SANJEEV AGRAWAL GLOBAL EDUCATIONAL UNIVERSITY, BHOPAL

Proposed Scheme & Syllabus For

Bachelor of Science (BSc)

Certificate/Diploma/Degree/Honors Degree/ Research Degree

in

Biotechnology

w.e.f. 2023-24 (According to NEP 2020)



School of Sciences

Bachelor of Science (BSc)

Program Educational Objectives (PEOs) Biotechnology/Microbiology:

PEO-1: Prospective Employment and Career Prospects-Developing the potential for vertical career growth in Biotech-oriented industries, service sectors and related avenues.

PEO-2: Proficiency- Inculcating technical and managerial skills crucial for real time scenarios through the enhancement of problem-solving skills and advanced technical documentation ability.

PEO-3: Affectionate Objective- Grooming the students with technical proficiency to equip them for the emergence of sustainable technology and solutions for prevailing environmental, societal and cultural concerns.

PEO-4: Research Methods-Nurturing the research aptitude to provide solutions for global challenges and abilities to explore hidden potential of the matter

PEO-5: Continuous Learning-Instilling knowledge and awareness on professional ethics, bioethical and health issues, intellectual property rights and life-long learning through career oriented courses

Program Outcomes (POs) Biotechnology/Microbiology:

By the end of the program the students will be able to:

- **PO 1.** Understand concepts of Biotechnology/Microbiology and demonstrate interdisciplinary skills acquired in cell biology, genetics, biochemistry, and molecular biology.
- **PO 2.** Demonstrate the Laboratory skills in cell biology, basic and applied microbiology with emphasis on technological aspects
- **PO 3.** Apply the knowledge and skills gained in the fields of plant biotechnology, animal biotechnology and microbial technology in pharma, food, agriculture, beverages, herbal and nutraceutical industries.
- **PO 4.** Critically analyze environmental issues and apply the biotechnology knowledge gained for conserving the environment and resolving environmental problems.
- **PO 5.** Demonstrate comprehensive innovations and skills in the fields of biomolecules, cell and organelles, molecular biology, bioprocess engineering and genetic engineering of plants, microbes, and animals with respect to applications for human welfare.
- **PO 6.** Apply the knowledge and skills of immunology, bioinformatics, computational modelling of proteins, drug design and simulations to test models and aid in drug discovery.
- **PO 7.** Demonstrate communication skills, scientific writing, data collection and interpretation abilities in all the fields of biotechnology.
- **PO 8.** Learn and practice professional skills in handling microbes, animals and plants and demonstrate the ability to identify ethical issues related to recombinant DNA technology, genetic engineering, animals handling, intellectual property rights, biosafety, and biohazards.
- **PO 9.** Demonstrate thorough knowledge and application of good laboratory and good manufacturing practices in biotech industries
- PO 10. Demonstrate entrepreneurship abilities, innovative thinking, planning, and setting up of small-scale enterprises or CROs

Bachelor of Science (BSc)

CURRICULUM COMPONENTS

Comp	oonents	Credits
University Open (Table 1)	Ability Enhancement Courses (06 Courses)	12
University Core (Table 1)	Skill Enhancement Courses (06 Courses)	12
Discipline Core Courses (8 Courses) (Table 2))	32
Discipline Specific Major Electives (8+4 Cou	rses) (Table 3)	32R/48H*
Discipline Specific Minor Electives (6 Cours	ses) (Table 3)	24
Interdisciplinary Minor Electives (04 Courses) (Table 4)	16
Project/Field Internship/Skill Based Project		28H/44R*
	otal Ionors Degree) or Research Based Industrial I	172 Project (for

** Note: Any student opting out after I year / II year will obtain undergraduate Certificate/Diploma respectively in the specific discipline subject to mandatory 450hrs (8-10 week) ,10 credit Internship in SUB/Industry/Research organization.

Distribution of credits across all components

	(one course	Core Courses. e = 02 credit) ble 1)	Discipline	Main Fa (as per prei		Interdisciplin ary Minor	Project/ Field	
SEM.	AEC	SEC	Courses (DC) [one course = 4 credit] (Table 2)	Discipline Elect (one cou cred (Table (Major)	ive irse = 4 it)	Elective Tracks (Employment Oriented) (Table 4)	Internship/ Skill Based Projects/Research Projects/industrial Projects	Total
I	2	2	4	(Wiajoi) 4	4	4	3(PBL)	23
II	2	2	4	4	4	4	3(PBL)	23
III	2	2	4	4	4	4	3(PBL)	23
IV	2	2	4	4	4	4	3(PBL)	23
V	2	2	-	4+4	4		4(SIP)	20
VI	2	2	-	4+4	4		4(Minor Project)	20
VII			12				8(Major)	20
VIII*			4	16*			16*(Research/Inte rnship Project)	20(4+16*
Total	12	12	32	32R/32+1 6*H	24	16	28H/28+16*R	172

* Opt either 04 Specialized Courses (For Honor Degree) or Research Based Industrial Project (For Research Degree) Note: PBL- Project Based Learning, SIP- Summer internship Project, SEC- Skill Enhancement Courses, AEC- Ability Enhancement Courses.

]	FIRS	ST S	SEMI	ESTE	R wef	2023-	-24 o	nward	S						
Course Code	Course Title	Ho	onta ours j Weel	per	C r e d i	E S E D u	Ir			ntage (T ment (L		ESE	GT	Weigh	ntage (Pra	actical) ToT	GT
					S	r a t i o	MS ASG TA ATT ToT										
						n (H o u r s)		ASG	ТА		ТоТ						
Refer Table 1	AEC	-	-	-	2	2	-	-	-	-	-	_	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	_	-	-	-	-	-	-	-	_	100
Refer Table 2	Discipline Core	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	I	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR001	Project Based Learning –I	-	-	6	3	2	-	-	-	-	-	-	-	40	60	100	100
			Tota	l	23												700

						1		R wef 2									
Course Code	Course Name	Hou	onta urs j Veek	per «	C r e d i	E S E D u		nternal		age (The		ESE	GT		Veightag Practica ESE		GT
			1	ſ	t s	r a t i	1	nternar	A5565511	ient (IA)		LSE	GI	CE	ESE	101	
						O N (H O U r S	MSE	ASG	ТА	ATT D	ТоТ						
Refer Table 1	AEC	-	-	-	2) 2	_	_		_	_	_	_	_	_	_	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 2	Discipline Core	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR002	Project Based Learning-II	-	-	6	3	2	-	-	-	-	-	-	-	40	60	100	100
]	[otal	l	23												700

Note: Those students who would like to exit after 1st year and want to obtain Undergraduate Certificate in Performing Arts have to complete mandatory Research internship at SUB/Industry/Research Organization for 450 hours to be completed in 8-10 weeks.

			,	THI	RD S	EMF	STER	wef 20)23-24	l onwai	rds						
Course Code	Course Name	Ho	onta ours p Week	oer	C r e	E S E D			Weigh	itage (Th	eory)				Veightag Practical		GT
		L	T	P	d i t s	u r	I	nternal	Assess	ment (IA)	ES E	GT	CE^	ESE	ТоТ	
					3	a t 0 n (H 0 u r s)	MSE	ASG	ТА	ATTD	ТоТ						
Refer Table 1	AEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 2	Discipline Core	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-		100
SC23PR003	Project Based Learning –III	-	-	6	3	2	-	-	-	-	-	-	-	40	60	100	100
		'	Total		23												700

FOURTH SEMESTER wef 2023-24 onwards

Course Code	Course Name	Н	Conta ours j Weel	per	C r e d	E S E D			Weight	age (The	eory)				Veighta; Practica		GT
		L	Т	P	i t s	u r		Internal	Assessm	ent (IA))	ESE	ТоТ	CE ^	ESE	ТоТ	
					3	a ti o n (H o u r	ti MS ASG TA ATT ToT o E D D D n D D D D i I I I I i I I I I o I I I I o I I I I i I I I I o I I I I i I I I I i I I I I j I I I I 2 - - - -										
Refer Table 1	AEC	-	-	-	2	/	- 1	-	-	-	-	-	-	_	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 2	Discipline Core	3	1	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR004	Project Based Learning-IV	-	-	6	3	2	-	-	-	-	-	-	-	40	60	100	100
			Tota	l	23												700

Note: Those students who would like to exit after 2nd year and want to obtain Undergraduate Diploma in Performing Arts have to complete mandatory Research internship at SUB/Industry/Research Organization for 450 hours to be completed in 8-10 weeks.

FIFTH SEMESTER wef 2023-24 onwards

Course Code	Course Name	I	onta Jour per Wee T	rs	C r e d i t s	ESEDUration(Hours)	In MSE	nternal ASG		ment (IA ATT D		ESE	GT		Veighta Practic ESE		GT
Refer Table 1	AEC	-	-	-	2	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-						-	-	-	-	100
SC23PR005	Summer Internship / Field Activity	-	-	8	4	3	-	-	-	-	-	-	-	40	60	100	100
		'	Tota	.l	20												600

SIXTH SEMESTER wef 2023-24 onwards

Course Code	Course Name	Ho	onta ours Wee	per	C r e d	E S E D			Weigh	tage (Tł	ieory)				eighta ractica		GT
		L	T	Р	it s	u r	I	nternal A	Assessi	ment (L	A)	ESE	GT	CE^	ES E	To T	
						a t i o n (H o u r s)	E D o n n i i <th></th> <th></th>										
Refer Table 1	AEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3						-	-	-	-	-	100
SC23PR006	Minor Project	-	-	8	4	3	-	-	-	-	-	-	-	40	60	100	100
		· ·	Tota	1	20							·	-	·	•	•	600

Note: Those who would like to continue their studies in fourth year for obtaining degree of Honors/Research should have completed all the courses up to third year and obtained a minimum CGPA of 7.5.

SEVENTH SEMESTER wef 2023-24 onwards

Course Code	Course Name	Ho	onta ours Wee	per	C r e d	E S E D			Weigh	tage (T	heory)					eightag ractica		GT
		L	Т	Р	it s	u r a	In	iternal .	Assess	ment (L	A)	ESE	GT	CE^	ES E		To T	
						t i o n (H o u r s)	MS E	ASG	ТА	ATT D	ТоТ				Pre Sub	Viv a Voc e		
SC23UC013	Intellectual Property Right & Research Publication Ethics	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	-	100
SC23UC014	Seminar / Publication	-	-	8	4	3	-	-	-	-	-	-	-	40	-	60	100	100
MG23UC015	Project Management	3	-	2	4	3	20	05	05	10	40	60	100	-	-	-	-	100
SC23PR007	Major Project	-	-	16	8	3	-	-	-	-	-	-	-	100	50	50	200	200
	·	,	Tota	ıl	20			· ·			•							500

EIGHTH SEMESTER (For Honors) wef 2023-24 onwards

Course Code	Course Name	Но	onta urs Weel	per	C r e	E S E			Weigh	tage (Tł	neory)				eighta ractica		GT
		L	Т	Р	d it s	D u r	Iı	nternal .	Assessi	ment (IA	A)	ESE	GT	CE^	ES E	To T	
						a t 0 n (H 0 u r s)	a MS ASG TA ATT ToT i E D D D o I I D I n I I I I (I I I I H I I I I v I I I I s I I I I N I I I I										
SC23MO001	MOOCs	-	-	8	4	3	-	-	-	-	-	-	-	40	60	100	100
Refer Table 3	DSE Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
		, , , , , , , , , , , , , , , , , , ,	Fota	1	20												500

OR

			EIGHTH SEM	1ESTF	ZR (Fo	or Research Degree) wef 2023-2 onwards		
Co	urse Code	Course Name	Contact Hours per Week	C r e d	E S E D	Weightage (Theory)	Weightage (Practical)	GT

		L	T	P	it s	u r a t	I	nternal A	Assessi	ment (IA	A)	ESE	GT	CE^	ES E		To T	
						i o n (H o u r s)	MS E	ASG	ТА	ATT D	ТоТ				Pre Sub	Viv aVo ce		
SC23MO001	MOOCs	-	-	8	4	3	-	-	-	-	-	-	-	40	-	60	100	100
SC23PR008	Research Project/Internship	-	-	32	16	3	-	-	-	-	-	-	-	200	100	100	400	400
		,	Tota	l	20									500				

	Table I
	Groups for UC Courses
	2023-24 onwards
GROUP A	School of Management, School of Commerce, School of Arts Humanities and Social Sciences, School of Law and Legal Studies, School of Performing Arts,
	School of Journalism and Mass Communication, School of Design.
GROUP B	School of Sciences, SIRT- Pharmacy, SAGE College of Nursing, School of Computer Application, School of Advanced Computing, School of Engineering
	and Technology, School of Agriculture

Semester	Course Code	Course Name			Course Name	CC	ONTA	CT	Credits	Туре				
		Group A	h	ours/v	veek	ts			Group B	ho	urs/w	eek		
		-	L	T	Р				-	L	Т	Р		
Ι	SC23UC001	Environmental	2	0	0	2	AEC	TR23UC003	Communication Skills	1	0	2	2	AEC
		Studies and Disaster												
		Management												
	AH23UC002	Hindi	2	0	0	2	SEC	CA23UC004	MS Office	0	0	4	2	SEC
	TR23UC003	Communication	1	0	2	2	AEC	SC23UC001	Environmental Studies	2	0	0	2	AEC
		Skills							and Disaster					
II									Management					
	CA23UC004	MS Office	0	0	4	2	SEC	AH23UC002	Hindi	2	0	0	2	SEC
	TR23UC005	Professional Skills-I	0	0	4	2	AEC	TR23UC007	Quantitative Aptitude	2	0	0	2	AEC
									and Logical Reasoning					
III	MG23UC006	Entrepreneurship	2	0	0	2	SEC	ET23UC008	Design and Critical	2	0	0	2	SEC
		Development							Thinking					
	TR23UC007	Quantitative	2	0	0	2	AEC	TR23UC005	Professional Skills-I	0	0	4	2	AEC
		Aptitude and Logical												
IV		Reasoning												
	ET23UC008	Design and Critical	2	0	0	2	SEC	MG23UC006	Entrepreneurship	2	0	0	2	SEC
		Thinking							Development					
	TR23UC009	Professional Skills-	0	0	4	2	AEC	CM23UC011	Financial Literacy &	2	0	0	2	AEC
		II							Banking					
V	MG23UC010	Research	2	0	0	2	SEC	AH23UC012	Indian Culture and	2	0	0	2	SEC
		Methodology					~		Human Values					~
	CM23UC011	Financial Literacy &	2	0	0	2	AEC	TR23UC009	Professional Skills- II	0	0	4	2	AEC
VI		Banking					-	• • •						-
	AH23UC012	Indian Culture and	2	0	0	2	SEC	MG23UC010	Research Methodology	2	0	0	2	SEC
		Human Values	-	ľ	Ĭ	-	SEC	1102300010	researen memodology	-	ľ	ľ	-	
L		i i uniun vuiues								L				

Note :

*Each Course would be of two Credits (1 Theory and 1 Practical) OR (0 Theory and 2 Practical)

** Each Credit is equivalent to 45 hrs. of student engagement (15 hrs. of Theory teaching in classroom & 30 hrs. of Practical learning / Field Work /Assignment /Self -learning)

School of Sciences (BSc)

Discipline Core Courses

Semester	Course Code	Discipline Core BSc
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Ι	SC23DC001	Basics of Life Sciences
II	SC23DC002	Introduction to Forensic Science
III	SC23DC003	Elements of Modern Physics
IV	SC23DC004	Elements of Statistics
V	SC23UC013	Intellectual Property Rights & Research Publication Ethics
VI	PA23UC014	Seminar / Publications
VII	MG23UC015	Project Management
VIII	PA23PR007	Major Project

Table: 2 Discipline Core Courses 2023-24 onwards

Semester	Course Code	Discipline Core BSc
Ι	SC23DC001	Basics of Life Sciences
II	SC23DC002	Introduction to Forensic Science
III	SC23DC003	Elements of Modern Physics
IV	SC23DC004	Elements of Statistics

Table: 3 Discipline Specific Electives (DSE) (Select Any Two) 2023-24 onwards Tracks

Sem	Course Code	Biotechnology	Course Code	Chemistry
Ι	SC23BT001	Principles of Microbiology	SC23CH001	Analytical and Organic Chemistry - I
Π	SC23MB002	Microbial Physiology and Metabolism	SC23CH002	Inorganic and Physical Chemistry - I
III	SC23BT003	Cell Biology and Genetics	SC23CH003	Analytical and Organic Chemistry - II
IV	SC23BT004	Immunology	SC23CH004	Inorganic and Physical Chemistry - II
V	SC23BT005 SC23BT006	Bioinformatics Bioanalytical Tools	SC23CH005	Biological Chemistry
VI	SC23BT007 SC23BT008	Plant Biotechnology Industrial Biotechnology	SC23CH006	Applied Chemistry
	SC23BT009	Molecular Biology	SC23CH007 SC23CH008	Materials Chemistry Toxicology
VIII	SC23BT010	Virology	SC23CH009	Analytical Chemistry-III
	SC23BT011	Recombinant DNA Technology	SC23CH010	Organic Chemistry-III
	SC23BT012	Animal Biotechnology	SC23CH011	Inorganic Chemistry-III
			SC23CH012	Physical Chemistry-III

		-	-		r	Frac	k Bio	techr	ology	7					-			
			H	onta lours · We	5		E S E D u			Weigh	tage (T	`heory)			Weighta Practica		
Sem este r	Course Code	Course Title				C r e d	r a t i o	Int	ernal .	Assess	ment (IA)						GT
			L	Τ	Р	i t s	n (H o r s)	M SE	AS G	T A	AT TD	To T	ES E	G T	CE ^	ESE	ТоТ	
I	SC23BT001	Principles of Microbiology	4	-	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
П	SC23MB002	Microbial Physiology and Metabolism	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
ш	SC23BT003	Cell Biology and Genetics	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
IV	SC23BT004	Immunology	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
v	SC23BT005 SC23BT006	Bioinformatics Bioanalytical Tools	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
VI	SC23BT007 SC23BT008	Plant Biotechnology Industrial Biotechnology	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23BT009	Molecular Biology	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23BT010	Virology	4	-	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
VIII	SC23BT011	Recombinant DNA Technology	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23BT012	Animal Biotechnology	4	-	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100

	Track Chemistry Contact E S Weightage																	
]	Conta Hou er W	rs		S E D			Weigl	htage ('	Theor	y)			Weighta Practica		
Sem este r	Course Code	Course Title				C r e d	u r a t i o	Inte	ernal	Asses	ssment	(IA)						GT
I			L	Т	Р	i t s	n (H o u r s	M S E	AS G	TA	AT TD	To T	ES E	G T	CE	ESE	ТоТ	
I	SC23CH001	Analytical and Organic Chemistry-I	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
Π	SC23CH002	Inorganic and Physical Chemistry-I	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
Ш	SC23CH003	Analytical and Organic Chemistry-II	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
IV	SC23CH004	Inorganic and Physical Chemistry- II	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
V	SC23CH005 SC23CH006	Biological Chemistry Applied Chemistry	4	-	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
VI	SC23CH007 SC23CH008	Materials Chemistry Toxicology	4	-	-	4	3	20	0 5	05	10	40	60	10 0	-	-	-	100
	SC23CH009	Analytical Chemistry-III	3	-	2	4	3	20	0 5	05	10	40	60	10 0	-	-	-	100
X/111	SC23CH010	Organic Chemistry-III	3	-	2	4	3	20	0 5	05	10	40	60	10 0	-	-	-	100
VIII	SC23CH011	Inorganic Chemistry-III	3	-	2	4	3	20	0 5	05	10	40	60	10 0	-	-	-	100
	SC23CH012	Physical Chemistry-III	3	-	2	4	3	20	0 5	05	10	40	60	10 0	-	-	-	100

Table 4: Interdisciplinary Minor Elective Courses

(Select any one track) 2023-24 Onwards

S. No	Name of the	Minor	Minor Elective			Н	onta our: Wee	s /	Cre dit s			The	ory		Pr	actio	cal	G T
	Offering School	Specialization Track		Code	Course	L	Т	Р		M S E	A S G	I A	A T D	T o t a l	C E	E S E	ť	
			Ι	ET23DM0 01	Web Development Fundamentals	2	0	4	4						40	60	10 0	10 0
		Digital	II	ET23DM0 02	Introduction to Digital Marketing	2	0	4	4						40		10 0	10 0
		Marketing	III	ET23DM0 03	Search Engine Optimization and Social Media Marketing	2	0	4	4						40		10 0	10 0
1			IV	ET23DA00 4	Web Analytics	2	0	4	4						40	60	10 0	10 0
			Ι	ET23 DA001	Data Analytics Fundamentals	2	0	4	4						40	60	10 0	10 0
		Data Analytics	II	ET23DA00 2	Business Analytics	2	0	4	4						40		10 0	10 0
	School of	Data Analytics	III	ET23DA00 3	R Programming	2	0	4	4						40		10 0	10 0
	Engineering &		IV	ET23DA00 4	Data Visualization	2	0	4	4						40	60	10 0	10 0
	Technology		Ι	ET23WD0 01	Web Designing Fundamentals	2	0	4	4						40	60	10 0	10 0
		Web Designing	II	ET23WD0 02	Dynamic Website with Java-script	2	0	4	4						40	60	10 0	10 0
		web Designing	III	ET23WD0 03	Introduction to XML	2	0	4	4						40	60	10 0	10 0
			IV	ET23WD0 04	Web Application Development using PHP	2	0	4	4						40	60	10 0	10 0
			Ι	ET23PR00 1	Core Java	2	0	4	4						40	60	10 0	10 0
		Programming	II	ET23PR00 2	Advanced Java	2	0	4	4						40	60	10 0	10 0
			III	ET23PR00 3	Python Programming	2	0	4	4						40	60	10 0	10 0

