

## B.Sc. Computer Science (NEP – 2020)

B.Sc. Sem. - I (Computer Science - Major)				B.Sc. Sem. - II (Computer Science - Major)		
Sr.	Name of Course	Theory	Practical	Name of Course	Theory	Practical
1	Programming in 'C'	80+20	25+25	OOP's using C++	80+20	25+25
2	Computer Fundamentals	80+20	0+50	Operating Systems	80+20	0+50
3	<b>Refer GE/OE Basket</b>	80+20		<b>Refer GE/OE Basket</b>	80+20	
4	<b>Refer GE/OE Basket</b>	80+20		<b>Refer GE/OE Basket</b>	80+20	
5	Office Automation		50+50	Computer Animation		50+50
6	Refer SEC Basket		50+50	<b>Refer SEC Basket</b>		50+50
7	English Compulsory	50+50		English Compulsory	50+50	
8	Environmental Sci.	80+20		Constitution of India	80+20	
9	Vedic Mathematics	80+20		Indian Astronomy		50+50
10	<b>Refer CC Basket</b>		0+100	<b>Refer CC Basket</b>		0+100
		530+170	125+275		450+150	75+325

B.Sc. Sem. - III (Computer Science - Major)				B.Sc. Sem. - IV (Computer Science - Major)		
Sr.	Name of Course	Theory	Practical	Name of Course	Theory	Practical
1	Data Structures	80+20	25+25	Java Programming	80+20	25+25
2	Linux Operating System	80+20	0+50	Software Engineering	80+20	+50
3	Minor-1 (Refer Minor Basket)	80+20	25+25	Minor-3 (Refer Minor Basket)	80+20	25+25
4	Minor-2 (Refer Minor Basket)	80+20	0+50	Minor-4 (Refer Minor Basket)	80+20	+50
5	<b>Refer GE/OE Basket</b>	80+20		<b>Refer GE/OE Basket</b>	80+20	
6	Refer VSC Basket		50+50	<b>Refer SEC Basket</b>		50+50
7	Second Language	50+50		English Compulsory	50+50	
8	Field Project		50+50	Community Service		50+50
9	<b>Refer CC Basket</b>		0+100	<b>Refer CC Basket</b>		+100
		450+150	150+350		450+150	150+350

B.Sc. Sem. - V (Computer Science - Major)				B.Sc. Sem. - VI (Computer Science - Major)		
Sr.	Name of Course	Theory	Practical	Name of Course	Theory	Practical
1	Advanced JAVA Programming	80+20	25+25	Cyber Security	80+20	25+25
2	Database Management System	80+20	+50	SQL and PL/SQL	80+20	+50
3	Data Communication & Networks	80+20	25+25	Python Programming	80+20	25+25
4	Elective-1	120+30	+50	Elective 2	120+30	+50
5	Minor-5 (Refer Minor Basket)	80+20	25+25	Minor 7 (Refer Minor Basket)	80+20	25+25
6	Minor-6 (Refer Minor Basket)	80+20	+50	Refer VSC Basket	-	50+50
7	Refer VSC Basket		50+50	<b>Internship (Related to DSC)</b>	-	00+100
8	Community Service		25+25	-	-	-
		520+130	150+300		440+110	25+325

B.Sc. Sem.-VII (Honors) (Computer Science - Major)				B.Sc. Sem-VIII (Honors) (Computer Science - Major)		
Sr.	Name of Course	Theory	Practical	Name of Course	Theory	Practical
1	Artificial Intelligence	80+20	25+25	Cloud Computing	80+20	25+25
2	Compiler Construction	80+20	+50	Machine Learning	80+20	+50
3	Neural Network	80+20	25+25	R-Programming	80+20	25+25
4	Data Mining	80+20	+50	Computer Graphics	80+20	+50
5	Elective-3	120+30	25+25	Elective-4	120+30	25+25
6	Research Methodology	80+20	50+50	<b>Apprenticeship</b> (Related DSC)		100+100
		520+130	125+225		440+110	175+275

B.Sc. Sem. - V (Computer Science - Major)				B.Sc. Sem. - VI (Computer Science - Major)		
Sr.	Name of Course	Theory	Practical	Name of Course	Theory	Practical
1	Artificial Intelligence	80+20	25+25	Cloud Computing	80+20	25+25
2	Compiler Construction	80+20	+50	Machine Learning	80+20	+50
3	Neural Network	80+20	25+25	R-Programming	80+20	25+25
4	Elective 3	120+30	+50	Elective 4	120+30	+50
5	Research Methodology	80+20	50+50	Research Project / Dissertation	-	175+175
6	Research Project / Dissertation	-	75+75	-	-	-
		440+110	175+275		440+110	225+325

SEC(Skill Enhancement Courses) Basket		
Semester	Name of Course	Course Code
CS Sem.-I	Desk Top Publishing Tally	BVS1P02 BVS2P04

VSC (Vocational Skill Course) Basket			GE/OE(Generic/Open Electives) Basket		
Semester	Name of Course	Code	Semester	Name of Course	Code
I	Office Automation	BVS1P01	I	Computer Fundamental Office Automation	BGO1T01 BGO1T02
II	Computer Animation	BVS2P03	II	Programming in C Web Technology	BGO2T03 BGO2T04
III	Web design using HTML, DHTML	BVS3P05	III	Data base management system	BGO3T05
V	Web Development using Java	BVS5P07	IV	Cyber Security (850)	BGO4T06
VI	Shell Programming	BVS6P08			

