

SCHOOL OF SCIENCE
Department of Physical Science
(PCM/CS)

CRITERIA 1

SUB CRITERIA 1.3.3

**Percentage of students undertaking research
projects**

Academic Year

2020-2021


REGISTRAR
ITM UNIVERSITY
Gwalior (M.P.)

SCHOOL OF SCIENCE
Department of Physical science
(PCM/CS)

Total Number of Research Projects in UG

Research Projects	Program	Total Number of students involved in research projects
	B. Sc (PCM/CS)	16

The students undertake minor and major projects for increasing their practical knowledge and experience. Students are encouraged to do their research in the Research Institutes and laboratory to encourage the research


REGISTRAR
ITM UNIVERSITY
Gwalior (M.P)



“ CELEBRATING DREAMS ”

Index

S.No.	Component	Page no.
2	Scheme	3-5
3	syllabus	6-7
	Details of UG Internship project with Cover Page of thesis and Certificate	8-25



REGISTRAR
ITM UNIVERSITY
Gwalior (M.P)



STUDY AND EVALUATION SCHEME (2020-2021)

(SUBJECT-WISE DISTRIBUTION OF MARKS AND CORRESPONDING CREDITS)

Programme: BSc_PCM(BSc_PCM) Semester: 6th

S.No.	Course Code	Course Name	Maximum Marks Allotted							Credits Allotted			Total Credits
			Theory			Practical			Total Marks	L	T	P	
			End Sem. Exam	Mid Sem. Exam	Class Participation	End Sem. Exam	Progressive Evaluation	Internal Viva					
1	BSCH0609[T]	Inorganic Chemistry - III	40	30	30	0	0	0	100	2	1	0	3
2	BSFC0609[T]	English Language - III	40	30	30	0	0	0	100	3	1	0	4
3	BSMA0609[T]	Linear Algebra & Numerical Analysis	40	30	30	0	0	0	100	4	1	0	5
4	BSPH0606[T]	Solid State Physics & Devices	40	30	30	0	0	0	100	3	1	0	4
5	BSCH0609[P]	Inorganic Chemistry - III	0	0	0	40	30	30	100	0	0	1	1
6	BSPH0606[P]	Solid State Physics & Devices	0	0	0	40	30	30	100	0	0	1	1
7	BSPR0602[P]	Major Project	0	0	0	40	30	30	100	0	0	6	6
Total Credits												24	

Sir Kothari
Dean
School of Science ITM University
Gwalior (M.P.)-INDIA-474601

[Signature]
REGISTRAR
ITM UNIVERSITY
Gwalior (M.P.)



STUDY AND EVALUATION SCHEME (2020-2021)

(SUBJECT-WISE DISTRIBUTION OF MARKS AND CORRESPONDING CREDITS)

Programme:BSc_ComputerScience(BSc_ComputerScience) Semester:6th

S.No.	Course Code	Course Name	Maximum Marks Allotted							Credits Allotted			Total Credits
			Theory			Practical			Total Marks	L	T	P	
			End Sem. Exam	Mid Sem. Exam	Class Participation	End Sem. Exam	Prograssive Evaluation	Internal Viva					
1	BSCS0608[T]	Software Project Management	40	30	30	0	0	0	100	3	1	0	4
2	BSFC0609[T]	English Language - III	40	30	30	0	0	0	100	3	1	0	4
3	BSMA0609[T]	Linear Algebra & Numerical Analysis	40	30	30	0	0	0	100	4	1	0	5
4	BSPH0606[T]	Solid State Physics & Devices	40	30	30	0	0	0	100	3	1	0	4
5	BSCS0608[P]	Software Project Management	0	0	0	40	30	30	100	0	0	1	1
6	BSPH0606[P]	Solid State Physics & Devices	0	0	0	40	30	30	100	0	0	1	1
7	BSPR0602[P]	Major Project	0	0	0	30	40	30	100	0	0	6	6
Total Credits												25	

Sir Kothari
Dean
School of Science ITM University
Gwalior (M.P.)-INDIA-474001

[Signature]
REGISTRAR
ITM UNIVERSITY
Gwalior (M.P.)

