

SCHOOL OF SCIENCE
Department of Biotechnology

CRITERIA 1

SUB CRITERIA 1.3.3

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

Academic Year

2021-2022



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SCHOOL OF SCIENCE
Department Of Biotechnology

Total Number of Research Projects in UG and PG

Research Projects	Program	Total Number of students involved in research projects
	M. Sc Biotechnology	05

The students undertake mini and major projects for increasing their practical knowledge and experience. Students are encouraged to do their research in the Research Institutes, hospitals and Industries to encourage the research insight in them

Total Number of Research Projects/Internships in UG

Internships/Research Projects	Program	Total Number of students involved in Internship
	BSc Biotechnology	26

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.

Total Number of Field Project/Industry visits in UG and PG

Expert Lecture/Industry visits/Hands on Training	Program	Total Number of students involved in field projects
	BSc Biotechnology	69
	M. Sc Biotechnology	05

Field visits / Industry Visits Field/ Industrial visits during the course of any programme gives students an insight on the internal working environment of the company. Biotechnology, students undertake field visits to research institutes, industries, sewage treatment plants, water treatment plants, etc. to enhance knowledge and enrich skills.


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"CELEBRATING DREAMS"

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4.	Field Project/Industry visits in UG and PG	19-24

A handwritten signature in blue ink, appearing to be 'S. S. S.', written over a faint circular stamp.

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School of Sciences

NAME OF COURSE: B. SC. BIOTECHNOLOGY

SESSION 2021 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	BSBT-601	Waste Management	40	30	30	40	30	30	200	3	1	04
2	BSBT-602	Food Microbiology	40	30	30	40	30	30	200	3	1	04
3	BSBT-603	Frontiers in Biotechnology & Microbiology	40	30	30	-	-	-	100	4	0	04
4	BSBT-604	Applied Biological Sciences	40	30	30	40	30	30	200	3	1	04
5	BSBT-605	Remedial technologies and climate change	40	30	30	-	-	-	100	2	-	02
6	BSBT 606	Major Project + Seminar				200+	-	-	300	2	-	02
7	BSBT -607	Biotechnology Lab	-	-	-	40	30	30	100	2	-	02
8	BSBT 608	NCC*/MOOC*	40	30	30	40	30	30	200	2	1	3
Total									1200			22+3

*Additional credit only for those students who opt for NCC/MOOC

Dr. Y.C. Goswami
(Chairman)

Dr. Rita Sharma
(Coordinator & member)

Dr. Santosh Kumar
(Exam Superintendent)

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Syllabus-2021-2022

(SOS)(BSc_Biotechnology)


Title of the Course	Major Project
Course Code	BSBT 607 (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	<p>CO1- This study aims to evaluate the impact of internship programs on the professional as well as on personal development and skills.(BL2-Understand)</p> <p>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)</p> <p>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)</p> <p>CO4- Designing a project framework that responds to particular problem with clear objectives, expected results and activities(BL6-Create)</p> <p>CO5- Project formulation helps to prepare students with clear understanding of outline of research work.(BL6-Create)</p>							
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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 Prof. (Dr.) Yogesh C Goswami
 Dean
 School of Applied Sciences
 School of Science ITM University
 Gwalior (M.P.)-INDIA-474001


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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

Books	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
Articles	https://www.sciencedirect.com/science/article/pii/S2666049020300244 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7150063/ https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5037945/
References Books	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
MOOC Courses	https://nptel.ac.in/courses/105103205 https://nptel.ac.in/courses/126105013 https://nptel.ac.in/courses/121106007
Videos	https://nptel.ac.in/courses/105103205 https://nptel.ac.in/courses/126105013 https://nptel.ac.in/courses/121106007

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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-


 Prof. (Dr.) Yogesh C Goswami
 Dean
 School of Applied Sciences
 School of Science ITM University
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Department of Biotechnology & Microbiology
(Batch 2021-22)

NAME OF COURSE: M.SC. BIOTECHNOLOGY

SEMESTER - IV

SUBJECT WISE DISTRIBUTION OF MARKS AND CORRESPONDING CREDITS

S.No.	Subject Code	Subject Name & Title	Maximum Marks Allotted							Credits Allotted Subject wise			Total Credits
			Theory Slot			Practical Slot			Total Marks	Period per week			
			End Sem	Mid Sem. MST (Two tests average)	Class Participation	End Sem	Progressive Evaluation	Internal viva		L	T	P	
1.	BT-401	Research Project	-	-	-	200	-	-	200	-	-	14	14
2.	BT-402	Research Report and Presentation	-	-	-	100	-	-	100	-	-	-	04

Minimum Marks for passing in End Semester Practical – 50%

Dr. Y.C. Goswami
(Chairman)

Dr. Rita Sharma
(Coordinator & member)

Dr. Santosh Kumar
(Exam Superintendent)

