SAPTHAGIRI COLLEGE OF ENGINEERING

(Affiliated to Visvesvaraya Technological University, Belagavi& Approved by AICTE, New Delhi)

#14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru - 560057

ISO 9001, 14001 Certified Institute, Accredited by NAAC with A Grade

DEPARTMENT OF BASIC SCIENCES

Program name	Program code	Name of the Course that include experiential learning through project work/field work/internship	Course code	Details of Experiential Learning through Projects/ Internship
COMPUTER SCIENCE AND ENGINEERING	CSE	Engineering Physics	18HY12/22	Air Gun
COMPUTER SCIENCE AND ENGINEERING	CSE	Engineering Physics Laboratory	18PHYL16/26	Powerful Hydraulic Jack
COMPUTER SCIENCE AND ENGINEERING	CSE	Engineering Chemistry	18CHE12/22	DC Motor Water Pump
COMPUTER SCIENCE AND ENGINEERING	CSE	Egineering Chemistry Laboratory	18CHEL16/26	Pencil Lead Water Level Indicator
COMPUTER SCIENCE AND ENGINEERING	CSE	Basic Electrical Engineering	18ELE13	Harmonograph
COMPUTER SCIENCE AND ENGINEERING	CSE	Basic Electrical Engineering Laboratory	18ELE17	Working of Model Heart
COMPUTER SCIENCE AND ENGINEERING	CSE	C Programming for Problem Solving	18CPL13	ECO - List
COMPUTER SCIENCE AND ENGINEERING	CSE	C Programming Laboratory	18CPL17	Magnetic Primer Designer
COMPUTER SCIENCE AND ENGINEERING	CSE	Basic Electronics	18ELN24/14	Free Energy Generator
COMPUTER SCIENCE AND ENGINEERING	CSE			Model of Wireless Power Transmission
COMPUTER SCIENCE AND ENGINEERING	CSE			free Energy Production using Salt Water
COMPUTER SCIENCE AND ENGINEERING	CSE			Light Following Robot
COMPUTER SCIENCE AND ENGINEERING	CSE	Value of the second		Mini Project
COMPUTER SCIENCE AND ENGINEERING	CSE	Lander of the second		Water Sensing Alarm
COMPUTER SCIENCE AND ENGINEERING	CSE		Tic .	Basic Electric Train
COMPUTER SCIENCE AND ENGINEERING	CSE	=		Automated Street Light
COMPUTER SCIENCE AND ENGINEERING	CSE			Earth Quake Alarm
COMPUTER SCIENCE AND ENGINEERING	CSE			Hydraulic Bridge
COMPUTER SCIENCE AND ENGINEERING	CSE			Automatic Water Level Indicator
COMPUTER SCIENCE AND ENGINEERING	CSE			Traffic Control using Aurdino
COMPUTER SCIENCE AND ENGINEERING	CSE			Clap itch Sound Operated Switch for LED
COMPUTER SCIENCE AND ENGINEERING	CSE			Light Fidelity (Li-Fi)
COMPUTER SCIENCE AND ENGINEERING	CSE			Power Generator DC Dynamo
COMPUTER SCIENCE AND ENGINEERING	CSE			Music Rhythm LED Circuit
COMPUTER SCIENCE AND ENGINEERING	CSE			Power Based Door Lock System
COMPUTER SCIENCE AND ENGINEERING	CSE			Smoke Absorber
COMPUTER SCIENCE AND ENGINEERING	CSE			Water Purifying By Charcoal Process
COMPUTER SCIENCE AND ENGINEERING	CSE			
COMPUTER SCIENCE AND ENGINEERING	CSE	N. Pr. Company		Solar Powred Dual HoseVacuum Cleaner
COMPUTER SCIENCE AND ENGINEERING	CSE			Automatic Street Light Control System
COMPUTER SCIENCE AND ENGINEERING	CSE			Laser Security Alaram
COMPUTER SCIENCE AND ENGINEERING	CSE			Advannce moke Detector using Aurdino
COMPUTER SCIENCE AND ENGINEERING	CSE			Total Internal reflection

