



Course Outline Form

ODD SEMESTER 2019

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*

Course Outline : BTY5D01. INTRODUCTION TO BIOTECHNOLOGY (2018-2019)

Name of the Stream	Science
Name of the Programme	BSc Biotechnology
Name of the Course	BTY5D01. INTRODUCTION TO BIOTECHNOLOGY
Nature of the Course	Open Course
Semester	Fifth
Lecturer(s)	SOMY SOMAN AND DR.K.MASHHOOR
Name of the Coordinator	SOMY SOMAN
Year	2018-2019
No of Credits	2
No of Contact Hours	2
Course Description	Course.Biotechnology is a field of applied biology that involves the use of living organisms and bioprocesses in engineering, technology, medicine and other fields requiring by-products.
Course Objectives	<ol style="list-style-type: none"> 1. To comprehend the fundamental principles and concepts of Biotechnology 2. To impart knowledge and implications of Biotechnology in daily Life. 3. To ensure knowledge transfer in applications of biotechnology and trends in biology.
Course Outcome	<ol style="list-style-type: none"> 1.Understand and Apply Future trends in Biology. 2 2. Understand the tools in biotechnology.
Assessment Method	Assignments Homeworks Class Tests Unit Tests Practical Tests Term Exam Seminars Lab Experiments
Teaching Methods Used	
Textbook	<ol style="list-style-type: none"> 1. Reinhard Renneberg, Arnold L. Demain. Biotechnology for Beginners. Academic Press 2. William J. Thieman, Michael A. Palladino. Introduction to Biotechnology. Benjamin Cummings 3. Sang Yup Lee. An Introduction to Molecular Biotechnology: Fundamentals, Methods, and Applications, John Wiley & Sons, Inc. 4. Chawla. Introduction To Plant Biotechnology, Oxford and IBH Publishing
References	<ol style="list-style-type: none"> 1. Reinhard Renneberg, Arnold L. Demain. Biotechnology for Beginners. Academic Press 2. William J. Thieman, Michael A. Palladino. Introduction to Biotechnology. Benjamin Cummings 3. Sang Yup Lee. An Introduction to Molecular Biotechnology: Fundamentals, Methods, and Applications, John Wiley & Sons, Inc. 4. Chawla. Introduction To Plant Biotechnology, Oxford and IBH Publishing
Internet Resources	

Internal Exam Pattern

Items	Marks/20	Marks/15
Assignment	4	3
Test Paper(s)/Viva voce	8	6
Seminar/Presentation	4	3
Class Room Participation based on Attendance	4	3
Total	20	15

External Exam Pattern

Question Type	No of Question	Marks/Question	Total Marks
Short Questions(2-3 Sentences)	12	2	Ceiling 20
Paragraph / Problem Type	7	5	Ceiling 30
Essay Type	2 out of 4	10	10
Total			60
Time			2 hrs

Graduate Attributes	Name of the Course: BTY5D01. INTRODUCTION TO BIOTECHNOLOGY
	Knowledge
	Academic and Intellectual Skills
	Self Learning
	Collaborative Learning
	Professional Skills
	Decision Making
	IT Skills
	Problem Solving Skills
	Research Skills
	Entrepreneur Aptitude
	Personal Skills
	Application Skills
Life Skills	
Attitude and Values	
Social Responsibility	
Ethical Commitment	

Course Schedule

Introduction to Biotechnology.	Week 1
History of biotechnology.	Week 2
Tools in biotechnology.	Week 3
Use of cell and cell process in biotechnology.	Week 4
Application of Biotechnology in food industry	Week 5
Basic principle of Fermentation	Week 6
Production of fermented food products- Bread, wines, vinegar and pickles.	Week 7
Fermented milk products and traditional Indian foods.	Week 8
High value food products single cell proteins and mushroom. first internal test FIRST INTERNAL	Week 9
Application of Biotechnology in agriculture	Week 10
genetically modified foods.	Week 11
Bt cotton and Bt brinjal.	Week 12
Biopesticides	Week 13
biofertilizers.	Week 14
Application of Biotechnology in medicine:	Week 15
application in treatment and diagnosis of diseases. SECOND INTERNAL	Week 16
DNA figure printing and paternity test.	Week 17
MODEL EXAM	Week 18

Contact Details

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