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Modules	Title	Indicative-ABCA/PBL/ Experiments/Field work/ Internships	Bloom's Level
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Syllabus (M.Sc. Biotechnology)

Title of the Course	RESEARCH PROJECT & RESEARCH REPORT AND PRESENTATION
Course Code	BT 401/402

Part A

Year	2nd	Semester	4th	Credits	L	T	P	C
					0	0	14	14
Course Type	Project							
Course Category	Projects and Internship							
Pre-Requisite/s	Student must have basic knowledge of biotechnological laboratory skills			Co-Requisite/s				
Course Outcomes & Bloom's Level	<p>CO1- To provide students with the fundamental tools and practical skills required to generate competent and highly qualified post graduates. (BL2-Understand)</p> <p>CO2- To acquaint the students with the principles of biosafety and ethical perspectives of biotechnological systems. (BL2-Understand)</p> <p>CO3- To develop students' ability to apply knowledge and skills to solve theoretical and practical problems in biology and biotechnology. (BL5-Evaluate)</p> <p>CO4- To provide students with the basis for the life-long self-learning in an attempt to keep up with the continuous quick changes in the field of biotechnology. (BL3-Apply)</p> <p>CO5- To equip students with the necessary critical theoretical background, develop the analytical, and basic research skills that will help students to pursue higher education in reputed institutes at both national and international levels (BL4-Analyze)</p>							

Modules	Contents	Pedagogy	Hours
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) SDG9(Industry Innovation and Infrastructure)

Part B


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Module-I	Identification of a problem and formulation of a topic of project/thesis	Internship	BL3-Apply
Module-II	To have field work and data collection through a chosen methodology	Internship	BL4-Analyze
Module-III	Dissertation and Viva-Voce	Internship	BL5-Evaluate

Part C

Part D (Marks Distribution)

Theory

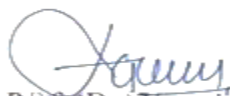
Total Marks	Minimum Passing Marks	External Evaluation	Min. External Evaluation	Internal Evaluation	Min. Internal Evaluation

Practical

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

Course Articulation Matrix

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


 Prof. (Dr.) Yogesh C Goswami
 Dean
 School of Applied Sciences
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Details of UG Research projects/Internship

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

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

Session: 2021– 2022

Total No. of Students enrolled: 26

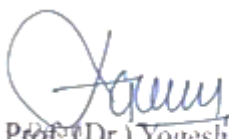
Duration: 45 Days

List of Students

S.No	Roll No	Name Of Students	Name of Industry/Institute	Topic	Supervisor
1	BSBN1BT19001	Aashi Jain	Dept. of Biotechnology, ITM University, Gwalior	Phytochemical and Antimicrobial Analysis of dry leaf extracts of <i>Mentha piperita</i>	Dr. Sadhna Chaturvedi Assistant Professor
2	BSBN1BT19003	Aman Sharma	Dept. of Biotechnology/Microbiology ITM University	Hematological and Biochemical parameters of Human Blood	Mrs. Trapti Pathak
3	BSBN1BT19004	Atharva Agrawal	Dept. of Biotechnology/Microbiology ITM University	Study of camouflage and color change in fresh water teleost fish	Mrs. Trapti Pathak
4	BSBN1BT19006	Bharti Arora	Dept. of Biotechnology/Microbiology ITM University	Hematological and Biochemical parameters of Human Blood	Mrs. Trapti Pathak
5	BSBN1BT19007	Devansh Singh Bais	Sahkari Dugdh Sangh Maryadit, Banmore, M. P	Milk Analysis and quality control	Mr. Atul Shrivastav Quality control manager
6	BSBN1BT19008	Dishee Mittal	Dept. of Biotechnology/Microbiology ITM University	Hematological and Biochemical parameters of Human Blood	Mrs. Trapti Pathak
7	BSBN1BT19009	Divya Shrivastava	Dept. of Biotechnology/Microbiology ITM University	Study of camouflage and color change in fresh water teleost fish	Mrs. Trapti Pathak
8	BSBN1BT19010	Dushyant Singh	Dept. of Biotechnology/Microbiology ITM University	Hematological and Biochemical parameters of Human Blood	Dr. Puneet Singh Chauhan
9	BSBN1BT19011	Gargi Rathore	Dept. of Biotechnology/Microbiology ITM University	Study of camouflage and color change in fresh water teleost fish	Mrs. Trapti Pathak

