Department of Information Technology

Syllabus for Bachelor of Computer Application (Honours)

Bachelor of Computer Application (Honours)

L T P - Indicates Theory Lectures (L), Tutorial(T) and Practical (P) classes per week.
1L Earns 1 credits
1P Earns 0.5 credits
1T Earns 1 Credit

Semester I							
Sl. No.	**Category**	**Course Code**	**Course Name**	**L**	**T**	**P**	**Credits**
Theory + Practical							
1	CC1	BCAC101 BCAC191	Programming for Problem Solving	4	0	4	6
2	CC2	BCAC102 BCAC192	Digital Electronics	4	0	4	6
3	AECC-1	BCAA101	Soft Skills	2	0	0	2
4	GE-1	BCAG101 BCAG102 BCAG103 BCAG104	A. MOOCS Basket 1 B. MOOCS Basket 2 C. MOOCS Basket 3 D. MOOCS Basket 4	4 / 5	0 / 1	4 / 0	**6**
			Total Credit				20

Semester II							
Sl. No.	**Category**	**Course Code**	**Course Name**	**L**	**T**	**P**	**Credits**
Theory + Practical							
1	CC3	BCAC201	Discrete Structures	5	1	0	**6**
2	CC4	BCAC202 BCAC292	Computer Architecture	4	0	4	6
3	AECC-2	BCAA201	Environmental Science	2	0	0	2
4	GE-2	BCAG201 BCAG202 BCAG203 BCAG204	A. MOOCS Basket 1 B. MOOCS Basket 2 C. MOOCS Basket 3 D. MOOCS Basket 4	4 / 5	0 / 1	4 / 0	**6**
Practical							
5	SEC-1	BCAS281	Minor Project and Entrepreneurship I	0	0	4	**2**
			Total Credit				22

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Semester III							
Sl. No.	**Category**	**Course Code**	**Course Name**	**L**	**T**	**P**	**Credits**
Theory							
1	CC5	BCAC301 BCAC391	Object Oriented Programming	4	0	4	**6**
2	CC6	BCAC302 BCAC392	Operating Systems	4	0	4	**6**
3	CC7	BCAC303 BCAC393	Data Structure and Algorithm using Python	4	0	4	**6**
4	GE-3	**BCA**G301 **BCA**G302 **BCA**G303 **BCA**G304	MOOCS Basket 1 MOOCS Basket 2 MOOCS Basket 3 MOOCS Basket 4	4/5	0/1	4/0	**6**
Practical							
5	SEC-2	BCAS391	Web Design and Development	0	0	4	2
			Total Credit				26

Semester IV							
Sl. No.	**Category**	**Course Code**	**Course Name**	**L**	**T**	**P**	**Credits**
Theory + Practical							
1	CC8	BCAC401 BCAC491	Database Management System	**4**	**0**	**4**	**6**
2	CC9	BCAC402 BCAC492	Software Engineering	**4**	**0**	**4**	**6**
3	CC10	BCAC403 BCAC493	Design and Analysis of Algorithms	4	0	4	6
4	GE-4	BCAG401	MOOCS Basket 1 MOOCS Basket 2 MOOCS Basket 3 MOOCS Basket 4	4/5	0/1	4/0	**6**
Practical							
5	**SEC-3**	**BCAS481**	**Minor Project and Entrepreneurship II**	**0**	**0**	**4**	**2**
			Total Credit				26

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Semester V							
Sl. No.	**Category**	**Course Code**	**Course Name**	**L**	**T**	**P**	**Credits**
Theory + Practical							
1	CC11	BCAC501 BCAC591	Internet Technology Internet Technology Lab	4	0	4	6
2	CC12	BCAC502 BCAC592	Computer Networking Computer Networking Lab	4	0	4	6
3	DSE-I	BCAD501	A. Information Security B. Cloud Computing C. Information and coding theory	5/4	1/0	0/4	6
4	DSE-2	BCAD502	A. Numerical and statistical Methods (Lab with R programming) B. Combinatorial Optimization C. Soft Computing	4/5	0/1	4/0	6
Sessional							
5	SEC-4	BCAS501	Industrial Training and Internship	0	0	0	**2**
			Total Credit				26

Semester VI							
Sl. No.	**Category**	**Course Code**	**Course Name**	**L**	**T**	**P**	**Credits**
Theory							
1	CC13	BCAC601 BCAC691	Advanced Database and PL-SQL Advanced Database and PL-SQL Lab	4	0	4	6
2	CC14	BCAC602	Theory of Computation	5	1	0	6
3	DSE-3	BCAD601	A. Digital Image Processing B. Introduction to AI and Machine Learning C. Introduction to Data Science	4	0	4	6
Sessional							
4	SEC-5	BCAS601	Grand Viva	0	0	2	**1**
5	DSE-4	BCAD681	Major Project and Entrepreneurship	0	0	8	**4**
6	SEC-6	BCAS602	Seminar	0	0	4	**2**
			Total Credit				25

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Semester	Credit
I	20
II	22
III	26
IV	26
V	26
VI	25
TOTAL	**145**

GE Basket 1		GE Basket 2		GE Basket 3		GE Basket 4	
Mathematics		Humanities and Social Sciences		General Science		Emerging Technologies, Innovation & Entrepreneurship	
1	Mathematics for Computing	1	Creative Writing	1	Climate Change and Health	1	Digital Marketing
2	Probability & Statistics	2	Business English	2	Environmental Law and Policy	2	Entrepreneurship Theory and Practice
3	Bayesian Statistics	3	Leadership	3	Environmental Informatics	3	Project Management
4	Operations Research	4	Professional Communication	4	Health Informatics	4	E-Commerce System Development
5	Data Analytics	5	E-Learning	5	Intelligence of Biological Systems	5	Effective Problem-Solving and Decision-Making
6	Applied Cryptography	6	Model Thinking	6	Simulation and Modelling Natural Processes	6	Business Analytics
7	Inferential Statistics	7	Digital Transformation and Industry 4.0	7	Bioinformatics	7	Design Thinking for Innovation