B.Tech. COMPUTER SCIENCE AND BUSINESS SYSTEMS
Minimum Credits to be Earned 201.0

First Semester

Code No.	Course	PEOs	POs	L	T	P	C
		Objectives &Outcomes					
19CB101	DISCRETE MATHEMATICS	-	a,b	3	0	0	3
19CB102	PROBABILITY AND STATISTICS	-	a,b	3	0	0	3
19CB103	PRINCIPLES OF ELECTRICAL ENGINEERING	-	a,b,c,d,e,m,n	3	0	2	4
19CB104	FUNDAMENTALS OF PHYSICS	-	a,b,i	3	0	2	4
19HS105	BUSINESS COMMUNICATION AND VALUE SCIENCE-I	-	i,j,k	2	1	2	4
19CB106	FUNDAMENTALS OF COMPUTER SCIENCE	-	a,b,e	2	1	2	4
	Total			16	2	8	22.0

Second Semester

Code No.	Course	PEOs	POs	L	T	P	C
		Objectives &Outcomes					
19CB201	LINEAR ALGEBRA	-	a,b	3	1	0	4
19CB202	STATISTICAL METHODS	-	a,b	3	1	0	4
19CB203	DATA STRUCTURES AND ALGORITHMS	-	a,b,c,e,m,n	2	1	2	4
19CB204	PRINCIPLES OF ELECTRONICS	-	a,b,m,n	3	0	2	4
19CB205	FUNDAMENTALS OF ECONOMICS	-	f,g,n	2	0	0	2
19HS206	BUSINESS COMMUNICATION AND VALUE SCIENCE -II	-	i,j	2	1	2	4
19HS207	ENVIRONMENTAL SCIENCES	-	a,b,g	2	0	0	0
	Total			17	4	6	22.0

Third Semester

Code No.	Course	PEOs	POs	L	T	P	C
		Objectives &Outcomes					
19CB301	FORMAL LANGUAGE AND AUTOMATA THEORY	-	a,b	3	2	0	4
19CB302	COMPUTER ORGANIZATION AND ARCHITECTURE	-	a,b,c,m,n	3	2	0	4
19CB303	OBJECT ORIENTED PROGRAMMING	-	a,b,c,e,m	3	0	2	4
19CB304	COMPUTATIONAL STATISTICS	-	a,b	3	0	2	4
19CB305	SOFTWARE ENGINEERING	-	a,b,c,j,k	3	1	2	5
19CB306	FINANCIAL MANAGEMENT	-	b,d,e,k,m,n	3	0	0	3
18GE501	SOFT SKILLS - APTITUDE I	-	-	0	0	2	0
	Total			18	5	8	24.0

Fourth Semester

Code No.	Course	PEOs	POs	L	T	P	C
		Objectives &Outcomes					
19CB401	OPERATING SYSTEMS	-	a,c,e	3	0	2	4
19CB402	DATABASE MANAGEMENT SYSTEMS	-	a,b,c,e,n	3	1	0	4
19CB403	SOFTWARE DESIGN WITH UML	-	b,c,e,n	3	0	2	4
19CB404	INTRODUCTION TO INNOVATION, IP MANAGEMENT AND ENTREPRENEURSHIP	-	a,b,e,h,i,m	3	0	0	3
19HS405	BUSINESS COMMUNICATION AND VALUE SCIENCE III	-	i,j	2	0	4	4
19CB406	OPERATIONS RESEARCH	-	a,b	2	0	2	3
19CB407	MARKETING RESEARCH AND MARKETING MANAGEMENT	-	c,d,f,g,n	3	0	0	3
19CB408	DATABASE MANAGEMENT SYSTEMS LABORATORY	-	a,b,c,e,n	0	0	2	1
18GE601	SOFT SKILLS-APTITUDE II	-	-	0	0	2	0
	Total			19	1	14	26.0

