





## **Course Outline Form**

## **ODD SEMESTER 2019**

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*Dear Student: Course outlines are intended to provide students with an overall plan for a course to enable them to function efficiently and effectively in the course.*

*Academic Programs  
BSc Biotechnology  
EMEA College  
Kondotty*

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## External Exam Pattern

Question Type	No of Question	Marks/Question	Total Marks
Short Questions(2-3 Sentences)	15	2	Ceiling 25
Paragraph / Problem Type	8	5	Ceiling 35
Essay Type	2 out of 4	10	20
<b>Total</b>			<b>80</b>
<b>Time</b>			<b>2.5 hrs</b>

Graduate Attributes	<b>Name of the Course:</b> BTY5B08 IMMUNOLOGY AND IMMUNOTECHNOLOGY
	<b>Knowledge</b>
	<b>Academic and Intellectual Skills</b>
	Self Learning
	Cognitive Skills
	<b>Professional Skills</b>
	Team Work and Leadership
	Critical and Analytical Skills
	Problem Solving Skills
	Research Skills
Entrepreneur Aptitude	
<b>Personal Skills</b>	
Application Skills	
<b>Attitude and Values</b>	
Social Responsibility	
Global Citizen	

## Course Schedule

Introduction to immune system : Historical perspectives, early vaccination,natural and artificial immunity, innate immunity and acquired immunity, active and passive immunity, humoral and cell mediated immunity	Week 1
Cells of Immune System: Hematopoiesis, Lymphoid cells B & T lymphocytes. N. K.cells, phagocyte, mast cells, dendritic cells.Assignment	Week 2
Organs of the Immune system: Primary lymphoid organs: Thymus, Bone marrow,	Week 3
secondary lymphoid organs: lymph nodes, spleen, mucosa associated lymphoidtissue.unit test 1	Week 4

## Course Outline : BTY5B08 IMMUNOLOGY AND IMMUNOTECHNOLOGY (2018-2019)

Name of the Stream	Science
Name of the Programme	BSc Biotechnology
Name of the Course	BTY5B08 IMMUNOLOGY AND IMMUNOTECHNOLOGY
Nature of the Course	Core Course
Semester	Fifth
Lecturer(s)	Shilly Das A
Name of the Coordinator	
Year	2018-2019
No of Credits	3
No of Contact Hours	4
Course Description	Immunology covers the study of immune systems in all organisms. Immunology charts, measures, and contextualizes the physiological functioning of the immune system in states of both health and diseases; malfunctions of the immune system in immunological disorders such as autoimmune diseases, hypersensitivities, immune deficiency.
Course Objectives	It helps the students to study the health of humans and animals through effective yet consistent research. The scientists or clinician who specializes in the field of Immunology is known as Immunologist. The students understand the immune system at the cell, molecular and genetic level, and how it relates to health and disease.
Course Outcome	To provide the student with a theoretical understanding of immunology and develop skills to enable the student to perform tests routinely performed in a clinical diagnostic immunology laboratory.
Assessment Method	Assignments Class Tests Unit Tests Practical Tests Seminars Lab Experiments
Teaching Methods Used	
Textbook	Kuby Immunology and Roitt immunology
References	1. Kuby Immunology by Thomas Kindt and Richard A. Goldsby and Barbara A. Osborne; Ed. 6th; W.H. Freeman and Company, New York; 2007. 2. Cellular and molecular immunology by Abul K. Abbas and Andrew H. Lichtman and Shiv Pillai; Ed. 6th; Saunders, 2007. 3. Immuno biology: the immune system in health and disease by Charles A. Janeway and Paul Travers and Mark Walport and Mark J. Shlomchik; 7th Ed; Garland Science; 2008. 4. Essentials of immunology & serology by Jacqueline H. Stanley; DELMAR; Australia; 2002.
Internet Resources	

### Internal Exam Pattern

Items	Marks/20	Marks/15
Assignment	4	3
Test Paper(s)/Five years	8	6