

Department of Life Sciences

CURRICULUM & CREDIT FRAMEWORK AND FORMATIVE ASSESSMENT FOR BACHELOR OF LIFE SCIENCES 4 YEAR PROGRAM

Scheme of Examinations under National Education Policy 2020

B. Sc. Life Sciences 1st semester

S.No.	Course	Subject	Name of the Subject	Remarks	Credits
1.	Discipline Specific Course	Botany	Diversity of microbes (24BOTM401DS01)	Compulsory	4
		Zoology	Animal diversity I (24ZOOM401DS01)	Compulsory	4
		Chemistry	Fundamental Chemistry (24CHEM401DS01)	Compulsory	4
2.	Skill	Botany	Biofertilizer and Biopesticides (24BOT401SE01)	Students must select on Skill subject from the three options provided	3
		Zoology	Apiculture(24ZOO401SE01)		3
		Chemistry	Role of Chemistry in society (24CHE401SE01)		3
3.	Minor	Biotechnology	Basics in Biotechnology (24CBT401MI01)	Students must select one minor subject from the two options provided	4
		Computer Science	Fundamentals of computing and problem-solving using C (24CSC401MI01)		4
4.	Multidisciplinary	Financial Literacy	Financial Literacy(24COMX01MD01)	Students must select one MDC subject from the Five options provided	3
		Music Instrumental	Basics studies in Hindustani instrumental music(24MUSIX01MD01)		3
		Home Science	Basics of Home Science I(24HSCX01MD01)		3
		Maths	Introductory Mathematics (23MATX01MD01)		3
5.	Value Added Course	EVS	Environmental Science (23EVSX01VA01)	Compulsory	2

6.	Ability Enhancement Course (AEC)	English	English (23ENGX01AE01)	Compulsory	2
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Scheme of Distribution of Marks

S.no	Course Title	Code	Theory Marks		Practical Marks		Total Marks	Exam time	Credit distribution		
			Int.	Ext.	Int.	Ext.			L	T	P
1.	Diversity of microbes	(24BOTM401DS01)	15	35	15	35	100	3hrs.	2	0	2
2.	Animal diversity I	(24ZOOM401DS01)	15	35	15	35	100	3hrs.	2	0	2
3.	Fundamental Chemistry	(24CHEM401DS01)	15	35	15	35	100	2hrs.	2	0	2
4.	Biofertilizer and Biopesticides	(24BOT401SE01)	-	-	-	-	75	3hrs.	2	0	1
5.	Apiculture	(24ZOO401SE01)	-	-	-	-	75	3hrs	2	0	1
6.	Role of Chemistry in society	(24CHE401SE01)	-	-	-	-	75	3hrs	2	0	1
7.	Basics in Biotechnology	(24CBT401MI01)	30	70	-	-	100	3hrs	4	0	0
8.	Fundamentals of computing and problem solving using C	(24CSC401MI01)	15	35	-	50	100	3hrs	2	0	2
9.	Financial Literacy	24COMX01MD01	-	-	-	-	75	3hrs	2	0	1
10.	Basics studies in Hindustani instrumental music	(24MUSIX01MD01)	-	-	-	-	75	3hrs	2	0	1
11.	Basics of Home Science I	(24HSCX01MD01)	-	-	-	-	75	3hrs	2	0	1
12.	Introductory Mathematics	(23MATX01MD01)	-	-	-	-	75	3hrs	2	0	1
13.	Environmental Science	(23EVSX01VA01)	-	--	-	-	50		2	0	0
14.	English	(23ENGX01AE01)	-	-	-	-	50		2	0	0

L: Lecture; T: Tutorial; P: Practical

Scheme of Distribution of Formative Assessment

Multidisciplinary Course for Two (02) credits theory and one (01) credit practical

Module	Marks
Written test (2X10)	20 marks
Lab. Work (Practical file)/Field work (Report)/Portfolio	20 marks
Assignment/Case Study/Mini project (2X10)	20 marks
Seminar/Presentation	10 marks
Attendance	05 marks
Total	75 Marks

