

#### **NEP 2020 - Course Structure**

**Program: Bachelor of Science (B.Sc. Computational Mathematics and Data Science)** 

(Honours / Honours with Research)

Semester – I (Level 4.5) Batch: AY 25-26 onwards

Sr. No.	Core	Course Code	e Course Name	5	each Sche rs./V	me Veek		Form Assess CIA Course	ative sment	on Scheme Sumn Assess ESI Course	native sment	Total Marks
MAJ	MAJOR (MANDATORY + ELECTIVES)											
1	Major	NYMT102	Algebra & Calculus-I	3	-	-	3	50		100		100
2	Major	NYMT103	Statistics-I	3	-	-	3	50		100		100
			MIN	NOR	: NA							
	NA											
	l		Open El		es (C	)E) <sup>*</sup>		<b>-</b> 0 I		100		100
3	Ma	indatory	Open Elective-I	4			4	50		100		100
			Vocational and Ski	ll En	han	cem	ent (	VSEC)				
4	VSC	NYMT111	Python Programming - I			4	2		50		50	100
5	SEC	NYMT112	Data Analysis in MS Excel			4	2		50		50	100
		Abili	ty/Value Education Courses/ In	dian	Kn	owle	dge	System(AI	EC/VEC	/IKS)*		
6	AEC		Ability Enhancement Courses - I	-		4	2		50		50	100
7	VEC		Value Education Courses- I			4	2		50		50	100
8	IKS		Indian Knowledge System - I			4	2		50		50	100
		,	OJT/FP	/CEI	P/CO	C/RP					, ,	
9	CC		CC-I			4	2		50		50	100
		1	Total	10		24	22	150	300	300	300	900

CIA: Continuous Internal Assessment				
ESE: End Semester Theory Exam.	OJT – On Job Training FP – Field Project	CIA	Weightage	Description
L: Theory Lecture,	CEP – Community Engagement			
T: Tutorial,	Project	CIA 1	10%	Home Assignment
P: Practical	CC – Curricular Course RP – Research Project	CIA 2	20%	Mid-Term Exam (MTE)
	* - Refer University Notification AEC-Ability Enhancement Course VEC- Value Education Course	CIA 3	10%	Activity/Project and research based learning along with seminar presentation
	SEC- Skill Enhancement Course IKS- Indian Knowledge System	CIA 4	10%	Behavioural Attitude +General Discipline Theory +Practical attendance
		CIA TOTAL	50%	
	Written Examination - End Sem	nester Exam (ESE)	50%	
		TOTAL	100%	



**Program: Bachelor of Science (B.Sc. Computational Mathematics and Data Science)** 

(Honours / Honours with Research)

Semester – II (Level 4.5) For the Batch: AY 25-26 onwards

Sr. No.	Core	Course Code	Course Name	\$	each Schei rs./W	me	ek)	Examinat  Formative  Assessment  CIA		Summative Assessment ESE		– Total Marks
								Course	Lab	Course	Lab	
MAJ	OR (MA	ANDATOR	Y + ELECTIVES)									
1	Major	NYMT201	Algebra & Calculus-II	3	-	-	3	50		100		100
2	Major	NYMT203	Inferential Statistics	3	-	-	3	50		100		100
	l		N	IINO	R						l l	
3	Minor	NYCIM06	Minor - I	2			2	50		100		100
			Open E	lectiv	es (C	E)*						
4	Mai	ndatory	Open Elective - II	4	-		4	50		100		100
			Vocational and Sk	ill En	hanc	eme	nt (V	/SEC)				
5	SEC	NYMT211	R-Programming	1	_	4	2		50		50	100
6	VSC	NYMT212	Python Programming -II	-		4	2		50		50	100
		A	Ability/Value Education Courses/ In	ıdian	Kno	wled	lge S	ystem(AE	C/VEC/II	KS)*		
7	AEC		Ability Enhancement Courses - II			4	2		50		50	100
8	VEC		Value Education Courses- II	2	-	ı	2	50		100		100
			OJT/FI	P/CEP	P/CC	/RP						
9	CC		CC-II			4	2		50		50	100
			TOTAL	14	-	16	22	250	200	500	200	900

