

Department of Science (Physical Science)

CURRICULUM & CREDIT FRAMEWORK AND FORMATIVE ASSESSMENT FOR BACHELOR OF SCIENCE (PHYSICAL SCIENCE) 4 YEAR PROGRAM Scheme of Examinations under National Education Policy 2020

BACHELOR OF SCIENCE(PHYSICAL SCIENCE):

F.Y Semester I					
Sr.No	Courses	Course Title	Course Code	Remarks	Credits
1	Major 1	Mathematics (Functions and Algebra)	24MATM401DS01	Compulsory	3:0:1
2	Major 2	Physics (Mechanics and Theory of Relativity)	24PHYM401DS01	Compulsory	2:0:2
	Major 3	Chemistry (Fundamental Chemistry-I)	24CHEM401DS01	Compulsory	2:0:2
3	Minor 1 in Statistics	Statistics (Introduction to Statistics)	24STA401MI01	Students must select one minor subject from the Two options provided	3:0:1
	Minor 2 in Physical Science	Fundamentals of Computing and Problem Solving using C	24CSC401MI01		2:0:2
4	MDC 1 in Zoology	Basics of Zoology-1	24ZOOX01MD01	Students must select one MDC subject from the six options provided	3:0:0
	MDC 2 in Statistics	Basic Statistics	24STAX01MD01		2:0:1
	MDC 3 in Computer science	Fundamentals of Computing	24CSCX01MD01		3:0:0
	MDC 4 in Biotechnology	Biotechnology of Society	24CBTX01MD01		3:0:0
5	SEC1in Maths	Mathematics (Mathematical Programming in C and Numerical Methods)	24MAT401SE01	Students must select one SEC subject from the six options provided	1:0:2
	SEC2 in Physics	Physics (Electrical Circuit and Instrumentation Skills)	24PHY401SE01		2:0:1
	SEC3in Chemistry	Chemistry (Role of Chemistry in Society)	24CHE401SE01		2:0:1
6	Value Added Course(VAC)	Environmental Science	23EVSX01VA01	Compulsory	2:0:0
7	Ability Enhancement Course(AEC)	English-I	23ENGX01AEC01	Compulsory	2:0:0

*MDC-Multidisciplinary Course

*SEC- Skill Enhancement Course

Scheme of Distribution of Marks:

Sr. No	Course Title	Course Code	Theory Marks		Practical Marks		Total Marks	Exam Time	Credit Distribution		
			Int.	Ext.	Int.	Ext.			L	T	P
1	Mathematics (Functions and Algebra)	24MATM401DS01	25	50	-	25	100	3hr	3	0	1
2	Physics (Mechanics and Theory of Relativity)	24PHYM401DS01	15	35	-	50	100	3hr	2	0	2
3	Chemistry (Fundamental Chemistry-I)	24CHEM401DS01	15	35	-	50	100	2hr	2	0	2
4	Statistics (Introduction to Statistics)	24STA401MI01	25	50	-	25	100	3hr	3	0	1
	Fundamentals of Computing and Problem Solving using C	24CSC401MI01	35	15	-	50	100	3hr	2	0	2
5	Basics of Zoology-1	24ZOOX01MD01	-	-	-	-	75	3hr	3	0	0
	Basic Statistics	24STAX01MD01	-	-	-	-	75	3hr	2	0	1
	Fundamentals of Computing	24CSCX01MD01	-	-	-	-	75	3hr	3	0	0
	Biotechnology of Society	24CBTX01MD01	-	-	-	-	75	3hr	3	0	0
6	Mathematics (Mathematical Programming in C and Numerical Methods)	24MAT401SE01	-	-	-	-	75	3hr	1	0	2
	Physics (Electrical Circuit and Instrumentation Skills)	24PHY401SE01	-	-	-	-	75	3hr	2	0	1
	Chemistry (Role of Chemistry in Society)	24CHE401SE01	-	50	-	25	75	3hr	2	0	1
7	Environmental Science	23EVSX01VA01	---	---	---	---	50	3hr	2	0	0
8	English-I	23ENGX01AE01	---	---	---	---	50	3hr	2	0	0

Scheme of Distribution of Formative Assessment:

Multidisciplinary Course For Two (02) credits theory and one (01) credit practical (Only for 2025-2026 session)	Marks distribution
Written test (2*10)	20
Lab work (practical file)/ Field work (report)/ Portfolio	20
Assignment/ Case study/ Mini Project (2*10)	20
Seminar/ Presentation	10
Attendance	05
Total	75

Ability Enhancement Courses For Two (02) Credits Theory	Marks distribution
Written test(2*5)	10
Peer discussion/ Debate/ Extempore Speech (2*10)	20
Role Play	05
Essay/ Article/ Report Writing	10
Attendance	05
Total	50

Skill Enhancement Courses For two (02) credits theory and one (01) credit practical (Only for 2025-2026 session)	Marks distribution
Written test(2*10)	20
Lab work (practical file)/ Field work (report)/ Portfolio	20
Assignment/ Case study/ Mini Project (2*10)	20
Seminar/ Presentation	10
Attendance	05
Total	75

Value Added Courses For Two (02) Credits theory	Marks distribution
Written test(2*10)	20
Class Assignments/ Case Study/ Mini Project (2*5)	10
Quiz/ Seminar/ Group Discussion/ Debate (2*7.5)	15
Attendance	05
Total	50

F.Y Semester II					
Sr. No	Courses	Course Title	Course Code	Remarks	Credits
1	Major 1	Chemistry (Fundamental Chemistry-II)	24CHEM402DS01	Compulsory	2:0:2
2	Major 2	Physics(Electricity & Magnetism)	24PHYM402DS01	Compulsory	2:0:2
3	Major 3	Mathematics (Calculus)	24MATM402DS01	Compulsory	3:0:1
4	MDC 1 Zoology	Basics Of Zoology	24ZOOX02MD01	Students must select one MDC subject from the 4 options provided	3:0:0
	MDC 2 Statistics	Statistics in Everyday Life	24STAX02MD01		2:0:1
	MDC 3 Computer science	Office Automation	24CSCX02MD01		2:0:1
	MDC 4 Bio-technology	Principal of Biotechnology	24CBTX02MD01		3:0:0
5	SEC 1	Fuel Chemistry	24CHE402SE01	Students must select one SEC subject from the 3 options provided	2:0:1
	SEC 2	Computational Techniques in Physics	24PHY402SE01		2:0:1
	SEC 3	Numerical Analysis	24MAT402SE01		1:0:2
6	Value Added Course(VAC)	Digital and technological Solutions	23CSAX01VA01	Compulsory	2:0:0
7	Ability Enhancement Course(AEC)	Hindi Bhasha Sanvardhan (One)	23HNDX01AE01	Compulsory	2:0:0

Scheme of Distribution of Marks:

Sr. No	Course Title	Course Code	Theory Marks		Practical Marks		Total Marks	Exam Time	Credit Distribution		
			Int.	Ext.	Int.	Ext.			L	T	P
1	Chemistry (Fundamental Chemistry-II)	24CHEM402DS01	15	35	50		100	3hr	2	0	2
2	Physics(Electricity & Magnetism)	24PHYM402DS01	15	35	50		100	3hr	2	0	2
3	Mathematics (Calculus)	24MATM402DS01	25	50	25		100	3hr	3	0	1
4	Statistics in Everyday Life	24STAX02MD01	-	-	-	-	3hr	3hr	2	0	1
	Principal of Biotechnology	24CBTX02MD01	-	-	-	-	3hr	3hr	3	0	0
	Office Automation	24CSCX02MD01	-	-	-	-	3hr	3hr	2	0	1
	Basics Of Zoology	24ZOOX02MD01	-	-	-	-	3hr	3hr	3	0	0
5	Fuel Chemistry	24CHE402SE01	15	35	25		75	3hr	2	0	1
	Computational Techniques in Physics	24PHY402SE01	-	-	-	-	3hr	3hr	2	0	1
	Numerical Analysis	24MAT402SE01	-	-	-	-	3hr	3hr	1	0	2
6	Digital and technological Solutions	23CSAX01VA01	-	-	-	-	3hr	3hr	2	0	0
	Hindi Bhasha Sanvardhan (one)	23HNDX01AE01	-	-	-	-	3hr	3hr	2	0	0

