B.Tech Information Technology – Curriculum & Syllabus

REGULATIONS - 2020
CHOICE BASED CREDIT SYSTEM
B.Tech. INFORMATION TECHNOLOGY

I TO VIII SEMESTERS CURRICULUM AND SYLLABUS

SEMESTER I

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	L	T	P	CREDITS
THEORY								
1	UHS1151	Technical English - I	HS	3	3	0	0	3
2	UMA1151	Mathematics - I	BS	4	3	1	0	4
3	UPH1151	Engineering Physics - I	BS	3	3	0	0	3
4	UCY1151	Engineering Chemistry	BS	3	3	0	0	3
5	UGE1151	Python Programming and Problem Solving	ES	3	3	0	0	3
THEORY CUM PRACTICAL								
6	UBE1161	Basic Civil and Mechanical Engineering (Theory + Lab)	ES	5	3	0	2	4
PRACTICALS								
7	UBS1161	Physics and Chemistry Laboratory	BS	4	0	0	4	2
8	UGE1161	Python Programming and Problem Solving Laboratory	ES	4	0	0	4	2
			TOTAL	29	18	1	10	24

SEMESTER II

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	L	T	P	CREDITS
THEORY								
1	UHS1251	Technical English - II	HS	3	3	0	0	3
2	UMA1251	Mathematics - II	BS	4	3	1	0	4
3	UPH1251	Engineering Physics - II	BS	3	3	0	0	3
4	UGE1251	Environmental Science and Engineering	HS	3	3	0	0	3
5	UGE1252	C Programming	ES	3	3	0	0	3
6	UGE1253	Engineering Graphics	ES	5	1	0	4	3
7	UHS1252	Professional skills - I	EEC	2	0	0	2	1
THEORY CUM PRACTICAL								
8	UBE1261	Basic Electrical and Electronics Engineering (Theory + Lab)	ES	4	2	0	2	3
PRACTICALS								
9	UGE1261	C Programming Laboratory	ES	4	0	0	4	2
			TOTAL	31	18	1	12	25

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SEMESTER III

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
THEORY								
1.	UMA1351	Discrete Mathematics and Graph Theory	BS	4	3	1	0	**4**
2.	UEC1352	Digital Principles and Systems Design	ES	3	3	0	0	**3**
3.	UIT1301	Data Structures and Algorithm Analysis	PC	3	3	0	0	**3**
4.	UIT1302	Computer Organization and Architecture	PC	3	3	0	0	**3**
5.	UIT1303	Object Oriented Programming	PC	3	3	0	0	**3**
6.	UHS1351	Professional Skills-II	EEC	2	0	0	2	**1**
PRACTICALS								
7.	UIT1311	Data Structures and Algorithms Laboratory	PC	4	0	0	4	**2**
8.	UIT1312	Object Oriented Programming Laboratory	PC	4	0	0	4	**2**
9.	UEC1362	Digital Principles and Systems Design Laboratory	ES	4	0	0	4	**2**
			TOTAL	**30**	**15**	**1**	**14**	**23**

SEMESTER IV

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
THEORY								
1.	UMA1456	Probability and Statistics	BS	4	3	1	0	**4**
2.	UIT1401	Database Systems	PC	3	3	0	0	**3**
3.	UCS1402	Operating Systems	PC	3	3	0	0	**3**
4.	UIT1402	Web based Internet Programming	PC	3	3	0	0	**3**
5.	UIT1403	Introduction to Artificial Intelligence	PC	3	3	0	0	**3**
6.	UHS1451	Professional Skills-III	EEC	2	0	0	2	**1**
PRACTICALS								
7.	UIT1411	Database Management Systems Laboratory	PC	4	0	0	4	**2**
8.	UIT1412	Internet Programming Laboratory	PC	4	0	0	4	**2**
9.	UHS1361	Interpersonal Skills Laboratory	HS	2	0	0	2	**1**
10.	UIT1413	Mini Project	EEC	4	0	0	4	**2**
			TOTAL	**32**	**15**	**1**	**16**	**24**

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SEMESTER V

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
THEORY								
1.	UCS1403	Software Engineering	PC	3	3	0	0	**3**
2.	UIT1501	Computer Network Fundamentals	PC	3	3	0	0	**3**
3.	UEC1402	Microprocessors and Microcontrollers	PC	3	3	0	0	**3**
4.	UIT1502	Mobile Application Development	PC	3	3	0	0	**3**
5.	UIT1503	Data Mining Techniques	PC	3	3	0	0	**3**
6.		Professional Elective-I	PE	3	3	0	0	**3**
7.	UHS1551	Professional Skills-IV	EEC	2	0	0	2	**1**
PRACTICALS								
8.	UIT1511	Computer Networks Laboratory	PC	4	0	0	4	**2**
9.	UIT1512	Mobile Application Development Laboratory	PC	4	0	0	4	**2**
10.	UEC1412	Microprocessors and Microcontrollers Laboratory	PC	4	0	0	4	**2**
			TOTAL	**32**	**18**	**0**	**14**	**25**

SEMESTER VI

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
THEORY								
1.	UIT1601	Object Oriented Modelling	PC	3	3	0	0	**3**
2.	UIT1602	Big Data Analytics	PC	3	3	0	0	**3**
3.	UIT1603	Information Storage and Management	PC	3	3	0	0	**3**
4.	UIT1604	Computer Graphics and Multimedia	PC	3	3	0	0	**3**
5.		Professional Electives-II	PE	3	3	0	0	**3**
6.		Open Elective-I	OE	3	3	0	0	**3**
PRACTICALS								
7.	UIT1611	Object Oriented Modelling Laboratory	PC	4	0	0	4	**2**
8.	UIT1612	Data Analytics Laboratory	PC	4	0	0	4	**2**
9.	UIT1613	Computer Graphics and Multimedia Laboratory	PC	4	0	0	4	**2**
10.	UHS1561	Professional Communication Laboratory	HS	4	0	0	4	**2**
			TOTAL	**34**	**18**	**0**	**16**	**26**