COMPUTER SCIENCE AND ENGINEERING	CSE	Design and Develoment of Floor Cleaning Vacuum Machine
COMPUTER SCIENCE AND ENGINEERING	CSE	Home Work writing machine
COMPUTER SCIENCE AND ENGINEERING	CSE	Line Follower Robot Using Microcontroller
COMPUTER SCIENCE AND ENGINEERING	CSE	Smart Irrigation using ARDUINO
COMPUTER SCIENCE AND ENGINEERING	CSE	Wireless Power Transmission Uisng Mutual Inductance
COMPUTER SCIENCE AND ENGINEERING	CSE	Free Energy GeneratorUsing Magnet
COMPUTER SCIENCE AND ENGINEERING	CSE	Auto Fire Sprinkler System
COMPUTER SCIENCE AND ENGINEERING	CSE	water Level Indicator
INFORMATION SCIENCE AND ENGINEERING	IS	Automatic Water Level Indicator
NFORMATION SCIENCE AND ENGINEERING	IS	Traffic Control using Aurdino
NFORMATION SCIENCE AND ENGINEERING	IS	Clap itch Sound Operated Switch for LED
NFORMATION SCIENCE AND ENGINEERING	IS	Light Fidelity (Li-Fi)
NFORMATION SCIENCE AND ENGINEERING	IS	Power Generator DC Dynamo
NFORMATION SCIENCE AND ENGINEERING	IS	Music Rhythm LED Circuit
NFORMATION SCIENCE AND ENGINEERING	IS	Power Based Door Lock System
NFORMATION SCIENCE AND ENGINEERING	IS	Smoke Absorber
NFORMATION SCIENCE AND ENGINEERING	IS	Water Purifying By Charcoal Process
NFORMATION SCIENCE AND ENGINEERING	IS	Solar Powred Dual HoseVacuum Cleaner
NFORMATION SCIENCE AND ENGINEERING	IS	Automatic Street Light Control System
NFORMATION SCIENCE AND ENGINEERING	IS	Laser Security Alaram
NFORMATION SCIENCE AND ENGINEERING	IS	Advannce moke Detector using Aurdino
NFORMATION SCIENCE AND ENGINEERING	IS	Total Internal reflection
NFORMATION SCIENCE AND ENGINEERING	IS	Design and Develoment of Floor Cleaning Vacuum Machine
NFORMATION SCIENCE AND ENGINEERING	IS	Home Work writing machine
NFORMATION SCIENCE AND ENGINEERING	IS	Line Follower Robot Using Microcontroller
LECTRONICS & ELECTRONICS ENGINEERING	EE	Wireless Power Transmission Uisng Mutual Inductance
LECTRONICS & ELECTRONICS ENGINEERING	EE	Free Energy GeneratorUsing Magnet
LECTRONICS & ELECTRONICS ENGINEERING	EE	Auto Fire Sprinkler System
LECTRONICS & ELECTRONICS ENGINEERING	EE	water Level Indicator
LECTRONICS & COMMUNICATION ENGINEERING	EC	Greenhouse Environment Controlling With Monitoring On Android Application
LECTRONICS & COMMUNICATION ENGINEERING	EC	Automatic Traffic Rule Viola Detection And Number Plate Recognition
ELECTRONICS & COMMUNICATION ENGINEERING	EC	Half Wave Rectifier Design (Working Model)
LECTRONICS & COMMUNICATION ENGINEERING	EC	Working Model Of Vacuum Cleaner
LECTRONICS & COMMUNICATION ENGINEERING	EC	Solar Inverter
LECTRONICS & COMMUNICATION ENGINEERING	EC	Full Wave Bridge Rectifier
LECTRONICS & COMMUNICATION ENGINEERING	EC	Free Energy Generator Magnetic Coil
LECTRONICS & COMMUNICATION ENGINEERING	EC	Artificial Intelligence
LECTRONICS & COMMUNICATION ENGINEERING	EC	Light Fidelity (Li-Fi)
LECTRONICS & COMMUNICATION ENGINEERING	EC	Working Model Of Free Energy Fro Saltwater
LECTRONICS & COMMUNICATION ENGINEERING	EC	Laser Security System
ELECTRONICS & COMMUNICATION ENGINEERING	EC	2 Stroke Engine

ELECTRONICS & COMMUNICATION ENGINEERING	EC	Rational Drug Design
ELECTRONICS & COMMUNICATION ENGINEERING	EC	Cementitous Material From Agro-Waste
ELECTRONICS & COMMUNICATION ENGINEERING	EC	Pharmacogenomics
ELECTRONICS & COMMUNICATION ENGINEERING	EC	Lactic Acid Fermentation
ELECTRONICS & COMMUNICATION ENGINEERING	EC	Hydroponics
ELECTRONICS & COMMUNICATION ENGINEERING	EC	Dna Model
ELECTRONICS & COMMUNICATION ENGINEERING	EC	Gel Electrophoresis
ELECTRONICS & COMMUNICATION ENGINEERING	EC	Biogas Power Plant
ELECTRONICS & COMMUNICATION ENGINEERING	EC	Organic Farming
ELECTRONICS & COMMUNICATION ENGINEERING	EC	Protein Profiling
ELECTRONICS & COMMUNICATION ENGINEERING	EC	Earthouake Alarm
ELECTRONICS & COMMUNICATION ENGINEERING	EC	Rain Water Harvesting
ELECTRONICS & COMMUNICATION ENGINEERING	EC	Hydraulic Traffic Reduce System
ELECTRONICS & COMMUNICATION ENGINEERING	EC	Working Project Of Hydraulic Bridge For Highways
BIOTECHNOLOGY	BT	2 Stroke Engine
BIOTECHNOLOGY	BT	Rational Drug Design
BIOTECHNOLOGY	ВТ	Cementitous Material From Agro-Waste
BIOTECHNOLOGY	BT	Pharmacogenomics
BIOTECHNOLOGY	BT	Lactic Acid Fermentation
BIOTECHNOLOGY	ВТ	Hydroponics
BIOTECHNOLOGY	BT	Dna Model
BIOTECHNOLOGY	BT	Gel Electrophoresis
BIOTECHNOLOGY	BT	Biogas Power Plant
BIOTECHNOLOGY	BT	Organic Farming
BIOTECHNOLOGY	BT	Protein Profiling
CIVIL ENGINEERING	CV	Earthouake Alarm
CIVIL ENGINEERING	cv	Rain Water Harvesting
CIVIL ENGINEERING	CV	Hydraulic Traffic Reduce System
CIVIL ENGINEERING	CV	Working Project Of Hydraulic Bridge For Highways
		HOD

