

# D.B.F. Dayanand College of Arts and Science, Solapur

## COURSE OUTCOME

Name of Department: - Microbiology

<b>B.A. / B.Sc. / M.A. / M.Sc. : B.Sc.</b>		
<b>NAME OF SUBJECT : Microbiology</b>		
<b>SEM I / II / III / IV / V / VI : Sem V</b>		
<b>COURSE NUMBER ( PAPER NUMBER) : SEC – 1 : Paper MIC – XII</b>		
<b>TITLE OF COURSE (NAME OF PAPER) :- Industrial Microbiology – I</b>		
<b>COURSE CONTENT</b>	<b>OBJECTIVES</b>	<b>OUTCOME</b>
<b>Unit I :-Food Microbiology</b>	To study of various microorganisms in the food substrate and food spoilages., and the concepts of food preservations for long term of food storage and fermented food production	Students will come to know food spoilages, concepts of food preservations for long term of food storage and fermented foods.
<b>Unit –II: Dairy Microbiology</b>	To know milk spoilages by microorganisms and production of various fermented dairy products	Students will be able to know microbial action in milk spoilages and production of dairy fermented products.
<b>Unit III: Industrial production.</b>	To study various industrial products through fermentation process by desired microorganisms.	Students will be able to know to the production of various fermented products.
<b>Unit – IV: Production of alcoholic beverages</b>	To study of production of alcoholic beverages such as wine and beer and post fermentation of spoilages of wine.	Students will be able to know production of wine and beer and concept of wine spoilages.
<b>Unit-V:-Downstream processing and quality control</b>	To study or learn the concepts of downstream and quality control processes in fermentation industry	Students will be able know or learn the various downstream and quality control processes in fermentation industry.

Signature of HOD

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<b>SEM I / II / III / IV / V / VI : Sem VI</b>		
<b>COURSE NUMBER ( PAPER NUMBER) : DSE – 2 – B: Paper MIC - XIV</b>		
<b>TITLE OF COURSE (NAME OF PAPER) :- Microbial Biochemistry</b>		
<b>COURSE CONTENT</b>	<b>OBJECTIVES</b>	<b>OUTCOME</b>
<b>Unit I :-</b> Enzyme, Enzyme kinetics and regulation	To obtain a general knowledge about how enzymes work To study of enzyme kinetics and its regulations in biochemical reactions	Students will be able to know or learn the concepts of enzymes, enzyme kinetics and regulation of enzymes in biochemical reactions
<b>Unit –II:</b> Extraction, purification and assay of enzymes	To study of extraction processes of enzyme and understand the quality of enzyme through purification and assay	Students will be able to know extraction processes, purification and assay of enzymes
<b>Unit III:</b> Assimilation of: Carbon, Nitrogen and Sulphur	To study the metabolic reactions of microorganisms for assimilation of carbon, nitrogen and sulphur	Students will be able to know the concepts of metabolic reactions of microorganisms.
<b>Unit – IV:</b> Bioenergetics	To study how living organisms acquire and transform energy in order to perform biological work and metabolic pathways	Students will be able to know or learn the concepts of bioenergetics and metabolic pathways.
<b>Unit-V:-</b> Biosynthesis of: Nucleotides, Protein and Peptidoglycan	To study or learn the concepts of biosynthesis of Nucleotides, Protein and Peptidoglycan	Students will be able know or learn the concepts of biosynthesis

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