Basket for ELECTIVE (DSE) Category Courses (Computer Science)			
Semester	Course Category	Name of Course	Course Code
V	Elective 1	Web Technology	BCS5T12
		E-Commerce	
VI	Elective 2	ASP.NET	BCS6T16
		Embedded System	
VII (Honors)	Elective 3	Discrete Mathematics	BCS7T21
		Digital Electronics and Microprocessor	
VIII (Honors)	Elective 4	Computer Architecture and Organization	BCS8T27
		PHP	
VII (Research)	Elective 3	Data Mining	BCS7T20R
		Soft Computing	
VIII (Research)	Elective 4	Digital Image Processing	BCS7T25R
		Internet of Things	

1. Basket for Minor Category Courses - BOTANY				
Semester	Course Category	Name of Course	Course Code	
			Theory	Practical
III	Minor 1	Algae, Fungi, Lichen & Plant Pathology	BBO1T01	BBO1P01
	Minor 2	Fossil Angiosperms & Angiosperm Taxonomy	BBO1T02	BBO1P02
IV	Minor 3	Genetics, Plant breeding, Biostatistics & Evolution	BBO2T03	BBO2P03
	Minor 4	Plant Development, Anatomy & Embryology	BBO2T04	BBO2P04
V	Minor 5	Biochemistry & Plant Physiology	BBO3T05	BBO3P05
	Minor 6	Economic botany, Ethnobotany & Phytogeography	BBO3T06	BBO3P06
VI	Minor 7	Ecology & Laboratory Instrumentation	BBO4T07	BBO4P07

4. Basket for Minor Category Courses - CHEMISTRY				
Semester	Course Category	Name of Course	Course Code	
			Theory	Practical
III	Minor 1	Inorganic Chemistry-1 (Atomic structure, bonding and main group elements)	BCH1T01	BCH1P01
	Minor 2	Organic Chemistry-1 (Fundamentals, stereochemistry and hydrocarbons)	BCH1T02	BCH1P02
IV	Minor 3	Organic Chemistry-2 (Functional group chemistry)	BCH2T03	BCH2P03
	Minor 4	Physical Chemistry-1 (Thermodynamics, gaseous and liquid state)	BCH2T04	BCH2P04
V	Minor 5	Physical Chemistry-2 (Surface chemistry, phase equilibria, electrochemistry and kinetics)	BCH3T05	BCH3P05
	Minor 6	Inorganic Chemistry-2 (Bonding, transition elements and solutions)	BCH3T06	BCH3P06
VI	Minor 7	Inorganic Chemistry-3 (Coordination chemistry, Redox reactions and Inorganic Polymers)	BCH4T07	BCH4P07

5. Basket for Minor Category Courses - COMPUTER SCIENCE				
Semester	Course Category	Name of Course	Course Code	
			Theory	Practical
III	Minor 1	Programming in 'C'	BCS1T01	BCS1P01
	Minor 2	Computer Fundamentals	BCS1T02	BCS1P02
IV	Minor 3	Object Oriented Programming using 'C++'	BCS2T03	BCS2P03
	Minor 4	Operating Systems	BCS2T04	BCS2P04
V	Minor 5	Data Structures	BCS3T05	BCS3P05
	Minor 6	Linux Operating System	BCS3T06	BCS3P06
VI	Minor 7	Java Programming	BCS4T07	BCS4P07

14. Basket for Minor Category Courses - MATHEMATICS				
Semester	Course Category	Name of Course	Course Code	
			Theory	Practical
III	Minor 1	Algebra and Trigonometry	BMT1T01	BMT1P01
	Minor 2	Differential Calculus	BMT1T02	BMT1P02
IV	Minor 3	Integral Calculus and Ordinary Differential Equations	BMT2T03	BMT2P03
	Minor 4	Vector Analysis	BMT2T04	BMT2P04
V	Minor 5	Partial Differential Equations	BMT3T05	BMT3P05
	Minor 6	Analytical Solid Geometry	BMT3T06	BMT3P06
VI	Minor 7	Mathematical Methods	BMT4T07	BMT4P07

16. Basket for Minor Category Courses - PHYSICS				
Semester	Course Category	Name of Course	Course Code	
			Theory	Practical
III	Minor 1	Measurement, Mechanics, and Properties of Matter	BPH1T01	BPH1P01
	Minor 2	Kinetic Theory of Gases and Thermodynamics	BPH1T02	BPH1P02
IV	Minor 3	Acoustics and Ultrasonics	BPH2T03	BPH2P03
	Minor 4	Oscillations and Blackbody radiations	BPH2T04	BPH2P04
V	Minor 5	Solid State Physics	BPH3T05	BPH3P05
	Minor 6	Optics	BPH3T06	BPH3P06
VI	Minor 7	Lasers and Optical Fibres	BPH4T07	BPH4P07

18. Basket for Minor Category Courses - ZOOLOGY				
Semester	Course Category	Name of Course	Course Code	
			Theory	Practical
III	Minor 1	Life and Diversity of Animals- Nonchordates (Protozoa to Annelida)	BZO1T01	BZO1P01
	Minor 2	Cell Biology and Genetics	BZO1T02	BZO1P02
IV	Minor 3	Life and Diversity of Animals- Nonchordates (Arthropoda to Hemichordata)	BZO2T03	BZO2P03
	Minor 4	Developmental Biology	BZO2T04	BZO2P04
V	Minor 5	Chordata	BZO3T05	BZO3P05
	Minor 6	General Mammalian Physiology	BZO3T06	BZO3P06
VI	Minor 7	Applied Zoology	BZO4T07	BZO4P07