			IV	ET23PR00 4	Web Application Development	2	0	4	4			40	60	10 0	10 0
		Tours & Travel Management	Ι	AH23TT00 1	Hospitality Etiquettes	2	0	4	4			40	60	10 0	10 0
2	School of Arts		II	AH23TT00 2	World Heritage Sites of MP	2	0	4	4			40	60	10 0	10 0
	Humanities and Social		III	AH23TT00 3	Medical Tourism	2	0	4	4			40	60	10 0	10 0
	Sciences		IV	AH23TT00 4	International Travel Assistance	2	0	4	4			40	60	10 0	10 0
		Laboratory Management	Ι	SC23LM00 1	Microbiology& Biotechnology Laboratory Skills	0	0	8	4			40	60	10 0	10 0
3	School of Sciences		II	SC23LM00 2	Chemistry Lab Skills	0	0	8	4				60	10 0	10 0
			III	SC23LM00 3	Electronics & Electrical Lab Skills	0	0	8	4					10 0	10 0
			IV	SC23LM00 4	Physics Lab Skills	0	0	8	4				60	10 0	10 0
		Horticulture	Ι	AG23HR00 1	Production Technology for Vegetable and Spices	2	0	4	4				60	0	10 0
			II	AG23HR00 2	Production Technology for Fruit and Plantation Crops	2	0	4	4				60	10 0	10 0
4			III	AG23HR00 3	Diseases of Field and Horticultural Crops and their Management –I	2	0	4	4			40	60	10 0	10 0
	School of Agriculture		IV	AG23HR00 4	`Diseases of Field and Horticultural Crops and their Management-II	2	0	4	4			40	60	10 0	10 0
		Agri Business	Ι	AG23AB00 1	Agricultural Finance and Cooperation	2	0	4	4			40	60	10 0	10 0
			II	AG23AB00 2	Agricultural Marketing Trade & Prices	2	0	4	4			40	60	10 0	10 0
			III	AG23AB00 3	Entrepreneurship Development and Business Communication	2	0	4	4				60	10 0	10 0
			IV	AG23AB00 4	Farm Management, Production & Resource Economics	2	0	4	4				60	10 0	10 0
		Basic Accounting	Ι	CM23BA0 01	Financial Accounting	4	0	0	4				60	0	0
	School of	Skills	II	CM23BA0 02	Tally	3	0	2	4				60	0	0
	Commerce & Management		III	CM23BA0 03	Personal Taxation	4	0	0	4				60	0	0
5			IV	CM23BA0 04	Direct and Indirect Taxes	4	0	0	4			40	60	10 0	10 0

		Retail Management &	Ι	MG23RM0 01	Retail Management	4	0	0	4			40	60	10 0	10 0
		Merchandising	II	MG23RM0 02	Merchandising	4	0	0	4			40	60	0	10 0
			III	MG23RM0 03	Supply Chain Management	4	0	0	4				60	0	10 0
			IV	MG23RM0 04	E Business	4	0	0	4				60	0	10 0
		Investment	Ι	MG23IM00 1	Introduction to Financial Markets	4	0	0	4				60	0	10 0
		Management	II	MG23IM00 2	Fundamental & Technical Analysis of Investment	4	0	0	4				60	0	10 0
			III	MG23IM00 3	Risk Management	4	0	0	4			40	60	10 0	10 0
			IV	MG23IM00 4	Introduction to Derivatives	4	0	0	4			40	60	10 0	10 0
		Sketching & Painting	Ι	DN23SP00 1	Sketching-I	0	0	8	4			40		0	10 0
			II	DN23SP00 2	Sketching –II	0	0	8	4			40	60	10 0	10 0
			III	DN23SP00 3	Painting-I	0	0	8	4			40	60	10 0	10 0
			IV	DN23SP00 4	Painting-II	0	0	8	4			40	60	10 0	10 0
6		Interior Design	Ι	DN23ID00 1	Building Materials & Processes	0	0	8	4			40	60	10 0	10 0
	School of		II	DN23ID00 2	Elements of Interior Spaces	0	0	8	4			40	60	10 0	10 0
	Design		III	DN3ID003	Basics of Lighting Design	0	0	8	4			40	60	10 0	10 0
			IV	DN23ID00 4	Building Services	0	0	8	4			40	60	10 0	10 0
		Apparel Design	Ι	DN23AD0 01	Fashion Illustration-I	0	0	8	4			40	60	0	10 0
			II	DN23AD0 02	Dyeing and Printing Techniques	0	0	8	4			40	60	0	10 0
			III	DN23AD0 03	Surface Exploration I	0	0	8	4				60	0	10 0
			IV	DN23AD0 04	Surface Exploration II	0	0	8	4			40	60	0	0
	School of		Ι	PA23DN00 1	Techniques and Theatrical Performance of Dance I	0	0	8	4			40	60	0	0
	Performing Arts	Dance	II	PA23DN00 2	Techniques and Theatrical Performance of Dance II	0	0	8	4			40	60	10 0	10 0

			III	PA23DN00	Techniques and Theatrical	0	0	8	4				40	60		
			IV	3 PA23DN00	Performance of Dance III Techniques and Theatrical	0	0	8	4		 		40	60	0	0 10
			IV	4	Performance of Dance IV	0		0	4				40	00		$\frac{10}{0}$
7			I	PA23MC00	Musical Roots and Theatrical	0	0	8	4				40	60	-	10
		Music	-	1	Performance I	ľ	ľ	Ŭ	· ·				10		0	0
			II	PA23MC00	Musical Roots and Theatrical	0	0	8	4				40	60	10	10
				2	Performance II										0	0
			III	PA23MC00	Musical Roots and Theatrical	0	0	8	4				40	60	10	10
				3	Performance III										0	0
			IV	PA23MC00 4	Musical Roots and Theatrical Performance IV	0	0	8	4				40	60	10 0	10 0
		Theatre	Ι	PA23TR00 1	Basics of Acting Production I	0	0	8	4				40	60	10 0	10 0
			II	PA23TR00 2	Drama Production II	0	0	8	4				40	60	10 0	10 0
			III	PA23TR00 3	Drama Production III	0	0	8	4				40	60	10 0	10 0
			IV	PA23TR00 4	Drama Production IV	0	0	8	4				40	60	10 0	10 0
8		Basic Media Production	Ι	JM23MP00 1	Photography	0	0	8	4				40	60	10 0	10 0
		Techniques	II	JM23MP00 2	Videography	0	0	8	4				40	60	10 0	10 0
	Cabaalaf		III	JM23MP00 3	Script Writing	0	0	8	4				40	60	10 0	10 0
	School of Journalism and Mass		IV	JM23MP00 4	Audio Visual Editing	0	0	8	4						0	10 0
	Communicat ion	Advertising	Ι	JM23AP00 1	Introduction to Advertising	0	0	8	4					60	0	10 0
	1011	and Public Relations	II	JM23AP00 2	Content Creation	0	0	8	4				40	60	10 0	10 0
			III	JM23AP00 3	Introduction to Public Relations	0	0	8	4					60	0	10 0
			IV	JM23AP00 4	Tools and Techniques of Public Relations	0	0	8	4				40	60	10 0	10 0

SANJEEV AGRAWAL GLOBAL EDUCATIONAL UNIVERSITY, BHOPAL

Proposed Scheme & Syllabus For

Bachelor of Science (BSc)

Certificate/Diploma/Degree/Honors Degree/ Research Degree

in

Chemistry

w.e.f. 2023-24 (According to NEP 2020)



School of Sciences

Bachelor of Science (BSc)

Program Educational Objectives (PEOs) Chemistry:

PEO-1: Prospective Employment and Career Prospects-Developing the potential for vertical career growth in investigation laboratories, service sectors and related avenues.

PEO-2: Proficiency- Inculcating technical and managerial skills crucial for real time scenarios through the enhancement of problem-solving skills and advanced technical documentation ability.

PEO-3: Affectionate Objective- Grooming the students with technical proficiency to equip them for the emergence of sustainable technology and solutions for prevailing environmental, societal and cultural concerns.

PEO-4: Research Methods-Nurturing the research aptitude to provide solutions for global challenges and abilities to explore hidden potential of the matter.

PEO-5: Continuous Learning-Instilling knowledge and awareness on professional ethics related to crime prevention and evidence analysis and life-long learning through career-oriented courses.

Program Outcomes (POs) Chemistry:

By the end of the program the students will be able to:

- PO 1. Understand the fundamentals of various branches of chemistry.
- PO 2. Demonstrate a range of practical skills to conduct and infer experiments independently and in groups.
- **PO 3.** Design and carry out scientific experiments as well as accurately record and analyze theresults of such experiments.
- PO 4. Apply the key concepts and standard methodologies to solve problems related to Chemistry.
- **PO 5.** Apply their skill in problem solving, critical thinking and analytical reasoning as applied to scientific problems.
- **PO 6.** Apply the knowledge and skills to explain why chemistry is an integral activity for addressing social, economic, andenvironmental problems.
- **PO 7.** Possess the level of proficiency in subject required for post-graduation as well as for pursuingresearch in Chemistry and related interdisciplinary subjects.
- PO 8. Apply methodologies to the solution of unfamiliar types of problems.
- PO 9. Design solutions stemming from the application of Chemistry to the local issues.
- PO 10. Explore new areas of research in pure chemistry and applied chemistry.

Bachelor of Science (BSc)

CURRICULUM COMPONENTS

Com	ponents	Credits
University Come (Table 1)	Ability Enhancement Courses (06 Courses)	12
University Core (Table 1)	Skill Enhancement Courses (06 Courses)	12
Discipline Core Courses (8 Courses) (Table 2	2)	32
Discipline Specific Major Electives (8+4 Con	urses) (Table 3)	32R/48H*
Discipline Specific Minor Electives (6 Cour	rses) (Table 3)	24
Interdisciplinary Minor Electives (04 Course	s) (Table 4)	16
Project/Field Internship/Skill Based Project		28H/44R*
	Fotal Honors Degree) or Research Based Industrial H	172 Project (for

** Note: Any student opting out after I year / II year will obtain undergraduate Certificate/Diploma respectively in the specific discipline subject to mandatory 450hrs (8-10 week) ,10 credit Internship in SUB/Industry/Research organization.

Distribution of credits across all components

	(one course	Core Courses. e = 02 credit) ble 1)	Discipline	Main Fa (as per prei		Interdisciplin ary Minor	Project/ Field	
SEM.	AEC	SEC	Courses (DC) [one course = 4 credit] (Table 2)	Discipline Elect (one cou cred (Table (Major)	ive irse = 4 it)	Elective Tracks (Employment Oriented) (Table 4)	Internship/ Skill Based Projects/Research Projects/industrial Projects	Total
I	2	2	4	(Wiajor) 4	4	4	3(PBL)	23
II	2	2	4	4	4	4	3(PBL)	23
III	2	2	4	4	4	4	3(PBL)	23
IV	2	2	4	4	4	4	3(PBL)	23
V	2	2	-	4+4	4		4(SIP)	20
VI	2	2	-	4+4	4		4(Minor Project)	20
VII			12				8(Major)	20
VIII*			4	16*			16*(Research/Inte rnship Project)	20(4+16*
Total	12	12	32	32R/32+1 6*H	24	16	28H/28+16*R	172

* Opt either 04 Specialized Courses (For Honor Degree) or Research Based Industrial Project (For Research Degree) Note: PBL- Project Based Learning, SIP- Summer internship Project, SEC- Skill Enhancement Courses, AEC- Ability Enhancement Courses.

]	FIRS	ST S	SEMI	ESTE	R wef	2023-	24 o	nward	s						
Course Code	Course Title	Ho	Conta ours Weel	per	C r d i t s	E S D u r a t i o	In			ntage (T ment (I		ESE	GT	Weigh	ntage (Pr	actical) ToT	GT
					n (H o u r s	MS E	ASG	ТА	ATT D	ТоТ							
Refer Table 1	AEC	-	-	-	2	2	-	_	- 1	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 2	Discipline Core	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR001	Project Based Learning –I	-	- Total	6	3 23	2	-	-	-	-	-	-	-	40	60	100	100 700

						1		R wef 2									
Course Code	Course Name	Hou	onta urs j Veek	per «	C r e d i	E S E D u		nternal		age (The		ESE	GT		Veightag Practica ESE		GT
			1	ſ	t s	r a t i	1	nternar	A5565511	ient (IA)		LSE	GI	CE	ESE	101	
					O N (H O U r S	MSE	ASG	ТА	ATT D	ТоТ							
Refer Table 1	AEC	-	-	-	2) 2	_	_		_	_	_	_	_	_	_	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 2	Discipline Core	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR002	Project Based Learning-II	-	-	6	3	2	-	-	-	-	-	-	-	40	60	100	100
]	[otal	l	23												700

Note: Those students who would like to exit after 1st year and want to obtain Undergraduate Certificate in Performing Arts have to complete mandatory Research internship at SUB/Industry/Research Organization for 450 hours to be completed in 8-10 weeks.

			,	THI	RD S	EMF	STER	wef 20	23-24	l onwar	'ds						
Course Code	Course Name	Ho	onta ours p Week	ber	C r e	E S E D			Weigh	itage (Th	eory)				Veightag Practical		GT
		L	T	P	d i t s	u r		nternal	Assess	ment (IA)	ES E	GT	CE^	ESE	ТоТ	
					3	a t 0 n (H 0 u r s)	MSE	ASG	ΤΑ	ATTD	ТоТ						
Refer Table 1	AEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 2	Discipline Core	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-		100
SC23PR003	Project Based Learning –III	-	-	6	3	2	-	-	-	-	-	-	-	40	60	100	100
l			Total		23												700

			FOL	JRTH	I SEN	иезті	ER we	f 2023-:	24 onv	vards							
Course Code	Course Name	Н	Conta ours j Weel	per	C r e d	E S E D			Weight	age (The	eory)				Veighta Practica		GT
		L	T	P	i t s	u r		Internal	Assessn	ient (IA)	ESE	ТоТ	CE ^	ESE	ТоТ	
					a ti o n (H o u r s)	MS E	ASG	TA	ATT D	ТоТ							
Refer Table 1	AEC	-	-	-	2	2	-	_	-	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 2	Discipline Core	3	1	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR004	Project Based Learning-IV	-	-	6	3	2	-	-	-	-	-	-	-	40	60	100	100
			Tota	1	23												700

Note: Those students who would like to exit after 2nd year and want to obtain Undergraduate Diploma in Performing Arts have to complete mandatory Research internship at SUB/Industry/Research Organization for 450 hours to be completed in 8-10 weeks.

				FI	FTH S	EME	STER we	f 2023-2	4 onw	vards							
Course Code	Course Name	ŀ	onta Ioui per Wee	rs k	C r e d i t s	E S E D u r a		nternal 2		ntage (T ment (IA		ESE	GT		Veighta Practic ESE		GT
						t i o n (H o u r s	MSE	ASG	ТА	ATT D	ТоТ						
Refer Table 1	AEC	-	-	-	2	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR005	Summer Internship / Field Activity	-	-	8	4	3	-	-	-	-	-	-	-	40	60	100	100
		,	Tota	1	20												600

		,	SIX	TH S	EMES	STER	wef	2023-24	4 onv	vards							
Course Code	Course Name	Ho	onta ours Wee	per	C r e	E S E D			Weigh	tage (Tł	1eory)				eighta ractica		GT
		L	T	Р	d it s	u u r	I	nternal A	Assessi	ment (IA	A)	ESE	GT	CE^	ES E	To T	
						a t 0 1 (H 0 u r s	MS E	ASG	ТА	ATT D	ТоТ						
Refer Table 1	AEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR006	Minor Project	-	-	8	4	3	-	-	-	-	-	-	-	40	60	100	100
			Tota	.l	20												600

Note: Those who would like to continue their studies in fourth year for obtaining degree of Honors/Research should have completed all the courses up to third year and obtained a minimum CGPA of 7.5.

				SEVI	ENTH	SEN	1ESTE	R wef	2023	-24 or	ward	s						
Course Code	Course Name	Ho	onta ours Wee	per	C r e d	E S E D			Weigh	tage (T	heory)					eightag ractica		GT
		L	Т	Р	it s	u r a	In	iternal A	Assess	ment (L	A)	ESE	GT	CE^	ES E		To T	
						t 0 1 0 1 0 1 1 1 1 1 1 1 1 1 1	MS E	ASG	ТА	ATT D	ТоТ				Pre Sub	Viv a Voc e		
SC23UC013	Intellectual Property Right & Research Publication Ethics	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	-	100
SC23UC014	Seminar / Publication	-	-	8	4	3	-	-	-	-	-	-	-	40	-	60	100	100
MG23UC015	Project Management	3	-	2	4	3	20	05	05	10	40	60	100	-	-	-	-	100
SC23PR007	Major Project	-	-	16	8	3	-	-	-	-	-	-	-	100	50	50	200	200
	·		Tota	1	20						-				-			500

	E	IGHTI	H SE	EMES	STER	(For	Honor	s) wef 2	2023-	24 on	wards			-			-
Course Code	Course Name	Ho	onta urs Weel	per	C r e	E S E			Weigh	tage (Tl	neory)				eightag ractica		GT
		L	T	Р	d it s	D u r	I	nternal A	Assessi	ment (L	4)	ESE	GT	CE^	ES E	To T	
						a t o n (H o u r s)	MS E	ASG	ТА	ATT D	ТоТ						
SC23MO001	MOOCs	-	-	8	4	3	-	-	- 1	-	-	-	-	40	60	100	100
Refer Table 3	DSE Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
		,	Tota	l	20												500

OR

		EIGH	ТН	SEN	1ESTE	CR (Fo	or Rese	arch De	gree)	wef 20)23-2	onwa	rds					
Course Code	Course Name	Ho	onta urs Wee	per	C r e	E S E			Weigh	tage (Th	ieory)					eightag ractica		GT
		L	T	Р	d it s	D u r a	Internal Assessment (IA) ESE G M MS ASG TA ATT ToT E D D					GT	CE^	ES E		To T		
						t i o n (a t iMSASGTAATTToToEDDnD(H						Pre Sub	Viv aVo ce				
						H o u r												
SC23MO001	MOOCs			8	4	s) 3								40		60	100	100
SC23PR0001 SC23PR008	Research Project/Internship	-	-	8 32	4	3	-	-	-	-	-	-	-	200	- 100	100	400	400
	· · · ·		Tota	l	20		-			-	-	-			·	-		500

Table I Groups for UC Courses 2023-24 onwards

GROUP A	School of Man	agement School of Con	ımer	ce So	hoolo		24 OIIWA		, School of Law and Legal S	Studie	s Sc	hool	of Performi	no Arts
GROUP A	Senoor or Man	agement, senoor of Con	mier	· ·				s Communication,		nuult	3, 50	1001 (ing mis,
GROUP B	School of Scie	nces SIRT- Pharmacy	SAG						ation, School of Advanced	Com	nutin	g Sch	nool of Eng	ineering
GROOT D	Sender of Sere	nees, shiri Thaimaey, i	5/10			U	,	, School of Agricult	-	com	puin	5, 501	loor or Eng	meening
Semester	Course Code	Course Name	C	ONT	ACT	Credi	Туре	Course Code	Course Name	CC	ONTA	СТ	Credits	Туре
		Group A	h	ours/v		ts			Group B	ho	urs/w			• •
			L	T	Р					L	T	Р		
Ι	SC23UC001	Environmental Studies and Disaster Management	2	0	0	2	AEC	TR23UC003	Communication Skills	1	0	2	2	AEC
	AH23UC002	Hindi	2	0	0	2	SEC	CA23UC004	MS Office	0	0	4	2	SEC
II	TR23UC003	Communication Skills	1	0	2	2	AEC	SC23UC001	Environmental Studies and Disaster Management	2	0	0	2	AEC
	CA23UC004	MS Office	0	0	4	2	SEC	AH23UC002	Hindi	2	0	0	2	SEC
	TR23UC005	Professional Skills-I	0	0	4	2	AEC	TR23UC007	Quantitative Aptitude and Logical Reasoning	2	0	0	2	AEC
ш	MG23UC006	Entrepreneurship Development	2	0	0	2	SEC	ET23UC008	Design and Critical Thinking	2	0	0	2	SEC
IV	TR23UC007	Quantitative Aptitude and Logical Reasoning	2	0	0	2	AEC	TR23UC005	Professional Skills-I	0	0	4	2	AEC
	ET23UC008	Design and Critical Thinking	2	0	0	2	SEC	MG23UC006	Entrepreneurship Development	2	0	0	2	SEC
	TR23UC009	Professional Skills- II	0	0	4	2	AEC	CM23UC011	Financial Literacy & Banking	2	0	0	2	AEC
V	MG23UC010	Research Methodology	2	0	0	2	SEC	AH23UC012	Indian Culture and Human Values	2	0	0	2	SEC
VI	CM23UC011	Financial Literacy & Banking	2	0	0	2	AEC	TR23UC009	Professional Skills- II	0	0	4	2	AEC
	AH23UC012	Indian Culture and Human Values	2	0	0	2	SEC	MG23UC010	Research Methodology	2	0	0	2	SEC