	OJT – On Job Training FP – Field Project	CIA	Weightage	Description
CIA: Continuous Internal	CEP – Community Engagement	CIA 1	10%	Home Assignment
Assessment	Project	CIA 2	20%	Mid-Term Exam (MTE)
ESE: End Semester Theory Exam.  L: Theory Lecture,	CC – Curricular Course RP – Research Project * - Refer University Notification	CIA 3	10%	Activity/Project and research based learning along with seminar presentation
<b>T</b> : Tutorial, <b>P</b> : Practical	AEC-Ability Enhancement Course VEC- Value Education Course SEC- Skill Enhancement Course	CIA 4	10%	Behavioural Attitude +General Discipline Theory +Practical attendance
	IKS- Indian Knowledge System	CIA TOTAL	50%	
	Written Examination – End	Semester Exam (ESE)	50%	
		TOTAL	100%	

**Exit Option:** Award of UG certificate in Major with 44 credits and additional 4 credits of Internship or Continue with Major and Minor.

BOS	Dean	Associate Dean	Registrar
Chairperson	SoS	Academics	SUN



#### **NEP 2020 - Course Structure**

**Program: Bachelor of Science (B.Sc. Computational Mathematics and Data Science)** 

(Honours / Honours with Research) **Semester – III (Level 5.0)** 

				T.	1.	•						
					each Schei	_		17	inati	an Caham		
				(Hrs./Week)				Examination Scheme				T. ( )
Sr. No.	Core	Course Code	Course Name			P		Formative		Summative		Total Marks
				L	Т		C	Asse	ssment	Asses	sment E	
								Course	Lab	Course	Lab	
MAJ	OR (MA	ANDATOR	Y + ELECTIVES)									
1	Major	NYMT301	Abstract Algebra	3	-	-	3	50		100		100
2	Major	NYMT302	Multivariate Calculus	3	-	•	3	50	-	100		100
3	Major	NYMT313	Abstract Algebra & Multivariate Calculus Lab	-	-	4	2		50		50	100
			N	IINO	R							
4	Minor	NYCIM07	Minor - II	4			4	50		100		100
			Open El	ective	es (C	E)*						
5	Man	idatory	Open Elective - III	2			2	50		100		100
			Vocational S	kill C	our	se (V	/SC)	)				
6	VSC	NYMT311	Data Analytics Lab-I	-		4	2	-	50		50	100
		Ab	ility/Value Education Courses/ Inc	dian l	Knov	vled	ge S	system (Al	EC/VEC/	IKS)*		
7	AEC		Ability Enhancement Courses - III	_		4	2		50		50	100
	1	· · · · · · · · · · · · · · · · · · ·	OJT/FP	/CEP	/CC	/RP				,	, ,	
8	FP	NYMT312	Field Project			4	2		50		50	100
9	CC		CC-III			4	2		50		50	100
	TOTAL				-	20	22	200	250	400	250	900

CIA: Continuous Internal	OJT – On Job Training FP – Field Project	CIA	Weightage	Description
	CEP - Community Engagement	CIA 1	10%	Home Assignment
Assessment	Project	CIA 2	20%	Mid-Term Exam (MTE)
ESE: End Semester Theory Exam.	CC – Curricular Course			Activity/Project and research based
L: Theory Lecture,	RP – Research Project	CIA 3	10%	learning along with seminar
,	* - Refer University Notification			presentation
T: Tutorial,	AEC-Ability Enhancement Course			Behavioural Attitude +General
P: Practical	VEC- Value Education Course	CIA 4	10%	Discipline
	SEC- Skill Enhancement Course			Theory +Practical attendance
	IKS- Indian Knowledge System	CIA TOTAL	50%	
	Written Examination - End	Semester Exam (ESE)	50%	
	_	TOTAL	100%	



#### **NEP 2020 - Course Structure**

**Program: Bachelor of Science (B.Sc. Computational Mathematics and Data Science)** 

(Honours / Honours with Research) **Semester** – **IV** (Level 5.0)

