

Subject Code: 1SC1000122	Subject Title: Applications of Microbiology
Course Type: Subject Elective	

Course Objective:

This is a basic course involving topics that gives information of different branches where microbiology is applied at present. It covers most of the areas where microorganisms as a whole or a part of the technique are applied for the benefit of mankind.

Teaching scheme (hours) per week		Credit			Theory Marks		Practical Marks		Total
Theory	Practical	Theory	Practical	Total	Uni. Assessment	Cont. Assessment	Uni. Assessment	Cont. Assessment	
2	--	2	--	2	35	15	--	--	50

Unit	Content	Lectures	Weightage
1	Unit :1 Applied areas of Microbiology-1: ✓ Applications of Microbiology in the field of drinking water ✓ Applications of Microbiology in the field of waste water and waste management ✓ Applications of Microbiology in the field of agriculture ✓ Applications of Microbiology in the field of medicines ✓ Applications of Microbiology in the field of Dairy & Food Industries	15	50%
2	Unit: 2 Applied areas of Microbiology-2: Role of Microorganisms and their applications in the fields of... ✓ Biotechnology, Recombinant DNA Technology & Genetic Engineering ✓ Ecology & Environment, Pollution Control & Bioremediation ✓ Bioleaching, Aeromicrobiology & Exomicrobiology ✓ Pharmaceutical Microbiology, Veterinary Microbiology ✓ Immunology & Medical Microbiology ✓ Fermentation Industries (Production of Antibiotics, Organic Acids, Enzymes & Other Specialty Biochemicals)	15	50%

Learning Outcome:

By going through the course contents, the student will get educated about the applications of microbiology in different areas of life. Students can also inculcate their further interest in any of these fields depending on their area of interest.

References:

1. Microbiology by M.J.Pelczar, ECS Chan & NR Krieg
2. Principles of Microbiology by R.M. Atlas
3. Microbiology by Prescott, Harley & Klein
4. Elementary Microbiology Vol.-1 by H.A.Modi
5. Textbook of Microbiology by R.C.Dubey & D.K.Maheshwari