Ability Enhancement Courses for Two (02) Credits Theory

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

Module	Marks
Written test (2X10)	20 marks
Lab. Work (Practical file)/Field work (Report)/Portfolio	20 marks
Assignment/Case Study/Mini project (2X10)	20 marks
Seminar/Presentation	10 marks
Attendance	05 marks
Total	75 Marks

Value Added Courses for Two (02) Credits theory

Module	Marks
Written test (2X10)	20 marks
Assignment/Case Study/Mini project (2X5)	10 marks
Quiz/ Seminar/ Group Discussion/ Debate (2*7.5)	15 marks
Attendance	05 marks
Total	50 Marks

B.Sc. Life Science 2nd Semester

S.No.	Course	Subject	Name of the Subject	Remarks	Credits
1.	Discipline Specific Course	Botany	Diversity of Archegoniate (24BOTM402DS01)	Compulsory	4
		Zoology	Animal Diversity II (24ZOOM402DS01)	Compulsory	4
		Chemistry	Fundamental Chemistry II (24CHEM402DS01)	Compulsory	4
2.	Skill	Botany	Floriculture(24BOT402SE01)	Students must select one Skill subject from the three options provided	3
		Zoology	Pesticides management (24ZOO402SE01)		3
		Chemistry	Fuel Chemistry (24CHE402SE01)		3
3.	Multidisciplinary	Business Documentation	Business Documentation 24COMX02MD01	Students must select one MDC subject from the Five options provided	3
		Music Instrumental	Technical Components of Hindustani Music Instrumental (24MUSIX02MD01)		3
		Home Science	Basics of Home Science II (24HSCX02MD01)		3
		Math's	Mathematical Reasoning (24MATX02MD01)		3
		Music Vocal	Applied Theory of Hindustani Music Vocal (24MUSVX02MD01)		3
4.	Value Aided	Digital Technological solutions	Digital Technological solutions(23CSAX01VA01)	Compulsory	2
5.	Ability Enhancement Course (AEC)	Hindi	Hindi Bhasha Sanvardhan(23HNDX01AE01)	students must select one subject from the two options provided	2
		Sanskrit	Sanskrit and modern Indian Languages (23SKTX01AE01)		

Scheme of Distribution of Marks

S.no	Course Title	code	Theory Marks		Practical Marks		Total Marks	Exam time	Credit distribution		
			Int.	Ext.	Int.	Ext.			L	T	P
1.	Diversity of Archegoniate	(24BOTM402DS01)	15	35	15	35	100	3hrs.	2	0	2
2.	Animal Diversity II	(24ZOOM402DS01)	15	35	15	35	100	3hrs.	2	0	2
3.	Fundamental Chemistry II	(24CHEM402DS01)	15	35	15	35	100	2hrs.	2	0	2
4.	Floriculture	(24BOT402SE01)	-	-	-	-	75	3hrs.	2	0	1
5.	Pesticides management	(24ZOO402SE01)	-	-	-	-	75	3hrs	2	0	1
6.	Fuel Chemistry	(24CHE402SE01)	-	-	-	-	75	3hrs	2	0	1
7.	Statistics in Everyday Life	(24STAX02MD01)	-	-	-	-	75	3hrs	2	0	1
8.	Technical Components of Hindustani Music Instrumental	(24MUSIX02MD01)	-	-	-	-	75	3hrs	2	0	1
9.	Basics of Home Science II	(24HSCX02MD01)	-	-	-	-	75	3hrs	2	0	1
10.	Mathematical Reasoning	(23MATX02MD01)	-	-	-	-	75	3hrs	2	0	1
11.	Applied Theory of Hindustani Music Vocal	(24MUSVX02MD01)	-	-	-	-	75	3hrs	2	0	1
12.	Digital Technological solutions	(23CSAX01VA01))	-	--	-	-	50	3Hrs	2	0	0
13.	Hindi Bhasha Sanvardhan	(23HNDX01AE01)	-	-	-	-	50	3Hrs	2	0	0
14.	Sanskrit and modern Indian Languages	(23SKTX01AE01)	-	-	-	-	50	3Hrs	2	0	0