			SEMESTER VII				
S.NO.	**COURSE CODE**	**COURSE TITLE**	**CATEGORY**	**TOTAL CONTACT PERIODS**	**PERIODS PER WEEK**		**CREDITS**
					L	**T**	**P**	
THEORY							
1.	UIT1701	Cloud Computing	PC	4	4	0	0	**4**
2.	UIT1702	Network Security	PC	4	3	1	0	**4**
3.	UIT1703	Internet of Things Architecture and protocols	PC	4	4	0	0	**4**
4.		Professional Elective -III	PE	3	3	0	0	**3**
5.		Professional Elective-IV	PE	3	3	0	0	**3**
PRACTICALS							
6.	UIT1711	Cloud Computing Laboratory	PC	4	0	0	4	**2**
7.	UIT1712	Network Security Laboratory	PC	4	0	0	4	**2**
8.	UIT1713	Internet Computing Laboratory	PC	4	0	0	4	**2**
			TOTAL	**30**	**17**	**1**	**12**	**24**

			SEMESTER VIII				
S.NO.	**COURSE CODE**	**COURSE TITLE**	**CATEGORY**	**TOTAL CONTACT PERIODS**	**PERIODS PER WEEK**		**CREDITS**
					L	**T**	**P**	
THEORY							
1.		Professional Elective-V	PE	3	3	0	0	**3**
2.		Professional Elective-VI	PE	3	3	0	0	**3**
3.		Open Elective-II	OE	3	3	0	0	**3**
PRACTICALS							
4.	UIT1811	Project Work	EEC	12	0	0	12	**6**
			TOTAL	**21**	**9**	**0**	**12**	**15**

TOTAL NO OF CREDITS: 186

PROFESSIONAL ELECTIVE – I (SEMESTER V)

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
1	UCS1002	Agile Methodologies	PE	3	3	0	0	**3**
2	UCS1005	Green Computing	PE	3	3	0	0	**3**
3	UIT1001	Cyber Forensics	PE	3	3	0	0	**3**
4	UCS1704	Human Computer Interaction	PE	3	3	0	0	**3**

PROFESSIONAL ELECTIVE – II (SEMESTER VI)

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
1	UCS1018	Digital Image Processing	PE	3	3	0	0	**3**
2	UIT1002	C# and .Net Programming	PE	3	3	0	0	**3**
3	UMG1054	Professional Ethics in Engineering	PE	3	3	0	0	**3**
4	UCS1006	Information Security	PE	3	3	0	0	**3**

PROFESSIONAL ELECTIVE – III (SEMESTER VII)

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
1	UEC1602	Embedded Systems and IoT	PE	3	3	0	0	**3**
2	UCS1015	Quantum Computing	PE	3	3	0	0	**3**
3	UGE1051	Human Rights	PE	3	3	0	0	**3**
4	UCS1017	Service Oriented Architecture	PE	3	3	0	0	**3**

PROFESSIONAL ELECTIVE – IV (SEMESTER VII)

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
1	UMG1051	Intellectual Property Rights	PE	3	3	0	0	**3**
2	UIT1003	Informational Retrieval	PE	3	3	0	0	**3**
3	UEC1501	Digital Signal Processing	PE	3	3	0	0	**3**
4	UIT1004	Theory of Automata	PE	3	3	0	0	**3**

PROFESSIONAL ELECTIVE – V (SEMESTER VIII)

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
1	UCS1604	Machine Learning	PE	3	3	0	0	**3**
2	UCS1019	Soft Computing	PE	3	3	0	0	**3**
3	UMG1052	Total Quality Management	PE	3	3	0	0	**3**
4	UCS1010	Software Testing	PE	3	3	0	0	**3**

PROFESSIONAL ELECTIVE – VI (SEMESTER VIII)

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
1	UEC1604	Speech and Image Processing	PE	3	3	0	0	**3**
2	UIT1005	Social Network Analysis	PE	3	3	0	0	**3**
3	UIT1006	Web Design and Management	PE	3	3	0	0	**3**
4	UIT1007	Software Project Management	PE	3	3	0	0	**3**

OPEN ELECTIVE – I (SEMESTER VI)

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
1	OEC1653	Satellite Communication	OE	3	3	0	0	**3**
2	OEC1654	Adhoc and Wireless Sensor Networks	OE	3	3	0	0	**3**
3	OEC1655	Bio-Medical Electronics	OE	3	3	0	0	**3**
4	OME1656	Robotics	OE	3	3	0	0	**3**
5	OME1652	Industrial Safety Engineering	OE	3	3	0	0	**3**

OPEN ELECTIVE – II (SEMESTER VIII)

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
1.	OMG1851	Warehouse and Supply Chain Management	OE	3	3	0	0	**3**
2.	OMG1852	Principles of Management	OE	3	3	0	0	**3**
3.	OMG1853	Business Ethics and Corporate Social Responsibility	OE	3	3	0	0	**3**
4.	OMG1854	Export Management and Documentation	OE	3	3	0	0	**3**
5.	OEE1851	Energy Conservation and Management	OE	3	3	0	0	**3**

HOD   **Member Secretary**   **Academic Council Chairman**