Fifth Semester

Code No.	Course	PEOs	POs	L	T	P	C
		Objectives &Outcomes					
21CB501	DESIGN AND ANALYSIS OF ALGORITHMS	-	-	2	0	2	3
21CB502	COMPLIER DESIGN	-	-	3	0	0	3
21CB503	BUSINESS STRATEGY	-	-	3	0	0	3
21CB504	DESIGN THINKING	-	-	2	0	2	3
21CB507	COMPILER DESIGN LABORATORY	-	-	0	0	2	1
21CB508	MINI PROJECT	-	-	0	0	2	1
21CB040	CLOUD, MICROSERVICES	-	-	3	0	0	3
21CB041	MACHINE LEARNING	-	-	3	0	0	3
19CB501	DESIGN AND ANALYSIS OF ALGORITHMS	-	a,b,c,e,m	2	0	2	3
19CB502	COMPILER DESIGN	-	b,c,e	3	0	0	3
19CB503	BUSINESS STRATEGY	-	e,i,n	3	0	0	3
19CB504	DESIGN THINKING	-	a,c,f,k,l,n	2	0	2	3
	PROFESSIONAL ELECTIVE I	-	-	-	-	-	3
	PROFESSIONAL ELECTIVE II	-	-	-	-	-	3

Code No.	Course	PEOs	POs	L	T	P	C
19CB507	COMPILER DESIGN LABORATORY	-	a,b,e	0	0	2	1
19CB508	MINI PROJECT	-	-	0	0	2	1
			Total	26	0	16	40.0

Sixth Semester

Code No.	Course	Objectives &Outcomes		L	T	P	C
		PEOs	POs				
19CB601	COMPUTER NETWORKS	-	e,g,m,n	2	1	0	3
19CB602	INFORMATION SECURITY	-	a,b,c,d,e,g,h,l,m,n	2	1	2	4
19CB603	ARTIFICIAL INTELLIGENCE	-	a,b,c,m	2	0	4	4
19HS604	BUSINESS COMMUNICATION AND VALUE SCIENCE-IV	-	a,e,f,g,i,j	2	0	2	3
	PROFESSIONAL ELECTIVE III	-	-	-	-	-	3
	PROFESSIONAL ELECTIVE IV	-	-	-	-	-	3
19CB607	COMPUTER NETWORKS LAB	-	a,b,c,e,m,n	0	0	2	1
			Total	8	2	10	21.0

Seventh Semester

Code No.	Course	Objectives &Outcomes		L	T	P	C
		PEOs	POs				
19CB014	INTRODUCTION TO IOT	-	b,c,e,m,n	3	0	0	3
18CS0YK	ADVANCE SOCIAL TEXT AND MEDIA ANALYTICS	-	-	3	0	0	3
19CB701	USABILITY DESIGN OF SOFTWARE APPLICATIONS	-	a,b,c,d,e,m,n	3	0	0	3
19CB702	IT WORKSHOP	-	a,b,e,m,n	3	0	0	3
19CB703	SERVICES SCIENCE AND SERVICE OPERATIONAL MANAGEMENT	-	c,e,i,j,m,n	3	0	0	3
19CB704	IT PROJECT MANAGEMENT	-	c,e,i,j,m,n	3	0	2	4
	PROFESSIONAL ELECTIVE V	-	-	-	-	-	3
	PROFESSIONAL ELECTIVE VI	-	-	-	-	-	3
19CB707	SERVICES SCIENCE AND SERVICE OPERATIONAL MANAGEMENT	-	a,b,c,e	0	0	4	2
19CB021	HUMAN RESOURCE MANAGEMENT	-	f,k,m,n	3	0	0	3
			Total	21	0	6	30.0

Eight Semester

Code No.	Course	Objectives &Outcomes		L	T	P	C
		PEOs	POs				
19CB804	PROJECT EVALUATION II	-	-	0	0	14	7
	PROFESSIONAL ELECTIVE VII	-	-	-	-	-	3
	PROFESSIONAL ELECTIVE VIII	-	-	-	-	-	3
	PROFESSION ELECTIVE IX	-	-	-	-	-	3
			Total	0	0	14	16.0

