

**SCHEME OF INSTRUCTION
BE (INFORMATION TECHNOLOGY)
AICTE MODEL CURRICULUM Proposed from the Academic year 2018-19**

IT: SEMESTER – I (2018-19)

S. No.	Course Code	Course Title	Scheme of Instructions				Scheme of Examination			Credits
			L	T	Pr/ Drg	Contact Hours/ Week	CIE	SEE	Duration in Hours	
Theory Course										
1	Three Week Induction Programme						-	-	-	-
2	BS101MT	Mathematics-I	3	1	-	4	30	70	3	4
3	BS103PH	Physics	3	1	-	4	30	70	3	4
4	ES101EE	Basic Electrical Engineering	3	1	-	4	30	70	3	4
Practical/ Laboratory Course										
5	BS153PH	Physics Lab	-	-	3	3	25	50	3	1.5
6	ES151EE	Basic Electrical Engineering Lab	-	-	2	2	25	50	3	1
7	ES153CE	Engineering Graphics & Design	1	-	4	5	50	50	3	3
Total			10	03	09	22	190	360		17.5

IT: SEMESTER – II

S. No	Course Code	Course Title	Scheme of Instruction				Scheme of Examination		
			L	T	P	Contact Hrs/Wk	CIE	SEE	Credits
1.	HS101EG	English	2	-	-	2	30	70	2
2.	BS102MT	Mathematics-II	3	1	-	4	30	70	4
3.	BS104CH	Chemistry	3	1	-	4	30	70	4
4.	ES102CS	Programming for Problem Solving	3	-	-	3	30	70	3
Practicals									
5.	HS151EG	English Lab			2		25	50	1
6.	BS154CH	Chemistry Lab			3	3	25	50	1.5
7	ES152CS	Programming for Problem Solving			4	4	25	50	2
8.	ES154ME	Workshop/ Manufacturing Process	1	-	4	5	50	50	3
Total			12	2	13	25	245	480	20.5

IT: SEMESTER – III (2019-2020)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	MC111PO	Indian Constitution	2	-	-	2	30	70	3	-
2	HS201EG	Effective Technical Communication in English	3	-	-	3	30	70	3	3
3	HS202CM	Finance and Accounting	3	-	-	3	30	70	3	3
4	BS207MT	Mathematics- III (Probability & Statistics)	3	-	-	3	30	70	3	3
5	ES214EC	Basic Electronics	3	-	-	3	30	70	3	3
6	ES216EC	Digital Electronics	3	-	-	3	30	70	3	3
6	PC221IT	Data Structures	3	-	-	3	30	70	3	3
7	PC222IT	Mathematical Foundations of Information Technology	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
8	ES251EC	Basic Electronics Lab	-	-	2	2	25	50	3	1
9	PC252IT	Data Structures Lab	-	-	2	2	25	50	3	1
10	PC253IT	IT Workshop Lab	-	-	2	2	25	50	3	1
			23	-	06	29	285	640		24

IT: SEMESTER – IV (2019-20)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	MC112CE	Environmental Sciences	2	-	-	2	30	70	3	-
2	MC113PY	Essence of Indian Traditional Knowledge	2	-	-	2	30	70	3	-
3	HS204ME	Operations Research	3	-	-	3	30	70	3	3
4	BS206BZ	Biology for Engineers	3	-	-	3	30	70	3	3
5	ES215EC	Signals and Systems	3	-	-	3	30	70	3	3
6	PC231IT	JAVA Programming	3	-	-	3	30	70	3	3
7	PC232IT	Database Systems	3	-	-	3	30	70	3	3
8	PC233IT	Computer Organization and Microprocessor	3	-	-	3	30	70	3	3
9	PC234IT	Data Communications	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
10	PC261IT	Microprocessor Lab	-	-	2	2	25	50	3	1
11	PC262IT	JAVA Programming Lab	-	-	2	2	25	50	3	1
12	PC263IT	Database Systems Lab	-	-	2	2	25	50	3	1
			25	-	06	31	345	780		24

IT - SEMESTER - V

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	D/P	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Course										
1.	PC 501 IT Core-7	Web Application Development	3	1	-	4	30	70	3	3
2.	PC 502 IT Core-8	Operating Systems	3	1	-	4	30	70	3	3
3.	PC 503 IT Core-9	Automata Theory	3	1	-	4	30	70	3	3
4.	PC 504 IT Core-10	Computer Networks	3	1	-	4	30	70	3	3
5.	PC 505 IT Core-11	Software Engineering	3	-	-	3	30	70	3	3
6.	PE-I	Professional Elective-I	3	-	-	3	30	70	3	3
7.	MC 901 EG	Gender Sensitization	3	-	-	3	30	70	3	0
Practical/Laboratory Course										
8.	PC531 IT	Computer Networks Lab	-	-	2	2	25	50	3	1
9.	PC532 IT	Operating Systems Lab	-	-	2	2	25	50	3	1
10.	PC534 IT	Web Application Development Lab	-	-	2	2	25	50	3	1
Total			21	04	06	31	285	640		21

Profession Elective – I	
Course Code	Course Title
PE 511 IT	Artificial Intelligence
PE 512 IT	Computer Graphics
PE 513 IT	Image Processing
PE514IT	Computational Number Theory