For the Batch: AY 24-25 onwards

		Teaching Scheme (Hrs./Week)		)	E	Total						
Sr. No.	Core	Course Code	Course Name	L	Т	P	C		native ssment	~	native sment E	Marks
								Course	Lab	Course	Lab	
MAJ	OR (M.	ANDATOR	RY + ELECTIVES)									
1	Major	NYMT401	Linear Algebra	3	-	1	3	50	1	100		100
2	Major	NYMT402	Discrete Mathematics	3	-	-	3	50		100		100
3	Major	NYMT413	Linear Algebra and Discrete Mathematics Lab	-	-	4	2		50		50	100
			N	AINO	R							
4	Minor	NYCIM08	Minor - III	4			4	50	-	100	-	100
			Open E	lectiv	es (C	)E)*	•					
5	Mar	ndatory	Open Elective - IV	2			2	50	-	100		100
			Skill Enhance	ment	Cou	ırse	(SE	C)		I		
6	SEC	NYMT411	Data Analytics Lab-II			4	2		50		50	100
		Ab	oility/Value Education Courses/ In	dian	Kno	wled	lge S	System (Al	EC/VEC/	TKS)*		
7	AEC		Ability Enhancement Courses - IV	2		ı	2	I	50		50	100
			OJT/FI	P/CEI	P/CC	Z/RP						
8	СЕР	NYMT412	Community Engagement Project			4	2	-	50		50	100
9	CC		CC-IV			4	2		50		50	100
	TOTAL					16	22	200	250	400	250	900

CIA: Continuous Internal	OJT – On Job Training FP – Field Project	CIA	Weightage	Description
	CEP - Community Engagement	CIA 1	10%	Home Assignment
Assessment	Project	CIA 2	20%	Mid-Term Exam (MTE)
ESE: End Semester Theory Exam.	CC – Curricular Course			Activity/Project and research based
L: Theory Lecture,	RP – Research Project	CIA 3	10%	learning along with seminar
,	* - Refer University Notification			presentation
<b>T</b> : Tutorial,	AEC-Ability Enhancement Course			Behavioural Attitude +General
P: Practical	VEC- Value Education Course	CIA 4	10%	Discipline
	SEC- Skill Enhancement Course			Theory +Practical attendance
	IKS- Indian Knowledge System	CIA TOTAL	50%	
Written Examination – End Se		Semester Exam (ESE)	50%	
		TOTAL	100%	

Exit Option: Award of UG Diploma in Major and Minor with 88 credits and additional 4credits core NSQF Course / Internship or Continue with Major and Minor.

BOS
Chairperson



#### **NEP 2020 - Course Structure**

**Program: Bachelor of Science (B.Sc. Computational Mathematics and Data Science)** 

(Honours / Honours with Research) **Semester** – V (Level 5.5)

		Teaching Scheme (Hrs./Week		me	)	F	Examinati	on Scheme	n Scheme			
Sr. No.	Core	Course Code	Course Name	L	Т	P	C	Asses		ESI	sment E	Total Marks
								Course	Lab	Course	Lab	
MAJ	MAJOR (MANDATORY + ELECTIVES)											
1	Major	NYMT501	Real Analysis	3	1	-	4	50	1	100		100
2	Major	NYMT502	Data Science-I	4	-	-	4	50	-	100		100
3	Major	NYMT511	Data Science-I Lab	-	-	4	2		50		50	100
			Maj	or Ele	ectiv	e - I						
4	NY	MTE_	Major Elective - I	4	-	-	4	50	-	100	-	100
				Min	or							
5	Minor	NYCIM09	Minor - IV	4			4	50	-	100	-	100
			Vocational Skill Courses (VSC	C)/ <b>Al</b>	oility	Enl	hanc	ement cou	rse (AEC	C)		
6	VSC	NYMT512	Data Analytics with Python	-	-	4	2		50		50	100
7	AEC		Ability Enhancement Courses - V			4	2	-	50		50	100
	FP/CEP											
8	FP / CEP	NYMT513	Filed Project /Community Engagement Project	1		4	2		50		50	100
		TO	OTAL	15	01	12	24	200	***	400	200	800

