between diet, health and disease. In this Self-study paper Nutrition and Dietics, students will gain knowledge about the Importance of nutrients and various diets used for various disease conditions</p>	Local, National, and global developmental needs
6	MICROBIAL BIOTECHNOLOGY	MB601	<ul style="list-style-type: none"> To learn the basic tools in Microbial Biotechnology. To understand the various concepts of Recombinant DNA Technology and Microbial products. <p>To emphasize on IPR issues and need for knowledge in patents in Biotechnology</p>	<p>The paper Microbial Biotechnology helps the student to study theoretical concepts of Biotechnology and their applications in Genetic engineering and Microbiology. It also creates awareness on the Intellectual property rights and patenting of Biotechnological processes.</p>	National and global developmental needs
7	VERMITECHNOLOGY	MB603	<ul style="list-style-type: none"> To study about the properties of soil and microbial composting. To understand the biology of Earthworms and its role in Vermicomposting. To learn the ability of Earthworms in Organic farming and Solid waste reclamation 	<p>The course Vermitechnology has been designed to provide the knowledge to the students about Organic farming through Composting and Vermicomposting. This paper also provides the details of Earthworms and its role in Solid waste reclamation</p>	National and global developmental needs

8	SSP – 2: DAIRY TECHNOLOGY	MB607SP1	<ul style="list-style-type: none"> • To encode the importance of the role of microorganisms in Dairy industries • To obtain a good understanding of Dairy microbiology and become an Entrepreneur. To obtain knowledge in food quality and spoilage of Dairy products. 	<p>The Self-study paper Dairy Technology is about the study of milk and milk-derived food products. It focuses on the biological, chemical, physical, and microbiological aspects of milk itself, and on the technological aspects of the transformation of milk into its various consumer products including fermented products, concentrated and dried products, butter and ice cream. This course also provides information about the role of microorganisms in Dairy products development</p>	<p>Regional and national developmental needs</p>
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