IT - SEMESTER - VI

S. No	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	D/P	Contact Hrs/Wk	CIE	SEE	Duration in Hrs/Wk	
Theory Course										
1.	PC 601 IT Core-12	Embedded Systems	3	1	-	4	30	70	3	3
2.	PC 602 IT Core-13	Design and Analysis of Algorithms	3	1	-	4	30	70	3	3
3.	PE-II	Professional Elective -II	3	-	-	3	30	70	3	3
4.	PE -III	Professional Elective -III	3	-	-	3	30	70	3	3
5	PE -IV	Professional Elective -IV	3	-	-	3	30	70	3	3
6.	OE - 1	Open Elective -1	3	-	-	3	30	70	3	3
Practical/Laboratory Course										
7.	PC631 IT	Embedded Systems Lab	-	-	2	2	25	50	3	1
8.	PC632 IT	Design and Analysis of Algorithms Lab	-	-	2	2	25	50	3	1
8.	PW633 IT	Mini Project-I	-	-	2	2	25	50	3	1
9.	MC	NSS/Sports/Yoga	-	-	3	3	50	-	-	0
10.	SI 671 IT	Summer Internship*	-	-	-	-	-	-	-	-
Total			18	2	9	29	305	570		21

Profession Elective - II	
Course Code	Course Title
PE 611 IT	Data Mining
PE 612 IT	Compiler Construction
PE 616 IT	Distributed Systems
PE 617 IT	Advanced Computer Architecture

Profession Elective - IV	
Course Code	Course Title
PE 627CS	Computational Intelligence
PE 628 IT	Adhoc and Sensor Networks
PE 629 CS	Natural Language Processing
PE 630 IT	Information Storage and Management

Profession Elective – III	
Course Code	Course Title
PE 623 IT	Object Oriented Analysis and Design
PE 624 IT	Multimedia
PE 625 IT	Machine Learning
PE 626 IT	Data Science Using R Programming

Open Elective - I	
Course Code	Course Title
OE 601 CE	Disaster Management
OE 602 CE	Geo Spatial Techniques
OE 601 CS	Operating Systems**
OE 602 CS	OOP using Java**
OE 601 IT	Database Systems**
OE 602 IT	Data Structures**
OE 601 EC	Principles of Embedded Systems
OE 602 EC	Digital System Design using HDL Verilog
OE 601 EE	Reliability Engineering
OE 602 EE	Basics of Power Electronics
OE 601 ME	Industrial Robotics
OE 602 ME	Material Handling
OE 601 AE	Automotive Safety & Ergonomics

IT - SEMESTER - VII

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	PC 701 EC Core-14	VLSI Design	3	1	-	4	30	70	3	3
2	PC 702 IT Core-15	Big Data Analytics	3	1	-	4	30	70	3	3
3	PE-V	Professional Elective-V	3	1	-	4	30	70	3	3
4	PE-IV	Professional Elective – VI	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
5	PC 751 EC	VLSI Design Lab	-	-	3	3	25	50	3	1
6	PC 752 IT	Big Data Analytics Lab	-	-	3	3	25	50	3	1
7	PW 761 IT	Project Work – I	-	-	4	4	50	-	-	2
8	SI 762 IT	Summer Internship	`	-	-	-	50	-	-	2
			12	03	10	25	300	450	21	18

Profession Elective – V	
Course Code	Course Title
PE 723 IT	Wireless and Mobile Communication
PE 724 IT	Semantic Web
PE 725 IT	Cloud Computing
PE 726 IT	Human Computer Interaction

Profession Elective – VI	
Course Code	Course Title
PE 727 IT	Internet of Things
PE 728 IT	Deep Learning
PE 729 IT	Digital Forensics
PE 730 IT	Cryptography and Network Security

IT - SEMESTER - VIII

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	OE-II	Open Elective – II	3	-	-	3	30	70	3	3
2	OE-III	Open Elective – III	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
4	PW861 IT	Project Work – II	-	-	16	16	50	100	-	8
			06	-	16	22	110	240	06	14

Open Elective – II			Open Elective – III		
S. No.	Course Code	Course Title	S. No.	Course Code	Course Title
1	OE 771 CE	Green Building Technologies	1	OE 781 CE	Road Safety Engineering
2	OE 772 CS**	Data Science Using R Programming	2	OE 782 IT**	Software Engineering
3	OE 773 EC	Fundamentals of IoT	3	OE 783 EC	Principles of Electronic Communications
4	OE 774 EE	Non-Conventional Energy Sources	4	OE 784 EE	Illumination and Electric Traction systems
5	OE 775 ME	Entrepreneurship	5	OE 785 ME	Mechatronics
6	OE 876 IT	Cyber Security			

S.No	Course Work- Subject Area	Credits/Semester								Total Credits
		I	II	III	IV	V	VI	VII	VIII	
1.	Humanities and Social Sciences (HS) - AICTE -12	-	3 (1+1)	6 (3+3)	3 (1)		-	-	-	12
2.	Basic Sciences (BS) AICTE -24	9.5 (2+1)	9.5 (2+1)	3 (1)	3 (1)	-	-	-	-	25
3.	Engineering Sciences (ES) AICTE-29	8 (2+1)	8 (1+2)	7 (2+1)	3 (1)	-	-	-	-	26
4.	Professional Subjects- Core (PC) AICTE-49	-	-	8 (2+2)	15 (4+3)	18 (5+3)	8 (2+2)	9 (2+2)		58
5.	Professional Subject- Electives (PE*) AICTE-18	-	-	-	-	3 (1)	9 (3)	6 (2)		18
6.	Open Subjects- Electives (OE) AICTE-12	-	-	-	-	-	3 (1)	-	6 (2)	09
7.	Mini Project, Project Work-I and II and Internship AICTE-15	-	-	-	-	-	1	4	8	13
	TOTAL	17.5	20.5	24	24	21	21	18	14	160
8.	Mandatory Courses (MC) (Non-Credit) 8 Units			3 (1)	6 (2)	3 (3U)				12