10	BSBN1BT19012	Gaurangi Bhadouriya	Dept. of Biotechnology/Microbiology ITM University	Hematological and Biochemical parameters of Human Blood	Mrs. Trapti Pathak
11	BSBN1BT19014	Khushi Kaushal	Dept. of Biotechnology/Microbiology ITM University	Hematological and Biochemical parameters of Human Blood	Mrs. Trapti Pathak
12	BSBN1BT19015	Lalit Prajapati	Dept. of Biotechnology/Microbiology ITM University	Study of camouflage and color change in fresh water teleost fish	Mrs. Trapti Pathak
13	BSBN1BT19017	Mayank Tripathi	Dept. of Biotechnology/Microbiology ITM University	Study of camouflage and color change in fresh water teleost fish	Mrs. Trapti Pathak
14	BSBN1BT19018	Muskan Jayaswal	Dept. of Biotechnology/Microbiology ITM University	A Comparative study for the biofuel production: A Review	Dr. Rita Sharma Assistant Professor
15	BSBN1BT19019	Neha Sharma	Dept. of Biotechnology/Microbiology ITM University	Study of camouflage and color change in fresh water teleost fish	Dr. Puneet Singh Chauhan
16	BSBN1BT19020	Neha Sharma	Dept. of Biotechnology/Microbiology ITM University	Hematological and Biochemical parameters of Human Blood	Mrs. Trapti Pathak
17	BSBN1BT19021	Prayanshu Verma	Innovation centre, Bundelkhand University, Jhansi (U.P)	Antibacterial, anti-diabetic and antioxidant activity of <i>Delonix regia</i> .	Dr. Luvkush Dwivedi
18	BSBN1BT19022	Pujan Ghimire	Dept. of Biotechnology, ITM University, Gwalior	Phytochemical Analysis of Dry and Fresh Leaf Extracts of <i>Simarouba glauca</i> : A Comparative Study	Dr. Rita Sharma Assistant Professor
19	BSBN1BT19024	Saloni Soni	Dept. of Biotechnology/Microbiology ITM University	Study of camouflage and color change in fresh water teleost fish	Mrs. Trapti Pathak
21	BSBN1BT19026	Sanskar Pandey	Dept. of Biotechnology/Microbiology ITM University	Study of camouflage and color change in fresh water teleost fish	Mrs. Trapti Pathak
22	BSBN1BT19027	Shruti Sengar	Sahkari Dugdh Sangh Maryadit, Banmore, M. P	Milk Analysis and quality control	Mr. Atul Shrivastav Quality control manager
23	BSBN1BT19028	Sunena Bamoriya	Dept. of Biotechnology/Microbiology ITM University	Study of camouflage and color change in fresh water fish	Mrs. Trapti Pathak
24	BSBN1BT19029	Taniya Bhatnagar	Sahkari Dugdh Sangh Maryadit, Banmore, M. P	Milk Analysis and quality control	Mr. Atul Shrivastav Quality control manager
25	BSBN1BT19031	Pale Loic	Dept. of Biotechnology/Microbiology ITM University	A Comparative study for the biofuel production: A Review	Dr. Rita Sharma Assistant Professor

26	BSBN3BT20T01	Tiyasa Jana	Dept. of Biotechnology, ITM University, Gwalior	Antimicrobial and Phytochemical Analysis of dry leaf extracts of Murray koinigii: A comparative study	Dr. Sadhna Chaturvedi Assistant Professor
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Prof. (Dr.) Yogesh C Goswami
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Dean
Prof. Y.C. Goswami
School of Sciences


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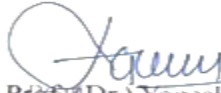
List of Students of BSc Biotechnology 6th Semester

S.No	Roll Number	Name of student
1	BSBN1BT19001	Aashi Jain
2	BSBN1BT19003	Aman Sharma
3	BSBN1BT19004	Atharva Agrawal
4	BSBN1BT19006	Bharti Arora
5	BSBN1BT19007	Devansh Singh Bais
6	BSBN1BT19008	Dishee Mittal
7	BSBN1BT19009	Divya Shrivastava
8	BSBN1BT19010	Dushyant Singh
9	BSBN1BT19011	Gargi Rathore
10	BSBN1BT19012	Gaurangi Bhadoriya
11	BSBN1BT19014	Khushi Kaushal
12	BSBN1BT19015	Lalit Prajapati
13	BSBN1BT19017	Mayank Tripathi
14	BSBN1BT19018	Muskan Jayaswal
15	BSBN1BT19019	Neha Sharma
16	BSBN1BT19020	Neha Sharma
17	BSBN1BT19021	Prayanshu Verma
18	BSBN1BT19022	Pujan Ghimire
19	BSBN1BT19024	Saloni Soni
20	BSBN1BT19025	Sanjana Bhadoriya



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21	BSBN1BT19026	Sanskar Pandey
22	BSBN1BT19027	Shruti Sengar
23	BSBN1BT19028	Sunena Bamoriya
24	BSBN1BT19029	Taniya Bhatnagar
25	BSBN1BT19031	Pale Loic
26	BSBN3BT20T01	Tiyasa Jana


Prof. (Dr.) Yogesh C Goswami
Dean
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Phytochemical Analysis
of Dry and Fresh Leaf Extracts of *Simarouba*
***glauca*: A Comparative Study**



Submitted By:

Pujan Ghimire

BSBN1BT19022

**For partial fulfillment of the Degree of
B.Sc. Biotechnology (Honors)**

Under the Guidance Of:

Dr. Rita Sharma

Assistant Professor

Department of Biotechnology/Microbiology

School of Sciences

ITM University, Gwalior



Prof. (Dr.) Yogesh C Goswami
Dean
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CERTIFICATE

We hereby certify that the work which is being presented in this thesis entitled “PHYTOCHEMICAL Analysis of Dry and Fresh Leaf Extracts of *Simarouba glauca*: A Comparative Study” at Department of Biotechnology, School of Sciences, ITM University, Gwalior, Madhya Pradesh. His training period was from 10 March 2022 to 15 May 2022. The project is being submitted to ITM University, Gwalior, in partial fulfillment of award of degree of Bachelor of Science in Biotechnology.

No part of the report has been submitted for any other degree or diploma.

DEAN
Dr. Yogesh C. Goswami
School of Sciences

Supervisor
Dr. Rita Sharma
Department of Biotechnology
School of Sciences

Prof. (Dr.) Yogesh C Goswami
Dean
School of Applied Sciences
School of Science ITM University
Gwalior (M.P.)-INDIA-474001

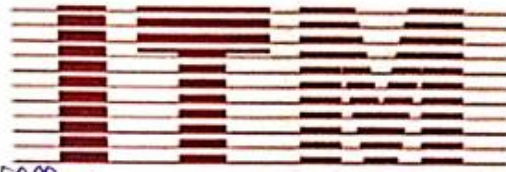
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**Submitted in fulfilment for the award of
the degree of Bachelor of science**

in

Bio technology (Honours)

*Forwarded
to Dean, SAS
for consideration
Saxena*



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Submitted by

DEVANSH SINGH BAIS

(BSBN1BT19007)

