School of Basic Sciences : B.Sc. (Hons) Climate Change and Sustainability (3 Yrs) and B.Sc. (Hons with Research) Climate Change and Sustainability (4Yrs)

Year 1						
Semester-I						
S. No.	**Category**	**Name of the Course**				
			L	**T**	**P**	**C**
1	Core	Introduction to Climate Science	3	1	0	4
2	Core	Introduction to Natural Resources and Sustainability	3	1	0	4
3	AEC	English Proficiency I	0	0	2	2
4	VAC	IT Tools and Data Analytics	0	0	2	2
5	MDC-1	Foundation of Programming	2	0	2	4
6	GE	Minor / Interdisciplinary Elective I	-	-	-	4
Total Credits						**20**
Semester-II						
S. No.	**Category**	**Name of the Course**				
			L	**T**	**P**	**C**
1	Core	Earth System Processes	3	1	0	4
2	Core	Environment pollution and mitigation techniques	3	0	1	4
3	Core	Sustainable Agriculture and Food Systems	3	1	0	4
4	AEC	English Proficiency II	-	-	-	2
5	VAC	Choose From the Basket	-	-	-	2
6	GE	Minor / Interdisciplinary Elective II	-	-	-	4
Total Credits						**20**
Year 2						
Semester-III						
S. No.	**Category**	**Name of the Course**				
			L	**T**	**P**	**C**
1	Core	Climate Modelling and Projections	3	0	1	4
2	Core	Biodiversity and Conservation	3	1	0	4
3	Core	Data Analytics for Sustainability	3	0	1	4

4	AEC	Today's Science, Tomorrow's World I	2	0	0	2
5	SEC	Statistical Computing with R	1	0	2	3
6	Internship	Social Internship	-	-	-	2
7	GE	Minor / Interdisciplinary Elective III	-	-	-	4
Total Credits						**23**

Semester-IV

S. No.	Category	Name of the Course	L	T	P	C
1	Core	Water Resources and Climate Resilience	3	0	1	4
2	Core	Climate change law and policy	3	1	0	4
3	Core	Energy Systems and Transitions	3	1	0	4
4	AEC	Today's Science, Tomorrow's World II	2	0	0	2
5	SEC	Choose From the Basket	-	-	-	3
6	MDC-2	Choose From the Basket	-	-	-	2
7	GE	Minor / Interdisciplinary Elective IV	-	-	-	4
Total Credits						**23**

Year 3

Semester-V

S. No.	Category	Name of the Course	L	T	P	C
1	Core	Urban Sustainability and Smart Cities	3	1	0	4
2	Core	Waste Management and Circular Economy	3	0	1	4
3	Elective	Specialised Elective-1	-	-	-	4
4	GE	Minor / Interdisciplinary Elective V	-	-	-	4
5	SEC	Choose From the Basket	-	-	-	3
6	VAC	Choose From the Basket	-	-	-	2
7	Internship	Academic/Research/Industry	-	-	-	2
Total Credits						**23**

Semester-VI						
S. No.	Category	Name of the Course				
			L	T	P	C
1	**Elective**	Specialized Elective-2	-	-	-	4
2	**Elective**	Specialized Elective-3	-	-	-	4
3	**Elective**	Specialized Elective-4	-	-	-	4
4	**Elective**	Specialized Elective-5	-	-	-	4
5	GE	Minor / Interdisciplinary Elective VI	-	-	-	4
6	MDC-3	Choose From the Basket	-	-	-	3
Total Credits						**23**
Year 4						
Semester-VII						
S. No.	Category	Name of the Course				
			L	T	P	C
1	**Core**	Green Technology and Innovation	3	1	0	4
2	**Elective**	Specialised Elective-6	-	-	-	4
3	**Elective**	Specialised Elective-7	-	-	-	4
4	GE	Minor / Interdisciplinary Elective VII	-	-	-	4
5	GE	Minor / Interdisciplinary Elective VIII	-	-	-	4
Total Credits						**20**
Semester-VIII						
S. No.	Category	Name of the Course				
			L	T	P	C
1	**Project**	Dissertation				12
Total Credits						**12**
Electives						
S. No.	Category	Name of the Course				
			L	T	P	C
1	**Elective 1**	Carbon sequestration and sustainability	3	1	0	4
2		Disaster Risk Reduction	3	1	0	4
3		Geophysical Fluid dynamics	3	1	0	4