CIA: Continuous Internal	OJT – On Job Training FP – Field Project	CIA	Weightage	Description
Assessment	CEP - Community Engagement	CIA 1	10%	Home Assignment
ESE: End Semester Theory	Project	CIA 2	20%	Mid-Term Exam (MTE)
Exam.	CC – Curricular Course			Activity/Project and research based
	RP – Research Project	CIA 3	10%	learning along with seminar
L: Theory Lecture,	* - Refer University Notification			presentation
T: Tutorial,	AEC-Ability Enhancement Course VEC- Value Education Course	CIA 4	10%	Behavioural Attitude +General Discipline
P: Practical	SEC- Skill Enhancement Course			Theory +Practical attendance
	IKS- Indian Knowledge System	CIA TOTAL	50%	
Written Examination – End Se		Semester Exam (ESE)	50%	
		TOTAL	100%	

Major Electives – I										
S.No. Course Code Course Name										
1	NYMTE01	Integral Transforms								
2	NYMTE02	Linear Programming and Game Theory								
3 NYMTE03 Data Structures and Algorithms										



#### **NEP 2020 - Course Structure**

**Program: Bachelor of Science (B.Sc. Computational Mathematics and Data Science)** 

(Honours / Honours with Research)
Semester – VI (Level 5.5)

For the Batch: AY 24-25 onwards

-				Teacl (H	ning S		ne	E: Forma		ion Scheme Summa	ıtivo	
Sr. No.	Core	Course Code	Course Name	L	Т	P	C		Assessment		nent	Total Marks
								Course	Lab	Course	Lab	
	MAJOR (MANDATORY + ELECTIVES)											
1	Major	NYMT601	Complex Analysis	3	1	1	4	50		100		100
2	Major	NYMT602	Data Science-II	4	-	-	4	50		100		100
3	Major	NYMT611	Data Science-II Lab	-	-	4	2	-	50		50	100
					Ma	jor I	Elect	ive - II				
4	N	YMTE_	Major Elective - II	4	-	-	4	50	-	100	-	100
						M	lino	r				
5	Minor	NYCIM10	Minor - V	4			4	50		100		100
				Abilit	y Enh	ance	men	t course (AEC	C)			
6	AEC		Ability Enhancement Courses - V			4	2		50		50	100
OJT (	On Job	Training)	,		•							
7	OJT	NYMT612	On Job Training			8	4		50		50	100
			TOTAL	15	1	16	24	200	150	400	150	700

CIA: Continuous Internal	CIA: Continuous Internal  OJT – On Job Training FP – Field Project		Weightage	Description
Assessment	CEP - Community Engagement	CIA 1	10%	Home Assignment
ESE: End Semester Theory	Project	CIA 2	20%	Mid-Term Exam (MTE)
,	CC – Curricular Course			Activity/Project and research based
Exam.	RP – Research Project	CIA 3	10%	learning along with seminar
L: Theory Lecture,	* - Refer University Notification			presentation
T: Tutorial.	AEC-Ability Enhancement Course			Behavioural Attitude +General
,	VEC- Value Education Course	CIA 4	10%	Discipline
P: Practical	SEC- Skill Enhancement Course			Theory +Practical attendance
	IKS- Indian Knowledge System	CIA TOTAL	50%	
	Written Examination – End	50%		
		TOTAL	100%	

Exit Option: Award of UG Degree in Major with 132 credits or Continue with Major and Minor.

Major Elective – II										
S. No.	Course Code	Course Name								
1	NYMTE04	Information Theory								
2	NYMTE05	Number Theory								
3	NYMTE06	Machine Learning								
4	NYMTE13	Vector Calculus								



#### **NEP 2020 - Course Structure**

Program: Bachelor of Science (B.Sc. Computational Mathematics and Data Science)

(UG Honours)

Semester – VII (Level 6.0)

					each Schei	ne	)	Examination Scheme				Tital
Sr. No.	Core	Code		L T		С	Formative Assessment CIA		Summative Assessment ESE		Total Marks	
								Course	Lab	Course	Lab	
MAJ	MAJOR (MANDATORY + ELECTIVES)											
1	Major	NYMT701	Differential Equations	3	1	-	4	50	-	100		100
2	Major	NYMT702	Linear Algebra for Machine Learning	2	-	-	2	50	-	100		100
3	Major	NYMT712	Linear Algebra for Machine Learning Lab	-	-	4	2	-	50	-	50	100
4	Major	NYMT703	Introduction to AI	4	-	-	4	50	-	100	-	100
5	Major	NYMT711	Introduction to AI Lab	-	1	4	2	1	50	-	50	100
Majo	r Elective	e - III										
6	NYM	ITE_	Major Elective - III	4	ı	-	4	50	-	100	-	100
Mino	r											
7	Minor	17RDP101	Research Methodology	4			4	50		100		100
	TOTAL 20 - 4 22 250 50 500 50 600											