Under the supervision of

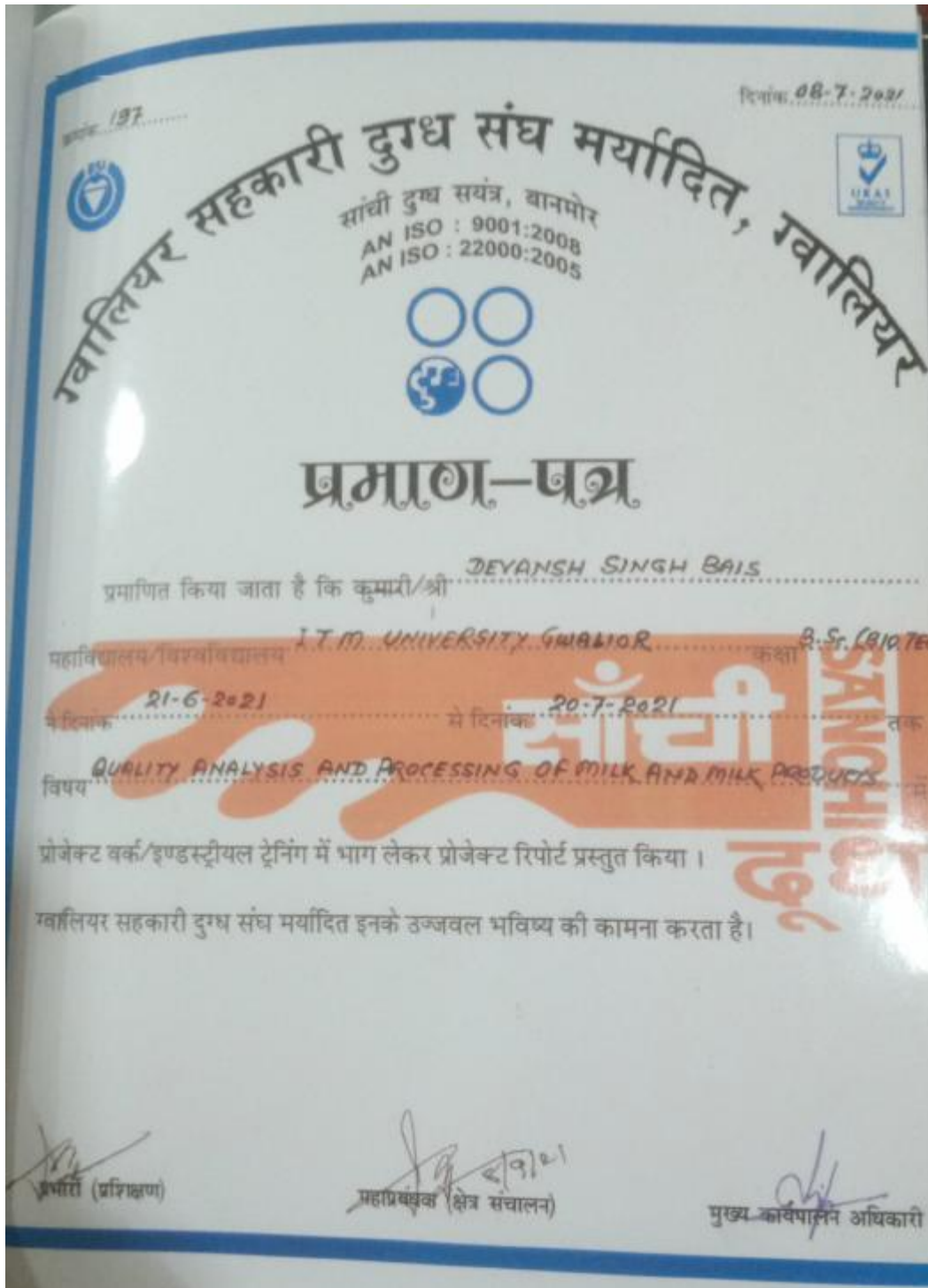
MR. ATUL SRIVASTAVA


Quality Control Manager

Sahakari Dugdh Sangh Maryadit.

Prof. (Dr.) Yogesh C Goswami
Dean
School of Applied Sciences
School of Science ITM University
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 Gwalior (M.P.)

A

Project Report On

Phytochemical Analysis
And Anti-Microbial Activity Of Mentha Piperita



Submitted By:

Aashi Jain

BSBN1BT19001

**For partial fulfillment of the Degree of
B.Sc. Biotechnology (Honors)**

Under the Guidance Of :

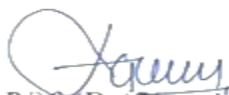
Dr. Sadhna Chaturvedi

Assistant Professor

Department of Biotechnology/Microbiology

School of Sciences

ITM University, Gwalior


Prof. (Dr.) Yogesh C Goswami
School of Applied Sciences
School of Science ITM University
Gwalior (M.P.)-INDIA-474001


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Gwalior (M.P.)

A

Project Report On

Antibacterial Activity and Phytochemical Analysis
of Dry Leaf Extracts of *Murraya koenigii*: A
Comparative Study



Submitted By:

Tiyasa Jana

BSBN3BT20T01

**For partial fulfillment of the Degree of
B.Sc. Biotechnology (Honors)**

Under the Guidance Of :

Dr. Sadhna Chaturvedi

Assistant Professor

Department of Biotechnology

School of Sciences

ITM University, Gwalior

Prof. (Dr.) Yogesh C Goswami

Dean
School of Applied Sciences
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Gwalior (M.P.)-INDIA-474001

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THESIS
On
"Anti-bacterial, anti-diabetic and anti-oxidant activity of Delonix regia"
Submitted to

INNOVATION CENTER
BUNDELKHAND UNIVERSITY
JHANSI



For the partial fulfilment of
The

University Grants Commission (UGC-STRIDE(I))
Funded Research Capacity Building & Human Resource
Development Program
MODULE – 3

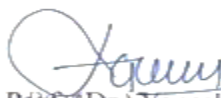
In
PHARMACOLOGY
By
PRAYANSHU VERMA
ITM UNIVERSITY GWALIOR



SCHOLAR OF UGC STRIDE BATCH (III)
BUNDELKHAND UNIVERSITY JHANSI
Under the supervision of

DR. PEEYUSH BHARDWAJ
HOD IN THE INSTITUTE OF PHARMACY
BUNDELKHAND UNIVERSITY, JHANSI

CO-GUIDE
DR. ALOK MOHAR
ASSISTANT PROFESSOR
INSTITUTE OF PHARMACY
BUNDELKHAND UNIVERSITY, JHANSI


Prof. (Dr.) Yogesh C Goswami
Dean
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BU/UGC-STRIDE(1)/III/22/12





The Research Capacity Building & Human Resource Development Programme
Batch-III (2022-23)
A University Grants Commission Programme
 Funded under Scheme for Transdisciplinary Research for India's Developing Economy
 (Component-I)
 Bundelkhand University, Jhansi

Certificate

Certified that
Mr. Prayanshu Verma
Department of Biotechnology, ITM University, Gwalior
has successfully completed the UGC-STRIDE(1) funded
Research Capacity Building and Human Resource Development Programme
in session 2022-23 (Third batch) at
Innovation Centre, Bundelkhand University, Jhansi
The training included;

Module-1: ✓	Delivery of advanced Research Methodology knowledge. (February - April 2022)
Module-2: ✓	Operational training on advanced research equipments viz. GC-MS, X-RD, Real Time-PCR, Gel Electrophoresis, Multimode Plate Reader, Ultrasonicator, Rotary Evaporator, Physical Quantity Measurement System, Scanning Tunneling Microscope, Cell Culture Techniques, Atomic Absorption Spectrometer, FTIR-ATR, High Pressure Liquid Chromatography (HPLC) etc. (June 2022)
Module-3: ✓	Minor project-based research training: "Anti-Bacterial, Anti-Diabetic and Antioxidant Activity of <i>Delonix regia</i> " (June - November 2022)
Module-4: ✗	Paper presentation in National Conference on Recent Trends in Transdisciplinary Research for Socioeconomic Development of India. (March 03-04, 2022)

He participated in Module-1, Modul-2 and Module-3 related activities and obtained
B⁺ Grade.