Note :

*Each Course would be of two Credits (1 Theory and 1 Practical) OR (0 Theory and 2 Practical)

** Each Credit is equivalent to 45 hrs. of student engagement (15 hrs. of Theory teaching in classroom & 30 hrs. of Practical learning / Field Work /Assignment /Self -learning)

Semester	Course Code	Discipline Core BSc
Ι	SC23DC001	Basics of Life Sciences
II	SC23DC002	Introduction to Forensic Science
III	SC23DC003	Elements of Modern Physics
IV	SC23DC004	Elements of Statistics
V	SC23UC013	Intellectual Property Rights & Research Publication Ethics
VI	PA23UC014	Seminar / Publications
VII	MG23UC015	Project Management
VIII	PA23PR007	Major Project

Table: 2 Discipline Core Courses 2023-24 onwards

Semester	Course Code	Discipline Core BSc
Ι	SC23DC001	Basics of Life Sciences
II	SC23DC002	Introduction to Forensic Science
III	SC23DC003	Elements of Modern Physics
IV	SC23DC004	Elements of Statistics

Table: 3 Discipline Specific Electives (DSE) (Select Any Two) 2023-24 onwards **Tracks**

Sem	Course Code	Chemistry	Course Code	Physics
Ι	SC23CH001	Analytical and Organic Chemistry - I	SC23PH001	Mathematical Physics
Π	SC23CH002	Inorganic and Physical Chemistry - I	SC23PH002	Mechanics
III	SC23CH003	Analytical and Organic Chemistry - II	SC23PH003	Thermal Physics and Statistical Mechanics
IV	SC23CH004	Inorganic and Physical Chemistry - II	SC23PH004	Wave and Optics
v	SC23CH005	Biological Chemistry	SC23PH005	Classical Electrodynamics
v	SC23CH006	Applied Chemistry	SC23PH006	Electricity, Magnetism and Electromagnetism
VI	SC23CH007 SC23CH008	Materials Chemistry Toxicology	SC23PH007 SC23PH008	Quantum Mechanics Plasma Physics
	SC23CH009	Analytical Chemistry-III	SC23PH009	Solid State Physics
VIII	SC23CH010	Organic Chemistry-III	SC23PH010	Nuclear, Atomic and Molecular Physics
	SC23CH011	Inorganic Chemistry-III	SC23PH011	Analog & Digital Circuits
	SC23CH012	Physical Chemistry-III	SC23PH012	Elements of Condensed Matter Physics

			_			Trac	k Ch	emis	try						-			
]	Conta Hou er W	rs		E S E D			Weigl	htage ('	Theor	y)			Weighta Practica		
Sem este r	Course Code	Course Title				C r e d	u r a t i o	Inte	ernal	Asses	ssment	(IA)						GT
	Cour		L	Τ	Р	i t s	n (H o u r s)	M S E	AS G	TA	AT TD	To T	ES E	G T	CE	ESE	ТоТ	
Ι	SC23CH001	Analytical and Organic Chemistry-I	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
п	SC23CH002	Inorganic and Physical Chemistry-I	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
Ш	SC23CH003	Analytical and Organic Chemistry-II	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
IV	SC23CH004	Inorganic and Physical Chemistry- II	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
V	SC23CH005 SC23CH006	Biological Chemistry Applied Chemistry	4	-	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
VI	SC23CH007 SC23CH008	Materials Chemistry Toxicology	4	-	-	4	3	20	0 5	05	10	40	60	10 0	-	-	-	100
	SC23CH009	Analytical Chemistry-III	3	-	2	4	3	20	0 5	05	10	40	60	10 0	-	-	-	100
	SC23CH010	Organic Chemistry-III	3	-	2	4	3	20	0 5	05	10	40	60	10 0	-	-	-	100
VIII	SC23CH011	Inorganic Chemistry-III	3	-	2	4	3	20	0 5	05	10	40	60	10 0	-	-	-	100
	SC23CH012	Physical Chemistry-III	3	-	2	4	3	20	0 5	05	10	40	60	10 0	-	-	-	100

							Tra	ck Pł	nysics									
			H	onta lour ' We	s		E S E D u		Ĭ	Veight	tage (T	'heory)			Weighta Practica		
Sem ester	Course Code	Course Title				C r e d	r a t i o	Int	ernal	Assess	ment (IA)						GT
			L	Т	Р	i t s	n (H o u r s)	M SE	AS G	T A	AT TD	To T	ES E	G T	CE ^	ESE	ТоТ	
Ι	SC23PH001	Mathematical Physics	4	-	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
п	SC23PH002	Mechanics	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
ш	SC23PH003	Thermal Physics and Statistical Mechanics	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
IV	SC23PH004	Wave and Optics	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23PH005	Classical Electrodynamics	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
V	SC23PH006	Electricity and Magnetism Electromagnetism	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
VI	SC23PH007 SC23PH008	Quantum Mechanics Plasma Physics	4	-	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23PH009	Solid State Physics	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23PH010	Nuclear, Atomic and Molecular Physics	4	-	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
VIII	SC23PH011	Analog & Digital Circuits	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23PH012	Elements of Condensed Matter Physics	4	-	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100

Table 4: Interdisciplinary Minor Elective Courses

(Select any one track) 2023-24 Onwards

S. No	Name of the	Minor	Minor Elective			Н	onta lour: Wee	s /	Cre dit s			The	ory			Pra	actio	cal	G T
	Offering School	Specialization Track		Code	Course	L	Т	Р		M S E	A S G		A T T D	E S E	T o t a l	C F	E S E	Ŭ	
			Ι	ET23DM0 01	Web Development Fundamentals	2	0	4	4							40	60	10 0	10 0
		Digital	II	ET23DM0 02	Introduction to Digital Marketing	2	0	4	4							40	60	10 0	10 0
		Marketing	III	ET23DM0 03	Search Engine Optimization and Social Media Marketing	2	0	4	4							40	60	10 0	10 0
1			IV	ET23DA00 4	Web Analytics	2	0	4	4							40	60	10 0	10 0
			Ι	ET23 DA001	Data Analytics Fundamentals	2	0	4	4							40		10 0	10 0
		Data Analytics	II	ET23DA00 2	Business Analytics	2	0	4	4							40	60	10 0	10 0
	School of	Data Analytics	III	ET23DA00 3	R Programming	2	0	4	4							40	60	10 0	10 0
	Engineering &		IV	ET23DA00 4	Data Visualization	2	0	4	4							40	60	10 0	10 0
	Technology		Ι	ET23WD0 01	Web Designing Fundamentals	2	0	4	4							40	60	10 0	10 0
		Web Designing	II	ET23WD0 02	Dynamic Website with Java-script	2	0	4	4							40	60	10 0	10 0
		Web Designing	III	ET23WD0 03	Introduction to XML	2	0	4	4							40		10 0	10 0
			IV	ET23WD0 04	Web Application Development using PHP	2	0	4	4							40	60	10 0	10 0
			Ι	ET23PR00 1	Core Java	2	0	4	4							40	60	10 0	10 0
		Programming	II	ET23PR00 2	Advanced Java	2	0	4	4							40	60	10 0	10 0
			III	ET23PR00 3	Python Programming	2	0	4	4							40	60	10 0	10 0

			IV	ET23PR00 4	Web Application Development	2	0	4	4			40	60	10 0	10 0
		Tours & Travel Management	Ι	AH23TT00 1	Hospitality Etiquettes	2	0	4	4			40	60	10 0	10 0
2	School of Arts		II	AH23TT00 2	World Heritage Sites of MP	2	0	4	4			40	60	10 0	10 0
	Humanities and Social		III	AH23TT00 3	Medical Tourism	2	0	4	4			40	60	10 0	10 0
	Sciences		IV	AH23TT00 4	International Travel Assistance	2	0	4	4			40	60	10 0	10 0
		Laboratory Management	Ι	SC23LM00 1	Microbiology& Biotechnology Laboratory Skills	0	0	8	4			40	60	10 0	10 0
3			II	SC23LM00 2	Chemistry Lab Skills	0	0	8	4				60	10 0	10 0
	School of Sciences		III	SC23LM00 3	Electronics & Electrical Lab Skills	0	0	8	4					10 0	10 0
			IV	SC23LM00 4	Physics Lab Skills	0	0	8	4				60	10 0	10 0
		Horticulture	Ι	AG23HR00 1	Production Technology for Vegetable and Spices	2	0	4	4				60	0	10 0
			II	AG23HR00 2	Production Technology for Fruit and Plantation Crops	2	0	4	4				60	10 0	10 0
4			III	AG23HR00 3	Diseases of Field and Horticultural Crops and their Management –I	2	0	4	4			40	60	10 0	10 0
	School of Agriculture		IV	AG23HR00 4	`Diseases of Field and Horticultural Crops and their Management-II	2	0	4	4			40	60	10 0	10 0
		Agri Business	Ι	AG23AB00 1	Agricultural Finance and Cooperation	2	0	4	4			40	60	10 0	10 0
			II	AG23AB00 2	Agricultural Marketing Trade & Prices	2	0	4	4			40	60	10 0	10 0
			III	AG23AB00 3	Entrepreneurship Development and Business Communication	2	0	4	4				60	10 0	10 0
			IV	AG23AB00 4	Farm Management, Production & Resource Economics	2	0	4	4				60	10 0	10 0
		Basic Accounting	Ι	CM23BA0 01	Financial Accounting	4	0	0	4				60	0	0
	School of	Skills	II	CM23BA0 02	Tally	3	0	2	4				60	0	0
	Commerce & Management		III	CM23BA0 03	Personal Taxation	4	0	0	4				60	0	0
5			IV	CM23BA0 04	Direct and Indirect Taxes	4	0	0	4			40	60	10 0	10 0

		Retail Management &	Ι	MG23RM0 01	Retail Management	4	0	0	4			40	60	10 0	10 0
		Merchandising	II	MG23RM0 02	Merchandising	4	0	0	4			40	60	0	10 0
			III	MG23RM0 03	Supply Chain Management	4	0	0	4				60	0	10 0
			IV	MG23RM0 04	E Business	4	0	0	4				60	0	10 0
		Investment	Ι	MG23IM00 1	Introduction to Financial Markets	4	0	0	4				60	0	10 0
		Management	II	MG23IM00 2	Fundamental & Technical Analysis of Investment	4	0	0	4				60	0	10 0
			III	MG23IM00 3	Risk Management	4	0	0	4			40	60	10 0	10 0
			IV	MG23IM00 4	Introduction to Derivatives	4	0	0	4			40	60	10 0	10 0
		Sketching & Painting	Ι	DN23SP00 1	Sketching-I	0	0	8	4			40		0	10 0
			II	DN23SP00 2	Sketching –II	0	0	8	4			40	60	10 0	10 0
			III	DN23SP00 3	Painting-I	0	0	8	4			40	60	10 0	10 0
			IV	DN23SP00 4	Painting-II	0	0	8	4			40	60	10 0	10 0
6		Interior Design	Ι	DN23ID00 1	Building Materials & Processes	0	0	8	4			40	60	10 0	10 0
	School of		II	DN23ID00 2	Elements of Interior Spaces	0	0	8	4			40	60	10 0	10 0
	Design		III	DN3ID003	Basics of Lighting Design	0	0	8	4			40	60	10 0	10 0
			IV	DN23ID00 4	Building Services	0	0	8	4			40	60	10 0	10 0
		Apparel Design	Ι	DN23AD0 01	Fashion Illustration-I	0	0	8	4			40	60	0	10 0
			II	DN23AD0 02	Dyeing and Printing Techniques	0	0	8	4			40	60	0	10 0
			III	DN23AD0 03	Surface Exploration I	0	0	8	4				60	0	10 0
			IV	DN23AD0 04	Surface Exploration II	0	0	8	4			40	60	0	0
	School of		Ι	PA23DN00 1	Techniques and Theatrical Performance of Dance I	0	0	8	4			40	60	0	0
	Performing Arts	Dance	II	PA23DN00 2	Techniques and Theatrical Performance of Dance II	0	0	8	4			40	60	10 0	10 0

			III	PA23DN00	Techniques and Theatrical	0	0	8	4				40	60		
			IV	3 PA23DN00	Performance of Dance III Techniques and Theatrical	0	0	8	4		 		40	60	0	0 10
			IV	4	Performance of Dance IV	0		0	4				40	00		$\frac{10}{0}$
7			I	PA23MC00	Musical Roots and Theatrical	0	0	8	4				40	60	-	10
		Music	-	1	Performance I	ľ	ľ	Ŭ	· ·				10		0	0
			II	PA23MC00	Musical Roots and Theatrical	0	0	8	4				40	60	10	10
				2	Performance II										0	0
			III	PA23MC00	Musical Roots and Theatrical	0	0	8	4				40	60	10	10
				3	Performance III										0	0
			IV	PA23MC00 4	Musical Roots and Theatrical Performance IV	0	0	8	4				40	60	10 0	10 0
		Theatre	Ι	PA23TR00 1	Basics of Acting Production I	0	0	8	4				40	60	10 0	10 0
			II	PA23TR00 2	Drama Production II	0	0	8	4				40	60	10 0	10 0
			III	PA23TR00 3	Drama Production III	0	0	8	4				40	60	10 0	10 0
			IV	PA23TR00 4	Drama Production IV	0	0	8	4				40	60	10 0	10 0
8		Basic Media Production	Ι	JM23MP00 1	Photography	0	0	8	4				40	60	10 0	10 0
		Techniques	II	JM23MP00 2	Videography	0	0	8	4				40	60	10 0	10 0
	Cabaalaf		III	JM23MP00 3	Script Writing	0	0	8	4				40	60	10 0	10 0
	School of Journalism and Mass		IV	JM23MP00 4	Audio Visual Editing	0	0	8	4						0	10 0
	Communicat ion	Advertising	Ι	JM23AP00 1	Introduction to Advertising	0	0	8	4					60	0	10 0
	1011	and Public Relations	II	JM23AP00 2	Content Creation	0	0	8	4				40	60	10 0	10 0
			III	JM23AP00 3	Introduction to Public Relations	0	0	8	4					60	0	10 0
			IV	JM23AP00 4	Tools and Techniques of Public Relations	0	0	8	4				40	60	10 0	10 0

SANJEEV AGRAWAL GLOBAL EDUCATIONAL UNIVERSITY, BHOPAL

Proposed Scheme & Syllabus For

Bachelor of Science (BSc)

Certificate/Diploma/Degree/Honors Degree/ Research Degree

in

Forensic Science

w.e.f. 2023-24 (According to NEP 2020)



School of Sciences

Bachelor of Science (BSc)

Program Educational Objectives (PEOs) Forensic Science:

PEO-1: Prospective Employment and Career Prospects-Developing the potential for vertical career growth in investigation laboratories, service sectors and related avenues.

PEO-2: Proficiency- Inculcating technical and managerial skills crucial for real time scenarios through the enhancement of problem-solving skills and advanced technical documentation ability.

PEO-3: Affectionate Objective- Grooming the students with technical proficiency to equip them for the emergence of sustainable technology and solutions for prevailing environmental, societal and cultural concerns.

PEO-4: Research Methods-Nurturing the research aptitude to provide solutions for global challenges and abilities to explore hidden potential of the matter.

PEO-5: Continuous Learning-Instilling knowledge and awareness on professional ethics related to crime prevention and evidence analysis and life-long learning through career-oriented courses.

Program Outcomes (POs) Forensic Science:

By the end of the program the students will be able to:

- **PO 1.** Understand concepts of Forensic Science and demonstrate interdisciplinary skills acquired in Forensic biology, Forensic chemistry, Forensic physics, questioned documents and cyber forensics.
- **PO 2.** Demonstrate the Laboratory skills in Forensic biology, Forensic chemistry, Forensic physics, questioned documents and cyber forensics with emphasis on technological aspects
- **PO 3.** Apply the knowledge and skills gained in the fields of Forensic biology, Forensic chemistry, Forensic physics, questioned documents and cyber forensics.
- **PO 4.** Critically analyze shortcomings in scientific analysis of evidences and apply the knowledge gained for protecting the Integrity and confidentiality of evidences to serve justice.
- **PO 5.** Demonstrate comprehensive innovations and skills in the fields of Forensic biology, DNA Fingerprinting, Forensic chemistry, Toxicology, Forensic physics, ballistics, questioned documents and cyber forensics with respect to applications for human welfare.
- PO 6. Apply the knowledge and skills of scientific concepts of forensic science to aid in investigation.
- **PO 7.** Demonstrate communication skills, scientific writing, data collection and interpretation abilities in all the fields of forensic science.
- PO 8. Learn and practice professional skills in handling and analyzing evidences of different fields of forensic science.
- PO 9. Demonstrate thorough knowledge and application of good laboratorypractices in forensic investigative agencies
- **PO 10.** Demonstrate entrepreneurship abilities, innovative thinking, planning, and setting up of and working in different investigative agencies.

Bachelor of Science (BSc)

CURRICULUM COMPONENTS

Com	ponents	Credits
University Come (Table 1)	Ability Enhancement Courses (06 Courses)	12
University Core (Table 1)	Skill Enhancement Courses (06 Courses)	12
Discipline Core Courses (8 Courses) (Table 2	2)	32
Discipline Specific Major Electives (8+4 Con	urses) (Table 3)	32R/48H*
Discipline Specific Minor Electives (6 Cour	rses) (Table 3)	24
Interdisciplinary Minor Electives (04 Course	s) (Table 4)	16
Project/Field Internship/Skill Based Project		28H/44R*
	Fotal Honors Degree) or Research Based Industrial H	172 Project (for

** Note: Any student opting out after I year / II year will obtain undergraduate Certificate/Diploma respectively in the specific discipline subject to mandatory 450hrs (8-10 week) ,10 credit Internship in SUB/Industry/Research organization.

Distribution of credits across all components

	(one course	Core Courses. e = 02 credit) ble 1)	Discipline	Main Fa (as per prei		Interdisciplin ary Minor	Project/ Field	
SEM.	AEC	SEC	Courses (DC) [one course = 4 credit] (Table 2)	Discipline Elect (one cou cred (Table (Major)	ive irse = 4 it)	Elective Tracks (Employment Oriented) (Table 4)	Internship/ Skill Based Projects/Research Projects/industrial Projects	Total
I	2	2	4	(Wiajoi) 4	4	4	3(PBL)	23
II	2	2	4	4	4	4	3(PBL)	23
III	2	2	4	4	4	4	3(PBL)	23
IV	2	2	4	4	4	4	3(PBL)	23
V	2	2	-	4+4	4		4(SIP)	20
VI	2	2	-	4+4	4		4(Minor Project)	20
VII			12				8(Major)	20
VIII*			4	16*			16*(Research/Inte rnship Project)	20(4+16*
Total	12	12	32	32R/32+1 6*H	24	16	28H/28+16*R	172

* Opt either 04 Specialized Courses (For Honor Degree) or Research Based Industrial Project (For Research Degree) Note: PBL- Project Based Learning, SIP- Summer internship Project, SEC- Skill Enhancement Courses, AEC- Ability Enhancement Courses.

]	FIRS	ST S	SEMI	ESTE	R wef	2023-	-24 o	nward	s						
Course Code	Course Title	Ho	Conta ours Weel	per	C r d i t s	E S D u r a t i o	Ir	nternal 4		ntage (T ment (I		ESE	GT	Weigh	ntage (Pr	actical) ToT	GT
						n (H o u r s	MS E	ASG	TA	ATT D	ТоТ						
Refer Table 1	AEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 2	Discipline Core	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR001	Project Based Learning –I	-	- Total	6	3 23	2	-	-	-	-	-	-	-	40	60	100	100 700

			S	EC	OND	SEN	IESTEF	א wef 2	023-24	l onwa	rds						
Course Code	Course Name	Нот	onta urs j Veek	per	C r e d	E S E D			Weight	age (The	eory)				Veightag Practica		GT
		L	Τ	Р	i t s	u r a t]	nternal	Assessm	ient (IA)	1	ESE	GT	CE^	ESE	ТоТ	
						i 0 1 (H 0 u r 5)	MSE	ASG	TA	ATT D	ТоТ						
Refer Table 1	AEC	-	-	-	2	2	-	-	-	-	-	_	_	- 1	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 2	Discipline Core	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR002	Project Based Learning-II	-	-	6	3	2	-	-	-	-	-	-	-	40	60	100	100
]]	[otal	L	23												700

Note: Those students who would like to exit after 1st year and want to obtain Undergraduate Certificate in Performing Arts have to complete mandatory Research internship at SUB/Industry/Research Organization for 450 hours to be completed in 8-10 weeks.