CIA: Continuous Internal	OJT – On Job Training	CIA	Weightage	Description
Assessment	FP - Field Project	CIA 1	10%	Home Assignment
ESE: End Semester Theory	CEP – Community Engagement Project	CIA 2	20%	Mid-Term Exam (MTE)
Exam.  L: Theory Lecture,	RP – Research Project  * - Refer University Notification AEC-Ability Enhancement Course	CIA 3	10%	Activity/Project and research based learning along with seminar presentation
<b>T</b> : Tutorial, <b>P</b> : Practical	VEC- Value Education Course SEC- Skill Enhancement Course IKS- Indian Knowledge System	CIA 4	10%	Behavioural Attitude +General Discipline Theory +Practical attendance
	ino maian knowledge bystem	CIA TOTAL	50%	
	Written Examination - End Semester Exam (ESE)			]
		TOTAL	100%	

Major Elective – III								
S.No. Course Code Course Name								
1	NYMTE07	Design and Analysis of Algorithms						
2	NYMTE08	Field Theory						
3	NYMTE09	Data Mining						



#### **NEP 2020 - Course Structure**

For the Batch: AY 24-25 onwards

**Program: Bachelor of Science (B.Sc. Computational Mathematics and Data Science)** (UG Honours)

**Semester – VIII (Level 6.0)** 

Sem	Tof the Daten. AT 24-25 offwards											
					each Schei rs./W	me	)	Examination Scheme				
Sr. No.	Core	Course Code	Course Name	L	Т	P	C		native ssment		mative ssment E	Total Marks
								Course	Lab	Course	Lab	
MAJ	MAJOR (MANDATORY + ELECTIVES)											
1	Major	NYMT801	Numerical Analysis	4	-	-	4	50		100		100
2	Major	NYMT802	Operation Research	3	1	-	4	50		100		100
3	Major	NYMT803	Deep Learning	4	-	-	4	50	-	100	-	100
4	Major	NYMT811	Numerical Analysis Lab	-	-	4	2	-	50	-	50	100
Majo	r Elective	e - IV										
5	NY	MTE_	Major Elective - IV	4	-	-	4	50	-	100	-	100
On Jo	On Job Training											
6	OJT	NYMT812	On Job Training	-		8	4		50		50	100
	TOTAL 20 - 4 22 200 100 500 100 600										600	

CIA: Continuous Internal	CIA: Continuous Internal  Assessment  OJT – On Job Training FP – Field Project CEP – Community Engagement	CIA	Weightage	Description
Assessment		CIA 1	10%	Home Assignment
ESE: End Semester Theory	Project CC – Curricular Course	CIA 2	20%	Mid-Term Exam (MTE)
Exam. <b>L</b> : Theory Lecture,	RP – Research Project  * - Refer University Notification AEC-Ability Enhancement Course	CIA 3	10%	Activity/Project and research based learning along with seminar presentation
T: Tutorial, P: Practical	VEC- Value Education Course SEC- Skill Enhancement Course IKS- Indian Knowledge System	CIA 4	10%	Behavioural Attitude +General Discipline Theory +Practical attendance
		CIA TOTAL	50%	
	Written Examination – End	50%		
		TOTAL	100%	

Major	Major Elective – IV								
S.No.	Course Code	Course Name							
1	NYMTE10	Big Data							
2	NYMTE11	Coding Theory							
3	NYMTE12	Web Designing							



#### **NEP 2020 - Course Structure**

**Program: Bachelor of Science (B.Sc. Computational Mathematics and Data Science)** (UG Honours with Research)

Semester – VII (Level 6.0)