Dr. Lavkush Dwivedi
 Programme Coordinator

Prof. M.M. Singh
 Programme Convener



Prof. (Dr.) Yogesh C Goswami
 Dean
 School of Applied Sciences
 School of Science ITM University
 Gwalior (M.P.)-INDIA-474001

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Details of PG Research Projects

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

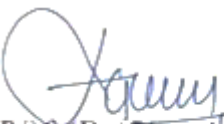
Name of the Course and Branch: M.Sc. Biotechnology

Session: 2021– 2022

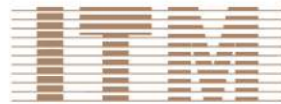
Total No. of Students enrolled: 05

List of Students

S.No	Roll No	Name Of Students	Name of Industry/Institute	Topic	Supervisor
1	MSBN1BT20001	Sakshi Rathore	Tropolite Foods Pvt Ltd Davar Campus, Tansen Rd, Gwalior, Madhya Pradesh.	Investigation and control of microorganisms in a food industry, A comparative study of effects and risk assessment of biological hazards	Ms. Pallavi Jaiswal
2	MSBN1BT20003	Neha Verma	Dept. of Biotechnology/Microbiology ITM University	Hematological and Biochemical parameters of Human Blood	Mrs. Trapti Pathak
3	MSBN1BT20004	Priyanka Achra	Tropilite foods Pvt. Ltd.	Isolation and culture media optimization of Lactobacillus acidophilus	Dr. Shailendra Raghuvanshi
4	MSBN1BT20005	Deeksha Chandra	Banco Construction Pvt Ltd.	Evaluation of efficiency of MBBR in sewage water treatment	Dr. Praveen Karandikar
5	MSBN1BT20006	Raksha Gupta	Tropilite Foods Private Ltd. Gwalior (M.P)	Non -dairy Whipping Cream	Mr. Alok Singh


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 Dean
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“ CELEBRATING DREAMS ”

**“EVALUATION OF EFFICIENCY OF MBBR
TECHNOLOGY IN SEWAGE WATER TREATMENT”**

“Dissertation Report”

In Partial Fulfillment of the requirement for the degree of
Master of Science in Biotechnology

Submitted to
Department of Life Science
ITM UNIVERSITY, GWALIOR (M.P.)



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By
Ms. Deeksha Chandra , IVth Semester

[MSBN1BT20005]

Guided By:

Prof. Sujeet Kumar
Department of Science
ITM University, Gwalior

Under the Supervision of

Pravin Karandikar
Project Manager
(Banco Construction Pvt. Ltd.)

A handwritten signature in blue ink, appearing to be 'S. R.' with a flourish.

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"CELEBRATING DREAMS"

M/S BANCO CONSTRUCTION PVT. LTD. Gwalior (M.P.)
(Consultant Engineers & Builders)

Ref: - BIL IPL/BCPL/2022

11 MAY, 2022

TO WHOME IT MAY CONCERN

This is to certify that Ms. Deeksha Chandra D/O Mr. Pratap Chandra of ITM university, Gwalior (MP) has undergone her training in our PHE lab from 16 January 2022 to 11 MAY 2022.

During the tenure of training with us, her work and conduct has been found to be satisfactory.

We wish her all the success in her future endeavors.

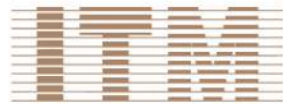
M/S Banco Construction Pvt. Ltd.

Mr. Pravin Karandikar

(project manager)



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"CELEBRATING DREAMS"

**""ISOLATION AND CULTURE MEDIA OPTIMIZATION OF
LACTOBACILLUS ACIDOPHILUS""**

Thesis

**Submitted in partial fulfilment for the award of the degree of
MASTER OF SCIENCE**

In

Biotechnology



UNIVERSITY
GWALIOR • MP • INDIA

Submitted By

Ms. Priyanka Achra

(MSBN1BT20004)

Under the Guidance of

Dr. Shailendra Raghuwanshi

**Scientist and Head of Department Probiotics Health and
Nutrition Group Bioflex Division, Tropilite Davar's**



The taste of Happiness!



Prof. (Dr.) Yogesh C Goswami
Dean
School of Applied Sciences
School of Science ITM University
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TFPL/HR/CERT/080

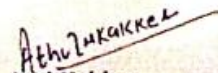
Date: 18-07-2022

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Ms. Priyanka Achra D/O Mr. Dilip Kumar Achra;** student of the **M.Sc.-Biotechnology**, from **ITM University, Gwalior (MP)**, has undergone 06 month's Training programme during the period from 19-01-2022 to 18-07-2022. Her topic for the project was **"Isolation And Culture Media Optimization of lactobacillus Acidophilus"**.

