

SCHEME OF INSTRUCTION
BE (COMPUTER SCIENCE & ENGINEERING)
Proposed from the Academic year 2015-16

BE: SEMESTER – I (common to all branches)

S. No	Course Code	Course Title	Scheme of Examination		L	T	P/Dg	Cont act Hrs/ Wk	Credits
			CIE	SEE					
1.	BS 101 MT	Engineering Mathematics I	30	70	3	1	0	4	3
2.	BS 102 PH	Engineering Physics I	30	70	3	0	0	3	3
3.	BS 103 CH	Engineering Chemistry I	30	70	3	0	0	3	3
4.	ES 101 CE	Engineering Graphics I	50	50	0	0	3+3	6	3
5.	ES 102 CE	Engineering Mechanics I	30	70	3	0	0	3	3
6.	ES 103 CS	Computer Programming and Problem Solving	30	70	3	0	0	3	3
7.	MC 101EG	Engineering English	30	70	3	0	0	3	3
Practicals									
8.	BS 151 PH	Engineering Physics Lab I	25	50	0	0	2	2	1
9.	BS 152 CH	Engineering Chemistry Lab I	25	50	0	0	2	2	1
10.	ES 151 CS	Computer Programming Lab	25	50	0	0	2	2	1
11.	ES 152 ME	Engineering Workshop	25	50	0	0	2	2	1
12.	MC151 EG	Engineering English Lab	25	50	0	0	2	2	1
Total			355	720	18	1	14	35	26

BE: SEMESTER - II

S. No	Course Code	Course Title	Scheme of Examination		L	T	P	Hrs/ Wk	Credits
			CIE	SEE					
1.	BS 201 MT	Engineering Mathematics II	30	70	3	1	0	4	3
2.	BS 202 PH	Engineering Physics II	30	70	3	0	0	3	3
3.	BS 203 CH	Engineering Chemistry II	30	70	3	0	0	3	3
4.	PC 201 CS	Object Oriented Programming using C++	30	70	3	1	0	4	3
5.	ES 221 EE	Basic Electrical Engineering	30	70	3	0	0	3	3
6.	HS 201 EG	Business Communication and Presentation Skills	30	70	3	0	0	3	3
Practicals									
7.	BS 251 PH	Engineering Physics Lab - II	25	50	0	0	2	2	1
8.	BS 252 CH	Engineering Chemistry Lab II	25	50	0	0	2	2	1
9.	ES 251 CS	Computer Skills Lab	25	50	0	0	2	2	1
10.	PC 251 CS	C++ Programming Lab	25	50	0	0	2x2	4	2
11.	HS 251 EG	Communication Skills Lab	25	50	0	0	2	2	1
Total			315	670	18	2	12	32	24

BE: SEMESTER - III

S. No	Course Code	Course Title	Scheme of Examination		L	T	P	Hrs/ Wk	Credits
			CIE	SEE					
1.	PC 301 CS	Data Structures	30	70	3	2	0	5	4
2.	PC 302 CS	Discrete Mathematics	30	70	3	2	0	4	4
3.	PC 303 CS	Logic & Switching Theory	30	70	3	0	0	3	3
4.	ES 321 EC	Basic Electronics Engineering	30	70	3	0	0	3	3
5.	BS 301 MT	Mathematics III	30	70	3	1	0	4	3
6.	MC 321 CE	Environmental Studies	30	70	3	0	0	3	3
Practicals									
7.	PC 351 CS	Data Structures Lab	25	50	0	0	2	2	1
8.	ES 324 EC	Basic Electronics Lab	25	50	0	0	2	2	1
9.	ES 323 EE	Electrical Engineering Lab	25	50	0	0	2	2	1
Total			265	570	18	3	06	27	20