Electives

Code No.	Course	Objectives &Outcomes		L	T	P	C
		PEOs	POs				

DISCIPLINE ELECTIVES

Code No.	Course	PEOs	POs	L	T	P	C
19CB002	CLOUD,MICROSERVICES AND APPLICATIONS	-	a,b,c,e,n	3	0	0	3
19CB003	MACHINE LEARNING	-	a,b,c,d,e,f,m	3	0	0	3
19CB005	COMPUTATIONAL FINANCE AND MODELING	-	b,d,e,k,m,n	3	0	0	3
19CB006	INDUSTRIAL PSYCHOLOGY	-	a,b,c,f,h,i,m,n	3	0	0	3
19CB007	ROBOTICS AND ITS INDUSTRIAL APPLICATIONS	-	b,c,d,e,m,n	3	0	0	3
19CB008	MODERN WEB APPLICATIONS	-	a,c,e,f,m,n	3	0	0	3
19CB009	DATA MINING AND ANALYTICS	-	a,c,e,f,l,m,n	3	0	0	3
19CB010	ENTERPRISE SYSTEMS	-	b,c,e,m,n	3	0	0	3
19CB011	ADVANCE FINANCE	-	b,k,m,n	3	0	0	3
19CB012	IMAGE PROCESSING AND PATTERN RECOGNITION	-	a,b,c,m,n	3	0	0	3
19CB013	COGNITIVE SCIENCE AND ANALYTICS	-	a,b,c,d,e,f,l,m,n	3	0	0	3
19CB015	CRYPTOLOGY	-	c,d,e	3	0	0	3
19CB016	QUANTUM COMPUTATION AND QUANTUM INFORMATION	-	a,b,c	3	0	0	3
19CB017	ADVANCED SOCIAL TEXT AND MEDIA ANALYTICS	-	a,b,c,d,e	3	0	0	3
19CB018	MOBILE COMPUTING	-	a,b,c	3	0	0	3
19CB019	FUNDAMENTALS OF MANAGEMENT	-	h,i,k,m,n	3	0	0	3
19CB020	FINANCIAL AND COST ACCOUNTING	-	d,k,n	3	0	0	3

ONE CREDIT COURSES

Code No.	Course	PEOs	POs	L	T	P	C
19CB0XB	DIGITAL MARKETING-INTERMEDIATE	-	a,b,e	3	0	0	3
19CB0XC	DIGITAL MARKETING-ADVANCED	-	a,b	3	0	0	3

OPEN ELECTIVES

Code No.	Course	PEOs	POs	L	T	P	C
18GE0C1	CORROSION SCIENCE AND ENGINEERING	-	-	3	0	0	3
18GE0P1	NANOMATERIALS SCIENCE	-	-	3	0	0	3