S.Y Semester III					
Sr.No	Courses	Course Title	Course Code	Remarks	Credits
1	Major 1	Optics	25PHY403DS01	Compulsory	2:0:2
2	Major 2	Fundamental Chemistry – III	25CHEM403DS01	Compulsory	2:0:2
3	Major 3	Ordinary Differential Equations	25MATM403DS01	Compulsory	3:0:1
3	Minor Statistics	Elementary Probability Theory	24STA402MI01	Students must select one minor subject from the six options provided	3:1:0
	Minor Botany	Basics of Plant Genetics	24BOT402MI01		2:0:2
	Minor Computer	Internet and Web Design	24CSC402MI01		3:0:1
4	MDC Computer	Web Designing	25CSCX03MD01	Students must select one MDC subject from the 7 options provided	2:0:1
	MDC Statistics	Statistical Computing using SPSS	25STAX03MD01		0:0:3
	MDC Home Science	Basics of Home Science -III	24HSCX03MD01		2:0:2
	MDC Botany	Plants in Everyday Life	25BOTX03MD01		2:0:1
	MDC Zoology	Basics Of Zoology III	25ZOOX03MD01		3:0:0
	MDC Music(V)	Essentials of Music Vocal Theory	25MUSVX03MD01		2:0:1
	MDC Music(I)	Applied theory of Hindustani Music – Instrumental Music	25MUSIX03MD01		2:0:1
5	SEC Math	Operations Research Techniques	25MAT403SE01	Students must select one MDC subject from the 3 options provided	1:0:2
	SEC Chem	Batteries	25CHE403SE01		2:0:1
	SEC Physics	Workshop Skills in Physics	25PHY403SE01		2:0:1
6	Ability Enhancement Course(AEC)	English-II	24ENGX03AE01	Compulsory	2:0:0

Scheme of Distribution of Marks:

Sr. No	Course Title	Course Code	Theory Marks		Practical Marks		Total Marks	Exam Time	Credit Distribution		
			Int.	Ext.	Int.	Ext.			L	T	P
1	Optics	25PHY403DS01	15	35	-	50	100		2	0	2
2	Fundamental Chemistry – III	25CHEM403DS01									
3	Ordinary Differential Equations	25MATM403DS01	25	50	-	25	100		3	0	1
4	Elementary Probability Theory	24STA403MI01	30	70	-	-	100		3	1	0
	Basics of Plant Genetics	24BOT402MI01	15	35	15	35	100		2	0	2
	Internet and Web Design	24CSC402MI01							2	0	2
5	Web Designing	25CSCX03MD01									
	Statistical Computing using SPSS	25STAX03MD01					75		0	0	3
	Basics of Home Science –III	24HSCX03MD01									
	Plants in Everyday Life	25BOTX03MD01									
	Basics Of Zoology III	25ZOOX03MD01									
	Essentials of Music Vocal Theory	25MUSVX03MD01									
	Applied theory of Hindustani Music – Instrumental Music	25MUSIX03MD01									
5	Operations Research Techniques	25MAT503SE01									
	Batteries	25CHE403SE01									
	Workshop Skills in Physics	25PHY403SE01									
6	English-II	24ENGX03AE01	---	---	---	---					

Note: All Multidisciplinary Courses (MDC), Ability Enhancement Courses (AEC), Skill Enhancement Courses (SEC), and Value Added Courses (VAC) are evaluated through Formative Assessment in accordance with the prescribed university norms and guidelines.

Link: [Syllabi of UG and PG Programs revised in July 2025 - Google Drive](#)

S.Y Semester IV					
Sr.No	Courses	Course Title	Course Code	Remarks	Credits
1	Major 1	Fundamental Chemistry – IV	25CHEM404DS01	Compulsory	2.0.2
2	Major 2	Thermodynamics and Statistical Mechanics	25PHYM404DS01	Compulsory	2.0.2
3	Major 3	Real Analysis	25MATM404DS01	Compulsory	3.1.0
3	Minor computer	Java Programming	25CSC404MV01	Students must select one minor from given option	2.0.2
	Minor statistics	Testing of Hypothesis Using SPSS	25STA404MV01		0.0.4
	Minor Botany	Horticulture	25BOTS404MV01		2.0.2