Sr.		Course			each Schei	ne	·)	Examination Scheme				Total
No.	Core	Code	Course Name	L	Т	P	C		native ssment A		native sment E	Marks
								Course	Lab	Course	Lab	
MAJ	MAJOR (MANDATORY + ELECTIVES)											
1	Major	NYMT701	Differential Equations	3	1	ı	4	50	-	100		100
2	Major	NYMT702	Introduction to AI	4	-	1	4	50		100		100
4	Major	NYMT711	Introduction to AI Lab	-	-	4	2	-	50	-	50	100
Majo	r Elective	- III	•									
5	NY	MTE_	Major Elective - III	4	-	- 1	4	50	-	100	-	100
Mino	r											
6	Minor	17RDP101	Research Methodology	4			4	50		100		100
Resea	Research Project											
7	RP	NYMT712	Research Project Stage-I			8	4		50		50	100
			TOTAL	20	-	4	22	250	50	500	50	600

CIA: Continuous Internal	OJT – On Job Training	CIA	Weightage	Description
Assessment	FP – Field Project	CIA 1	10%	Home Assignment
ESE: End Semester Theory	CEP – Community Engagement Project	CIA 2	20%	Mid-Term Exam (MTE)
Exam. L: Theory Lecture,	RP – Research Project  * - Refer University Notification AEC-Ability Enhancement Course	CIA 3	10%	Activity/Project and research based learning along with seminar presentation
<b>T</b> : Tutorial, <b>P</b> : Practical	VEC-Ability Enhancement Course VEC- Value Education Course SEC- Skill Enhancement Course IKS- Indian Knowledge System	CIA 4	10%	Behavioural Attitude +General Discipline Theory +Practical attendance
	mo maian mowicage system	CIA TOTAL	50%	
	Written Examination – End S	50%		
		TOTAL	100%	

Major	Major Elective – III				
S.No. Course Code		Course Name			
1	NYMTE07	Design and Analysis of Algorithms			
2	NYMTE08	Field Theory			
3	NYMTE09	Data Mining			



#### **NEP 2020 - Course Structure**

**Program: Bachelor of Science (B.Sc. Computational Mathematics and Data Science)** (UG Honours with Research)

**Semester – VIII (Level 6.0)** 

				Teaching Scheme (Hrs./Week)		Examination Scheme			T. (.)			
Sr. No.	Core	Course Code	Course Name	L	Т	P	C		native ssment		mative ssment E	Total Marks
								Course	Lab	Course	Lab	
MAJ	OR (MAN	DATOR	Y + ELECTIVES)									
1	Major	NYMT8	Numerical Analysis	4	-	-	4	50		100		100
2	Major	NYMT8	Deep Learning	4	-	-	4	50		100		100
3	Major	NYMT8	Numerical Analysis lab	-	-	4	2		50	-	50	100
Majo	r Elective	- IV										
4	NY	MTE_	Major Elective - IV	4	-	-	4	50	1	100	-	100
Resea	arch Proje	ect										
5	RP	NYMT8	Research Project Stage-II	-		16	8	-	50		50	100
TOTAL		20	-	4	22	150	100	300	100	500		
С	CIA: Continuous Internal OJT – On Job Training				CIA			Weight	age	Des	scription	
	Assessr		FP – Field Project CEP – Community Engagement Project			IA 1 IA 2		10%			Assignmen n Exam (M	

CIA: Continuous Internal	OJT – On Job Training FP – Field Project	CIA	Weightage	Description
Assessment	CEP - Community Engagement	CIA 1	10%	Home Assignment
ESE: End Semester Theory	Project	CIA 2	20%	Mid-Term Exam (MTE)
Exam. L: Theory Lecture,	CC – Curricular Course RP – Research Project * - Refer University Notification	CIA 3	10%	Activity/Project and research based learning along with seminar presentation
<b>T</b> : Tutorial, <b>P</b> : Practical	AEC-Ability Enhancement Course VEC- Value Education Course SEC- Skill Enhancement Course	CIA 4	10%	Behavioural Attitude +General Discipline Theory +Practical attendance
	IKS- Indian Knowledge System	CIA TOTAL	50%	
	Semester Exam (ESE)	50%	]	
		TOTAL	100%	

Major Elective – IV				
S.No.	Course Code	Course Name		
1	NYMTE10	Big Data		
2	NYMTE11	Coding Theory		
3	NYMTE12	Web Designing		