BE: SEMESTER - IV

S. No	Course Code	Course Title	Scheme of Examination		L	T	P	Hrs/ Wk	Credits
			CIE	SEE					
1.	PC 401 CS	Computer Organization	30	70	3	1	0	4	3
2.	PC 402 CS	OOP using Java	30	70	3	1	0	4	3
3.	PC 403 CS	Programming Languages	30	70	3	1	0	4	3
4.	PC 404 CS	Microprocessors and Interfacing	30	70	3	1	0	4	3
5.	BS 401 MT	Mathematics IV	30	70	3	1	0	4	3
6.	ES 421 EC	Digital Electronics	30	70	3	0	0	3	3
Practicals									
7.	PC 451 CS	Java Programming Lab	25	50	0	0	2	2	1
8.	PC 452 CS	Microprocessors Lab	25	50	0	0	2	2	1
9.	MC 451 HS	Society-Out Reach Program	25	50	0	0	2	2	1 Units
Total			265	570	18	5	06	29	20

BE: SEMESTER - V

S. No	Course Code	Course Title	Scheme of Examination		L	T	P	Hrs/Wk	Credits
			CIE	SEE					
1.	PC 501 CS	Database Management Systems	30	70	3	1	0	4	3
2.	PC 502 CS	Data Communications	30	70	3	1	0	4	3
3.	PC 503CS	Computer Graphics	30	70	3	1	0	4	3
4.	PC 504 CS	Automata, Languages & Computation	30	70	3	2	0	5	4
5.	PC 505 CS	Operating Systems	30	70	3	1	0	4	3
6.	HS 501 BM	Managerial Economics and Accountancy	30	70	3	1	0	4	3
Practicals									
7	PC 551 CS	DBMS Lab	25	50	0	0	2	2	1
8.	PC 552 CS	Computer Graphics Lab	25	50	0	0	2	2	1
9.	PC 553 CS	Operating Systems Lab	25	50	0	0	2	2	1
Total			255	570	18	7	06	31	22

BE: SEMESTER – VI

S. No	Course Code	Course Title	Scheme of Examination		L	T	P	Hrs/ Wk	Credits
			CIE	SEE					
1.	PC 601CS	Design and Analysis of Algorithms	30	70	3	2	0	4	4
2.	PC 602 CS	Software Engineering	30	70	3	1	0	4	3
3.	PC 603CS	Web Programming	30	70	3	1	0	4	3
4.	PC 604 CS	Computer Networks & Programming	30	70	3	1	0	4	3
5.	PE#	Professional Elective-I	30	70	3	0	0	3	3
6.	OE#	Open Elective-I	30	70	3	0	0	3	3
Practicals									
7	PC 651CS	Computer Networks & Programming Lab	25	50	0	0	2	2	1
8.	PC 652 CS	Web Programming Lab	25	50	0	0	2	2	1
9.	PC 653 CS	Software Engineering Lab	25	50	0	0	2	2	1
10	SI*	Summer Internship*							
Total			285	570	21	4	4	30	22

*Students has to undergo summer internship of 6 Weeks duration at the end of semester VI and credits will be awarded after evaluation.

Professional Elective-I:

PE 601 CS Advanced Computer Architecture

PE 602 CS Artificial Intelligence

PE 603 CS Simulation and Modeling

Open Elective-I:

OE 601 BE Micro Electro- Mechanical Systems (MEMS)