L: Lecture; T: Tutorial; P: Practical

B.Sc. Life Science 3rd Semester

S.No.	Course	Subject	Name of the Subject	remarks	credits
1.	Discipline Specific Course	Botany	Plant Taxonomy (25BOTM403DS01)	compulsory	4
		Zoology	Cell Biology and Genetics (25ZOOM403DS01)	compulsory	4
		Chemistry	Fundamental Chemistry III (25CHEM403DS01)	Compulsory	4
2.	Skill	Botany	Plants Propagation & Nursery Techniques. (25BOT403SE01)	Student must select one subject from the given options provided	3
		Zoology	Microtomy (25ZOO403SE01)		
		Chemistry	SEC III Batteries (25CHE403SE01)		
3.	Minor	Biotechnology	Principle Of Gene Manipulation (24CBT402MI01)	Student must select one subject from the option provided	4
		Computer Science	Internet and web Designing (24CSC402MI01)		
4.	Multidisciplinary	Music Vocal	Essentials of Music Theory (25MUSVX03MD01)	Student must select one subject from the options provided	3
		Music Instrumental	Applied Theory of Hindustani Music (25MUSIX03MD01)		
		Home Science	Basics of Home Science III (25HSCX03MD01)		
		Math's	Applicable Mathematics (25MATX03MD01)		
		Statistics	Statistical Computing using SPSS. (25STAX03MD01)		
5.	Ability Enhancement Course (AEC)	English	English II (24ENGX03AE01)	compulsory	2

Scheme of Distribution of Marks

S.no	CourseTitle	code	Theory Marks		Practical Marks		Total Marks	Exam time	Credit distribution		
			Int.	Ext.	Int.	Ext.			L	T	P
1.	Plant Taxonomy	(25BOTM403DS01)	15	35	15	35	100	3hrs.	2	0	2
2.	Cell Biology and Genetics	(25ZOOM403DS01)	15	35	15	35	100	3hrs.	2	0	2
3.	Fundamental Chemistry III	(25CHEM403DS01)	15	35	15	35	100	2hrs.	2	0	2
4.	Plants Propagation & Nursery Techniques	(25BOT403SE01)	-	-	-	-	75	3hrs.	2	0	1
5.	Microtomy	(25ZOO403SE01)	-	-	-	-	75	3hrs	2	0	1
6.	SEC III Batteries	(25CHE403SE01)	-	-	-	-	75	3hrs	2	0	1
7.	Principle Of Gene Manipulation	(24CBT402MI01)	-	-	-	-	75	3hrs	4	0	0
8.	Internet and web Designing	(24CSC402MI01)	-	-	-	-	75	3hrs	3	0	1
9.	Essentials of Music Theory	(25MUSVX03MD01)	-	-	-	-	75	3hrs	2	0	1
10.	Applied Theory of Hindustani Music	(25MUSIX03MD01)	-	-	-	-	75	3hrs	2	0	1
11.	Basics of Home Science III	(25HSCX03MD01)	-	-	-	-	75	3hrs	2	0	1
12.	Applicable Mathematics	(25MATX03MD01))	-	--	-	-	75	3Hrs	2	0	1
13.	Statistical Computing using SPSS	(25STAX03MD01)	-	-	-	-	75	3Hrs	0	0	3
14.	English II	(24ENGX03AE01)	-	-	-	-	50	3Hrs	2	0	0

L: Lecture; T: Tutorial; P: Practical

B.Sc. Life Science 4th Semester

S.No.	Course	Subject	Name of the Subject	Code	Remarks	Credits
1.	Discipline Specific Course	Botany	Plant Anatomy and Reproductive Biology	(25BOTM404DS01)	Compulsory	4
		Zoology	Biomolecules and Mammalian Physiology	(25ZOOM404DAS01)	Compulsory	4
		Chemistry	Fundamental Chemistry - IV	(25CHEM404DS01)	Compulsory	4
3.	Minor	Biotechnology	Biotechniques	(25CBT404MV01)	Compulsory	4
		Computer Science	Java Programming	25CSC404MV01	Compulsory	4
4.	Ability Enhancement course (AEC)	Hindi Bhasha Sanvardhan II		(24HNDX03AE01)	Compulsory	2
		Introduction to Sanskrit Language		(24SKTX03AE01)	Compulsory	
5.	Value Added Course (VAC)	Wellbeing through Yoga		(25YOGEEC01)	Compulsory	2

