



Department of Information Technology
Syllabus for B.Sc. in Information Technology (Artificial Intelligence)
(Effective from academic session 2019-20)

Curriculum Structure

Semester I							
Sl. No.		Course Code	Course Name	L	T	P	Credits
Theory							
1	C-1	BITAI101	Programming for Problem Solving	3	0	0	3
2	SEC-1	BITAI102	Electrical and Electronics Engineering	3	0	0	3
3	AECC-1	BITAI103	Soft Skills	3	0	0	3
4	C-2	BITAI104	Computational Engineering Mechanics	2	0	0	2
5	DSE-1	BITAI105	Introduction to AI and Machine Learning	3	1	0	4
6	GE-1	BITAI106	Mathematics for Computer Science	3	1	0	4
Practical							
1		BITAI191	Programming for Problem Solving Lab	0	0	4	2
2		BITAI192	Electrical and Electronics Engineering Lab	0	0	4	2
3		BITAI193	Soft Skills Lab	0	0	2	1
4		BITAI194	Computational Engineering Mechanics Lab	0	0	4	2
Total Credit							26

Semester II							
Sl. No.		Course Code	Course Name	L	T	P	Credits
Theory							
1	C-3	BITAI201	Digital Fabrication	3	0	0	3
2	C-4	BITAI202	Data Structure and Algorithm with Python	3	0	0	3
3	GE-2	BITAI203	Discrete Mathematics	3	1	0	4
4	C-5	BITAI204	Introduction to Drones and Applications	3	1	0	4
5	C-6	BITAI205	Intelligence of Biological Systems	2	0	0	2
6	AECC-2	BITAI206	Environmental Science	1	0	0	1
Practical							
1		BITAI291	Digital Fabrication Lab	0	0	4	2
2		BITAI292	Data Structure and Algorithm with Python Lab	0	0	4	2
Sessional							
1		BITAI281	Project -I	0	0	2	1
Total Credit							22



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Semester III							
Sl. No.		Course Code	Course Name	L	T	P	Credits
Theory							
1	C-7	BITAI301	Operating System	3	0	0	3
2	C-8	BITAI302	Database Management System	3	0	0	3
3	C-9	BITAI303	Data Visualisation	3	0	0	3
4	GE-3	BITAI304	Probability & Statistics	3	1	0	4
5	C-10	BITAI305	Microprocessor & Microcontroller	3	1	0	4
6	AECC-2	BITAI306	Values and Ethics in Profession	1	0	0	1
Practical							
1		BITAI391	Operating System	0	0	4	2
2		BITAI392	Database Management System	0	0	4	2
3		BITAI393	Data Visualisation	0	0	4	2
Total Credit							24

Semester IV							
Sl. No.		Course Code	Course Name	L	T	P	Credits
Theory							
1	C-11	BITAI401	Computer Networks	3	0	0	3
2	C-12	BITAI402	Introduction to Robotics	3	0	0	3
3	C-13	BITAI403	Design & Analysis of Algorithm	3	0	0	3
4	C-14	BITAI404	Elective-I	3	0	0	3
			A. Speech Systems				
			B. Computer Vision				
			C. Natural Language Processing				
Practical							
1		BITAI491	Computer Networks Lab	0	0	4	2
2		BITAI492	Introduction to Robotics Lab	0	0	4	2
3		BITAI493	Design & Analysis of Algorithm Lab	0	0	4	2
4		BITAI494	Elective-I	0	0	4	2
			A. Speech Systems Lab				
			B. Computer Vision Lab				
			C. Natural Language Processing Lab				
Sessional							
1		BITAI481	Technical Seminar and Communication Skill	0	0	2	1
2		BITAI482	Project -II	0	0	2	1
Total Credit							22



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Semester V							
Sl. No.		Course Code	Course Name	L	T	P	Credits
Theory							
1	C-15	BITAI501	Image Processing	3	0	0	3
2	C-16	BITAI502	Machine Learning	3	1	0	4
3	C-17	BITAI503	Elective-II	3	0	0	3
			A. Pattern Recognition				
			B. Applied Cryptography				
			C. Clinical Information System				
4	C-18	BITAI504	Elective-III	3	0	0	3
			A. Soft Computing				
			B. Network & Wireless Security				
			C. Biomedical Informatics				
Practical							
1		BITAI591	Image Processing Lab	0	0	4	2
Sessional							
1		BITAI581	Industrial Training and Internship	0	0	2	1
2		BITAI582	Major Project I	0	0	4	2
Total Credit							18

Semester VI							
Sl. No.		Course Code	Course Name	L	T	P	Credits
Theory							
1	C-19	BITAI601	Big Data Analytics	3	0	0	3
2	C-20	BITAI602	Cloud Computing	3	0	0	3
3	C-21	BITAI603	Elective-IV	3	0	0	3
			A. Deep Learning				
			B. Intrusion Detection & Prevention Systems				
			C. Bioinformatics				
Practical							
1		BITAI691	Big Data Analytics Lab	0	0	4	2
2		BITAI692	Cloud Computing Lab	0	0	4	2
Sessional							
1		BITAI681	Grand Viva	0	0	2	1
2		BITAI682	Major Project II	0	0	4	2
Total Credit							16



Semester	Credit
I	26
II	22
III	24
IV	22
V	18
VI	16
TOTAL	128

CBCS Category	CODE
CORE COURSE	C
Ability Enhancement Compulsory Course	AECC
Skill Enhancement Course	SEC
Elective: Discipline Specific	DSE
Elective: Generic	GE