# ABILITY ENHANCEMENT COURSE (AEC) BASKET

S. No.	COURSE CODE	NAME OF THE COURSE	SEMESTER
1	NHSA01	Communicative English	
2	NHSA06	Organizational Behavior	
3	NHSA07	Journalistic writing	I
4	NHSA05	Elementary Marathi	
5	NHSA09	Linguaskills 1	
6	NHSA02	Personality Development and Soft Skills	
7	NHSA08	Creative Writing	
8	NHSA03	Value Education	II
9	NHSA04	Introduction to Sanskrit	11
10	NHSA10	Linguaskills 2	
11	NSSA01	IP and Scientific writing	
12	NSSA02	Data analysis and interpretation	III
13	NSSA03	Publication Ethics	
14	NHSA11	Key Competencies for Career Growth	
15	NSSA04	Scientific policies and practices	
16	NSSA05	Literature and Publication	IV
17	NSSA06	Scientific media	
18	NHSA12	Strategic Communication for Professionals (Advanced)	
19	NHSA13	Essential Aptitude Skills	V
20	NHSA14	Employability Skills and Career Advancement	VI



#### **VALUE EDUCATION COURSE (VEC) BASKET**

S.No.	COURSE CODE	NAME OF THE COURSE	SEMESTER
1	NSSV02	Sustainable Development	
2	NLWV01	The Constitution and Human Rights	I
3	NSSV03	Scientific Ethics	
4	NSSV04	Science and Society	
5	NSSV05	Waste to Wealth	II
6	NSSV01	Environmental Studies	

#### INDIAN KNOWLEDGE SYSTEM (IKS) BASKET

Sr.No.	COURSE CODE	NAME OF THE COURSE	SEMESTER
1	NSSI01	Ethnomedicine	
2	NSSI02	Vedic Mathematics	
3	NSSI03	Nature as Medicine	I
4	NSSI04	Ancient World and Modern Science	
5	NSSI05	Science and Spirituality	



#### **CO-CURRICULAR COURSE (CC) BASKET**

Sr.No.	COURSE CODE	NAME OF THE COURSE	SEMESTER	
1	NSSC01	Physical Education and Mental Health	I	
2	NYCM112	Yoga Meditation	•	
3	NSSC02	Ethics and Human Rights		
4	NSSC03	Science Clubs	II	
5	NSSC04	Food Adulteration	11	
6	NSSC05	Bio-media		
7	NSSC06	Wild Life Photography		
8	NSSC07	Awareness and Recycling of Plastic	Ш	
9	NSSC08	Health and Hygeine	111	
10	NSSC13	Mathematics for Environmental Studies		
11	NSSC09	Courtroom Strategies and Tactics		
12	NSSC10	Scientific Journalism	13.7	
13	NSSC11	Organic and Residue Free Farming	IV	
14	NSSC12	Soil and water analysis		

# **OPEN ELECTIVE (OE) BASKET**

Sr.No.	COURSE CODE	NAME OF THE COURSE	SEMESTER
1	NSSO01	Fundamentals of Statistics	
2	NSSO02	Introduction to Nano science and Nanotechnology	I
3	NSSO03	Diseases and Control Measures	TT
4	NSSO04	Horticulture	11



**Note:** Student from B.Sc. (Computational Mathematics and Data Science) with minor in Artificial Intelligence (AI) shall choose from following:

Sr. No.	COURSE CODE	NAME OF THE COURSE	SEMESTER
1	NYCIM06	Introduction to AI Fundamentals	II
2	NYCIM07	Basics of Machine Learning	III
3	NYCIM08	Fundamental of AI & ML	IV
4	NYCIM09	Artificial neural network	V
5	NYCIM10	Knowledge representation using AI	VI

**Note:** Student from B.Sc. (Computational Mathematics and Data Science) shall choose from following:

S. No.	COURSE CODE	NAME OF THE COURSE	SEMESTER
1	NYMTM01	Data Science Fundamentals	II
2	NYMTM02	Data Management	III
3	NYMTM03	Data Security and Privacy	IV
4	NYMTM04	Data Handling and Visualization	V
6	NYMTM05	Techniques And Tools for Data Science	VI