

**SCHOOL OF SCIENCE**  
**Department of Microbiology**

**CRITERIA 1**

**SUB CRITERIA 1.3.3**

**Percentage of students undertaking field  
projects / research projects / internships**

**Academic Year**

**2020-2021**

  
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**SCHOOL OF SCIENCE**  
**Department Of Microbiology**

**Total Number of Research Projects/Internships in UG**

	Program	Total Number of students involved in Internship
Internships/Research Projects	BSc Microbiology	02

In the Biotechnology disciplines, there is mandatory Internship. In the curriculum design it has been incorporated into the programme and complete it as a mandatory part of final year training.

  
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"CELEBRATING DREAMS"

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## School of Sciences

NAME OF COURSE: B. SC. MICROBIOLOGY

SESSION 2018 ONWARDS

SEMESTER: VI

### SUBJECT WISE DISTRIBUTION OF MARKS AND CORRESPONDING CREDITS

Sr. No.	Subject Code	Subject Name	Maximum Marks Allotted						Credits		Total Credits	
			Theory Slot			Practical Slot			Total Marks	L		P
			End Sem.	Mid Sem. MST (Two tests average)	Class Participation	End Sem.	Progressive Evaluation	Internal viva				
1	BSMB-601	Medical Microbiology	40	30	30	-	-	-	100	4	0	04
2	BSMB-602	Food and Dairy Microbiology	40	30	30	40	30	30	200	3	1	04
3	BSMB-603	Environmental microbiology	40	30	30	-	-	-	100	4	0	04
5	BSMB-604	Marine Microbiology	40	30	30	40	30	30	200	3	1	04
6	BSMB 605	Agriculture microbiology	40	30	30	-	-	-	100	4	-	4
7	BSMB 606	Major Project + Seminar	-	-	-	200+	-	-	300	6	-	06
<b>Total</b>									<b>1000</b>			<b>26</b>

Prof. Richa Kothari  
(Dean)

Dr. Rita Sharma  
(Coordinator & member)

Dr. Santosh Kumar  
(Exam Superintendent)

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## Syllabus-2018-2019

(SOS)(Bsc\_Microbiology)

Title of the Course	Major Project
Course Code	BSMB 606 (P)

### Part A

Year	3rd	Semester	6th	Credits	L	T	P	C
					0	0	6	6
Course Type	Project							
Course Category	Projects and Internship							
Pre-Requisite/s	Student must have basic knowledge of all the instruments, good laboratory practices, and subjective knowledge			Co-Requisite/s				
Course Outcomes & Bloom's Level	CO1- This study aims to evaluate the impact of internship programs on the professional as well as on personal development and skills.(BL2-Understand) CO2- The planning and organizing of project framework in the Logframe through the analysis of inputs, activities, results, purpose or outcome, and overall objective or goal as a result of strategy analysis and selection.(BL3-Apply) CO3- Formulate a project that is capable of achieving its intended purpose/objective, of addressing identified problems, of managing potential risks, of designing activities and realistic time frame.(BL6-Create) CO4- Designing a project framework that responds to particular problem with clear objectives, expected results and activities(BL6-Create) CO5- Project formulation helps to prepare students with clear understanding of outline of research work.(BL6-Create)							
Course Elements	Skill Development ✓ Entrepreneurship ✓ Employability ✓ Professional Ethics ✗ Gender ✗ Human Values ✓ Environment ✓		SDG (Goals)	SDG3(Good health and well-being) SDG4(Quality education) SDG8(Decent work and economic growth)				

### Part B

Modules	Contents	Pedagogy	Hours
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## Part D(Marks Distribution)

Theory					
Total Marks	Minimum Passing Marks	External Evaluation	Min. External Evaluation	Internal Evaluation	Min. Internal Evaluation
Practical					
Total Marks	Minimum Passing Marks	External Evaluation	Min. External Evaluation	Internal Evaluation	Min. Internal Evaluation
300	150	300	150		

## Part E

<b>Books</b>	Sustainable solid waste management: issues, policies, and structures. Academic Foundation, New Delhi. Dhamija, U., (2009). Virendra Kumar Pandey Textbook of Food Microbiology 1st Edition Research methodology, C. R. Kothari, 6th Edition
<b>Articles</b>	<a href="https://www.sciencedirect.com/science/article/pii/S2666049020300244">https://www.sciencedirect.com/science/article/pii/S2666049020300244</a> <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7150063/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7150063/</a> <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5037945/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5037945/</a>
<b>References Books</b>	Handbook of solid waste management, McGraw-Hill Publication, USA Kreith F, Tchobanoglous G (2002) John C. Ayres Microbiology of foods-2nd Edition Research methodology, Panneerselvam, R., Prentice Hall of India, New Delhi
<b>MOOC Courses</b>	<a href="https://nptel.ac.in/courses/105103205">https://nptel.ac.in/courses/105103205</a> <a href="https://nptel.ac.in/courses/126105013">https://nptel.ac.in/courses/126105013</a> <a href="https://nptel.ac.in/courses/121106007">https://nptel.ac.in/courses/121106007</a>
<b>Videos</b>	<a href="https://nptel.ac.in/courses/105103205">https://nptel.ac.in/courses/105103205</a> <a href="https://nptel.ac.in/courses/126105013">https://nptel.ac.in/courses/126105013</a> <a href="https://nptel.ac.in/courses/121106007">https://nptel.ac.in/courses/121106007</a>

## Course Articulation Matrix

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	2	1	-	1	-	-	-	-	-	-	-	2	-	1
CO2	1	1	3	1	-	-	2	-	-	-	-	-	-	1	3
CO3	1	3	-	2	3	-	-	-	-	-	-	-	1	1	-
CO4	1	-	1	2	2	-	1	-	-	-	-	-	2	3	1
CO5	1	-	1	2	1	-	-	-	-	-	-	-	2	3	1
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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### Details of UG Research Projects

Name of the School: School of Science and Research, ITM University, Gwalior.


Name of the Course and Branch: B.Sc. Microbiology

Session: 2020– 2021

Total No. of Students enrolled: 02

### List of Students

S.No	Roll No	Name Of Students	Name of Industry/Institute	Topic	Supervisor
1	BSMN1MB18003	Shruti Chaudhary	CISF, Jiwaji University, Gwalior	Training on Analytical Instruments: HPLC, GC, LCMS, TGA, XRD, TEM, PSA and FTIR.	Dr. Sadhna Shrivastava Senior Scientific Officer
2	BSMN3MB19T01	Laiba Arsi	CISF, Jiwaji University, Gwalior	Training on Analytical Instruments: HPLC, GC, LCMS, TGA, XRD, TEM, PSA and FTIR.	Dr. Sadhna Shrivastava Senior Scientific Officer

  
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**Prof. Richa Kothari**  
**School of Sciences**



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### List of Students of BSc Microbiology 6<sup>th</sup> Semester

S.No	Roll Number	Name of student
1	BSMN1MB18003	Shruti Chaudhary
2	BSMN3MB19T01	Laiba Arsi

  
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*Dr. K. K. Kishan*  
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*[Signature]*  
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**Note: Due to COVID -19 precautions, no industrial visit/training was done in the session 2020-21**