Syllabus

Title of the Course	Major Project
Course Code	BSPR0602

Part A

Year	3rd	Semester	6th	Credits	L	T	P	C
					0	0	2	2
Course Type	Lab only							
Course Category	Projects and Internship							
Pre-Requisite/s				Co-Requisite/s				
Course Outcomes & Bloom's Level	CO1- dissertation, works as skills development in students(BL3-Apply) CO2- increases their mental ability(BL4-Analyze) CO3- express their opinion and thoughts.(BL3-Apply) CO4- enhancing writing skills and knowledge.(BL3-Apply)							
Course Elements	Skill Development ✓ Entrepreneurship ✗ Employability ✓ Professional Ethics ✓ Gender ✗ Human Values ✗ Environment ✗		SDG (Goals)	SDG4(Quality education)				

Part B

Modules	Contents	Pedagogy	Hours
---------	----------	----------	-------

Part D(Marks Distribution)

Theory					
Total Marks	Minimum Passing Marks	External Evaluation	Min. External Evaluation	Internal Evaluation	Min. Internal Evaluation
	0				
Practical					
Total Marks	Minimum Passing Marks	External Evaluation	Min. External Evaluation	Internal Evaluation	Min. Internal Evaluation
100	0	60	0	40	0

Part E

Books	
Articles	
References Books	
MOOC Courses	
Videos	

Course Articulation Matrix

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


 Dean
 School of Science ITM University
 Gwalior (M.P.)-INDIA-474001


 REGISTRAR
 ITM UNIVERSITY
 Gwalior (M.P.)



Details of UG Research projects

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

Name of the Course and Branch: B.Sc. PCM/CS

Session: 2020– 2021

Total No. of Students:enrolledb02

S. No	Specialization	Name of the Student	Roll No.	Title of the project	Duration	Guide
1	Chemistry	Harshita Pandey Tanushree Sharma	BSMN1SC18007 BSMN1SC18015	Dyes and their degradation	4 months	Dr. Rupali Rastogi
2	Chemistry	Bupendra Bharti	BSMN1SC18005	Antimicrobial activity of different lemon extract	4 months	Dr. Rupali Rastogi


Dean
School of Science ITM University
Gwalior (M.P.) INDIA-474001


REGISTRAR
ITM UNIVERSITY
Gwalior (M.P.)

ANTIMICROBIAL ACTIVITY OF DIFFERENT LEMON EXTRACT
A MAJOR PROJECT

Submitted in partial fulfillment for the award of the degree of

BACHELOR OF SCIENCES

IN

(CHEMISTRY)



Submitted by

Bhupendra Bharti

Under the Guidance of

Dr. Rupali Rastogi

Department of Chemistry

School of Sciences

ITM UNIVERSITY GWALIOR, (M. P.), INDIA

2020-2021


Dean
School of Science, ITM University
Gwalior (M.P.)-471004, India

FORMULATION OF HERBAL HAND SANITIZER
A MAJOR PROJECT
Submitted in partial fulfillment for the award of the degree of
BACHELOR OF SCIENCES

IN

(CHEMISTRY)



Submitted by

Tanushree Sharma

Harshita Pandey

Under the Guidance of

Dr. Rupali Rastogi

Department of Chemistry

School of Sciences

ITM UNIVERSITY GWALIOR, (M. P.), INDIA

2020-2021


Dean
School of Science ITM University
Gwalior (M.P.) 471002

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

Name of the Course and Branch: B.Sc. (PCM/CS)

Session: 2020-21

S. No	Specialization	Name of the Student	Roll No	Title of the project	Duration	Guide
1	Physics	Aditya Singh Gurjar	BSMN1SC18001	UV Spectroscopy	4 Months	Dr UPS Gahlaut
2	Physics	Ashim Kumar	BSMN1SC18003	FTIR	4 Months	Dr UPS Gahlaut
3	Physics	Mukul Das	BSMN1SC18011	SEM	4 Months	Dr UPS Gahlaut
4	Physics	Abhinav Kumar	BSCN1CS18001	photoluminescence	4 Months	Dr UPS Gahlaut
5	Physics	Rahul Sharma	BSCN1CS18011	XRD	4 Months	Dr UPS Gahlaut
6	Physics	Sachin Sharma	BSCN1CS18016	AFM	4 Months	Dr UPS Gahlaut
7	Physics	Sunny Kushwaha	BSCN1CS18019	TEM	4 Months	Dr UPS Gahlaut


Dean
School of Science ITM University
Gwalior (M.P.)-INDIA-474001


REGISTRAR
ITM UNIVERSITY
Gwalior (M.P.)