Scheme of Distribution of Marks:

Sr. No	Course Title	Course Code	Theory Marks		Practical Marks		Total Marks	Exam Time	Credit Distribution		
			Int.	Ext.	Int.	Ext.			L	T	P
1	Fundamental Chemistry – IV	25CHEM404DS01	15	35		50	100	2 Hrs.	2	0	2
2	Thermodynamics and Statistical Mechanics	25PHYM404DS01	15	35		50	100	3 Hrs.	2	0	2
3	Real Analysis	25MATM404DS01	30	70			100	3 Hrs.	3	1	0
4	Java Programming	25CSC404MV01	15	35		50	100	3 Hrs.	2	0	2
	Testing of Hypothesis Using SPSS	25STA404MV01				100	100	8 Hrs /Week	0	0	4
	Horticulture	25BOTS404MV01	15	35		50	100	3 Hrs.	2	0	2

S.Y Semester V					
Sr.No	Courses	Course Title	Course Code	Remarks	Credits
1	Major 1	Fundamental Chemistry – V	26CHEM405DS01	Compulsory	2.0.2
2	Major 2	Quantum Mechanics and Nuclear Physics	26PHYM405DS01	Compulsory	2.0.2
3	Major 3	Group and Rings	26MATM405DS01	Compulsory	3.0.1
3	Minor computer	Database Design and MySQL	26CSC405MV01	Students must select one minor from given option	3.0.1
	Minor statistics	Bio-Statistics	26STA405MV01		3.1.0
	Minor Botany	Agroforestry	26BOT405MV01		2.0.2

Scheme of Distribution of Marks:

Sr. No	Course Title	Course Code	Theory Marks		Practical Marks		Total Marks	Exam Time	Credit Distribution		
			Int.	Ext.	Int.	Ext.			L	T	P
1	Fundamental Chemistry – V	26CHEM405DS01	15	35		50	100	2 Hrs.	2	0	2
2	Quantum Mechanics and Nuclear Physics	26PHYM405DS01	15	35		50	100	3 Hrs.	2	0	2
3	Group and Rings	26MATM405DS01	25	50		25	100	3 Hrs.	3	0	1
4	Database Design and MySQL	26CSC405MV01	25	50		25	100	3 Hrs.	3	0	1
	Bio-Statistics	26STA405MV01	30	70			100	3 Hrs.	3	1	0
	Agroforestry	26BOT405MV01	15	35		50	100	3 Hrs.	2	0	2

S.Y Semester VI					
Sr.No	Courses	Course Title	Course Code	Remarks	Credits
1	Major 1	Fundamental Chemistry – VI	26CHEM406DS01	Compulsory	2.0.2
2	Major 2	Solid State Physics and Electronic Devices	26PHYM406DS01	Compulsory	2.0.2
3	Major 3	Linear Algebra	26MATM406DS01	Compulsory	3.0.1
3	Minor computer	Object Oriented Concepts and C++ Programming	25CSC403MI01	Students must select one minor from given option	3.0.1
	Minor statistics	Statistical Interference	25STA403MI01		3.1.0
	Minor Botany	Plant resource Utilization	26BOT406MV01		2.0.2

Scheme of Distribution of Marks:

Sr. No	Course Title	Course Code	Theory Marks		Practical Marks		Total Marks	Exam Time	Credit Distribution		
			Int.	Ext.	Int.	Ext.			L	T	P
1	Fundamental Chemistry – VI	26CHEM406DS01	15	35		50	100	2 Hrs.	2	0	2
2	Solid State Physics and Electronic Devices	26PHYM406DS01	15	35		50	100	3 Hrs.	2	0	2
3	Linear Algebra	26MATM406DS01	25	50		25	100	3 Hrs.	3	0	1
4	Object Oriented Concepts and C++ Programming	25CSC403MI01	25	50		25	100	3 Hrs.	3	0	1
	Statistical Interference	25STA403MI01	25	50		25	100	3 Hrs.	3	0	1
	Plant resource Utilization	26BOT406MV01	15	35		50	100	3 Hrs.	2	0	2