OE 602 CE Disaster Management

OE 603 CE Geo Spatial Techniques

*OE 604 CS Operating Systems

*OE 605 CS OOP using Java

OE 606 EC Embedded Systems

OE 607 EC Signal Analysis and Transform Techniques

OE 608 EE Reliability Engineering

OE 609 ME Robotics

OE 610 ME Material Handling

OE 611 LA Intellectual Property Rights

*** OE 604 CS and *OE 605 CS Electives are not offered to the students of Computer Science and Engineering Department.**

BE: SEMESTER - VII

S. No	Course Code	Course Title	Scheme of Examination		L	T	P	Hrs/Wk	Credits
			CIE	SEE					
1.	PC 701 CS	Compiler Construction	30	70	3	1	0	4	3
2.	PC 702 CS	Distributed Systems	30	70	3	1	0	4	3
3.	PC 703CS	Information Security	30	70	3	0	0	3	3
4.	PC 704 CS	Data Mining	30	70	3	1	0	4	3
5.	PE*	Elective-II	30	70	3	0	0	3	3
6.	OE*	Open Elective-II	30	70	3	0	0	3	3
Practicals									
7.	PC 751 CS	Compiler Construction Lab	25	50	0	0	2	2	1
8.	PC 752 CS	Distributed Systems Lab	25	50	0	0	2	2	1
9.	CSP1	Project Work-I	50	--	0	0	0	2	2
10.	SI*	Summer Internship*	50	--				-	2
Total			330	520	18	3	4	27	24

*Students has to undergo summer internship of 6 Weeks duration at the end of semester VI and credits will be awarded after evaluation.

Professional Elective-II:

PE 701 CS Information Retrieval Systems
 PE 702 CS Mobile Computing
 PE 703 CS Soft Computing
 PE 704 CS Image Processing

Open Elective-II:

OE 701 BE Image Processing
 OE 702 CE Optimization Techniques
 *OE 703 CS Database Systems
 *OE 704 CS Information Security
 OE 705 EC Neural Networks
 OE 706 EE Renewable Energy Sources
 OE 707 ME Entrepreneurship
 OE 708 ME Finite Element Analysis

*** OE 703 CS and *OE 704 CS Electives are not offered to the students of Computer Science and Engineering Department.**

BE: SEMESTER - VIII

S. No	Course Code	Course Title	Scheme of Examination		L	T	P	Hrs/Wk	Credits
			CIE	SEE					
1	PC 801 CS	Embedded Systems	30	70	3	1	0	4	3
2.	PE*	Professional Elective-III	30	70	3	0	0	3	3
3.	PE*	Professional Elective-IV	30	70	3	0	0	3	3
4.	PC 851 CS	Embedded Systems Lab	25	50	0	0	2	2	1
5.	CSP2	Project Work –II	50	100	--	--	6	6	8
Total			165	360	9	1	2	18	18

***Professional Elective – III**

PE 801 CS Machine Learning
PE 802 CS Natural Language Processing
PE 803 CS Software Quality and Testing
PE 804 CS Web Services & Architecture

***Professional Elective-IV**

PE 805 CS Advanced Databases
PE 806 CS Cloud Computing
PE 807 CS Human Computer Interaction

S.No.	Course Work- Subject Area	Credits/Semester								Total Credits
		I	II	III	IV	V	VI	VII	VIII	
1.	Humanities and Social Sciences (HS) 5%	-	4 (1+1)	-	-	3 (1)	-	-	-	07 (4%)
2.	Basic Sciences (BS) 15%	11 (3+2)	11 (3+2)	-	6 (2+0)	-	-	-	-	28 (15%)
3.	Engineering Sciences (ES) 15%	11 (3+2)	4 (1+1)	8 (2+2)	-	-	-	-	-	23 (13%)
4.	Professional Subjects- Core (PC) 30%- 40%	-	5 (1+1)	12 (3+1)	14 (4+2)	19 (5+3)	16 (4+3)	14 (4+2)	4 (1+1)	84 (47%)
5.	Professional Subject- Electives (PE*) 10% - 15%	-	-	-	-	-	3 (1)	3 (1)	6 (2)	12 (7%)
6.	Open Subjects- Electives (OE) 5% - 10%	-	-	-	-	-	3 (1)	3 (1)	-	06 (4%)
7.	Project Work-I and II and Internship 10% - 15%	-	-	-	-	-	-	4	8	12 (7%)
	TOTAL	26	24	20	20	22	22	24	18	176
8.	Mandatory Courses (MC) (Non-Credit) 8 Units	4 (1+1)		3 (1 U)	2 (1 U)					05 U + 4