Course Code	Course Name	Но	ontao urs p Week	ber	C r e	E S E			Weigh	tage (The	eory)				Veightag Practical		GT
		L	T	Р	d i t	D u r	Iı	nternal	Assessi	ment (IA))	ES E	GT	CE^	ESE	ТоТ	
					S	a t 0 n (H 0 u r s)	MSE	ASG	ТА	ATTD	ТоТ						
Refer Table 1	AEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 2	Discipline Core	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-		100
SC23PR003	Project Based Learning –III	-	-	6	3	2	-	-	-	-	-	-	-	40	60	100	100

			FOU	IRTE	I SEN	AESTI	ER we	f 2023-	24 onv	vards							
Course Code	Course Name	H	Conta ours j Weel	per	C r e d	E S E D			Weight	age (The	eory)				Veighta Practica		GT
		L	Т	P	i t	u r a		Internal	Assessn	nent (IA)	ESE	ТоТ	CE ^	ESE	ТоТ	
					8	ti MS ASG TA ATT ToT I <thi< th=""><th></th><th></th></thi<>											
Refer Table 1	AEC	-	-	- 1	2	~ /	-	-	-	_	-	-	-	_	-	-	100
Refer Table 1	SEC	-	-	- 1	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 2	Discipline Core	3	1	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR004	Project Based Learning-IV	-	-	6	3	2	-	-	-	-	-	-	-	40	60	100	100
		23												700			

Note: Those students who would like to exit after 2nd year and want to obtain Undergraduate Diploma in Performing Arts have to complete mandatory Research internship at SUB/Industry/Research Organization for 450 hours to be completed in 8-10 weeks.

				FI	FTH S	EME	STER we	f 2023-2	4 onw	vards							
Course Code	Course Name	ŀ	onta Ioui per Wee	rs	C r e d	E S E D			Weigl	ntage (T	heory)				Veighta Practic		GT
		L	T	Р	i t s	u r a t	Iı	nternal A	Assess	ment (IA	A)	ESE	GT	CE ^	ESE	ТоТ	
						i 0 1 (H 0 1 7 5)	MSE	ASG	ТА	ATT D	ТоТ						
Refer Table 1	AEC	-	-	-	2	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR005	Summer Internship / Field Activity	-	- Tota	8	4	3	-	-	-	-	-	-	-	40	60	100	100
		20												600			

		ļ	SIX	тн s	EMES	STER	wef	2023-24	4 onv	vards							
Course Code	Course Name	Ho	onta ours Wee	per	C r e	E S E			Weigh	tage (Th	neory)				eighta ractica		GT
		L	T	Р	d it s	D u r	Ι	nternal A	Assessi	ment (IA	A)	ESE	GT	CE^	ES E	To T	
						a t o n (H o u r s	MS E	ASG	ТА	ATT D	ТоТ						
Refer Table 1	AEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR006	Minor Project	-	-	8	4	3	-	 -	-	-	-	-	-	40	60	100	100
		,	Tota	l	20		-			-	-	-	-	-		-	600

Note: Those who would like to continue their studies in fourth year for obtaining degree of Honors/Research should have completed all the courses up to third year and obtained a minimum CGPA of 7.5.

				SEVI	ENTH	SEN	1ESTE	R wef	2023	-24 or	ward	s						
Course Code	Course Name	Ho	onta ours Wee	per	C r e	E S E D			Weigh	tage (T	heory)					eightag ractica		GT
		L	Т	Р	d it s	u r a	In	iternal 4	Assess	ment (L	A)	ESE	GT	CE^	ES E		To T	
						t 0 1 0 1 0 1 1 1 1 1 1 1 1 1 1	MS E	ASG	ТА	ATT D	ТоТ				Pre Sub	Viv a Voc e		
SC23UC013	Intellectual Property Right & Research Publication Ethics	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	-	100
SC23UC014	Seminar / Publication	-	-	8	4	3	-	-	-	-	-	-	-	40	-	60	100	100
MG23UC015	Project Management	3	-	2	4	3	20	05	05	10	40	60	100	-	-	-	-	100
SC23PR007	Major Project	-	-	16	8	3	-	-	-	-	-	-	-	100	50	50	200	200
		,	Tota	ıl	20													500

		EIGHTI	H SE	EMES	STER	(For	Honor	s) wef 2	2023-	24 on	wards						
Course Code	Course Name	Ho	onta ours Wee	per	C r e	E S E			Weigh	tage (Tl	neory)				eighta ractica		GT
		L	T	Р	d it s	D u r	I	nternal A	Assess	ment (L	A)	ESE	GT	CE^	ES E	To T	
						a t o n (H o u r s	MS E	ASG	ТА	ATT D	ТоТ						
SC23MO001	MOOCs	-	-	8	4)	-	-	-	-	-	-	-	40	60	100	100
Refer Table 3	DSE Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
		,	Tota	1	20												500

OR

		EIGH	ITH	SEN	1ESTE	CR (Fe	or Rese	earch De	gree)	wef 20)23-2	onwa	rds					
Course Code	Course Name	Ho	onta urs Wee	per	C r e	E S E			Weigh	tage (Tl	neory)					eightag ractica		GT
		L	T	Р	d it s	D u r a	I	nternal A	Assessi	ment (IA	A)	ESE	GT	CE^	ES E		To T	
						t i o n (H o u r s	MS E	ASG	ТА	ATT D	ТоТ				Pre Sub	Viv aVo ce		
SC23MO001	MOOCs	-	-	8	4	3	-	-	-	-	-	-	-	40	-	60	100	100
SC23PR008	Research Project/Internship	-	-	32	16	3	-	-	-	-	-	-	-	200	100	100	400	400
		,	Tota	ıl	20													500

Table I Groups for UC Courses 2023-24 onwards

GROUP A	School of Man	agement School of Con	nmer	ce Sc	hool o		4 OIIWA manifies a		ial Sciences	School of Law and Legal S	tudie	s Scl	hool a	of Performi	ng Arts
oncoor m	Seneer of Mu	agement, seneer or con		· ·					,	School of Design.	-tuuit	.s, s e			ng 1 n to,
GROUP B	School of Scie	nces SIRT- Pharmacy	SAG						,	tion, School of Advanced	Com	nuting	y Sch	ool of Eng	ineering
Shoor B	Sender of Sere	nees, sitti Thaimaey,	0/10		1050 01	-		-	l of Agricult		com	paring	5, 501	loor or Eng	meening
Semester	Course Code	Course Name Group A		ONT/ ours/v	veek	Credi ts	Туре	Co	urse Code	Course Name Group B		DNTA urs/w	eek	Credits	Туре
			L	T	Р							1	Р		
Ι	SC23UC001	Environmental Studies and Disaster Management	2	0	0	2	AEC	TR	23UC003	Communication Skills	1	0	2	2	AEC
	AH23UC002	Hindi	2	0	0	2	SEC	CA	23UC004	MS Office	0	0	4	2	SEC
II	TR23UC003	Communication Skills	1	0	2	2	AEC	SC	23UC001	Environmental Studies and Disaster Management	2	0	0	2	AEC
	CA23UC004	MS Office	0	0	4	2	SEC	AF	I23UC002	Hindi	2	0	0	2	SEC
	TR23UC005	Professional Skills-I	0	0	4	2	AEC		23UC007	Quantitative Aptitude and Logical Reasoning	2	0	0	2	AEC
III	MG23UC006	Entrepreneurship Development	2	0	0	2	SEC	ET	23UC008	Design and Critical Thinking	2	0	0	2	SEC
IV	TR23UC007	Quantitative Aptitude and Logical Reasoning	2	0	0	2	AEC	TR	23UC005	Professional Skills-I	0	0	4	2	AEC
	ET23UC008	Design and Critical Thinking	2	0	0	2	SEC	MC	G23UC006	Entrepreneurship Development	2	0	0	2	SEC
	TR23UC009	Professional Skills- II	0	0	4	2	AEC	CM	123UC011	Financial Literacy & Banking	2	0	0	2	AEC
V	MG23UC010	Research Methodology	2	0	0	2	SEC	AF	I23UC012	Indian Culture and Human Values	2	0	0	2	SEC
VI	CM23UC011	Financial Literacy & Banking	2	0	0	2	AEC	TR	23UC009	Professional Skills- II	0	0	4	2	AEC
	AH23UC012	Indian Culture and Human Values	2	0	0	2	SEC	MC	G23UC010	Research Methodology	2	0	0	2	SEC

Note :

*Each Course would be of two Credits (1 Theory and 1 Practical) OR (0 Theory and 2 Practical)

** Each Credit is equivalent to 45 hrs. of student engagement (15 hrs. of Theory teaching in classroom & 30 hrs. of Practical learning / Field Work /Assignment /Self -learning)

School of Sciences (BSc) Discipline Core Courses

Options	Major	Minor
I Nurtur	Forensic Science	Digital Forensic

Semester	Course Code	Discipline Core BSc
Ι	SC23DC001	Basics of Life Sciences
II	SC23DC002	Introduction to Forensic Science
III	SC23DC003	Elements of Modern Physics
IV	SC23DC004	Elements of Statistics
V	SC23UC013	Intellectual Property Rights & Research Publication Ethics
VI	PA23UC014	Seminar / Publications
VII	MG23UC015	Project Management
VIII	PA23PR007	Major Project

Table: 2 Discipline Core Courses 2023-24 onwards

Semester	Course Code	Discipline Core BSc
Ι	SC23DC001	Basics of Life Sciences
II	SC23DC002	Introduction to Forensic Science
III	SC23DC003	Elements of Modern Physics
IV	SC23DC004	Elements of Statistics

Table: 3 Discipline Specific Electives (DSE) (Select Any Two) 2023-24 onwards

Tracks

Sem	Course Code	Forensic Science	Sem	Course Code	Digital Forensic
Ι	SC23FS001	Police Science and Criminal Justice System	Ι	SC23FS013	Computer Fundamentals and Organization
Π	SC23FS002	Document and Fingerprint Examination	Π	SC23FS014	Operating Systems
ш	SC23FS003	Crime Scene Management	III	SC23FS015	Computer Networks
IV	SC23FS004	Forensic Physics and Speaker Identification	IV	SC23FS016	Digital Forensics and Investigation
V	SC23FS005 SC23FS006	Forensic Medicine and Toxicology Forensic Genetics and Anthropology	v	SC23FS017	File System and Storage
VI	SC23FS007 SC23FS008	Forensic Biology and Serology Forensic Ballistics	VI	SC23FS018	Forensics regulations, IT Acts and Cyber Law
	SC23FS009	Forensic Chemistry and Explosives			
VIII	SC23FS010	Instrumental Methods-Physical and Cyber			
VIII	SC23FS011	Quality control, NABL Accreditation and Recent Advancement in Forensic Science			
	SC23FS012	Instrumental Methods-Chemical and Biological			

							able: 3.3													
		I				<u>[rack</u>	<u>Forensi</u>	<u>c Scie</u>	ence						· · · · ·			·		
		Course Title	Contact Hours per Week		oer	C r	ES E Du	Weightage (Theory)								Weightage (Practical)				
Se mes	Course Code		L	Т	Р	e d i t	rati on (Ho urs	Internal Assessment (IA)					ES E	G T	CE ^	ESE	ТоТ	GT		
ter						S)	M SE	A S G	T A	AT TD	To T								
I	SC23FS001	Police Science and Criminal Justice System	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100		
П	SC23FS002	Document and Fingerprint Examination	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100		
III	SC23FS003	Crime Scene Management	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100		
IV	SC23FS004	Forensic Physics and Speaker Identification	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100		
V	SC23FS005 SC23FS006	Forensic Medicine and Toxicology Forensic Genetics and Anthropology	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100		
VI	SC23FS007 SC23FS008	Forensic Biology and Serology Forensic Ballistics	3	-	2	4	3	20	0 5	05	10	40	60	10 0	-	-	-	100		
	SC23FS009	Forensic Chemistry and Explosives	3	-	2	4	3	20	0 5	05	10	40	60	10 0	-	-	-	100		
	SC23FS010	Instrumental Methods-Physical and Cyber	3	-	2	4	3	20	0 5	05	10	40	60	10 0	-	-	-	100		
VII I	SC23FS011	Quality control, NABL Accreditation and Recent Advancement in Forensic Science	3	-	2	4	3	20	0 5	05	10	40	60	10 0	-	-	-	100		
	SC23FS012	Instrumental Methods-Chemical and Biological	3	-	2	4	3	20	0 5	05	10	40	60	10 0	-	-	-	100		

Table 4: Interdisciplinary Minor Elective Courses

(Select any one track) 2023-24 Onwards

S. No	Name of the	Minor	Minor Elective			Н	onta ours Wee	5/	Cre dit s			The	eory		Pr	actio	al	G T
	Offering School	Specialization Track		Code	Course	L	Т	Р		M S E	A S G	T A		T o t a l	C	E S E	ť	
			Ι	ET23DM0 01	Web Development Fundamentals	2	0	4	4						40	60	10 0	10 0
		Digital	II	ET23DM0 02	Introduction to Digital Marketing	2	0	4	4						40		10 0	10 0
		Marketing	III	ET23DM0 03	Search Engine Optimization and Social Media Marketing	2	0	4	4						40		10 0	10 0
1			IV	ET23DA00 4	Web Analytics	2	0	4	4						40		10 0	10 0
	-		Ι	ET23 DA001	Data Analytics Fundamentals	2	0	4	4						40		10 0	10 0
		Data Analytics	II	ET23DA00 2	Business Analytics	2	0	4	4						40		10 0	10 0
	School of Engineering	Data Analytics	III	ET23DA00 3	R Programming	2	0	4	4						40		10 0	10 0
	& Technology		IV	ET23DA00 4	Data Visualization	2	0	4	4						40		10 0	10 0
	8,		Ι	ET23WD0 01	Web Designing Fundamentals	2	0	4	4						40	60	10 0	10 0
		Web Designing	II	ET23WD0 02	Dynamic Website with Java-script	2	0	4	4						40		0	10 0
		Web Designing	III	ET23WD0 03	Introduction to XML	2	0	4	4						40		0	10 0
			IV	ET23WD0 04	Web Application Development using PHP	2	0	4	4						40		10 0	10 0
		_	Ι	ET23PR00 1	Core Java	2	0	4	4						40		10 0	10 0
		Programming	II	ET23PR00 2	Advanced Java	2	0	4	4						40	60	10 0	10 0

			III	ET23PR00 3	Python Programming	2	0	4	4			40	60	10 0	10 0
			IV	ET23PR00 4	Web Application Development	2	0	4	4			40	60	10 0	10 0
		Tours & Travel Management	Ι	AH23TT00 1	Hospitality Etiquettes	2	0	4	4			40	60	10 0	10 0
2	School of Arts Humanities		II	AH23TT00 2	World Heritage Sites of MP	2	0	4	4			40		10 0	10 0
	and Social Sciences		III	AH23TT00 3	Medical Tourism	2	0	4	4			40		10 0	10 0
	Sciences		IV	AH23TT00 4	International Travel Assistance	2	0	4	4			40		10 0	10 0
		Laboratory Management	Ι	SC23LM00 1	Microbiology& Biotechnology Laboratory Skills	0	0	8	4			40		10 0	10 0
3			II	SC23LM00 2	Chemistry Lab Skills	0	0	8	4			40		0	10 0
	School of Sciences		III	SC23LM00 3	Electronics & Electrical Lab Skills	0	0	8	4			40		10 0	10 0
			IV	SC23LM00 4	Physics Lab Skills	0	0	8	4			40		0	10 0
		Horticulture	Ι	AG23HR00 1	Production Technology for Vegetable and Spices	2	0	4	4			40		10 0	10 0
			II	AG23HR00 2	Production Technology for Fruit and Plantation Crops	2	0	4	4			40		10 0	10 0
4			III	AG23HR00 3	Diseases of Field and Horticultural Crops and their Management –I	2	0	4	4			40		10 0	10 0
	School of Agriculture		IV	AG23HR00 4	`Diseases of Field and Horticultural Crops and their Management-II	2	0	4	4			40	60	10 0	10 0
		Agri Business	Ι	AG23AB00 1	Agricultural Finance and Cooperation	2	0	4	4			40	60	10 0	10 0
			II	AG23AB00 2	Agricultural Marketing Trade & Prices	2	0	4	4			40		10 0	10 0
			III	AG23AB00 3	Entrepreneurship Development and Business Communication	2	0	4	4			40		10 0	10 0
			IV	AG23AB00 4	Farm Management, Production & Resource Economics	2	0	4	4			40		10 0	10 0
	School of	Basic Accounting	Ι	CM23BA0 01	Financial Accounting	4	0	0	4			40		10 0	10 0
	Commerce & Management	Skills	II	CM23BA0 02	Tally	3	0	2	4			40	60	10 0	10 0

			III	CM23BA0 03	Personal Taxation	4	0	0	4		40	60	10 0	10 0
5			IV	CM23BA0 04	Direct and Indirect Taxes	4	0	0	4		40	60	10 0	10 0
		Retail Management &	Ι	MG23RM0 01	Retail Management	4	0	0	4		40	60	10 0	10 0
		Merchandising	II	MG23RM0 02	Merchandising	4	0	0	4		40	60	10 0	10 0
			III	MG23RM0 03	Supply Chain Management	4	0	0	4		40		10 0	10 0
			IV	MG23RM0 04	E Business	4	0	0	4			60	10 0	10 0
		Investment	Ι	MG23IM00 1	Introduction to Financial Markets	4	0	0	4			60	10 0	10 0
		Management	II	MG23IM00 2	Fundamental & Technical Analysis of Investment	4	0	0	4		40		10 0	10 0
			III	MG23IM00 3	Risk Management	4	0	0	4			60	10 0	10 0
			IV	MG23IM00 4	Introduction to Derivatives	4	0	0	4		40		10 0	10 0
		Sketching & Painting	Ι	DN23SP00 1	Sketching-I	0	0	8	4			60	10 0	10 0
			II	DN23SP00 2	Sketching –II	0	0	8	4			60	10 0	10 0
			III	DN23SP00 3	Painting-I	0	0	8	4			60	10 0	10 0
			IV	DN23SP00 4	Painting-II	0	0	8	4			60	10 0	10 0
6		Interior Design	I	DN23ID00 1	Building Materials & Processes	0	0	8	4		40		10 0	10 0
	School of Design		II	DN23ID00 2	Elements of Interior Spaces	0	0	8	4			60	10 0	10 0
			III	DN3ID003	Basics of Lighting Design	0	0	8	4			60	10 0	10 0
			IV	DN23ID00 4	Building Services	0	0	8	4		40		10 0	10 0
		Apparel Design	I	DN23AD0 01	Fashion Illustration-I	0	0	8	4		40		10 0	10 0
			II	DN23AD0 02	Dyeing and Printing Techniques	0	0	8	4		40		10 0	10 0
			III	DN23AD0 03	Surface Exploration I	0	0	8	4		40	60	10 0	10 0

			IV	DN23AD0 04	Surface Exploration II	0	0	8	4		40	60	10 0	10 0
			Ι	PA23DN00 1	Techniques and Theatrical Performance of Dance I	0	0	8	4		40	60	_	10 0
			II	PA23DN00 2	Techniques and Theatrical Performance of Dance II	0	0	8	4		40	60	10 0	10 0
		Dance	III	PA23DN00 3	Techniques and Theatrical Performance of Dance III	0	0	8	4		40	60	10 0	10 0
			IV	PA23DN00 4	Techniques and Theatrical Performance of Dance IV	0	0	8	4		40	60	10 0	10 0
7		Music	Ι	PA23MC00 1	Musical Roots and Theatrical Performance I	0	0	8	4		40	60	10 0	10 0
	School of		II	PA23MC00 2	Musical Roots and Theatrical Performance II	0	0	8	4		40	60	10 0	10 0
	Performing Arts		III	PA23MC00 3	Musical Roots and Theatrical Performance III	0	0	8	4		40	60	10 0	10 0
			IV	PA23MC00 4	Musical Roots and Theatrical Performance IV	0	0	8	4			60	10 0	10 0
		Theatre	Ι	PA23TR00 1	Basics of Acting Production I	0	0	8	4		40	60	0	10 0
			II	PA23TR00 2	Drama Production II	0	0	8	4			60	10 0	10 0
			III	PA23TR00 3	Drama Production III	0	0	8	4		40		10 0	10 0
			IV	PA23TR00 4	Drama Production IV	0	0	8	4		40		0	10 0
8		Basic Media Production	Ι	JM23MP00 1	Photography	0	0	8	4			60	0	10 0
		Techniques	II	JM23MP00 2	Videography	0	0	8	4			60	10 0	10 0
	School of		III	JM23MP00 3	Script Writing	0	0	8	4		40		10 0	10 0
	Journalism and Mass		IV	JM23MP00 4	Audio Visual Editing	0	0	8	4		40		0	10 0
	Communicat ion	Advertising	Ι	JM23AP00 1	Introduction to Advertising	0	0	8	4			60	10 0	10 0
		and Public Relations	II	JM23AP00 2	Content Creation	0	0	8	4		40		0	10 0
			III	JM23AP00 3	Introduction to Public Relations	0	0	8	4		40		10 0	10 0
			IV	JM23AP00 4	Tools and Techniques of Public Relations	0	0	8	4		40	60	10 0	10 0

SANJEEV AGRAWAL GLOBAL EDUCATIONAL UNIVERSITY, BHOPAL

Proposed Scheme & Syllabus For

Bachelor of Science (BSc)

Certificate/Diploma/Degree/Honors Degree/ Research Degree

in

Mathematics

w.e.f. 2023-24 (According to NEP 2020)



School of Sciences

Bachelor of Science (BSc)

Program Educational Objectives (PEOs) Mathematics:

PEO-1: Prospective Employment and Career Prospects-Developing the potential for vertical career growth in investigationlaboratories, service sectors and related avenues.

PEO-2: Proficiency- Inculcating technical and managerial skills crucial for real time scenarios through the enhancement of problem-solving skills and advanced technical documentation ability.

