

Shree M. & N. Virani Science College (Autonomous), Rajkot

Department of Microbiology

SCHEME OF INSTRUCTION AND EXAMINATIONS

M.Sc. Microbiology

For Students Admitted from A.Y. 2019-2020 & Onwards

VISION:

The Department of Microbiology endeavors to be a centre of excellence in microbiological studies and research in bringing pre-eminence in the field and strive to be in the vanguard of the domain for scientific and social benefit of mankind through human resource development.

MISSION:

The Department of Microbiology is committed to provide quality education, extension activities for academic success, societal and industrial development by providing academic extension and research environment through scholarly progression, inquisitiveness, intellectual development and human values.

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Department of Microbiology
SCHEME OF INSTRUCTION AND EXAMINATIONS

Semester- I									
Course Code	Course	Hrs of Instruction / week			Exam Duration (Hrs)	Max Marks			Credit
		Th	Pr	Tu		CIA	SEE	Total	
Part-I: Core Courses (CC)									
Core (Theory)									
19PMBCC101	Core 1: Biomolecules	4	-	-	3	40	60	100	4
19PMBCC102	Core 2: Microbial Cell Biology and Physiology	4	-	-	3	40	60	100	4
19PMBCC103	Core 3: Microbial Diversity and Evolution	4	-	-	3	40	60	100	4
Discipline Specific Elective – Interdisciplinary (DSE- ID)									
19PMBID101/ 19PMBID102	Discipline Specific Elective-Inter Disciplinary Statistical Methods / Industrial Instrumentation	4	-	-	2.5	50	50	100	4
Core (Practical)									
19PMBCC104	Core 4- Combined Practical-1 Microbial and Biochemical Techniques	-	12	-	9*	100	100	200	6
Part-II : Competency Enhancement Courses (CEC)									
CEC – I									
	Online / Professional certification courses/ STC**		-		-	-	-	-	-
Life Skill Courses (LSC)									
	Value Education for consciousness development	1	-	-	-	-	-	-	-
Total		29						600	22
* 6 hours for day 1 and 3 hours for day 2					**STC: Short Term Course of 80-120 hrst				

M.Sc. Microbiology

Semester-II									
Course Code	Course	Hrs of Instruction / week			Exam Duration (Hrs)	Max Marks			Credit
		Th	Pr	Tu		CIA	SEE	Total	
Part-I									
Core (Theory)									
19PMBCC201	Core 5: Microbial Genetics	4	-	-	2.5	50	50	100	4
19PMBCC202	Core 6: Analytical Techniques	4	-	-	2.5	50	50	100	4
19PMBCC203	Core 7: Immunology and Medical Microbiology	4	-	-	3	40	60	100	4
19PMBCC204	Core 8 :Microbial Metabolism	4	-	-	3	40	60	100	4
Discipline Specific Elective - Interdisciplinary (DSE- ID)									
19PMBID201/ 19PMBID202	Industrial and Environment Management / Chemical Technology	4	-	-	2.5	50	50	100	4
Core (Practicals)									
19PMBCC205	Core -9 Combined Practical-2 – Molecular Techniques	-	8	-	9*	100	100	200	4
Part-II : Competency Enhancement Courses (CEC)									
CEC – 1									
	Online / Professional certification courses/STC		-		-	-	-	-	-
CEC – II									
19PMBCE01	Research Proposal Presentation	1	-	-	-	Remarks			1
Life Skill Courses (LSC)									
19LSVE01	Value Education for consciousness development	1	-		-	Remarks			2
Total		30						700	27

Semester-III									
Course Code	Course	Hrs of Instruction / week			Exam Duration (Hrs)	Max Marks			Credit
		Th	Pr	Tu		CIA	SEE	Total	
Part-I : Core Courses (CC)									
Core (Theory)									
19PMBCC301	Core 10: Bioinformatics	4	2	-	3	90	60	150	4+1
19PMBCC302	Core 11: Industrial Microbiology	4	2	-	3	90	60	150	4+1
19PMBCC303	Core 12: Gene Manipulation Techniques	4	2	-	3	90	60	150	4+1
19PMBCC304	Core 13: Microbial Ecology (self study)	1	-	-	2.5	50	50	100	3
Discipline Specific Elective Core (DSE-Core)									
19PMBDC301/ 19PMBDC302	Discipline Specific Elective- Environmental Microbiology and Biotechnology / Food and Dairy Microbiology	4	2		2.5	50	50	100	4+1
	Project/ Internship/ Training		2		-	-	-	-	2*
Generic Elective (GE)									
19PMBGE01	From common PG Pool	2			-	100	-	100	2
Part-II : Competency Enhancement Courses (CEC)									
.									
CEC- I									
19PMBCE02	Online / Professional certification courses/STC		-		-	Remarks			2
CEC- II									
19PMBCE03	Summer Training		1		-	Remarks			1
Total		30						750	28
Summer Training for a period of 3-4 weeks in the vacation between Semester II and Semester III will be an essential for earning the degree of Masters in Microbiology.									
*For those who want to leave the programme after Semester III. For others the credits will be awarded in semester IV									

Online/Professional certification course/STC must be completed any time between Semester I-III and details of which must be submitted to CoE in or before Semester IV

Semester- IV									
Course Code	Course	Hrs of Instruction / week			Exam Duration (Hrs)	Max Marks			Credit
		Th	Pr	Tu		CIA	SEE	Total	
Part-I: Core									
19PMBCC401	Core13: Agricultural Microbiology	4	2	-	3	90	60	150	4+1
19PMBCC402	Project / Internship/ Training		18		3	200	100	300	9
Discipline Specific Elective – Core (Theory)									
19PMBDC401/ 19PMBDC402	Discipline Specific Elective- Pharmaceutical Microbiology /Advanced Molecular Techniques	4	2	-	2.5	50	50	100	4+1
Total		30						550	19
TOTAL OF ALL SEMESTERS								2600	96