We found her sincere during her training and wish her tremendous success in all future endeavors.

For Tropilite Foods Pvt. Ltd, Gwalior



Atul Kakkar

Head - HR & Legal

Tropilite Foods Pvt. Ltd.



Tropilite Foods Pvt. Ltd. Regd. Office: Green Campus, Industrial Area, Sector Road, Gwalior-474002 (M.P.) India. Ph. : +91 751-405111, 4056301. Gwalior H.O. : 17, 18th Floor, Plaza Road, Karol Bagh, New Delhi-110005, Ph. : +91-11-45221111. Gwalior Office : 11/12/13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100. www.davars.com, www.foodservice.com, www.tropilite.com, www.bioflex.com


Prof. (Dr.) Yogesh C Goswami
Dean
School of Applied Sciences
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**“Investigation and control of microorganisms in a food industry,
A comparative study of effects and risk assessment of biological hazards.”**

“Dissertation Report”

In partial fulfillment of the requirement for the Degree of

MASTERS OF SCIENCE

IN

BIOTECHNOLOGY

Submitted to

Department of Life Science

ITM University, Gwalior (MP)



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“ CELEBRATING DREAMS ”

Submitted by

Ms. Sakshi Rathor (4th semester)

[MSBN1BT20001]

Under the Guidance of

Ms. Pallavi Jaiswal


Deputy Manager of Department of Quality Control,



Tropolite Foods Pvt Ltd

Davar Campus, Tansen Rd,

Gwalior, Madhya Pradesh.


Prof. (Dr.) Yogesh C Goswami
School of Applied Sciences
School of Science ITM University
Gwalior (M.P.)-INDIA-474001


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Details of One day awareness workshop (UG/PG)

On

“World Soil Health Day”

On

Agroforestry: Current Scenario

II Year B.Sc Biotechnology & I & Yr M. Sc Biotechnology – Brief Summary

Objective

The **object of the program** is to focus attention on the importance of Agroforestry. Trees and flowering plants within agroforestry systems provide food and shelter for pollinators like bees, butterflies and birds. This boosts pollination of both crops and wild plants, ensuring reproductive success. Agroforestry fosters a healthy soil ecosystem that increases microbial diversity

Dr A.K. Handa delivers a lecture on the topic **“Agroforestry: Current Scenario”**

Dr. A.K. Handa gave an expert lecture on the on the topic **“Agroforestry: Current Scenario”**. He briefed about the Agroforestry Department. The Department of Agroforestry was started in 1979 to benefit the farmers of the Nation. In the year 1983, it was established in Jhansi. While giving information about agroforestry, discussed the benefits of planting trees in the forest simultaneously with agriculture. Dr. Handa also emphasized the significance of Three " I's" in Agroforestry: Intensive, Interactive, and Integrated. Scientist Dr. Indradev, as the second speaker, narrated the verse of Matsya Purana and highlighted the importance of trees by accepting a tree equal to ten sons. The emphasis was laid on the conservation of earth and soil. In the end, Pro-Vice-Chancellor Dr. S.K.N. Khedkar and Dean Dr. Richa Kothari expressed their gratitude to the guests by presenting the mementos. At the end of the session Coordinator, Dr. Rita Sharma proposed the vote of thanks.


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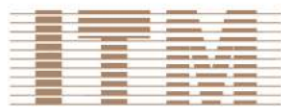
OUTCOMES

Theme of this year “**Agroforestry: Current Scenario**” of **World Soil Health Day**, Agroforestry projects combine crop fields and trees, optimizing land use and health. These practices offer economic and ecological benefits for sustainable agriculture. The challenge for agroforestry arises from managing diverse species and complex farming systems

There are also some new global challenges and risks such as **industrialization, increased construction sites, ethical concerns related to artificial intelligence, and the potential misuse of biotechnology**. It is therefore important for society to have a deep understanding of soil health and its potential impact on our lives, and to ensure that agroforestry is used worldwide to overcome the current soil issues and to improve soil health through agroforestry.

In this manner this year WSHD celebrations highlighted that **by promoting agroforestry and advanced agriculture technologies, we can ensure a better future for ourselves and for generations to come.**


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**List of Students –Attended Awareness workshop on World soil health day
6th December 2021**