PEO-3: Affectionate Objective- Grooming the students with technical proficiency to equip them for the emergence of sustainable technology and solutions for prevailing environmental, societal and cultural concerns.

PEO-4: Research Methods-Nurturing the research aptitude to provide solutions for global challenges and abilities to explore hidden potential of the matter.

PEO-5: Continuous Learning-Instilling knowledge and awareness on professional ethics related to crime prevention and evidence analysis and life-long learning through career-oriented courses.

Program Outcomes (POs) Mathematics:

By the end of the program the students will be able to:

- PO 1. Recall basic facts about mathematics and display knowledge of conventions such as notations, terminology etc.
- **PO 2.** Think in a critical manner and develop problem solving skills which leads in-depth knowledge of Algebra, Calculus, Geometry, differential equations and several other branches of pure and applied mathematics.
- **PO 3.** Apply the knowledge and skills to critical thinking and logical reasoning and capable of recognizing and distinguishing the various aspects of real-life problems.
- PO 4. Analyze the problems, identify and define appropriate computing requirements for its solutions.
- PO 5. Inquire about appropriate questions relating to the Mathematical concepts in different areas of Mathematics.
- **PO 6.** Use appropriate software to solve system of algebraic equation and differential equations.
- PO 7. Work independently and to make an in-depth study of various notions of Mathematics.
- **PO 8.** Develop algorithms and computational skills for solving real world problems.
- **PO 9.** Apply their skills and knowledge in various fields of studies including, science, engineering, commerce and management etc.
- PO 10. Peruse advanced studies and research in pure and applied Mathematical sciences.

Bachelor of Science (BSc)

CURRICULUM COMPONENTS

Comp	oonents	Credits
University Open (Table 1)	Ability Enhancement Courses (06 Courses)	12
University Core (Table 1)	Skill Enhancement Courses (06 Courses)	12
Discipline Core Courses (8 Courses) (Table 2))	32
Discipline Specific Major Electives (8+4 Cou	rses) (Table 3)	32R/48H*
Discipline Specific Minor Electives (6 Cours	ses) (Table 3)	24
Interdisciplinary Minor Electives (04 Courses) (Table 4)	16
Project/Field Internship/Skill Based Project		28H/44R*
	otal Ionors Degree) or Research Based Industrial I	172 Project (for

** Note: Any student opting out after I year / II year will obtain undergraduate Certificate/Diploma respectively in the specific discipline subject to mandatory 450hrs (8-10 week) ,10 credit Internship in SUB/Industry/Research organization.

Distribution of credits across all components

	(one course	Core Courses. e = 02 credit) ble 1)	Discipline	Main Fa (as per prei		Interdisciplin ary Minor	Project/ Field	
SEM.	AEC	SEC	Courses (DC) [one course = 4 credit] (Table 2)	Discipline Elect (one cou cred (Table (Major)	ive irse = 4 it)	Elective Tracks (Employment Oriented) (Table 4)	Internship/ Skill Based Projects/Research Projects/industrial Projects	Total
I	2	2	4	(Wiajoi) 4	4	4	3(PBL)	23
II	2	2	4	4	4	4	3(PBL)	23
III	2	2	4	4	4	4	3(PBL)	23
IV	2	2	4	4	4	4	3(PBL)	23
V	2	2	-	4+4	4		4(SIP)	20
VI	2	2	-	4+4	4		4(Minor Project)	20
VII			12				8(Major)	20
VIII*			4	16*			16*(Research/Inte rnship Project)	20(4+16*
Total	12	12	32	32R/32+1 6*H	24	16	28H/28+16*R	172

* Opt either 04 Specialized Courses (For Honor Degree) or Research Based Industrial Project (For Research Degree) Note: PBL- Project Based Learning, SIP- Summer internship Project, SEC- Skill Enhancement Courses, AEC- Ability Enhancement Courses.

]	FIRS	ST S	SEMI	ESTE	R wef	2023-	-24 o	nward	S						
Course Code	Course Title	Ho	onta ours j Weel	per	C r e d i	E S E D u	Ir			ntage (T ment (L		ESE	GT	Weigh	ntage (Pra	actical) ToT	GT
					S	r a t i o	MS ASG TA ATT ToT E D										
						n (H o u r s)	MS ASG TA ATT ToT E D D D D										
Refer Table 1	AEC	-	-	-	2	2	-	-	-	-	-	_	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	_	-	-	-	-	-	-	-	_	100
Refer Table 2	Discipline Core	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	I	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR001	Project Based Learning –I	-	-	6	3	2	-	-	-	-	-	-	-	40	60	100	100
			Tota	l	23												700

						1		R wef 2									
Course Code	Course Name	Hou	onta urs j Veek	per «	C r e d i	E S E D u		nternal		age (The		ESE	GT		Veightag Practica ESE		GT
			1	ſ	t s	r a t i	1	nternar	A5565511	ient (IA)		LSE	GI	CE	ESE	101	
						O N (H O U r S	MSE	ASG	ТА	ATT D	ТоТ						
Refer Table 1	AEC	-	-	-	2) 2	_	_		_	_	_	_	_	_	_	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 2	Discipline Core	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR002	Project Based Learning-II	-	-	6	3	2	-	-	-	-	-	-	-	40	60	100	100
]	[otal	l	23												700

Note: Those students who would like to exit after 1st year and want to obtain Undergraduate Certificate in Performing Arts have to complete mandatory Research internship at SUB/Industry/Research Organization for 450 hours to be completed in 8-10 weeks.

			,	THI	RD S	EMF	STER	wef 20)23-24	l onwai	rds						
Course Code	Course Name	Ho	onta ours p Week	oer	C r e	E S E D			Weigh	itage (Th	eory)				Veightag Practical		GT
		L	T	P	d i t s	u r	I	nternal	Assess	ment (IA)	ES E	GT	CE^	ESE	ТоТ	
					3	a t 0 n (H 0 u r s)	MSE	ASG	ТА	ATTD	ТоТ						
Refer Table 1	AEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 2	Discipline Core	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-		100
SC23PR003	Project Based Learning –III	-	-	6	3	2	-	-	-	-	-	-	-	40	60	100	100
		'	Total		23												700

FOURTH SEMESTER wef 2023-24 onwards

Course Code	Course Name	Н	Conta ours j Weel	per	C r e d	E S E D			Weight	age (The	eory)				Veighta; Practica		GT
		L	Т	Р	i t s	u r		Internal	Assessm	ent (IA))	ESE	ТоТ	CE ^	ESE	ТоТ	
					3	a ti o n (H o u r	ti MS ASG TA ATT ToT o E D D n ((H O O O O O O O O O O O O O O O O O O										
Refer Table 1	AEC	-	-	-	2	2	- 1	-	-	-	-	-	-	_	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 2	Discipline Core	3	1	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3							-	-	-	-	100
SC23PR004	Project Based Learning-IV	-	-	6	3	2	-	-	-	-	-	-	-	40	60	100	100
			Tota	l	23										700		

Note: Those students who would like to exit after 2nd year and want to obtain Undergraduate Diploma in Performing Arts have to complete mandatory Research internship at SUB/Industry/Research Organization for 450 hours to be completed in 8-10 weeks.

FIFTH SEMESTER wef 2023-24 onwards

Course Code	Course Name	I	onta Jour per Wee T	rs	C r e d i t s	ESEDUration(Hours)	In MSE	nternal ASG		ment (IA ATT D		ESE	GT		Veighta Practic ESE		GT
Refer Table 1	AEC	-	-	-	2	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-						-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR005	Summer Internship / Field Activity	-	-	8	4	3	-	-	-	-	-	-	-	40	60	100	100
		'	Tota	.l	20												600

SIXTH SEMESTER wef 2023-24 onwards

Course Code	Course Name	Ho	onta ours Wee	per	C r e d	E S E D			Weigh	tage (Tł	ieory)				eighta ractica		GT
		L	T	Р	it s	u r	I	nternal A	Assessi	ment (L	A)	ESE	GT	CE^	ES E	To T	
						a t i o n (H o u r s)	i E D o 0 0 n 0 (0 H 0 v 0 r 0 s 0) 0										
Refer Table 1	AEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR006	Minor Project	-	-	8	4	3	-	-	-	-	-	-	-	40	60	100	100
		· ·	Tota	1	20							·	-	·	•	•	600

Note: Those who would like to continue their studies in fourth year for obtaining degree of Honors/Research should have completed all the courses up to third year and obtained a minimum CGPA of 7.5.

SEVENTH SEMESTER wef 2023-24 onwards

Course Code	Course Name	Ho	onta ours Wee	per	C r e d	E S E D			Weigh	tage (T	heory)				eightag ractica		GT	
		L	Т	Р	it s	u r a	In	iternal .	Assess	ment (L	A)	ESE	GT	CE^	ES E		To T	
						t i o n (H o u r s)	MS E	ASG	ТА	ATT D	ТоТ				Pre Sub	Viv a Voc e		
SC23UC013	Intellectual Property Right & Research Publication Ethics	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	-	100
SC23UC014	Seminar / Publication	-	-	8	4	3	-	-	-	-	-	-	-	40	-	60	100	100
MG23UC015	Project Management	3	-	2	4	3	20	05	05	10	40	60	100	-	-	-	-	100
SC23PR007	Major Project	-	-	16	8	3	-	-	-	-	-	-	-	100	50	50	200	200
	·	,	Tota	ıl	20			· ·			•							500

EIGHTH SEMESTER (For Honors) wef 2023-24 onwards

Course Code	Course Name	Ho	onta urs Weel	per	C r e	E S E			Weigh	tage (Tł	ieory)				eighta ractica		GT
		L	Т	Р	d it s	D u r	Iı	nternal	Assessi	ment (IA	A)	ESE	GT	CE^	ES E	To T	
						a t o n (H o u r s	MS ASG TA ATT ToT E D D D H I I I H I I I										
SC23MO001	MOOCs	-	-	8	4	3	-	-	-	-	-	-	-	40	60	100	100
Refer Table 3	DSE Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Track – I	-	-	-	4	3					-	-	-	-	-	-	100
Refer Table 3	DSE Track – I	-	-	-	4	3						-	-	-	-	-	100
Refer Table 3	DSE Track – I	-	-	-	4	3						-	-	-	-	-	100
		r	Fota	1	20												500

OR

			EIGHTH SEM	IESTE	R (Fo	or Research Degree) wef 2023-2 onwards		
Cou	ırse Code	Course Name	Contact	С	E	Weightage (Theory)	Weightage	GT
			Hours per	r	S F		(Practical)	
			Week	e	E D			
				a	D			
					u			

		L	Τ	P	it	r	I	nternal A	Assessi	nent (IA	A)	ESE	GT	CE^	EG		То	
					S	a t i									ES E		Т	
						o n (H o u r s)	MS E	ASG	ТА	ATT D	ТоТ				Pre Sub	Viv aVo ce		
SC23MO001	MOOCs	-	-	8	4	3	-	-	-	-	-	-	-	40	-	60	100	100
SC23PR008	Research Project/Internship	-	-	32	16	3	-	-	-	-	-	-	-	200	100	100	400	400
		,	Tota	l	20													500

Table I Groups for UC Courses 2023-24 onwards

GROUP A	School of Management, School of Commerce, School of Arts Humanities and Social Sciences, School of Law and Legal Studies, School of Performing Arts,
	School of Journalism and Mass Communication, School of Design.
GROUP B	School of Sciences, SIRT- Pharmacy, SAGE College of Nursing, School of Computer Application, School of Advanced Computing, School of Engineering
	and Technology, School of Agriculture

Semester	Course Code	Course Name	C	ONT	ACT	Credi	Туре	Course Code	Course Name	CC	ONTA	CT	Credits	Туре
		Group A	h	ours/v	veek	ts			Group B	ho	urs/w	eek		
		-	L	T	Р				-	L	Т	Р		
Ι	SC23UC001	Environmental	2	0	0	2	AEC	TR23UC003	Communication Skills	1	0	2	2	AEC
		Studies and Disaster												
		Management												
	AH23UC002	Hindi	2	0	0	2	SEC	CA23UC004	MS Office	0	0	4	2	SEC
	TR23UC003	Communication	1	0	2	2	AEC	SC23UC001	Environmental Studies	2	0	0	2	AEC
		Skills							and Disaster					
II									Management					
	CA23UC004	MS Office	0	0	4	2	SEC	AH23UC002	Hindi	2	0	0	2	SEC
	TR23UC005	Professional Skills-I	0	0	4	2	AEC	TR23UC007	Quantitative Aptitude	2	0	0	2	AEC
									and Logical Reasoning					
III	MG23UC006	Entrepreneurship	2	0	0	2	SEC	ET23UC008	Design and Critical	2	0	0	2	SEC
		Development							Thinking					
	TR23UC007	Quantitative	2	0	0	2	AEC	TR23UC005	Professional Skills-I	0	0	4	2	AEC
		Aptitude and Logical												
IV		Reasoning												
	ET23UC008	Design and Critical	2	0	0	2	SEC	MG23UC006	Entrepreneurship	2	0	0	2	SEC
		Thinking							Development					
	TR23UC009	Professional Skills-	0	0	4	2	AEC	CM23UC011	Financial Literacy &	2	0	0	2	AEC
		II							Banking					
V	MG23UC010	Research	2	0	0	2	SEC	AH23UC012	Indian Culture and	2	0	0	2	SEC
		Methodology					~		Human Values					~
	CM23UC011	Financial Literacy &	2	0	0	2	AEC	TR23UC009	Professional Skills- II	0	0	4	2	AEC
VI		Banking					-	• • •						-
	AH23UC012	Indian Culture and	2	0	0	2	SEC	MG23UC010	Research Methodology	2	0	0	2	SEC
		Human Values	-	ľ	Ĭ	-	SEC	1102300010	researen memodology	-	ľ	ľ	-	
L		i i uniun vuiues								L				

Note :

*Each Course would be of two Credits (1 Theory and 1 Practical) OR (0 Theory and 2 Practical)

** Each Credit is equivalent to 45 hrs. of student engagement (15 hrs. of Theory teaching in classroom & 30 hrs. of Practical learning / Field Work /Assignment /Self -learning)

School of Sciences (BSc)

Discipline Core Courses

Semester	Course Code	Discipline Core BSc
----------	-------------	---------------------

Ι	SC23DC001	Basics of Life Sciences
II	SC23DC002	Introduction to Forensic Science
III	SC23DC003	Elements of Modern Physics
IV	SC23DC004	Elements of Statistics
V	SC23UC013	Intellectual Property Rights & Research Publication Ethics
VI	PA23UC014	Seminar / Publications
VII	MG23UC015	Project Management
VIII	PA23PR007	Major Project

Table: 2 Discipline Core Courses 2023-24 onwards

Semester	Course Code	Discipline Core BSc
Ι	SC23DC001	Basics of Life Sciences
II	SC23DC002	Introduction to Forensic Science
III	SC23DC003	Elements of Modern Physics
IV	SC23DC004	Elements of Statistics

Table: 3 Discipline Specific Electives (DSE) (Select Any Two) 2023-24 onwards Tracks

Sem	Course Code	Physics	Course Code	Mathematics
Ι	SC23PH001	Mathematical Physics	SC23MA001	Algebra and Calculus - I
Π	SC23PH002	Mechanics	SC23MA002	Algebra and Calculus - II
ш	SC23PH003	Thermal Physics and Statistical Mechanics	SC23MA003	Differential Equations
IV	SC23PH004	Wave and Optics	SC23MA004	Discrete Mathematics
v	SC23PH005	Classical Electrodynamics	SC23MA005	Real Analysis
v	SC23PH006	Electricity, Magnetism and Electromagnetism	SC23MA006	Integral Calculus and Vector Analysis
VI	SC23PH007 SC23PH008	Quantum Mechanics Plasma Physics	SC23MA007 SC23MA008	Linear Algebra Probability and Statistics
	SC23PH009	Solid State Physics	SC23MA009	Complex Analysis
	SC23PH010	Nuclear, Atomic and Molecular Physics	SC23MA010	Numerical Methods
VIII	SC23PH011	Analog & Digital Circuits	SC23MA011	Linear Programming and Optimization Techniques
	SC23PH012	Elements of Condensed Matter Physics	SC23MA012	Mathematical Transforms and Techniques

			_			Т	rack	Phys	ics									
			Н	onta lour [.] We	S		E S E D		V	Veigh	tage (T	heory)			Weighta Practica		
Sem ester	Course Code	Course Title				C r e d	u r a t i o	Int	ernal A	Assess	sment (IA)						GT
I			L	Т	Р	i t s	n (H o u r s)	M SE	AS G	T A	AT TD	To T	ES E	G T	CE	ESE	ТоТ	
I	SC23PH001	Mathematical Physics	4	-	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
п	SC23PH002	Mechanics	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
ш	SC23PH003	Thermal Physics and Statistical Mechanics	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
IV	SC23PH004	Wave and Optics	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23PH005	Classical Electrodynamics	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
V	SC23PH006	Electricity and Magnetism Electromagnetism	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
VI	SC23PH007 SC23PH008	Quantum Mechanics Plasma Physics	4	-	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23PH009	Solid State Physics	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23PH010	Nuclear, Atomic and Molecular Physics	4	-	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
VIII	SC23PH011	Analog & Digital Circuits	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23PH012	Elements of Condensed Matter Physics	4	-	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100

						Tra	ck M	ather	natics	5								
			H	onta lour · We	s		E S E D		,	Weigh	tage (T	Theory)			Veighta Practica		
Seme ster	Course Code	Course Title				C r e d	u r a t i o	Int	ernal	Assess	sment (IA)						GT
			L	Τ	Р	i t s	n (H o u r s)	M SE	SE G A TD T 20 05 05 10 40				ES E	G T	CE ^	ESE	ТоТ	
Ι	SC23MA001	Algebra and Calculus - I	3	1	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
П	SC23MA002	Algebra and Calculus - II	3	1	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
ш	SC23MA003	Differential Equations	3	1	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
IV	SC23MA004	Discrete Mathematics	3	1	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
V	SC23MA005 SC23MA006	Real Analysis	3	1	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
VI	SC23MA007 SC23MA008	Integral Calculus and Vector Analysis	3	1	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23MA009	Linear Algebra Probability and Statistics	3	1	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23MA010	Complex Analysis	3	1	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
VIII	SC23MA011	Numerical Methods	3	1	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23MA012	Linear Programming and Optimization Techniques	3	1	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100

Table 4: Interdisciplinary Minor Elective Courses

(Select any one track) 2023-24 Onwards

S. No	Name of the	Minor	Minor Elective			Н	onta our: Wee	s /	Cre dit s			The	ory			Pr	actio	cal	G T
	Offering School	Specialization Track		Code	Course	L	Т	Р		M S E	A S G	T A	A T T D	E S E	T o t a l	C E	E S E	T O t a l	
			Ι	ET23DM0 01	Web Development Fundamentals	2	0	4	4							40	60	10 0	10 0
		Digital	II	ET23DM0 02	Introduction to Digital Marketing	2	0	4	4							40	60	10 0	10 0
		Marketing	III	ET23DM0 03	Search Engine Optimization and Social Media Marketing	2	0	4	4									10 0	10 0
1			IV	ET23DA00 4	Web Analytics	2	0	4	4							40	60	10 0	10 0
			Ι	ET23 DA001	Data Analytics Fundamentals	2	0	4	4								60	10 0	10 0
		Data Analytics	II	ET23DA00 2	Business Analytics	2	0	4	4							40	60	10 0	10 0
	School of	Data Analytics	III	ET23DA00 3	R Programming	2	0	4	4								60	10 0	10 0
	Engineering &		IV	ET23DA00 4	Data Visualization	2	0	4	4							40	60	10 0	10 0
	Technology		Ι	ET23WD0 01	Web Designing Fundamentals	2	0	4	4								60	0	10 0
		Web Designing	II	ET23WD0 02	Dynamic Website with Java-script	2	0	4	4							40	60	10 0	10 0
		Web Designing	III	ET23WD0 03	Introduction to XML	2	0	4	4								60	10 0	10 0
			IV	ET23WD0 04	Web Application Development using PHP	2	0	4	4								60	0	10 0
			Ι	ET23PR00 1	Core Java	2	0	4	4								60	0	10 0
		Programming	II	ET23PR00 2	Advanced Java	2	0	4	4							40	60	10 0	10 0
			III	ET23PR00 3	Python Programming	2	0	4	4							40	60	10 0	10 0