Scheme of Distribution of Marks

S.no	CourseTitle	code	Theory Marks		Practical Marks		Total Marks	Exam time	Credit distribution		
			Int.	Ext.	Int.	Ext.			L	T	P
1.	Plant Anatomy and Reproductive Biology	(25BOTM404DS01)	15	35	15	35	100	3hrs.	2	0	2
2.	Biomolecules and Mammalian Physiology	(25ZOOM404DS01)	15	35	15	35	100	3hrs.	2	0	2
3.	Fundamental Chemistry - IV	(25CHEM404DS01)	15	35	15	35	100	2hrs.	2	0	2
4.	Biotechniques	(25CBT404MV01)	-	-	-	-	100	3hrs	4	0	0
5.	Java Programming	(25CSC404MV01)	-	-	-	-	100	3hrs	2	0	2
6.	Hindi Bhasha Sanvardhan II	(24HNDX03AE01)	-	-	-	-	75	3hrs	2	0	0
10.	Introduction to Sanskrit Language	(24SKTX03AE01)	-	-	-	-	75	3hrs	2	0	0
11.	Wellbeing through Yoga	(25YOGEEC01)	-	-	-	-	75	3hrs	2	0	0

L: Lecture; T: Tutorial; P: Practical

B.Sc. Life Science 5th Semester

S.No.	Course	Subject	Name of the Subject	Remarks	Credits
1.	Discipline Specific Course	Botany	Plant Physiology (26BOTM405DS01)	Compulsory	4
		Zoology	Basics of Developmental Biology (26ZOOM405DS01)	Compulsory	4
		Chemistry	Fundamental Chemistry V (26CHEM405DS01)	Compulsory	4
2.	Minor	Biotechnology	IPR, Biosafety and Bioethics (26CBT405MV01)	Students must select one minor subject from the two options provided	4
		Computer Science	Database Design and MySQL (26CSC405MI01)		4

Scheme of Distribution of Marks

S.no	Course Title	Code	Theory Marks		Practical Marks		Total Marks	Exam time	Credit distribution		
			Int.	Ext.	Int.	Ext.			L	T	P
1.	Plant Physiology	(26BOTM405DS01)	15	35	15	35	100	3hrs.	2	0	2
2.	Basics of Developmental Biology	(26ZOOM405DS01)	15	35	15	35	100	3hrs.	2	0	2
3.	Fundamental Chemistry V	(26CHEM405DS01)	15	35	15	35	100	2hrs.	2	0	2
4.	IPR, Biosafety and Bioethics	(26CBT405MV01)	30	70	-	-	100	3hrs	4	0	0
5.	Database Design and MySQL	(26CSC405MI01)	15	35	-	50	100	3hrs	2	0	2

L: Lecture; T: Tutorial; P: Practical

B.Sc. Life Science 6th Semester

S.No.	Course	Subject	Name of the Subject	Remarks	Credits
1.	Discipline Specific Course	Botany	Plant Biochemistry and Metabolism (26BOTM406DS01)	Compulsory	4
		Zoology	Ecology and Evolution(26ZOOM406DS01)	Compulsory	4
		Chemistry	Fundamental Chemistry VI (26CHEM406DS01)	Compulsory	4
2.	Minor	Biotechnology	Bioentrepreneurship (26CBT406MV01)	Students must select one minor subject from the two options provided	4
		Computer Science	Python Programming (26CSC406MI01)		4

Scheme of Distribution of Marks

S.no	Course Title	Code	Theory Marks		Practical Marks		Total Marks	Exam time	Credit distribution		
			Int.	Ext.	Int.	Ext.			L	T	P
1.	Plant Biochemistry and Metabolism	(26BOTM406DS01)	15	35	15	35	100	3hrs.	2	0	2
2.	Ecology and Evolution	(26ZOOM406DS01)	15	35	15	35	100	3hrs.	2	0	2
3.	Fundamental Chemistry	(26CHEM406DS01)	15	35	15	35	100	2hrs.	2	0	2
4.	Bioentrepreneurship	(26CBT406MV01)	30	70	-	-	100	3hrs	4	0	0
5.	Python Programming	(26CSC406MI01)	15	35	-	50	100	3hrs	2	0	2

L: Lecture; T: Tutorial; P: Practical