

Name of Program: BSc.IT

Specialization:

Artificial Intelligence and Machine Learning

And

Cyber Security and Forensics

Year I

Semester - 1

S.No.	Course Title	Credits
1.	Major 1 Specialization:	4
	Artificial Intelligence and Machine Learning	Introduction to Python Programming (IBM)
	Cyber security and Forensics	Information Security Fundamentals (IBM)
2	Major 2 Problem Solving and Programming using C	4
3	Minor 1 Computer System Architecture	4
4.	MD-1 Fundamentals of Mathematics	2
5.	MD-2 Dynamics of Human Behavior	2
6.	AEC 1 Communication Skills / Sanskrit	2
7.	SEC 1 E - Commerce	2
8.	VAC 1 Science of Living I	2
Total of SEMESTER 1		22

Semester - 2

S.No.	Course Title	Credits
1.	Major 3 Specialization:	4

	Artificial Intelligence and Machine Learning	Introduction to Artificial Intelligence and Machine Learning (IBM)	
	Cyber security and Forensics	IT Network Security (IBM)	
2.	Major 4 Data Structure & Algorithm		4
3.	Minor 2 Database Management System		4
4.	MD 3 Fundamentals of Statistics		2
5.	MD 4 (Any one course to be chosen from the following pool of courses)		2
	Course Name	Offered By	
	Travel & Itinerary Design	School of Hospitality	
	Environmental Education	School of Design	
	Short Film Making	School of Journalism Mass Comm.	
	Financial Literacy	School of Business	
	Introduction to IPR	School of Law	
	Digital Literacy	School of Information Technology	
	Sculpture	School of Design	
	The Art of Expressive Writing	School of Liberal Arts & Human Sciences	
6.	AEC 2 Communication Skills/ French / Sanskrit / Gujarati / Hindi		2
7.	SEC 2 Internet Concepts and Web Designing		2
8.	VAC 2 Science of Living II		2
Total of SEMESTER II			22
Total Credits for FIRST YEAR			44

Exit 1: Award of UG certificate in Major course with 44 credits with additional 4 credits of Summer Internship in core specific NSQF defined course OR continue with Major and Minor course for next NCrF credit level

Year 2

Semester-3

S.No.	Course Title	Credits																		
1.	Major 5 Specialization:	4																		
	Artificial Intelligence and Machine Learning Machine Learning (IBM)																			
	Cyber security and Forensics IT Application Security (IBM)																			
2.	Major 6 Operating System	4																		
3.	Major 7 Relational Database Management System	4																		
4	MD 5 Computer Networks	2																		
5	MD-6 : (Any one course to be chosen from the following pool of courses)	2																		
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Course</th> <th style="text-align: center;">Offered by</th> </tr> </thead> <tbody> <tr> <td>Digital Literacy</td> <td>School of IT</td> </tr> <tr> <td>Environmental Education</td> <td>School of Design</td> </tr> <tr> <td>Financial Literacy</td> <td>School of Business</td> </tr> <tr> <td>Introduction to IPR</td> <td>School of Law</td> </tr> <tr> <td>Sculpture</td> <td>School of Design</td> </tr> <tr> <td>Short Film Making</td> <td>School of Journalism and Mass Communication</td> </tr> <tr> <td>The Art of Expressive Writing</td> <td>School of Liberal Arts and Human Sciences</td> </tr> <tr> <td>Travel and Itinerary Design</td> <td>School of Hospitality</td> </tr> </tbody> </table>	Course	Offered by	Digital Literacy	School of IT	Environmental Education	School of Design	Financial Literacy	School of Business	Introduction to IPR	School of Law	Sculpture	School of Design	Short Film Making	School of Journalism and Mass Communication	The Art of Expressive Writing	School of Liberal Arts and Human Sciences	Travel and Itinerary Design	School of Hospitality	
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6	AEC 3 Communication Skills/ French / Sanskrit / Gujarati / Hindi	2																		
7	SEC 3 Data Science using R	2																		
8	VAC 3 Science of Living III	2																		
Total of SEMESTER III		22																		

Semester - 4

S.No.	Course Title	Credits
1.	Major 8 Specialization:	4
	Artificial Intelligence and Machine Learning	Deep Learning (IBM)
	Cyber security and Forensics	IT Data Security (IBM)
2.	Major 9 JAVA Programming	4
3.	Major 10 ASP.net	4
4.	Minor 3 Design and Analysis of Algorithm	4
5.	AEC 4 Communication Skills/ French / Sanskrit / Gujarati / Hindi	2
6.	SEC 4 UI/UX Design and Animation	2
7.	VAC 4 Science of Living IV	2
Total of SEMESTER IV		22
Total Credits for SECOND YEAR		44

Exit 2: Award of UG Diploma in Major course with 88 credits with additional 4 credits of Summer Internship in core specific NSQF defined course OR continue with Major and Minor course for next NCrF credit level

Year 3

Semester - 5

S.No.	Course Title	Credits
1.	Major 11 Specialization:	4
	Artificial Intelligence and Machine Learning	Computational Linguistic and Natural Language Processing (IBM)
	Cyber security and Forensics	Ethical Hacking & Penetration Testing (IBM)
2.	Major 12 Block chain Technologies	4
3.	Major 13 Web Technologies using PHP	4
4.	Minor 4 Software Engineering	4
5.	Minor 5 Service – Oriented Architecture	4
6.	SEC 5 Data Visualization	2
7.	VAC 5 Foundation of Indian Culture – I	2
Total of SEMESTER V		24

Semester - 6

S.No.	Course Title	Credits
1.	Major 14 Specialization:	4
	Artificial Intelligence and Machine Learning	Application of Machine Learning in Industries (IBM)
	Cyber security and Forensics	Digital Forensic (IBM)
2.	Major 15 Android Programming	4
3.	Major 16 Full Stack Development	4

4.	Minor 6 Introduction to Cloud Computing	4
5.	AEC 5 Introduction to IoT and Security	2
6.	Internship 1 Major Project – I	4
7.	VAC 6 Foundation of Indian Culture – II	2
Total of SEMESTER VI		24

Exit 3: Award of UG Degree in Major Course with 136 credits and Internship in core discipline OR continue with Major and Minor course for next NCrF credit level

Semester-7

S.No.	Course Title		Credits
1.	Major 17 Specialization:		4
	Artificial Intelligence and Machine Learning	Pattern Recognition and Anomaly Detection (IBM)	
	Cyber security and Forensics	Information Security Audit, Monitoring and Governance (IBM)	
2.	Major 18 Cryptography & Network Security		4
3.	Major 19 Digital Image Processing		4
4.	Minor 7 System Simulation and Modelling		4
5.	OJT 1 On the Job Training – Major Project II		6
Total of SEMESTER VII			22

Semester-8

S.No.	Course Title	Credits
1.	Major 20 Big Data Analytics using Hadoop	4

2.	Major 21 Software Testing Tools	4
3.	Major 22 Mobile Computing	4
4.	Minor 8 Distributed System	4
5.	OJT 2 / Research Project 1 On the Job Training – Major Project III / Research Project	6
Total of SEMESTER VIII		22

Four Years

BSc IT (Artificial Intelligence and Machine Learning) OR

BSc IT (Cyber security and Forensics)

Honours Degree with 180 credits.