			IV	ET23PR00 4	Web Application Development	2	0	4	4			40	60	10 0	10 0
		Tours & Travel Management	Ι	AH23TT00 1	Hospitality Etiquettes	2	0	4	4			40	60	10 0	10 0
2	School of Arts		II	AH23TT00 2	World Heritage Sites of MP	2	0	4	4			40	60	10 0	10 0
	Humanities and Social		III	AH23TT00 3	Medical Tourism	2	0	4	4			40	60	10 0	10 0
	Sciences		IV	AH23TT00 4	International Travel Assistance	2	0	4	4			40	60	10 0	10 0
		Laboratory Management	Ι	SC23LM00 1	Microbiology& Biotechnology Laboratory Skills	0	0	8	4			40	60	10 0	10 0
3			II	SC23LM00 2	Chemistry Lab Skills	0	0	8	4				60	10 0	10 0
	School of Sciences		III	SC23LM00 3	Electronics & Electrical Lab Skills	0	0	8	4					10 0	10 0
			IV	SC23LM00 4	Physics Lab Skills	0	0	8	4				60	10 0	10 0
		Horticulture	Ι	AG23HR00 1	Production Technology for Vegetable and Spices	2	0	4	4				60	0	10 0
			II	AG23HR00 2	Production Technology for Fruit and Plantation Crops	2	0	4	4				60	10 0	10 0
4			III	AG23HR00 3	Diseases of Field and Horticultural Crops and their Management –I	2	0	4	4			40	60	10 0	10 0
	School of Agriculture		IV	AG23HR00 4	`Diseases of Field and Horticultural Crops and their Management-II	2	0	4	4			40	60	10 0	10 0
		Agri Business	Ι	AG23AB00 1	Agricultural Finance and Cooperation	2	0	4	4			40	60	10 0	10 0
			II	AG23AB00 2	Agricultural Marketing Trade & Prices	2	0	4	4			40	60	10 0	10 0
			III	AG23AB00 3	Entrepreneurship Development and Business Communication	2	0	4	4				60	10 0	10 0
			IV	AG23AB00 4	Farm Management, Production & Resource Economics	2	0	4	4				60	10 0	10 0
		Basic Accounting	Ι	CM23BA0 01	Financial Accounting	4	0	0	4				60	0	0
	School of	Skills	II	CM23BA0 02	Tally	3	0	2	4				60	0	0
	Commerce & Management		III	CM23BA0 03	Personal Taxation	4	0	0	4				60	0	0
5			IV	CM23BA0 04	Direct and Indirect Taxes	4	0	0	4			40	60	10 0	10 0

		Retail Management &	Ι	MG23RM0 01	Retail Management	4	0	0	4			40	60	10 0	10 0
		Merchandising	II	MG23RM0 02	Merchandising	4	0	0	4			40	60	0	10 0
			III	MG23RM0 03	Supply Chain Management	4	0	0	4				60	0	10 0
			IV	MG23RM0 04	E Business	4	0	0	4				60	0	10 0
		Investment	Ι	MG23IM00 1	Introduction to Financial Markets	4	0	0	4				60	0	10 0
		Management	II	MG23IM00 2	Fundamental & Technical Analysis of Investment	4	0	0	4				60	0	10 0
			III	MG23IM00 3	Risk Management	4	0	0	4			40	60	10 0	10 0
			IV	MG23IM00 4	Introduction to Derivatives	4	0	0	4			40	60	10 0	10 0
		Sketching & Painting	Ι	DN23SP00 1	Sketching-I	0	0	8	4			40		0	10 0
			II	DN23SP00 2	Sketching –II	0	0	8	4			40	60	10 0	10 0
			III	DN23SP00 3	Painting-I	0	0	8	4			40	60	10 0	10 0
			IV	DN23SP00 4	Painting-II	0	0	8	4			40	60	10 0	10 0
6		Interior Design	Ι	DN23ID00 1	Building Materials & Processes	0	0	8	4			40	60	10 0	10 0
	School of		II	DN23ID00 2	Elements of Interior Spaces	0	0	8	4			40	60	10 0	10 0
	Design		III	DN3ID003	Basics of Lighting Design	0	0	8	4			40	60	10 0	10 0
			IV	DN23ID00 4	Building Services	0	0	8	4			40	60	10 0	10 0
		Apparel Design	Ι	DN23AD0 01	Fashion Illustration-I	0	0	8	4			40	60	0	10 0
			II	DN23AD0 02	Dyeing and Printing Techniques	0	0	8	4			40	60	0	10 0
			III	DN23AD0 03	Surface Exploration I	0	0	8	4				60	0	10 0
			IV	DN23AD0 04	Surface Exploration II	0	0	8	4			40	60	0	0
	School of		Ι	PA23DN00 1	Techniques and Theatrical Performance of Dance I	0	0	8	4			40	60	0	0
	Performing Arts	Dance	II	PA23DN00 2	Techniques and Theatrical Performance of Dance II	0	0	8	4			40	60	10 0	10 0

			III	PA23DN00	Techniques and Theatrical	0	0	8	4					•	40	60		10
				3	Performance of Dance III												0	0
			IV	PA23DN00	Techniques and Theatrical	0	0	8	4					•	40	60	10	10
_				4	Performance of Dance IV												0	0
7			Ι	PA23MC00	Musical Roots and Theatrical	0	0	8	4					•	40	60	10	10
		Music		1	Performance I												0	0
			II	PA23MC00	Musical Roots and Theatrical	0	0	8	4						40	60	10	10
				2	Performance II			-									0	0
			III	PA23MC00	Musical Roots and Theatrical	0	0	8	4						40	60	10	10
				3	Performance III				<u> </u>		_					6.0	0	0
			IV	PA23MC00	Musical Roots and Theatrical	0	0	8	4						40	60	10	10
				4	Performance IV										4.0	60	0	0
		m) .	Ι	PA23TR00	Basics of Acting Production I	0	0	8	4						40	60	10	10
		Theatre		1	0				<u> </u>							6.0	0	0
			II	PA23TR00	Drama Production II	0	0	8	4						40	60	10	10
				2											4.0	60	0	0
			III	PA23TR00 3	Drama Production III	0	0	8	4						40	60	10 0	10 0
			IV	PA23TR00 4	Drama Production IV	0	0	8	4					ŀ	40	60	10 0	10 0
8		Basic Media	Ι	4 JM23MP00	Photography	0	0	8	4			-	-		40	60	10	10
0		Production	I	JM25MP00	Photography			0	4						40	00	0	0
		Techniques	II	JM23MP00	Videography	0	0	8	4	-					40	60	10	10
		roomiquoo	11	2	videography			0	Т						10	00	0	0
			III		Script Writing	0	0	8	4	-					40	60	10	10
			111	3	Script Writing		Ŭ	0							10	00	0	0
	School of		IV	JM23MP00	Audio Visual Editing	0	0	8	4						40	60	10	10
	Journalism			4	Thans visual Balting	ľ	ľ	Ŭ								00	0	0
	and Mass		I	JM23AP00	Introduction to Advertising	0	0	8	4						40	60	10	10
	Communicat	Advertising	-	1	introduction to mayor doing	ľ	ľ	Ŭ								00	0	0
	ion	and Public	II	JM23AP00	Content Creation	0	0	8	4						40	60	10	10
		Relations		2		ľ	Ē	-									0	0
			III		Introduction to Public Relations	0	0	8	4			\neg	\neg		40	60	10	10
				3		ľ	ľ										0	0
			IV	JM23AP00	Tools and Techniques of Public	0	0	8	4	-+		\neg	\neg		40	60	10	10
				4	Relations			-									0	0
																	-	-
1		i I				I	I		I									

SANJEEV AGRAWAL GLOBAL EDUCATIONAL UNIVERSITY, BHOPAL

Proposed Scheme & Syllabus For

Bachelor of Science (BSc)

Certificate/Diploma/Degree/Honors Degree/ Research Degree

in

Microbiology

w.e.f. 2023-24 (According to NEP 2020)



School of Sciences

Bachelor of Science (BSc)

Program Educational Objectives (PEOs) (Microbiology):

PEO-1: Prospective Employment and Career Prospects-Developing the potential for vertical career growth in Biotech-oriented industries, service sectors and related avenues.

PEO-2: Proficiency- Inculcating technical and managerial skills crucial for real time scenarios through the enhancement of problem-solving skills and advanced technical documentation ability.

PEO-3: Affectionate Objective- Grooming the students with technical proficiency to equip them for the emergence of sustainable technology and solutions for prevailing environmental, societal and cultural concerns.

PEO-4: Research Methods-Nurturing the research aptitude to provide solutions for global challenges and abilities to explore hidden potential of the matter

PEO-5: Continuous Learning-Instilling knowledge and awareness on professional ethics, bioethical and health issues, intellectual property rights and life-long learning through career oriented courses

Program Outcomes (POs) (Microbiology):

By the end of the program the students will be able to:

- **PO 1.** Understand concepts of Biotechnology/Microbiology and demonstrate interdisciplinary skills acquired in cell biology, genetics, biochemistry, and molecular biology.
- **PO 2.** Demonstrate the Laboratory skills in cell biology, basic and applied microbiology with emphasis on technological aspects
- **PO 3.** Apply the knowledge and skills gained in the fields of plant biotechnology, animal biotechnology and microbial technology in pharma, food, agriculture, beverages, herbal and nutraceutical industries.
- **PO 4.** Critically analyze environmental issues and apply the biotechnology knowledge gained for conserving the environment and resolving environmental problems.
- **PO 5.** Demonstrate comprehensive innovations and skills in the fields of biomolecules, cell and organelles, molecular biology, bioprocess engineering and genetic engineering of plants, microbes, and animals with respect to applications for human welfare.
- **PO 6.** Apply the knowledge and skills of immunology, bioinformatics, computational modelling of proteins, drug design and simulations to test models and aid in drug discovery.
- **PO 7.** Demonstrate communication skills, scientific writing, data collection and interpretation abilities in all the fields of biotechnology.
- **PO 8.** Learn and practice professional skills in handling microbes, animals and plants and demonstrate the ability to identify ethical issues related to recombinant DNA technology, genetic engineering, animals handling, intellectual property rights, biosafety, and biohazards.
- **PO 9.** Demonstrate thorough knowledge and application of good laboratory and good manufacturing practices in biotech industries
- PO 10. Demonstrate entrepreneurship abilities, innovative thinking, planning, and setting up of small-scale enterprises or CROs

Bachelor of Science (BSc)

CURRICULUM COMPONENTS

Com	ponents	Credits
University Come (Table 1)	Ability Enhancement Courses (06 Courses)	12
University Core (Table 1)	Skill Enhancement Courses (06 Courses)	12
Discipline Core Courses (8 Courses) (Table 2	2)	32
Discipline Specific Major Electives (8+4 Con	urses) (Table 3)	32R/48H*
Discipline Specific Minor Electives (6 Cour	rses) (Table 3)	24
Interdisciplinary Minor Electives (04 Course	s) (Table 4)	16
Project/Field Internship/Skill Based Project		28H/44R*
	Fotal Honors Degree) or Research Based Industrial H	172 Project (for

** Note: Any student opting out after I year / II year will obtain undergraduate Certificate/Diploma respectively in the specific discipline subject to mandatory 450hrs (8-10 week) ,10 credit Internship in SUB/Industry/Research organization.

Distribution of credits across all components

	(one course	Core Courses. e = 02 credit) ble 1)	Discipline	Main Fa (as per prei		Interdisciplin ary Minor	Project/ Field	
SEM.	AEC	SEC	Courses (DC) [one course = 4 credit] (Table 2)	Discipline Elect (one cou cred (Table (Major)	ive irse = 4 it)	Elective Tracks (Employment Oriented) (Table 4)	Internship/ Skill Based Projects/Research Projects/industrial Projects	Total
I	2	2	4	(Wiajor) 4	4	4	3(PBL)	23
II	2	2	4	4	4	4	3(PBL)	23
III	2	2	4	4	4	4	3(PBL)	23
IV	2	2	4	4	4	4	3(PBL)	23
V	2	2	-	4+4	4		4(SIP)	20
VI	2	2	-	4+4	4		4(Minor Project)	20
VII			12				8(Major)	20
VIII*			4	16*			16*(Research/Inte rnship Project)	20(4+16*
Total	12	12	32	32R/32+1 6*H	24	16	28H/28+16*R	172

* Opt either 04 Specialized Courses (For Honor Degree) or Research Based Industrial Project (For Research Degree) Note: PBL- Project Based Learning, SIP- Summer internship Project, SEC- Skill Enhancement Courses, AEC- Ability Enhancement Courses.

]	FIRS	ST S	SEMI	ESTE	R wef	2023-	24 o	nward	s						
Course Code	Course Title	Ho	Conta ours Weel	per	C r d i t s	E S D u r a t i o	Weightage (Theory) Internal Assessment (IA) ESE GT MS ASG TA ATT ToT								ntage (Pr	actical) ToT	GT
						n (H o u r s	MS E	ASG	ТА	ATT D	ТоТ						
Refer Table 1	AEC	-	-	-	2	2	-	_	- 1	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 2	Discipline Core	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR001	Project Based Learning –I	-	- Total	6	3 23	2	-	-	-	-	-	-	-	40	60	100	100 700

			S	ECO	OND	SEN	IESTEF	k wef 2	023-24	l onwa	rds						
Course Code	Course Name	Hou V	onta urs p Veek	per K	C r e d	E S E D				age (The	• <i>·</i> ·				Weightag Practica	I)	GT
			Τ	Р	t s	u r a t i	I	nternal	Assessm	ent (IA)		ESE	GT	CE^	ESE	ТоТ	
						0 n (H 0 u r s	MSE	ASG	ТА	ATT D	ТоТ						
Refer Table 1	AEC	-	-	-	2	2	-	_	-	-	-	-	-	-	-	_	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 2	Discipline Core	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR002	Project Based Learning-II	-	-	6	3	2	-	-	-	-	-	-	-	40	60	100	100
]	otal	l	23												700

Note: Those students who would like to exit after 1st year and want to obtain Undergraduate Certificate in Performing Arts have to complete mandatory Research internship at SUB/Industry/Research Organization for 450 hours to be completed in 8-10 weeks.

		-	r	ГНΙ	RD S	EME	STER	wef 20	23-24	l onwar	ďs			-			_
Course Code	Course Name	Но	Contact Iours per Week		C r e	E S E			Weigh	tage (Th	eory)				Veightag Practical		GT
		L	T	Р	d i t	D u r	Iı	nternal	Assess	ment (IA)	ES E	GT	CE^	ESE	ТоТ	
					S	a t o n (H o u r s)	MSE	ASG	ТА	ATTD	ТоТ						
Refer Table 1	AEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 2	Discipline Core	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-		100
SC23PR003	Project Based Learning –III	-	-	6	3	2	-	-	-	-	-	-	-	40	60	100	100
			23												700		

			FOU	RTE	I SEN	AESTI	ER we	f 2023-	24 onv	vards							
Course Code	Course Name	Н	Conta ours j Weel	per	C r e d	E S E D			Weight	age (Th	eory)				Veighta Practica		GT
		L	Т	Р	i t s	u r		Internal	Assessn	nent (IA)	ESE	ТоТ	CE ^	ESE	ТоТ	l
					3	a ti o n (H o u r	MS E	ASG	TA	ATT D	ТоТ	-					
Refer Table 1	AEC	-	-	-	2	s) 2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 2	Discipline Core	3	1	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR004	Project Based Learning-IV	-	-	6	3	2	-	-	-	-	-	-	-	40	60	100	100
			Tota	1	23												700

Note: Those students who would like to exit after 2nd year and want to obtain Undergraduate Diploma in Performing Arts have to complete mandatory Research internship at SUB/Industry/Research Organization for 450 hours to be completed in 8-10 weeks.

				FI	FTH S	EME	STER we	ef 2023-2	4 onw	vards							
Course Code	Course Name	ŀ	onta Ioui per Wee T	rs k	C r e d i t s	E S D u r a		nternal		htage (T ment (IA		ESE	GT		Veighta Practic ESE		GT
						t i o n (H o u r s	MSE	ASG	ТА	ATT D	ТоТ						
Refer Table 1	AEC	- 1	-	-	2	3	-	-	-	-	-	_	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR005	Summer Internship / Field Activity	-	-	8	4	3	-	-	-	-	-	-	-	40	60	100	100
		· ·	Tota	1	20												600

		1	SIX	TH S	EMES	TER	wef	2023-24	4 onv	vards				_			
Course Code	Course Name	Ho	Contact Hours per Week			E S E			Weigh			eighta ractica		GT			
		L	T	Р	d it s	D U r	I	nternal A	Assessi	ment (IA	A)	ESE	GT	CE^	ES E	To T	
						a t i o n (H o u r s	MS E	ASG	ТА	ATT D	ТоТ	-					
Refer Table 1	AEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR006	Minor Project	-	-	8	4	3	-	-	-	-	-	-	-	40	60	100	100
	•		Tota	il	20												600

Note: Those who would like to continue their studies in fourth year for obtaining degree of Honors/Research should have completed all the courses up to third year and obtained a minimum CGPA of 7.5.

				SEV	ENTH	SEN	1ESTE	R wef	2023	-24 on	ward	s						
Course Code	Course Name	Ho	onta ours Wee	per	C r e	E S E D		,	Weigh	tage (T	heory)					eightag ractica		GT
		L	Т	Р	d it s	u r a	In	Internal Assessment (IA) MS ASG TA ATT ToT						CE^	ES E		To T	
						t i o n (H o u r s)	MS E	ASG	ТА	ATT D	ТоТ				Pre Sub	Viv a Voc e		
SC23UC013	Intellectual Property Right & Research Publication Ethics	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	-	100
SC23UC014	Seminar / Publication	-	-	8	4	3	-	-	-	-	-	-	-	40	-	60	100	100
MG23UC015	Project Management	3	-	2	4	3	20	05	05	10	40	60	100	-	-	-	-	100
SC23PR007	Major Project	-	-	16	8	3	-	-	-	-	-	-	-	100	50	50	200	200
		,	Tota	.1	20													500

	E	IGHTI	H SF	EMES	STER	(For	Honor	s) wef 2	2023-	24 on	wards						
Course Code	Course Name	C Ho	onta ours Wee	ıct per	C r e	E S E D				tage (Tl					eighta ractica		GT
		L	T	P	d it s	u r	I	nternal	Assess	ment (IA	A)	ESE	GT	CE^	ES E	To T	
						ТоТ											
SC23MO001	MOOCs		-	8	4	3	-	-	-	-	-	-	-	40	60	100	100
Refer Table 3	DSE Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
			Tota	l	20												500

OR

EIGHTH SEMESTER (For Research Degree) wef 2023-2 onwards

Course Code	Course Name	Contact Hours per Week L T P			C r e d	E S E D		nternal A		tage (Th		ESE	GT	CE^		eightag ractica		GT
					it s	u r a t o n (H o u r s)	MS E	ASG	ТА	ATT D	ТоТ				ES E Pre Sub	Viv aVo ce	T	
SC23MO001	MOOCs	-	-	8	4	3	-	-	-	-	-	-	-	40	-	60	100	100
SC23PR008	SC23PR008 Research Project/Internship	-	-	32	16	3	-	-	-	-	-	-	-	200	100	100	400	400
		,	Tota	1	20													500

Table I Groups for UC Courses 2023-24 onwards

GROUP A	School of Mar	agement School of Con	nmer	ce Sc	-hool o		24 ONWA		s, School of Law and Legal S	Studie	s Sc	hool	of Performi	no Arts
GROOT A	Senoor or Mar	agement, senoor or con	mier					ss Communication,		luuit	3, 50	11001 0		ing / ints,
GROUP B	School of Scie	nces SIRT Pharmacy	SAG					,	cation, School of Advanced	Com	nutin	a Sel	ool of Eng	ineering
UKUUI B	School of Scie	nees, sixi- mannacy,	SAU		liege of	e	,	, School of Agricul	· · · · · · · · · · · · · · · · · · ·	Com	puun	g, sei	loor or Eng	,meeting
Semester	Course Code	Course Name	C	ONT	ACT	Credi	Type	Course Code	Course Name	CC	ONTA	CT	Credits	Туре
	course cours	Group A		ours/v		ts	- , , , ,	could could	Group B		urs/w		creates	1)p•
		1	L	Т	Р	1			1	L	Т	Р		
Ι	SC23UC001	Environmental Studies and Disaster Management	2	0	0	2	AEC	TR23UC003	Communication Skills	1	0	2	2	AEC
	AH23UC002	Hindi	2	0	0	2	SEC	CA23UC004	MS Office	0	0	4	2	SEC
П	TR23UC003	Communication Skills	1	0	2	2	AEC	SC23UC001	Environmental Studies and Disaster Management	2	0	0	2	AEC
- 11	CA23UC004	MS Office	0	0	4	2	SEC	AH23UC002	Hindi	2	0	0	2	SEC
	TR23UC005	Professional Skills-I	0	0	4	2	AEC	TR23UC007	Quantitative Aptitude and Logical Reasoning	2	0	0	2	AEC
III	MG23UC006	Entrepreneurship Development	2	0	0	2	SEC	ET23UC008	Design and Critical Thinking	2	0	0	2	SEC
IV	TR23UC007	Quantitative Aptitude and Logical Reasoning	2	0	0	2	AEC	TR23UC005	Professional Skills-I	0	0	4	2	AEC
I V	ET23UC008	Design and Critical Thinking	2	0	0	2	SEC	MG23UC006	Entrepreneurship Development	2	0	0	2	SEC
	TR23UC009	Professional Skills- II	0	0	4	2	AEC	CM23UC011	Financial Literacy & Banking	2	0	0	2	AEC
V	MG23UC010	Research Methodology	2	0	0	2	SEC	AH23UC012	e		0	0	2	SEC
VI	CM23UC011	Financial Literacy & Banking	2	0	0	2	AEC	TR23UC009	Professional Skills- II	0	0	4	2	AEC
	AH23UC012	Indian Culture and Human Values	2	0	0	2	SEC	MG23UC010	Research Methodology	2	0	0	2	SEC

Note :

*Each Course would be of two Credits (1 Theory and 1 Practical) OR (0 Theory and 2 Practical)