Atomic Force Microscope

Major Project in Physics

Submitted in partial fulfillment for the award of the degree of

BSc(PCM)



Submitted by

Sachin Sharma (BSCNICS18016)

Under The Supervision
Dr UPS Gahlaut
Assistant Professor in Physics
Dean School of Sciences

A handwritten signature in blue ink, appearing to read 'Dr UPS Gahlaut', is written over a horizontal line.

Department of Physics
ITM, University Gwalior (M.P.)
2021

X Ray Diffraction Analysis

Major Project in Physics

Submitted in partial fulfillment for the award of the degree of

BSc(PCM)



Submitted by

Rahul Sharma (BSCN1CS18011)

Under The Supervision
Dr UPS Gahlaut
Assistant Professor in Physics
Dean School of Sciences



Department of Physics
ITM, University Gwalior (M.P.)
2021

Photoluminescence

Major Project in Physics

Submitted in partial fulfillment for the award of the degree of

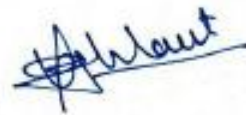
BSc(PCM)



Submitted by

Abhinav Kumar (BSCN1CS18001)

Under The Supervision
Dr UPS Gahlaut
Assistant Professor in Physics
Dean School of Sciences

A handwritten signature in blue ink, which appears to read 'Gahlaut', is written over a horizontal line.

Department of Physics
ITM, University Gwalior (M.P.)
2021

Scanning Electron Microscope

Major Project in Physics

Submitted in partial fulfillment for the award of the degree of

BSc(PCM)



Submitted by

Mukul Das (BSMN15C18011)

Under The Supervision
Dr UPS Gahlaut
Assistant Professor in Physics
Dean School of Sciences

A handwritten signature in blue ink, which appears to read 'Gahlaut', is written over a horizontal line. The signature is slanted and written in a cursive style.

Department of Physics
ITM, University Gwalior (M.P.)
2021

Fourier-Transform Infrared spectroscopy

Major Project in Physics

Submitted in partial fulfillment for the award of the degree of

BSc(PCM)



Sumbitted by

Ashim Kumar (BSMN15C18003)

Under The Supervision
Dr UPS Gahlaut
Assistant Professor in Physics
Dean School of Sciences

A handwritten signature in blue ink, which appears to read 'Gahlaut', is written over a horizontal line.

Department of Physics
ITM, University Gwalior (M.P.)
2021

UV Spectroscopy

Major Project in Physics

Submitted in partial fulfillment for the award of the degree of


BSc(PCM)



Sumbitted by

Aditya Singh Gurjar (BSMN1SC18001)

Under The Supervision
Dr UPS Gahlaut
Assistant Professor in Physics
Dean School of Sciences



Department of Physics
ITM, University Gwalior (M.P.)
2021

Transmission Electron Microscope

Major Project in Physics

Submitted in partial fulfillment for the award of the degree of

BSc(PCM)



Submitted by

Sunny Kushwaha (BSCN1CS18019)

Under The Supervision
Dr UPS Gahlaut
Assistant Professor in Physics
Dean School of Sciences

A handwritten signature in blue ink, which appears to read 'Gahlaut', is written over a horizontal line.