S. No.	Category		Name of the Course	L	T	P	C
4	Elective 2		Environmental Planning, Management and Ethics	3	1	0	4
5	Elective 3		Land Use and Climate Change	3	1	0	4
6	Elective 4		GIS and Remote Sensing for Climate Studies	3	1	0	4
7	Elective 5		Sustainable Livelihoods	3	1	0	4
8	Elective 6		Climate Finance	3	1	0	4
9			Competition and Industrial policy for sustainable development	3	1	0	4
10	Elective 7		Climate Simulation	3	1	0	4
11			Economic development, Gender and Sustainability	3	1	0	4
Specialization in Green Hydrogen and Technology							
S. No.	Category		Name of the Course	L	T	P	C
1	Elective 1		Green Hydrogen and Renewable Energy Systems	3	1	0	4
2			Water Electrolysis and Photocatalysis for Hydrogen Production	3	0	1	4
3			Hydrogen and the Circular Carbon Economy	3	0	1	4
4	Elective 2		Materials and Technologies for Green Hydrogen	3	0	1	4
5	Elective 3		Sustainable Hydrogen Storage and Distribution Technologies	3	1	0	4
6	Elective 4		Hydrogen Applications in Climate-Resilient Sectors	3	1	0	4
7	Elective 5		Environmental Impact and Life Cycle Analysis of Hydrogen Technologies	3	1	0	4
8	Elective 6		Policy, Governance, and Economics of Green Hydrogen	3	1	0	4
9			Climate Modelling and Simulation for Hydrogen Integration	3	1	0	4
10	Elective 7		Capstone Project: Designing Sustainable Hydrogen Ecosystems	3	0	1	4

Multidisciplinary Courses (MDC)

S. No.	Category	Name of the Course	L	T	P	C
1	MDC-1	Foundation of Programming	2	0	2	4
2	MDC-2	Indian legal systems for sciences	2	0	0	2
3	MDC-2	Stock exchange	2	0	0	2
4	MDC-2	Machine learning	3	0	0	3
5	MDC-3	Environmental Toxicology and Society	3	0	0	3
6	MDC-3	Research Methodology	3	0	0	3

Value added Courses (VAC)

S. No.	Category	Name of the Course	L	T	P	C
1.	VAC-1	IT Tools and Data Analytics	0	0	2	2
2.	VAC-1	Introduction of Value Based Education	2	-	-	2
3	VAC-2	Health and Nutrition	2	-	-	2
4	VAC-2	Art of Happiness	2	-	-	2
5	VAC-3	Vedic Mathematics	1	-	1	2
6	VAC-3	Digital Marketing	2	-	-	2

Skill Enhancement Courses (SEC)

S. No.	Category	Name of the Course	L	T	P	C
1.	SEC-1	Statistics with R	1	0	2	3
2.	SEC-1	Electronic Product Testing	2	0	1	3
3.	SEC-2	Introduction to Artificial Intelligence	2	0	1	3
4.	SEC-2	Cyber Sphere & Security Global Concern	3	0	0	3
5.	SEC-3	Testing of Cosmetics and Hygienic Products	2	0	1	3
6.	SEC-3	Innovation and Entrepreneurship	3	0	0	3

Ability Enhancement Courses (AEC)

S. No.	Category	Name of the Course	L	T	P	C
1.	AEC-1	English Proficiency I	0	0	2	2
2.	AEC-2	English Proficiency II	0	0	2	2
3.	AEC-3	Today's Science, Tomorrow's World I	2	0	0	2
4.	AEC-4	Today's Science, Tomorrow's World II	2	0	0	2