** Each Credit is equivalent to 45 hrs. of student engagement (15 hrs. of Theory teaching in classroom & 30 hrs. of Practical learning / Field Work /Assignment /Self -learning)

Semester	Course Code	Discipline Core BSc
Ι	SC23DC001	Basics of Life Sciences
II	SC23DC002	Introduction to Forensic Science
III	SC23DC003	Elements of Modern Physics
IV	SC23DC004	Elements of Statistics
V	SC23UC013	Intellectual Property Rights & Research Publication Ethics
VI	PA23UC014	Seminar / Publications
VII	MG23UC015	Project Management
VIII	PA23PR007	Major Project

Table: 2 Discipline Core Courses 2023-24 onwards

Semester	Course Code	Discipline Core BSc
Ι	SC23DC001	Basics of Life Sciences
II	SC23DC002	Introduction to Forensic Science
III	SC23DC003	Elements of Modern Physics
IV	SC23DC004	Elements of Statistics

Table: 3 Discipline Specific Electives (DSE) (Select Any Two) 2023-24 onwards T

Sem	Course Code	Microbiology	Sem	Course Code	Chemistry
Ι	SC23MB001	Bacteriology and Systematics	Ι	SC23CH001	Analytical and Organic Chemistry - I
П	SC23MB002	Microbial Physiology and Metabolism	II	SC23CH002	Inorganic and Physical Chemistry - I
III	SC23BT003	Cell Biology and Genetics	Ш	SC23CH003	Analytical and Organic Chemistry - II
IV	SC23BT004	Immunology	IV	SC23CH004	Inorganic and Physical Chemistry - II
v	SC23BT005 SC23BT006	Bioinformatics Bioanalytical Tools	V	SC23CH005	Biological Chemistry
VI	SC23MB003 SC23MB004	Agriculture and Food Microbiology Industrial Biotechnology	•	SC23CH006	Applied Chemistry
	SC23BT009	Molecular Biology	VI	SC23CH007 SC23CH008	Materials Chemistry Toxicology
VIII	SC23BT010	Virology		SC23CH009	Analytical Chemistry-III
	SC23BT011	Recombinant DNA Technology	VIII	SC23CH010	Organic Chemistry-III
	SC23MB005	Medical Microbiology	Inorganic Chemistry-III		
				SC23CH012	Physical Chemistry-III

Tab	le [.]	3	2
Iuo	υ.	2.	_

						Tr	ack I	Micro	biolog	gy								
			Contact Hours per Week			E S E D			Weigł	ntage (1	Theor	y)		We	eightage	(Practical)		
Sem este r	Course Code	Course Code Course Title				C r e d	u r a t i o	Int	ernal	Assess	ment (IA)			C			GT
			L T P t n s H		To T	ES E	GT	E ^	ESE	ТоТ								
Ι	SC23MB001	Bacteriology and Systematics	3	-	2	4	3	20	05	05	10	40	60	100	-	-	-	100
П	SC23MB002	Microbial Physiology and Metabolism	3	-	2	4	3	20	05	05	10	40	60	100	-	-	-	100
III	SC23BT003	Cell Biology and Genetics	3	-	2	4	3	20	05	05	10	40	60	100	-	-	-	100
IV	SC23BT004	Immunology	3	-	2	4	3	20	05	05	10	40	60	100	-	-	-	100
v	SC23BT005 SC23BT006	Bioinformatics Bioanalytical Tools	3	-	2	4	3	20	05	05	10	40	60	100	-	-	-	100
VI	SC23MB003 SC23MB004	Agriculture and Food Microbiology Industrial Biotechnology	3	-	2	4	3	20	05	05	10	40	60	100	-	-	-	100
	SC23BT009	Molecular Biology	3	-	2	4	3	20	05	05	10	40	60	100	-	-	-	100
VIII	SC23BT010	Virology	4	-	0	4	3	20	05	05	10	40	60	100	-	-	-	100
VIII	SC23BT011	Recombinant DNA Technology	3	-	2	4	3	20	05	05	10	40	60	100	-	-	-	100
	SC23MB005	Medical Microbiology	3	-	2	4	3	20	05	05	10	40	60	100	-	-	-	100

	[e: 3.3	homi										
]	Conta Hou er W	act rs		E S E D	hemi		Weigh	tage (T	`heory)			Veighta Practica		
Sem este r	Course Code	Course Title				(r e d	u r a t i o	Int	ernal 4	Assess	sment (IA)						GT
			L	Т	Р	i t s	n (M SE	AS G	T A	AT TD	To T	ES E	G T	CE	ESE	ТоТ	
I	SC23CH001	Analytical and Organic Chemistry-I	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
П	SC23CH002	Inorganic and Physical Chemistry-I	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
ш	SC23CH003	Analytical and Organic Chemistry-II	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
IV	SC23CH004	Inorganic and Physical Chemistry- II	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
v	SC23CH005 SC23CH006	Biological Chemistry Applied Chemistry	4	-	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
VI	SC23CH007 SC23CH008	Materials Chemistry Toxicology	4	-	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23CH009	Analytical Chemistry-III	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23CH010	Organic Chemistry-III	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
VIII	SC23CH011	Inorganic Chemistry-III	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23CH012	Physical Chemistry-III	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100

Table 4: Interdisciplinary Minor Elective Courses

(Select any one track) 2023-24 Onwards

S. No	Name of the	Minor	Minor Elective			H	onta lours Weel	s /	Cre dit s			The	ory			Pra	actic	al	G T
	Offering School	Specialization Track		Code	Course	L	Т	Р		M S E	A S G	T A		E S E	T o t a l	C E	E S E	t	
			Ι	ET23DM0 01	Web Development Fundamentals	2	0	4	4							40	60	10 0	10 0
		Digital	II	ET23DM0 02	Introduction to Digital Marketing	2	0	4	4							40		0	10 0
		Marketing	III	ET23DM0 03	Search Engine Optimization and Social Media Marketing	2	0	4	4									0	10 0
1			IV	ET23DA00 4	Web Analytics	2	0	4	4							40		0	10 0
			I	ET23 DA001	Data Analytics Fundamentals	2	0	4	4							40		0	10 0
		Data Analytics	II	ET23DA00 2	Business Analytics	2	0	4	4							40		0	10 0
	School of Engineering	Data Analytics	III	ET23DA00 3	R Programming	2	0	4	4							40	60	10 0	10 0
	& Technology		IV	ET23DA00 4	Data Visualization	2	0	4	4							40		0	10 0
			Ι	ET23WD0 01	Web Designing Fundamentals	2	0	4	4							40		0	10 0
		Web Designing	II	ET23WD0 02	Dynamic Website with Java-script	2	0	4	4							40		0	10 0
		web Designing	III	ET23WD0 03	Introduction to XML	2	0	4	4							40		10 0	10 0
			IV	ET23WD0 04	Web Application Development using PHP	2	0	4	4							40		10 0	10 0
			Ι	ET23PR00 1	Core Java	2	0	4	4							40		0	10 0
		Programming	II	ET23PR00 2	Advanced Java	2	0	4	4							40	60	10 0	10 0

			III	ET23PR00 3	Python Programming	2	0	4	4			40	60	10 0	10 0
			IV	ET23PR00 4	Web Application Development	2	0	4	4			40	60	10 0	10 0
	Cabaal af	Tours & Travel Management	Ι	AH23TT00 1	Hospitality Etiquettes	2	0	4	4			40	60	10 0	10 0
2	School of Arts Humanities		II	AH23TT00 2	World Heritage Sites of MP	2	0	4	4			40		10 0	10 0
	and Social Sciences		III	AH23TT00 3	Medical Tourism	2	0	4	4			40		10 0	10 0
	Sciences		IV	AH23TT00 4	International Travel Assistance	2	0	4	4			40		10 0	10 0
		Laboratory Management	Ι	SC23LM00 1	Microbiology& Biotechnology Laboratory Skills	0	0	8	4			40		10 0	10 0
3	School of Sciences		II	SC23LM00 2	Chemistry Lab Skills	0	0	8	4			40		0	10 0
			III	SC23LM00 3	Electronics & Electrical Lab Skills	0	0	8	4			40		10 0	10 0
			IV	SC23LM00 4	Physics Lab Skills	0	0	8	4			40		10 0	10 0
		Horticulture	Ι	AG23HR00 1	Production Technology for Vegetable and Spices	2	0	4	4			40		10 0	10 0
			II	AG23HR00 2	Production Technology for Fruit and Plantation Crops	2	0	4	4			40		10 0	10 0
4			III	AG23HR00 3	Diseases of Field and Horticultural Crops and their Management –I	2	0	4	4			40		10 0	10 0
	School of Agriculture		IV	AG23HR00 4	`Diseases of Field and Horticultural Crops and their Management-II	2	0	4	4			40	60	10 0	10 0
		Agri Business	Ι	AG23AB00 1	Agricultural Finance and Cooperation	2	0	4	4			40	60	10 0	10 0
			II	AG23AB00 2	Agricultural Marketing Trade & Prices	2	0	4	4			40		10 0	10 0
			III	AG23AB00 3	Entrepreneurship Development and Business Communication	2	0	4	4			40		10 0	10 0
			IV	AG23AB00 4	Farm Management, Production & Resource Economics	2	0	4	4				60	0	10 0
	School of	Basic Accounting	Ι	CM23BA0 01	Financial Accounting	4	0	0	4				60	0	0
	Commerce & Management	Skills	II	CM23BA0 02	Tally	3	0	2	4			40	60	10 0	10 0

			III	CM23BA0 03	Personal Taxation	4	0	0	4			40	60	10 0	10 0
5			IV	CM23BA0 04	Direct and Indirect Taxes	4	0	0	4					10 0	10 0
		Retail Management &	Ι	MG23RM0 01	Retail Management	4	0	0	4					10 0	10 0
		Merchandising	II	MG23RM0 02	Merchandising	4	0	0	4					10 0	10 0
			III	MG23RM0 03	Supply Chain Management	4	0	0	4					10 0	10 0
			IV	MG23RM0 04	E Business	4	0	0	4					10 0	10 0
		Investment	Ι	MG23IM00 1	Introduction to Financial Markets	4	0	0	4					10 0	10 0
		Management	II	MG23IM00 2	Fundamental & Technical Analysis of Investment	4	0	0	4					10 0	10 0
			III	MG23IM00 3	Risk Management	4	0	0	4				60	10 0	10 0
			IV	MG23IM00 4	Introduction to Derivatives	4	0	0	4					10 0	10 0
		Sketching & Painting	I	DN23SP00 1	Sketching-I	0	0	8	4					10 0	10 0
			II	DN23SP00 2	Sketching –II	0	0	8	4			40		10 0	10 0
			III	DN23SP00 3	Painting-I	0	0	8	4					10 0	10 0
			IV	DN23SP00 4	Painting-II	0	0	8	4					10 0	10 0
6		Interior Design	I	DN23ID00 1	Building Materials & Processes	0	0	8	4					10 0	10 0
	School of Design		II	DN23ID00 2	Elements of Interior Spaces	0	0	8	4					10 0	10 0
				DN3ID003	Basics of Lighting Design	0	0	8	4					10 0	10 0
			IV	DN23ID00 4	Building Services	0	0	8	4					10 0	10 0
		Apparel Design	I	DN23AD0 01	Fashion Illustration-I	0	0	8	4					10 0	10 0
			II	DN23AD0 02	Dyeing and Printing Techniques	0	0	8	4					10 0	10 0
			III	DN23AD0 03	Surface Exploration I	0	0	8	4			40	60	10 0	10 0

			IV	DN23AD0	Surface Exploration II	0	0	8	4			40	60	10	10
				04		÷		-	_					0	0
			I	PA23DN00	Techniques and Theatrical	0	0	8	4			40	60	10	10
				1	Performance of Dance I	_		_						0	0
			II	PA23DN00	Techniques and Theatrical	0	0	8	4			40	60	10	10
				2	Performance of Dance II									0	0
		Dance	III	PA23DN00	Techniques and Theatrical	0	0	8	4			40	60	10	10
				3	Performance of Dance III									0	0
			IV	PA23DN00	Techniques and Theatrical	0	0	8	4			40	60	10	10
				4	Performance of Dance IV									0	0
			Ι	PA23MC00	Musical Roots and Theatrical	0	0	8	4			40	60	10	10
7		Music		1	Performance I									0	0
			II	PA23MC00	Musical Roots and Theatrical	0	0	8	4			40	60	10	10
	School of Performing			2	Performance II									0	0
	Arts		III	PA23MC00	Musical Roots and Theatrical	0	0	8	4			40	60	10	10
	AITS			3	Performance III									0	0
			IV	PA23MC00	Musical Roots and Theatrical	0	0	8	4			40	60	10	10
				4	Performance IV									0	0
			Ι	PA23TR00	Basics of Acting Production I	0	0	8	4			40	60	10	10
		Theatre		1	Basics of Acting Production 1									0	0
			II	PA23TR00	Drama Production II	0	0	8	4			40	60	10	10
				2										0	0
			III	PA23TR00	Drama Production III	0	0	8	4			40	60	10	10
				3										0	0
			IV	PA23TR00	Drama Production IV	0	0	8	4			40	60	10	10
				4										0	0
8		Basic Media	Ι	JM23MP00	Photography	0	0	8	4			40	60	10	10
		Production		1										0	0
		Techniques	II	JM23MP00	Videography	0	0	8	4			40	60	10	10
				2									60	0	0
			III	JM23MP00	Script Writing	0	0	8	4			40	60	10	10
	School of		11.7	3		0		0				40	60	0	0
	Journalism		IV	JM23MP00	Audio Visual Editing	0	0	8	4			40	60	10	10
	and Mass		T	4 JM23AP00		0	0	8	4			40	(0)	0 10	0 10
	Communicat	Advertising	Ι	JM23AP00 1	Introduction to Advertising	0	0	8	4			40	60		
	ion	and Public	п	I IM23AP00	Combout Curation	0	0	0	4		_	40	(0)	0 10	0 10
		Relations	II	JM23AP00 2	Content Creation		0	8	4			40	60	10 0	$10 \\ 0$
		iciacións	III	Z JM23AP00	Introduction to Public Relations	0	0	8	4			40	60	10	10
			111	JMZ5AP00 3	introduction to Fublic Relations			0	4			40	00	10 0	10 0
			IV	JM23AP00	Tools and Techniques of Public	0	0	8	4			40	60	10	10
			1V	JMZ5AP00 4	Relations			0	4			40		10	$10 \\ 0$
l		1		-7	Relations	L	L	L	I				L	U	0

SANJEEV AGRAWAL GLOBAL EDUCATIONAL UNIVERSITY, BHOPAL

Proposed Scheme & Syllabus For

Bachelor of Science (BSc)

Certificate/Diploma/Degree/Honors Degree/ Research Degree

in

Physics

w.e.f. 2023-24 (According to NEP 2020)



School of Sciences

Bachelor of Science (BSc)

Program Educational Objectives (PEOs) Physics:

PEO-1: Prospective Employment and Career Prospects-Developing the potential for vertical career growth in investigationlaboratories, service sectors and related avenues.

PEO-2: Proficiency- Inculcating technical and managerial skills crucial for real time scenarios through the enhancement of problem-solving skills and advanced technical documentation ability.

PEO-3: Affectionate Objective- Grooming the students with technical proficiency to equip them for the emergence of sustainable technology and solutions for prevailing environmental, societal and cultural concerns.

PEO-4: Research Methods-Nurturing the research aptitude to provide solutions for global challenges and abilities to explore hidden potential of the matter.

PEO-5: Continuous Learning-Instilling knowledge and awareness on professional ethics related to crime prevention and evidence analysis and life-long learning through career-oriented courses.

Program Outcomes (POs) Physics:

By the end of the program the students will be able to:

- **PO 1.** Design and perform experiments in the labs to demonstrate the concepts, principles and theories learned in the classrooms.
- PO 2. Have hands on experience in modeling, implementation and calculation of physical quantities of relevance.
- PO 3. Demonstrate skills and competencies to conduct a wide range of physics experiments.
- **PO 4.** Work effectively as an individual as a team member in a multidisciplinary team.
- PO 5. Use a modern scientific, engineering and IT tool or technique for solving problems in the areas of their discipline.
- **PO 6.** Emphasize the discipline of Physics to be a very important branch of science for pursuing the interdisciplinary and multidisciplinary higher education.
- PO 7. Apply their knowledge in various fields of academics and industry.
- **PO 8.** Create the facilities and environment in all the educational institutions to consolidate the knowledge acquired.
- **PO 9.** To emphasize the importance of Physics as the most important discipline for sustaining the existing industries and establishing new ones to create job opportunities at all levels of employment.
- PO 10. Pursue their future career in the field of academics, research and industry.

Bachelor of Science (BSc)

CURRICULUM COMPONENTS

Comp	oonents	Credits
University Open (Table 1)	Ability Enhancement Courses (06 Courses)	12
University Core (Table 1)	Skill Enhancement Courses (06 Courses)	12
Discipline Core Courses (8 Courses) (Table 2))	32
Discipline Specific Major Electives (8+4 Cou	rses) (Table 3)	32R/48H*
Discipline Specific Minor Electives (6 Cours	ses) (Table 3)	24
Interdisciplinary Minor Electives (04 Courses) (Table 4)	16
Project/Field Internship/Skill Based Project		28H/44R*
	otal Jonors Degree) or Research Based Industrial I	172 Project (for

** Note: Any student opting out after I year / II year will obtain undergraduate Certificate/Diploma respectively in the specific discipline subject to mandatory 450hrs (8-10 week) ,10 credit Internship in SUB/Industry/Research organization.

Distribution of credits across all components

	(one course	Core Courses. e = 02 credit) ble 1)	Discipline	Main Fa (as per prei		Interdisciplin ary Minor	Project/ Field	
SEM.	AEC	SEC	Courses (DC) [one course = 4 credit] (Table 2)	Discipline Elect (one cou cred (Table (Major)	ive irse = 4 it)	Elective Tracks (Employment Oriented) (Table 4)	Internship/ Skill Based Projects/Research Projects/industrial Projects	Total
I	2	2	4	(Wiajoi) 4	4	4	3(PBL)	23
II	2	2	4	4	4	4	3(PBL)	23
III	2	2	4	4	4	4	3(PBL)	23
IV	2	2	4	4	4	4	3(PBL)	23
V	2	2	-	4+4	4		4(SIP)	20
VI	2	2	-	4+4	4		4(Minor Project)	20
VII			12				8(Major)	20
VIII*			4	16*			16*(Research/Inte rnship Project)	20(4+16*
Total	12	12	32	32R/32+1 6*H	24	16	28H/28+16*R	172

* Opt either 04 Specialized Courses (For Honor Degree) or Research Based Industrial Project (For Research Degree) Note: PBL- Project Based Learning, SIP- Summer internship Project, SEC- Skill Enhancement Courses, AEC- Ability Enhancement Courses.

]	FIRS	ST S	SEMI	ESTE	R wef	2023-	-24 o	nward	S						
Course Code	Course Title	Ho	onta ours j Weel	per	C r e d i	E S E D u	Ir			ntage (T ment (L		ESE	GT	Weigh	ntage (Pra	actical) ToT	GT
					S	r a t i o					,						
						n (H o u r s)											
Refer Table 1	AEC	-	-	-	2	2	-	-	-	-	-	_	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	_	-	-	-	-	-	-	-	_	100
Refer Table 2	Discipline Core	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	I	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR001	Project Based Learning –I	-	-	6	3	2	-	-	-	-	-	-	-	40	60	100	100
			Tota	l	23												700

			S	EC	OND	SEN	IESTEF	k wef 2	023-24	l onwa	rds						
Course Code	Course Name	Нот	onta urs p Veek T	per K	C r e d i t	E S E D u r		nternal	_	age (The nent (IA)		ESE	GT		Veightag Practica ESE		GT
					S	a t i o	MSE	ASG	ТА	ATT	ТоТ						
						n (H o u r s				D							
Refer Table 1	AEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	2	_	-	-	-	-	-	-	-	_	-	100
Refer Table 2	Discipline Core	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	- 1	-	-	4	3	-	_	_	-	-	-	-	-	_	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR002	Project Based Learning-II	-	-	6	3	2	-	-	-	-	-	-	-	40	60	100	100
l]	otal	L	23												700

Note: Those students who would like to exit after 1st year and want to obtain Undergraduate Certificate in Performing Arts have to complete mandatory Research internship at SUB/Industry/Research Organization for 450 hours to be completed in 8-10 weeks.

			r	тні	RD S	EME	STER	wef 20)23-24	l onwar	ds						
Course Code	Course Name	Но	ontao urs p Week	oer	C r e	E S E D			Weigh	itage (Th	eory)				Veightag Practical		GT
		L	Т	P	d i t	u r	Iı	nternal	Assess	ment (IA)	ES E	GT	CE^	ESE	ТоТ	
					S	a MSE ASG TA ATTD ToT i o o n (o u y 2 2											
Refer Table 1	AEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	_	-	_	100
Refer Table 2	Discipline Core	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-		100
SC23PR003	Project Based Learning –III	-	-	6	3	2	-	-	-	-	-	-	-	40	60	100	100
		,	Fotal		23												700

FOURTH SEMESTER wef 2023-24 onwards

Course Code	Course Name	He	Conta Durs J Weel	per	C r e d	E S E D			Weight	age (The	eory)				Veighta Practica		GT
		L	Т	Р	i t	u r		Internal	Assessm	ient (IA))	ESE	ТоТ	CE ^	ESE	ТоТ	
					S	a ti o n (H o u r s)	MS E	ASG	ТА	ATT D	ТоТ						
Refer Table 1	AEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 2	Discipline Core	3	1	-	4	3	20	05	05	10	40	60	100	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 4	Interdisciplinary Minor Elective Track	-	-	8	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR004	Project Based Learning-IV	-	-	6	3	2	-	-	-	-	-	-	-	40	60	100	100
			Tota	1	23												700

Note: Those students who would like to exit after 2nd year and want to obtain Undergraduate Diploma in Performing Arts have to complete mandatory Research internship at SUB/Industry/Research Organization for 450 hours to be completed in 8-10 weeks.