Department of Physics
ITM, University Gwalior (M.P.)
2021



Details of UG Research projects

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

Name of the Course and Branch: B.Sc. PCM/CS

Session: 2020– 2021

Total No. of Students enrolled: 07

S. No	Specialization	Name of the Student	Title of the project	Duration	Guide
1.	Mathematics	Mayank Mishra Vasu Singh Yaya Modi Vika Srivas Bivesh Chandra Lodhi Astik Yadav Nongmaithem Century Luwang Ritika Khare	Mapping of Annual Sun path for Tracing of Analemma Stability Analysis for student teacher model	4 Months	Dr.Hema Purushwani


Dean
School of Science ITM University
Gwalior (M.P.)-INDIA-474001


REGISTRAR
ITM UNIVERSITY
Gwalior (M.P.)

MAPPING OF ANNUAL SUN PATH FOR TRACING OF ANALEMMA



A Project Report

Submitted to the School of Science
ITM University, Gwalior (M.P.)

In

Fulfillment of the requirement for the degree of
Bachelor of Science

By

Mayank Mishra 

Under the supervision of

Dr. Hema Purushwani 

School of Science, ITM University, Gwalior

2021


Dean
School of Science, ITM University
Gwalior (M.P.)

MAPPING OF ANNUAL SUN PATH FOR TRACING OF ANALEMMA



A Project Report

Submitted to the School of Science

ITM University, Gwalior (M.P.)

In

Fulfillment of the requirement for the degree of
Bachelor of Science

By

Vasu Singh

A handwritten signature in black ink, appearing to read 'Vasu Singh'.

Under the supervision of

Dr. Hema Purushwani

A handwritten signature in black ink, appearing to read 'Hema Purushwani'.

School of Science, ITM University, Gwalior

2021

A handwritten signature in black ink, appearing to read 'S. K. Sharma'.

Dean
School of Science ITM University
Gwalior (M.P.) 471001

Stability Analysis of Student Teacher (ST) Model



A Major Project File

(In Mathematics)

Submitted to the Faculty of Science

ITM University, Gwalior (M.P)

In Fulfilment of the requirement for the degree of
BSC (PCM)

By

Yaya Modi *Yayamodi*

Under the supervision of

Dr. Hema Purushwant *Hema*

Department of Mathematics,

ITM University, Gwalior (M.P)

2021

Lino Kothari
Dean
School of Science ITM University
Gwalior (M.P.) (INDIA-471001)

Stability Analysis of Student Teacher (ST) Model



A Major Project File


(In Mathematics)

Submitted to the Faculty of Science

ITM University, Gwalior (M.P)

**In Fulfilment of the requirement for the degree of
BSC (PCM)**

By

Vikash shrivas 

Under the supervision of

Dr. Hema Purushwani 

Department of Mathematics,

ITM University, Gwalior (M.P)

2021


Dean
School of Science ITM University
Gwalior (M.P.)

Stability Analysis of Student Teacher (ST) Model



A Major Project File

(In Mathematics)

Submitted to the Faculty of Science

ITM University, Gwalior (M.P)

In Fulfilment of the requirement for the degree of
BSC (PCM/CS)

By

Bivesh Chandra Lodhi

Under the supervision of

Dr. Hema Purushwani

Department of Mathematics,
ITM University, Gwalior (M.P)

2021

Hemakotwani
Dean
School of Science ITM Univ
Gwalior (M.P)-INDIA

Stability Analysis of Student Teacher (ST) Model



A Major Project File

(In Mathematics)

Submitted to the Faculty of Science

ITM University, Gwalior (M.P)

In Fulfilment of the requirement for the degree of
BSC (PCM/CS)

By

Astik Yadav *Astik*

Under the supervision of

Dr. Hema Purushwani *Hema*

Department of Mathematics,

ITM University, Gwalior (M.P)

2021

Licet Kothari
LICET
School of Science ITM University
Gwalior (M.P) - INDIA - 471001

Stability Analysis of Student Teacher (ST) Model



A Major Project File

(In Mathematics)

Submitted to the Faculty of Science

ITM University, Gwalior (M.P)

**In Fulfilment of the requirement for the degree of
BSC (PCM/CS)**

By



Nongmaithem Century Luwang

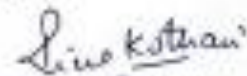
Under the supervision of

Dr. HemaPurushwani

Department of Mathematics,

ITM University, Gwalior (M.P)

2021



Dean

School of Science ITM University
Gwalior (M.P) - 471004