

Title of the Course: FOOD MICROBIOLOGY [P]

Course Code: MIC-626

Number of Credits: 1, Practical

Contact hours: 30

Effective from Academic Year: 2022-23

Prerequisites	It is assumed that the student should have knowledge about handling of microorganisms.	
Objective:	<ul style="list-style-type: none">Students will be assessing the microbiological quality of food.Students will learn the role of microorganisms in food fermentations.	
Content:		(30)
1.	Determination of the D value in heat treatment of foods.	
2.	Fermentation: Production of wine, monitoring of sugar reduction and alcohol production.	
3.	Assessment of sanitary status of an eatery – Examination of microflora from table surface; utensils; drinking water.	
4.	Isolation of probiotic culture (<i>Lactobacillus</i>).	
Pedagogy:	Experiments in the laboratory	
References/ Readings	Adams, M. R. and Moss, M. O., Food Microbiology, New Age International (P) Limited Publishers, New Delhi. (2008)	
	Bacteriological Analytical Manual (BAM), US FDA Administration, https://www.fda.gov/food/laboratory-methods-food/bacteriological-analytical-manual-bam (2023)	
	Da Silva, N., Taniwaki, M. H., Junqueira, V. C. A., Silveira, N. F. A., Nascimento, M. S. do. and Gomes, R. A. R., Microbiological Examination Methods of Food and Water: A Laboratory Manual, CRC Press, Taylor & Francis Group, U.K. (2018).	
	Department of Food and Public Distribution, Ministry of Consumer Affairs, Food & Public Distribution, GOI https://dfpd.gov.in/index.htm (2023).	
	Doyle, M. P. and Buchanan, R. L., Food Microbiology: Fundamentals and Frontiers, ASM Press. (2012)	
	Food Safety and Standards Authority of India, Ministry of Health and Family Welfare, GOI https://fssai.gov.in/cms/food-safety-and-standards-act-2006.php#:~:text=The%20Food%20Safety%20and%20Standards,34%20OF%202006. (2023)	
	Frazier, W. C. and Westhoff, D. C., Food Microbiology, M. C. Graw-Hill Companies, Inc., New York. (2020)	
	Harrigan, W. F., Laboratory Methods in food Microbiology, CRC Press, Taylor & Francis Group. (2020)	
	Jay, MJ, Loessner, M.J. & Golden, D.A., Modern Food Microbiology, Springer Science + Business Media Inc., NY. (2006)	
	Ramesh, K. V., Food Microbiology, MJP Publishers, Chennai. (2019).	
Course Outcomes	<ul style="list-style-type: none">Analyse food samples produced in food industry.Correlate the different methods of food treatments used to control the microorganisms with food preservation.	

	<ul style="list-style-type: none">• Evaluate foods in terms of microbial quality for food safety and quality control.• Develop the value added food products using beneficial microorganisms.	
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