



**St. Mary's College (Autonomous)**  
Reaccredited with 'A+' Grade by NAAC (Cycle IV)  
Thoothukudi



**Criterion: I – Curricular Aspects**  
**1.1 – Curriculum Design and Development**  
**Year: 2018-2023**

**Programme: M.Sc. Microbiology**

<b>SEMESTER-III</b>			
<b>Core-IX- Industrial and Pharmaceutical Microbiology</b>			
<b>Code:19PMIC31</b>	<b>Hrs/Week:5</b>	<b>Hrs/Sem:75</b>	<b>Credits:4</b>

**Course outcome:**

<b>CO No</b>	<b>Upon completion of this course, students will be able to</b>	<b>PSO addressed</b>	<b>CL</b>
CO -1	revise the idea about the usage of microorganisms in the field of industrial microbiology	3	An
CO -2	analyse the knowledge of various industrial	4	Un
CO -3	knowledgeable in industrial fermentation	3	Un
CO -4	have an insight on industrial microbiological techniques	2	Re
CO -5	understands in the field of pharmaceutical microbiology	1	Un
CO-6	knowledge of basics and applied microbiological aspects of industries.	1	Un
CO-7	acquire the knowledge about production of various industrial and pharmaceutical products	4,5	Un
CO-8	know the detail knowledge about antibiotics	2,3,4	Un,Ap

**SEMESTER – IV****Core – XIII- Environmental  
Microbiology****Code :19PMIC41****Hrs/ Week: 4****Hrs/ Sem: 60****Credit: 4****Course Outcome:**

CO.No	Upon completion of this course, students will be able to	PSO addressed	CL
CO-1	recall the ecological groups of microbes	1	Re,
CO -2	have knowledge about the interaction between microbes and organisms at other tropic level.	1,2	Un, An
CO-3	interpret the microbiology of sewage and its treatment	2,3	Co
CO-4	explain about aero microbiology and microbial ecology	2	Un, An
CO-5	acquire basic knowledge about water purification	2	Ap
CO-6	gets knowledge about diversity in anoxic ecosystem.	2,4	Co
CO-7	understanding about biodegradation.	2	Sy
CO-8	develop the application of biodegradation and bioremediation.	5	Ap, Cr

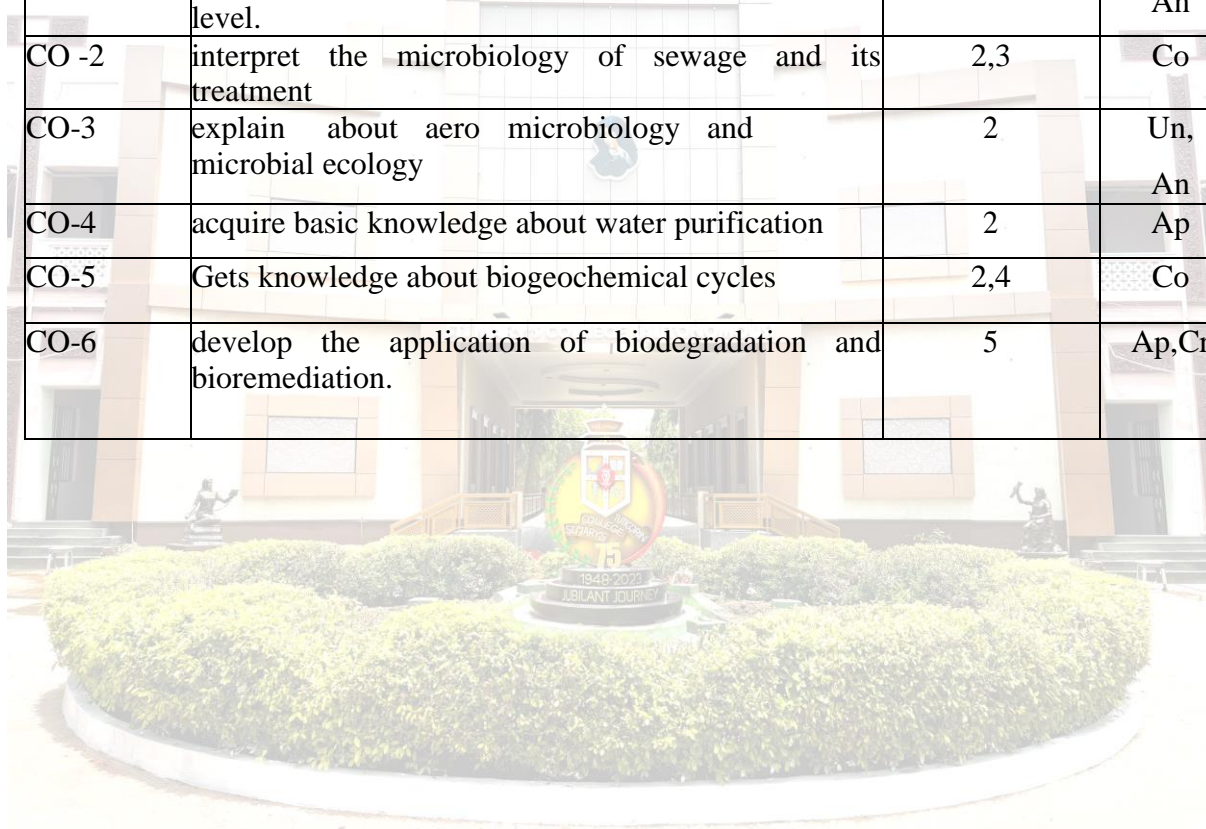
**SEMESTER –III****Core- XI****Food and Dairy Microbiology****Course Code : 21PMIC33****Hrs/Week: 4****Hrs/Sem: 60****Credits: 4****Course Outcome:**

CO. No	Upon completion of this course, students will be able to	PSO addressed	CL
CO- 1	explain the about microorganisms important in food	2,5	Un
CO- 2	knowledge about the microbial contamination of food.	1,2,4	Un
CO -3	knows about the techniques in food preservation and fermented foods	3,4,6	Re
CO- 4	knowledge about beneficial and harmful aspects of microbes in dairy products	2,4,5,6	Cr
CO -5	communicate the recent techniques on good manufacturing.	2,4,5,6	Un
CO -6	grasp the quality and safety assurance in food industry and the hazard analysis and critical control point	2,3	Re, Un

SEMESTER – IV			
Core – XIII		Environmental Microbiology	
Course Code :21PMIC41	Hrs/ Week: 4	Hrs/ Sem: 60	Credit: 4

#### Course Outcome:

CO.No	Upon completion of this course, students will be able to	PSO addressed	CL
CO-1	have knowledge about the interaction between microbes and organisms at other tropic level.	1,2	Un, An
CO -2	interpret the microbiology of sewage and its treatment	2,3	Co
CO-3	explain about aero microbiology and microbial ecology	2	Un, An
CO-4	acquire basic knowledge about water purification	2	Ap
CO-5	Gets knowledge about biogeochemical cycles	2,4	Co
CO-6	develop the application of biodegradation and bioremediation.	5	Ap,Cr



*Lucia Rose*  
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