



Course Outline Form

EVEN 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 : **BTY2B02. GENERAL MICROBIOLOGY (2018-2019)**

Name of the Stream	Science
Name of the Programme	BSc Biotechnology
Name of the Course	BTY2B02. GENERAL MICROBIOLOGY
Nature of the Course	Core Course
Semester	Second
Lecturer(s)	Shilly Das.A and Somy Soman
Name of the Coordinator	
Year	2018-2019
No of Credits	3
No of Contact Hours	3
Course Description	Course describes History of Microbiology, Morphology, growth, reproduction and metabolism of microorganisms.
Course Objectives	Students will be able to communicate scientific information effectively, especially relating to microbiological organisms, and the roles of microbial organisms in ecosystem function and health-related issues
Course Outcome	Evaluate the potential for microbial techniques.
Assessment Method	Assignments Class Tests Unit Tests Practical Tests Term Exam Seminars
Teaching Methods Used	
Textbook	Microbiology: Concepts and Applications Pelczar, MJ. Microbiology: Prescott Stainer, R.K., Ingraham, J.L., Wheelis, General Microbiology,
References	1. Pelczar, MJ., Chan, E.C.S. and Kreig, Microbiology: Concepts and Applications (Fifth edition). 2. Ronald Atlas. Principles of Microbiology (second edition). 3. Michael T. Medigan, John M. Martinho, Brock, Biology of Microorganisms (Tenth edition). 4. Prescott, Harley, Microbiology (Sixth edition). 5. Stainer, R.K., Ingraham, J.L., Wheelis, General Microbiology, Macmillan Publ. 6. Benson, H.J. 1990. Microbiological applications: A laboratory manual in General Microbiology, 5th ed., W.M.C. Brown, Publishing. 7. Cappuccino, J.G. & Sherman, N. 1996. Microbiology Laboratory Manual.
Internet Resources	

Internal Exam Pattern

Items	Marks/20	Marks/15
Assignment	4	3
Test Paper(s)/Viva voce	8	6
Seminar/Presentation	4	3

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
Total			80
Time			2.5 hrs

Graduate Attributes	Name of the Course: BTY2B02. GENERAL MICROBIOLOGY
	Knowledge Academic and Intellectual Skills Self Learning Collaborative Learning Professional Skills Communication Skills Decision Making Problem Solving Skills Research Skills Entrepreneur Aptitude Personal Skills Creative Thinking Lifelong Learning Application Skills Attitude and Values Social Responsibility Ethical Commitment Global Citizen

Course Schedule

History of Microbiology	Week 1
Leeuwenhoek and his microscope,Assignment	Week 2

Germ theory of disease – Koch's postulates,	Week 3
development in disease prevention,	Week 4
antisepsis, immunisation, chemotherapy,	Week 5
classes of microorganisms, bacteria, virus, fungi.	Week 6
Morphological characters of bacteria & fungi.	Week 7
Difference between eukaryotic & prokaryotic cells. Unit test 1	Week 8
Preparation of media, eg. nutrient agar, potato dextrose agar, Mac Coukey Agar,	Week 9
Industrial media,	Week 10
Requirements for carbon, N ₂ .	Week 11
Concept of sterilization,	Week 12
Methods of sterilization of media and equipments / glassware .First internal examination	Week 13
Measurement of growth: dry weight, CFV, turbidometry	Week 14
Microbial metabolism: Aerobic and anaerobic respiration,Electron transport chain Second internal examination	Week 15
Brief account of microbial diseases: eg: Typhoid	Week 16
AIDS,	Week 17
Dermatomycoses.Modal examination	

Contact Details

Name	Shilly das.A
Phone	8289864121
Email	shillyabhilash@gmail.com
Website	www.emecollege.ac.in