FIFTH SEMESTER wef 2023-24 onwards

Course Code	Course Name	ŀ	onta Ioui per Wee	rs k	C r e d i	E S E D u				htage (T		EGE	CT		Veighta Practic	al)	GT
			T	P	t s	r a	n	nternal A	4ssess	ment (IA	A)	ESE	GT	CE ^	ESE	ТоТ	
						i o n (H o u r s)	MSE ASG TA ATT ToT D H H H H H H H H H H H H H H H H H H										
Refer Table 1	AEC	-	-	-	2	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3						-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3							-	-	-	-	100
SC23PR005	Summer Internship / Field Activity	-	-	8	4	3	-	-	-	-	-	-	-	40	60	100	100
		<u> </u>	Tota	1	20												600

SIXTH SEMESTER wef 2023-24 onwards

Course Code	Course Name	Ho	onta ours Wee	per	C r e d	E S E D			Weigh	tage (Tł	neory)				eighta ractica		GT
		L	T	Р	it s	u r	I	nternal A	Assessi	ment (IA	A)	ESE	GT	CE^	ES E	To T	
						a t o n (H o u r s)	MS ASG IA AIT IoT E D D D D n D D D D H D D										
Refer Table 1	AEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 1	SEC	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Major Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Minor Track – II	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
SC23PR006	Minor Project	- 1	-	8	4	3	-	-	-	-	-	-	-	40	60	100	100
			Tota	l	20												600

Note: Those who would like to continue their studies in fourth year for obtaining degree of Honors/Research should have completed all the courses up to third year and obtained a minimum CGPA of 7.5.

SEVENTH SEMESTER wef 2023-24 onwards

Course Code	Course Name	Но	onta urs Wee	per	C r e d	E S E D			Weigh	tage (T	heory)					eightag ractica		GT
		L	T	Р	it s	u r a	In	iternal A	Assess	ment (L	A)	ESE	GT	CE^	ES E		To T	
						t · i o n (H o u r s	MS ASG TA ATT ToT E D I H A ATT D I H A ATT D I I A ATT D I A ATT D I I A ATT D I A							Pre Sub	Viv a Voc e			
SC23UC013	Intellectual Property Right & Research Publication Ethics	4	-	-	4	3	20	05	05	10	40	60	100	-	-	-	-	100
SC23UC014	Seminar / Publication	-	-	8	4	3	-	-	-	-	-	-	-	40	-	60	100	100
MG23UC015	Project Management	3	-	2	4	3	20	05	05	10	40	60	100	-	-	-	-	100
SC23PR007	Major Project	-	-	16	8	3	-	-	-	-	-	-	-	100	50	50	200	200
	·		Tota	1	20						-		-	-	-	-	-	500

EIGHTH SEMESTER (For Honors) wef 2023-24 onwards

Course Code	Course Name	Ho	onta urs Weel	per	C r e d	E S E D			Weigh	tage (Th	ieory)				eighta; ractica		GT
		L	T	Р	d it s	u u r	I	nternal	Assess	ment (IA	A)	ESE	GT	CE^	ES E	To T	
						a t 0 n (H 0 u r s	MS E	ASG	TA	ATT D	ТоТ						
SC23MO001	MOOCs	-	-	8	4	3	-	-	-	-	-	-	-	40	60	100	100
Refer Table 3	DSE Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
Refer Table 3	DSE Track – I	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	100
			Tota	1	20												500

OR

			EIGHTH SEM	IESTF	CR (F	or Research Degree) wef 2023-2 onwards		
Cou	irse Code	Course Name	Contact	С	Ε	Weightage (Theory)	Weightage	GT
			Hours per	r	S		(Practical)	
			Week	e	Ε			
				d	D			

		L	Τ	Р	it s	u r a t		nternal A				ESE	GT	CE^	ES E		To T	
						i 0 n (H 0 u r s)	MS E	ASG	ΤΑ	ATT D	ТоТ				Pre Sub	Viv aVo ce		
SC23MO001	MOOCs	-	-	8	4	3	-	-	-	-	-	-	-	40	-	60	100	100
SC23PR008	Research Project/Internship	-	-	32	16	3	-	-	-	-	-	-	-	200	100	100	400	400
			Fota	1	20													500

	Table I
	Groups for UC Courses
	2023-24 onwards
GROUP A	School of Management, School of Commerce, School of Arts Humanities and Social Sciences, School of Law and Legal Studies, School of Performing Arts,
	School of Journalism and Mass Communication, School of Design.

GROUP B	School of Scie	nces, SIRT- Pharmacy,	SAG	E Col	lege of	-				ation, School of Advanced	Com	puting	g, Sch	ool of Eng	ineering
						and Te	echnology	/, S	chool of Agricult	ure					
Semester	Course Code	Course Name Group A		ONTA ours/w		Credi ts	Туре		Course Code	Course Name Group B		DNTA urs/w T		Credits	Туре
Ι	SC23UC001	Environmental Studies and Disaster Management	2	0	0	2	AEC	Ī	TR23UC003	Communication Skills	1	0	2	2	AEC
	AH23UC002	Hindi	2	0	0	2	SEC	ſ	CA23UC004	MS Office	0	0	4	2	SEC
Π	TR23UC003	BUC003 Communication Skills 1 0 2 2 AEC SC23UC001 Environmental Studies and Disaster Management		2	0	0	2	AEC							
	CA23UC004	MS Office	0	0			Hindi	2	0	0	2	SEC			
	TR23UC005	Professional Skills-I	0	0	4	2	AEC		TR23UC007	Quantitative Aptitude and Logical Reasoning	2	0	0	2	AEC
III	MG23UC006	Entrepreneurship Development	2	0	0	2	SEC	Ī	ET23UC008	Design and Critical Thinking	2	0	0	2	SEC
IV	TR23UC007	Quantitative Aptitude and Logical Reasoning	2	0	0	2	AEC	Ī	TR23UC005	Professional Skills-I	0	0	4	2	AEC
	ET23UC008	Design and Critical Thinking	2	0	0	2	SEC	ľ	MG23UC006	Entrepreneurship Development	2	0	0	2	SEC
	TR23UC009	Professional Skills- II	0	0	4	2	AEC	Ī	CM23UC011	Financial Literacy & Banking	2	0	0	2	AEC
V	MG23UC010	Research Methodology	2	0	0	2	SEC	ľ	AH23UC012	Indian Culture and Human Values	2	0	0	2	SEC
VI	CM23UC011	Financial Literacy & Banking	2	0	0	2	AEC	Ī	TR23UC009	Professional Skills- II	0	0	4	2	AEC
	AH23UC012	Indian Culture and Human Values	2	0	0	2	SEC		MG23UC010	Research Methodology	2	0	0	2	SEC

Note :

*Each Course would be of two Credits (1 Theory and 1 Practical) OR (0 Theory and 2 Practical)

** Each Credit is equivalent to 45 hrs. of student engagement (15 hrs. of Theory teaching in classroom & 30 hrs. of Practical learning / Field Work

/Assignment /Self -learning)

School of Sciences (BSc)

Discipline Core Courses

Semester	Course Code	Discipline Core BSc
Ι	SC23DC001	Basics of Life Sciences
II	SC23DC002	Introduction to Forensic Science
III	SC23DC003	Elements of Modern Physics
IV	SC23DC004	Elements of Statistics
V	SC23UC013	Intellectual Property Rights & Research Publication Ethics
VI	PA23UC014	Seminar / Publications
VII	MG23UC015	Project Management
VIII	PA23PR007	Major Project

Table: 2 Discipline Core Courses 2023-24 onwards

Semester	Course Code	Discipline Core BSc
Ι	SC23DC001	Basics of Life Sciences
II	SC23DC002	Introduction to Forensic Science
III	SC23DC003	Elements of Modern Physics
IV	SC23DC004	Elements of Statistics

Table: 3 Discipline Specific Electives (DSE) (Select Any Two) 2023-24 onwards Tracks

Sem	Course Code	Physics	Course Code	Mathematics
Ι	SC23PH001	Mathematical Physics	SC23MA001	Algebra and Calculus - I
Π	SC23PH002	Mechanics	SC23MA002	Algebra and Calculus - II
ш	SC23PH003	Thermal Physics and Statistical Mechanics	SC23MA003	Differential Equations
IV	SC23PH004	Wave and Optics	SC23MA004	Discrete Mathematics
v	SC23PH005	Classical Electrodynamics	SC23MA005	Real Analysis
v	SC23PH006	Electricity, Magnetism and Electromagnetism	SC23MA006	Integral Calculus and Vector Analysis
VI	SC23PH007	Quantum Mechanics	SC23MA007	Linear Algebra
VI	SC23PH008	Plasma Physics	SC23MA008	Probability and Statistics
	SC23PH009	Solid State Physics	SC23MA009	Complex Analysis
	SC23PH010	Nuclear, Atomic and Molecular Physics	SC23MA010	Numerical Methods
VIII	SC23PH011	Analog & Digital Circuits	SC23MA011	Linear Programming and Optimization Techniques
	SC23PH012	Elements of Condensed Matter Physics	SC23MA012	Mathematical Transforms and Techniques

						Т	rack	Phys	ics									
			H	onta lour: We	S		E S E D		١	Veigh	tage (T	`heory)			Weighta Practica		
Sem ester	Course Code	Course Title				C r e d	u r a t i o	Int	ernal A	Assess	sment (IA)						GT
			L	Т	Р	i t s	n (H o u r s)	M SE	AS G	T A	AT TD	To T	ES E	G T	CE	ESE	ТоТ	
Ι	SC23PH001	Mathematical Physics	4	-	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
п	SC23PH002	Mechanics	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
ш	SC23PH003	Thermal Physics and Statistical Mechanics	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
IV	SC23PH004	Wave and Optics	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23PH005	Classical Electrodynamics	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
V	SC23PH006	Electricity and Magnetism Electromagnetism	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
VI	SC23PH007 SC23PH008	Quantum Mechanics Plasma Physics	4	-	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23PH009	Solid State Physics	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23PH010	Nuclear, Atomic and Molecular Physics	4	-	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
VIII	SC23PH011	Analog & Digital Circuits	3	-	2	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23PH012	Elements of Condensed Matter Physics	4	-	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100

		Track Mathematics																
			H	onta lour We	S		E S E D		١	Weigh	tage (T	`heory)			Veighta Practica		
Seme ster	Course Code	Course Title				C r e d	u r a t i o	Int	ernal A	Assess	sment (IA)						GT
			L	Т	Р	i t s	n (H o u r s)	M SE	AS G	T A	AT TD	To T	ES E	G T	CE	ESE	ТоТ	
Ι	SC23MA001	Algebra and Calculus - I	3	1	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
П	SC23MA002	Algebra and Calculus - II	3	1	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
ш	SC23MA003	Differential Equations	3	1	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
IV	SC23MA004	Discrete Mathematics	3	1	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
v	SC23MA005 SC23MA006	Real Analysis	3	1	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
VI	SC23MA007 SC23MA008	Integral Calculus and Vector Analysis	3	1	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23MA009	Linear Algebra Probability and Statistics	3	1	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23MA010	Complex Analysis	3	1	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
VIII	SC23MA011	Numerical Methods	3	1	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100
	SC23MA012	Linear Programming and Optimization Techniques	3	1	-	4	3	20	05	05	10	40	60	10 0	-	-	-	100

Table 4: Interdisciplinary Minor Elective Courses

(Select any one track) 2023-24 Onwards

S. No	Name of the	Minor	Minor Elective			H	onta our: Wee	s /	Cre dit s		1	The	ory			Pra	actio	cal	G T
	Offering School	Specialization Track		Code	Course	L	Т	Р		M S E	A S G	T A	A T T D	E S E	T o t a l	C E		t	
			Ι	ET23DM0 01	Web Development Fundamentals	2	0	4	4							40	60	10 0	10 0
		Digital	II	ET23DM0 02	Introduction to Digital Marketing	2	0	4	4									0	10 0
		Marketing	III	ET23DM0 03	Search Engine Optimization and Social Media Marketing	2	0	4	4							40		10 0	10 0
1			IV	ET23DA00 4	Web Analytics	2	0	4	4								60	10 0	10 0
			Ι	ET23 DA001	Data Analytics Fundamentals	2	0	4	4									0	10 0
		Data Analytics	II	ET23DA00 2	Business Analytics	2	0	4	4								60	10 0	10 0
		Data Analytics	III	ET23DA00 3	R Programming	2	0	4	4									10 0	10 0
	School of Engineering		IV	ET23DA00 4	Data Visualization	2	0	4	4							40		10 0	10 0
	& Technology		Ι	ET23WD0 01	Web Designing Fundamentals	2	0	4	4								60	10 0	10 0
		Web Designing	II	ET23WD0 02	Dynamic Website with Java-script	2	0	4	4								60	10 0	10 0
		Web Designing	III	ET23WD0 03	Introduction to XML	2	0	4	4									0	10 0
			IV	ET23WD0 04	Web Application Development using PHP	2	0	4	4									10 0	10 0
			Ι	ET23PR00 1	Core Java	2	0	4	4								60	10 0	10 0
		Programming	II	ET23PR00 2	Advanced Java	2	0	4	4							40		10 0	10 0
		riogramming	III	ET23PR00 3	Python Programming	2	0	4	4								60	10 0	10 0
			IV	ET23PR00 4	Web Application Development	2	0	4	4							40	60	10 0	10 0

		Tours & Travel Management	Ι	AH23TT00 1	Hospitality Etiquettes	2	0	4	4			40	60	10 0	10 0
2	School of Arts	5	II	AH23TT00 2	World Heritage Sites of MP	2	0	4	4			40	60	10 0	10 0
	Humanities and Social Sciences		III	AH23TT00 3	Medical Tourism	2	0	4	4				60	0	10 0
	Sciences		IV	AH23TT00 4	International Travel Assistance	2	0	4	4				60	0	10 0
		Laboratory Management	Ι	SC23LM00 1	Microbiology& Biotechnology Laboratory Skills	0	0	8	4				60	0	10 0
3			II	SC23LM00 2	Chemistry Lab Skills	0	0	8	4				60	0	10 0
	School of Sciences		III	SC23LM00 3	Electronics & Electrical Lab Skills	0	0	8	4				60	0	10 0
			IV	SC23LM00 4	Physics Lab Skills	0	0	8	4				60	0	10 0
		Horticulture	Ι	AG23HR00 1	Production Technology for Vegetable and Spices	2	0	4	4				60	0	10 0
			II	AG23HR00 2	Production Technology for Fruit and Plantation Crops	2	0	4	4				60	0	10 0
4			III	AG23HR00 3	Diseases of Field and Horticultural Crops and their Management –I	2	0	4	4			40	60	10 0	10 0
	School of Agriculture		IV	AG23HR00 4	`Diseases of Field and Horticultural Crops and their Management-II	2	0	4	4			40	60	10 0	10 0
		Agri Business	Ι	AG23AB00 1	Agricultural Finance and Cooperation	2	0	4	4			40	60	0	10 0
			II	AG23AB00 2	Agricultural Marketing Trade & Prices	2	0	4	4				60	0	10 0
			III	AG23AB00 3	Entrepreneurship Development and Business Communication	2	0	4	4				60	0	10 0
			IV	AG23AB00 4	Farm Management, Production & Resource Economics	2	0	4	4				60	10 0	10 0
		Basic Accounting	I	CM23BA0 01	Financial Accounting	4	0	0	4				60	0	10 0
	School of	Skills	II	CM23BA0 02	Tally	3	0	2	4				60	10 0	10 0
	Commerce & Management		III	CM23BA0 03	Personal Taxation	4	0	0	4				60	0	10 0
5			IV	CM23BA0 04	Direct and Indirect Taxes	4	0	0	4			40	60	10 0	10 0

		Retail Management &	Ι	MG23RM0 01	Retail Management	4	0	0	4				40	60	10 0	10 0
		Merchandising	II	MG23RM0 02	Merchandising	4	0	0	4				40	60	10 0	10 0
			III	MG23RM0 03	Supply Chain Management	4	0	0	4				40	60	10 0	10 0
			IV	MG23RM0 04	E Business	4	0	0	4			ľ	40	60	10 0	10 0
		Investment	Ι	MG23IM00 1	Introduction to Financial Markets	4	0	0	4			ľ	40	60	10 0	10 0
		Management	II	MG23IM00 2	Fundamental & Technical Analysis of Investment	4	0	0	4				40	60	10 0	10 0
			III	MG23IM00 3	Risk Management	4	0	0	4				40	60	10 0	10 0
			IV	MG23IM00 4	Introduction to Derivatives	4	0	0	4				40	60	10 0	10 0
		Sketching & Painting	Ι	DN23SP00 1	Sketching-I	0	0	8	4		1		40	60	10 0	10 0
			II	DN23SP00 2	Sketching –II	0	0	8	4			ľ	40	60	10 0	10 0
			III	DN23SP00 3	Painting-I	0	0	8	4				40	60	10 0	10 0
			IV	DN23SP00 4	Painting-II	0	0	8	4				40	60	10 0	10 0
6		Interior Design	Ι	DN23ID00 1	Building Materials & Processes	0	0	8	4				40	60	10 0	10 0
	School of		II	DN23ID00 2	Elements of Interior Spaces	0	0	8	4				40	60	10 0	10 0
	Design		III	DN3ID003	Basics of Lighting Design	0	0	8	4				40	60	10 0	10 0
			IV	DN23ID00 4	Building Services	0	0	8	4				40	60	10 0	10 0
		Apparel Design	Ι	DN23AD0 01	Fashion Illustration-I	0	0	8	4				40	60	10 0	10 0
			II	DN23AD0 02	Dyeing and Printing Techniques	0	0	8	4					60	0	10 0
			III	DN23AD0 03	Surface Exploration I	0	0	8	4					60	0	0
			IV	DN23AD0 04	Surface Exploration II	0	0	8	4				40	60	10 0	10 0
	School of		Ι	PA23DN00 1	Techniques and Theatrical Performance of Dance I	0	0	8	4					60	0	10 0
	Performing Arts	Dance	II	PA23DN00 2	Techniques and Theatrical Performance of Dance II	0	0	8	4				40	60	10 0	10 0

	1		III	PA23DN00	Techniques and Theatrical	0	0	0	4					40	60	10	10
			111	PAZ3DN00	Performance of Dance III			8	4					40	00	10	10 0
			IV	PA23DN00	Techniques and Theatrical	0	0	8	4					40	()	10	10
			1V	PAZ3DN00 4	Performance of Dance IV			ð	4					40	00	10	10 0
	Music	Music	I	4 PA23MC00	Musical Roots and Theatrical	0	0	8	4		_			40	60	10	10
7			I	1	Performance I	0	0	0	4					40	00	0	0
		II	PA23MC00	Musical Roots and Theatrical	0	0	8	4					40	60	10	10	
		11	2	Performance II	0	0	0	4					40	00	$10 \\ 0$	0	
			III	PA23MC00	Musical Roots and Theatrical	0	0	8	4					40	60	10	10
			111	PAZSMC00 3	Performance III	0	0	0	4					40	00		0
			IV	PA23MC00	Musical Roots and Theatrical	0	0	8	4					40	60	10	10
			1V	4	Performance IV	0	0	0	4					40	00		0
		Theatre	I	PA23TR00	i enormance iv	0	0	8	4					40	60	10	10
			I	1	Basics of Acting Production I	0	0	0	4					40	00	0	0
			II	PA23TR00	Drama Production II	0	0	8	4					40	60	10	10
				Z				ļ								0	0
			III	PA23TR00	Drama Production III	0	0	8	4					40	60	10	10
			117	3 PA23TR00				0						4.0	(0)	0 10	0 10
			IV	PA231R00 4	Drama Production IV	0	0	8	4					40	60	10	10
8		Basic Media	Ι	IM23MP00	Photography	0	0	8	4					40	60	10	10
	School of Journalism	Production Techniques		, 1	019											0	0
			II	JM23MP00	Videography	0	0	8	4					40	60	10	10
				2												0	0
			III	JM23MP00	Script Writing	0	0	8	4					40	60	10	10
		Advertising and Public Relations		3												0	0
			IV	JM23MP00	Audio Visual Editing	0	0	8	4				T	40	60	10	10
	and Mass			4												0	0
	Communicat		Ι	JM23AP00	Introduction to Advertising	0	0	8	4					40	60	10	10
	ion			1												0	0
			II	JM23AP00	Content Creation	0	0	8	4					40	60	10	10
				2												0	0
			III	JM23AP00	Introduction to Public Relations	0	0	8	4					40	60	10	10
				3		 										0	0
			IV	JM23AP00	Tools and Techniques of Public	0	0	8	4					40	60	10	10
				4	Relations											0	0