ADDITIONAL ONE CREDIT COURSE

Code	Title			L	T	P	C
18GE0XK	NEW AGE INNOVATION AND ENTREPRENEURSHIP	-	-	1	0	0	1
18GE0XL	NATIONAL CADET CORPS	-	-	1	0	0	1
18GE0XM	COMMUNITY SERVICE AND LEADERSHIP DEVELOPMENT	-	-	1	0	0	1
18GE0XN	DISRUPTIVE INNOVATION BASED STARTUP ACTIVITIES	-	-	1	0	0	1
DISCIPLINE ELECTIVES							
19CB004	BEHAVIORAL ECONOMICS	-	c,d,g,n	3	0	0	3
ONE CREDIT COURSES							
18CS0XM	MACHINE LEARNING FOR ENGINEERS	-	-	0	0	0	1
19CB0XA	DIGITAL MARKETING-BEGINNERS	-	a,b,j,k	1	0	0	1
ADDITIONAL ONE CREDIT COURSE							
18GE0XF	VEDIC MATHEMATICS	-	-	1	0	0	1
DISCIPLINE ELECTIVES							
19CB001	CONVERSATIONAL SYSTEMS	-	a,b,c,d,e,f,m,n	3	0	0	3
OPEN ELECTIVES							
18AE0YA	NON-DESTRUCTIVE TESTING	-	-	3	0	0	3
18AE0YB	SMART MATERIALS	-	-	3	0	0	3
18AE0YC	FUNDAMENTALS OF AIRCRAFT ENGINEERING	-	-	3	0	0	3
18AG0YA	ENTREPRENEURSHIP DEVELOPMENT AND FOOD QUALITY MANAGEMENT FOOD INDUSTRY	-	-	3	0	0	3
18AG0YB	HUMAN ENGINEERING AND SAFETY IN AGRICULTURE	-	-	3	0	0	3
18AG0YC	ENERGY MANGEMENT IN AGRICULTURE	-	-	3	0	0	3
18AG0YD	FARM MECHANISATION	-	-	3	0	0	3
18AU0YA	AUTOMOTIVE ENGINEERING	-	-	3	0	0	3
18AU0YB	VEHICLE CONTROL SYSTEMS	-	-	3	0	0	3
18AU0YC	PUBLIC TRANSPORT MANAGEMENT	-	-	3	0	0	3
18AU0YD	TECHNOLOGIES FOR GREEN MOBILITY	-	-	3	0	0	3
18AU0YE	TROUBLE SHOOTING AND MAINTENANCE OF AUTOMOBILES	-	-	3	0	0	3
18BT0YA	BIOFUELS	-	-	3	0	0	3
18BT0YB	MUSHROOM CULTIVATION AND VERMICOMPOSTING	-	-	3	0	0	3
18BT0YC	FORENSIC TECHNOLOGY	-	-	3	0	0	3
18CE0YA	GREEN BUILDINGS	-	-	3	0	0	3
18CE0YB	DISASTER PREPAREDNESS AND PLANNING	-	-	3	0	0	3
18CE0YC	ENVIRONMENTAL IMPACT ASSESSMENT	-	-	3	0	0	3
18CE0YD	BUILDING SERVICES	-	-	3	0	0	3
18CE0YE	INDUSTRIAL WASTE MANAGEMENT	-	-	3	0	0	3
18CE0YF	WEALTH FROM WASTE	-	-	3	0	0	3
18CE0YG	RISK AND SAFETY MANAGEMENT	-	-	3	0	0	3
18CE0YH	ENERGY SCIENCE AND ENGINEERING	-	-	3	0	0	3
18CE0YI	CONCEPTS OF REMOTE SENSING	-	-	3	0	0	3
18CS0YA	E-LEARNING TECHNIQUES	-	-	3	0	0	3
18CS0YB	SOFTWARE TESTING AND QUALITY ASSURANCE	-	-	3	0	0	3
18CS0YC	JAVA FUNDAMENTALS	-	-	3	0	0	3
18CS0YD	NETWORK ENGINEERING AND MANAGEMENT	-	-	3	0	0	3
18CS0YE	AGENT BASED INTELLIGENT SYSTEMS	-	-	3	0	0	3
18CS0YF	E-BUSINESS	-	-	3	0	0	3
18CS0YG	KNOWLEDGE DISCOVERY IN DATABASES	-	-	3	0	0	3
18CS0YH	SOCIAL NETWORK ANALYSIS CONCEPTS	-	-	3	0	0	3
18CS0YI	OPERATING SYSTEM CONCEPTS	-	-	3	0	0	3
18CS0YJ	OBJECT ORIENTED PROGRAMMING	-	-	3	0	0	3
18EC0YA	BASICS OF ANALOG AND DIGITAL ELECTRONICS	-	-	3	0	0	3
18EC0YB	AUTOMOTIVE ELECTRONICS	-	-	3	0	0	3
18EC0YC	PCB DESIGN AND PROTOTYPING	-	-	3	0	0	3
18EC0YD	MICROCONTROLLER PROGRAMMING	-	-	3	0	0	3
18EC0YE	ENGINEERING COMPUTATION WITH MATLAB	-	-	3	0	0	3
18EC0YF	BASICS OF HARDWARE DESCRIPTION LANGUAGES	-	-	3	0	0	3
18EC0YG	FUNDAMENTALS OF EMBEDDED SYSTEMS	-	-	3	0	0	3
18EC0YH	PRINCIPLES OF COMMUNICATION SYSTEMS	-	-	3	0	0	3
18EC0YI	ELECTRONIC PRODUCT DESIGN AND PACKAGING	-	-	3	0	0	3
18EC0YJ	PRINCIPLES OF COMPUTER COMMUNICATION AND NETWORKS	-	-	3	0	0	3
18EE0YA	ENERGY CONSERVATION AND MANAGEMENT	-	-	3	0	0	3
18EE0YB	ELECTRICAL SAFETY	-	-	3	0	0	3
18EE0YC	INDUSTRIAL DRIVES AND CONTROL	-	-	3	0	0	3
18EI0YA	PROGRAMMABLE LOGIC CONTROLLERS	-	-	3	0	0	3
18EI0YB	SENSOR TECHNOLOGY	-	-	3	0	0	3
18EI0YC	FUNDAMENTALS OF VIRTUAL INSTRUMENTATION	-	-	3	0	0	3
18EI0YD	OPTOELECTRONICS AND LASER INSTRUMENTATION	-	-	3	0	0	3
18FD0YA	TRADITIONAL FOODS	-	-	3	0	0	3
18FD0YB	FOOD LAWS AND REGULATIONS	-	-	3	0	0	3