S No	Name	Roll No	Signature
1	Imran Khan	BSBN1BT21002	
2	Jigyanshu Khalate	BSBN1BT21003	
3	Parth Ajit Bhagat	BSBN1BT21005	
5	Shivangi Chauhan	BSBN1BT21006	
6	Uday Pratap	BSBN1BT21008	
7	Deepti Parmar	BSBN1BT21009	
8	Shweta Rajput	BSBN1BT21011	
10	Raj Sharma	BSBN1BT21013	
11	Vivek Rajouriya	BSBN1BT21014	
12	Mehak Ganglani	BSBN1BT21015	
13	Amit Yadav	BSBN1BT21018	
14	Ojaswini Kothari	BSBN1BT21019	
15	Aparna Shandilya	BSBN1BT21022	
16	Kumkum Yadav	BSBN1BT21023	
17	Aswabendra singh	BSBN1BT21024	
18	Nandini Raj	BSBN1BT21025	
19	Yashasvi Shrivastava	BSBN1BT21026	
20	Md Tausif Alam	BSBN1BT21027	
21	Surbhi Mandal	BSBN1BT21028	
22	Veeranki Sai Kiran	BSBN1BT21029	
23	Shruti Gupta	BSBN3BT22T01	
24	Awkash Bhadouriya	BSBN3BT22T02	
25	Saikat Mondal	BSMN1MB21003	
26	Mohini Rajak	BSMN1MB21006	
27	Akansha Gupta	BSMN1MB21007	
28	Gagan Awasthi	BSMN1MB21008	
29	Anuj Shrivastava	BSBN1BT20001	
30	Harsh Choudhary	BSBN1BT20002	
31	Priyanka Sharma	BSBN1BT20004	
32	Samridhi Sonker	BSBN1BT20005	
33	Somya Sharma	BSBN1BT20006	
34	Tushant Wats	BSBN1BT20007	
35	Yaser Khan	BSBN1BT20008	
36	Srijita Rauth	BSBN1BT20009	
37	Monalisa Aktar	BSBN1BT20010	
38	Meenakshi Jadhav	BSBN1BT20011	
39	Kashish Jain	BSBN1BT20012	
40	Deepika Goyal	BSBN1BT20013	

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mail: info@itmuniversity.ac.in, web: www.itmuniversity.ac.in

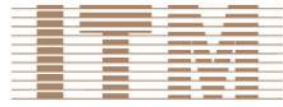
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41	Tanya Bhadoriya	BSBN1BT20018	Tanya
42	Gabou Jonathan Levy	BSBN1BT20019	Ced
43	Pallavi Sharma	BSMN1MB20001	PSA
44	Anushree Kamthan	BSMN1MB20002	Anushree
45	Sakshi Rathore	MSBN1BT20001	Sa
46	Neha Verma	MSBN1BT20003	NS
47	Priyanka Achra	MSBN1BT20004	Priyanka
48	Deeksha Chandra	MSBN1BT20005	Deeksha
49	Raksha Gupta	MSBN1BT20006	R
50	Kamini Rajput	MSBN1MB20001	KRB
51	Kumari Aruna	MSBN1BT20002	AR
52	Pranshu Sharma	MSBN1BT20003	Pranshu
53	Saloni Mankele	MSBN1BT20004	S
54	Shivani Agarwal	MSBN1BT20005	Shivani
55	Aashi Jain	BSBN1BT19001	AJ
56	Aman Sharma	BSBN1BT19003	ASB
58	Atharva Agrawal	BSBN1BT19004	AA
59	Bharti Arora	BSBN1BT19006	BA
60	Devansh Singh Bais	BSBN1BT19007	DS
61	Dishee Mittal	BSBN1BT19008	DM
62	Divya Shrivastava	BSBN1BT19009	DS
63	Dushyant Singh	BSBN1BT19010	Dushyant
64	Gargi Rathore	BSBN1BT19011	Gargi
65	Gaurangi Bhadouriya	BSBN1BT19012	GB
66	Khushi Kaushal	BSBN1BT19014	KK
67	Lalit Prajapati	BSBN1BT19015	Lalit
68	Mayank Tripathi	BSBN1BT19017	
69	Muskan Jayaswal	BSBN1BT19018	Muskan
70	Neha Sharma	BSBN1BT19019	NS
71	Neha Sharma	BSBN1BT19020	
72	Prayanshu Verma	BSBN1BT19021	Prayanshu
73	Pujan Ghimire	BSBN1BT19022	Pujan

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74	Saloni Soni	BSBN1BT19024	Soni
75	Sanjana Bhadoriya	BSBN1BT19025	Bhadoriya
76	Sanskar Pandey	BSBN1BT19026	Sanskar Pandey
77	Shruti Sengar	BSBN1BT19027	Sengar
78	Sunena Bamoriya	BSBN1BT19028	Sunena Bamoriya
79	Taniya Bhatnagar	BSBN1BT19029	Taniya Bhatnagar
80	Pale Loic	BSBN1BT19031	Pale
81	Tiyasa Jana	BSBN3BT20T01	Tiyasa Jana

R Sharma

Dr. Rita Sharma
Coordinator
Dept. of Biotechnology/Microbiology
School of Sciences

Richa Kothari

Prof. Richa Kothari
Dean
School of Sciences

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**World Soil Health Day Celebration on 6th December 2021 in Madhu Limay Seminar Hall,
ITM University, Gwalior**




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Students attending One Day awareness workshop on “World Soil Health Day”


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Students and Faculty members attending One Day awareness workshop on “World Soil Health Day”


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