18FD0YC	POST HARVEST TECHNOLOGY OF FRUITS AND VEGETABLES	-	-	3	0	0	3
18FT0YA	FASHION CRAFTS	-	-	3	0	0	3
18FT0YB	FASHION ACCESSORIES	-	-	3	0	0	3
18FT0YC	FASHION VISUAL MERCHANDISING	-	-	3	0	0	3
18FT0YD	INTERIOR DESIGN	-	-	3	0	0	3
18FT0YE	SURFACE EMBELLISHMENT	-	-	3	0	0	3
18GE01	BUSINESS ANALYTICS	-	-	3	0	0	3
18GE02	INDUSTRIAL SAFETY	-	-	3	0	0	3
18GE03	OPERATIONS RESEARCH	-	-	3	0	0	3
18GE04	COST MANAGEMENT OF ENGINEERING PROJECTS	-	-	3	0	0	3
18GE05	COMPOSITE MATERIALS	-	-	3	0	0	3
18GE06	WASTE TO ENERGY	-	-	3	0	0	3
18IT0YA	DATABASE MANAGEMENT SYSTEMS	-	-	3	0	0	3
18IT0YB	DATA STRUCTURES AND ALGORITHMS	-	-	3	0	0	3
18IT0YC	DATA SCIENCES AND ANALYTICS	-	-	3	0	0	3
18IT0YD	OBJECT ORIENTED PROGRAMMING	-	-	3	0	0	3
18IT0YE	ARTIFICIAL INTELLIGENCE	-	-	3	0	0	3
18ME0YA	INDUSTRIAL PROCESS ENGINEERING	-	-	3	0	0	3
18ME0YB	SAFETY ENGINEERING	-	-	3	0	0	3
18ME0YC	MAINTENANCE ENGINEERING	-	-	3	0	0	3
18ME0YD	BASICS OF NON-DESTRUCTIVE TESTING	-	-	3	0	0	3
18ME0YE	DIGITAL MANUFACTURING	-	-	3	0	0	3
18ME0YF	WORK STUDY AND ERGONOMICS	-	-	3	0	0	3
18ME0YG	METROLOGY IN INDUSTRY	-	-	3	0	0	3
18ME0YH	PLANT LAYOUT AND MATERIAL HANDLING	-	-	3	0	0	3
18ME0YI	CONCEPTS OF ENGINEERING DESIGN	-	-	3	0	0	3
18ME0YJ	OIL HYDRAULICS AND PNEUMATICS	-	-	3	0	0	3
18ME0YK	ENERGY AUDITING AND MANAGEMENT	-	-	3	0	0	3
18ME0YL	LEAN SIX SIGMA	-	-	3	0	0	3
18ME0YM	HEATING VENTILATION AND AIRCONDITIONING	-	-	3	0	0	3
18TT0YA	YARN AND FABRIC MANUFACTURE	-	-	3	0	0	3
18TT0YB	COLOURATION OF TEXTILES	-	-	3	0	0	3
18TT0YC	TEXTILES IN ENGINEERING APPLICATION	-	-	3	0	0	3
18TT0YD	GENERAL TEXTILE TECHNOLOGY	-	-	3	0	0	3