Head the Department Department of Sapinagiri College of Facuseering Bengaluru - 560 057.

Dr. B.S. KRISHNA

Professor & Head

Department of Chemistry

Sapthagiri College of Engineering

BENGALURU - 560 057.

Scheme of Teaching and Examination 2018 – 19
Outcome Based Education(OBE) and Choice Based Credit System (CBCS)
(Effective from the academic year 2018 – 19)

SI.				TER B.E./B.T			Teachi lours /\	ng	Examination				
No 1	Course and Course Code		Course Title	Teaching Department	Paper Setting Board	Theory	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	Conditor
	BSC	18MAT11	Calculus and Linear			L	T	P	-		S	ļ i	
2	55.00.03		Algebra	Mathematics	Maths	3	2		03	40	60	100	
2	BSC	18PHY12	Engineering Physics	Physics	Physics	3	2		55500	18.95.			
3	ESC	18ELE13	Basic Electrical	E and E	E and E		- 2		03	40	60	100	
			Engineering	Engineering	Engineering	2	2		03	40	60	100	
4	ESC	18CIV14	Elements of Civil Engineering and Mechanics	Civil Engineering	Civil Engineering	2	2		03	40	60	100	
5	ESC	18EGDL15	Engineering Graphics	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	2	s 	2	03	40	60	100	
6	BSC	18PHYL16	Engineering Physics Laboratory	Physics	Physics	177	1 77 6	2	03	40	60	100	
7	ESC	18ELEL17	Basic Electrical Engineering Laboratory	E and E Engineering	E and E Engineering	-	1 <u>44</u>	2	03	40	60	100	
8	HSMC	18EGH18	Technical English-I	Humanities	Humanities		-			9.73	261810	100	23
Jote	DCC. P					12	2		03	40	60	100	1
ote:	DSC: Bas	ic Science Cou	rses, ESC: Engineering Scie ir Lecture (L) per week per se	nce Courses, HSM	AC. II	ocial Sc	ience o	uo Mo-	24	320	480	800	2
efin	ition of Cı	redit: 2 hou	rr Lecture (L) per week per so rr Tutorial (T) per week per so rr Practical/Laboratory/Drawi	mester =1 C1's			ichte a	mu Man	agemen	t Cour	ses.		

Scheme of Teaching and Examination 2018 – 19
Outcome Based Education(OBE) and Choice Based Credit System (CBCS)
(Effective from the academic year 2018 – 19)

61				ž .	94 24	1	Touchi		Examination				
SI. No	Course and Course Code		Course Title	Teaching	Paper Setting Board	Theory	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
1	BSC	18MAT11	Calculus and Linear	Table W		L	Т	P		٥	S	P ₂	
2	BSC		Algebra	Mathematics	Mathematics	3	2		03	40	60	100	-
44	DSC	18CHE12	Engineering Chemistry	Chemistry	Chemistry	3	2		03		L.		
3	ESC	18CPS13	C Programming for	Computer	Computer				03	40	60	100	4
		1001515	Problem Solving	Science and Engineering	Science and Engineering	2	2		03	40	60	100	
4	ESC	18ELN14	Basic Electronics	ECE/E and I/ TC	E and C Engineering	2	2		03	40	60	100	3
5	ESC	18ME15	Elements of Mechanical Engineering	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	2	2		03	40	60	100	3
6	BSC	18CHEL16	Engineering Chemistry Laboratory	Chemistry	Chemistry	177		2	03	40	60	100	
7	ESC	18CPL17	C Programming Laboratory	Computer Science and Engineering	Computer Science and			2	03	40	60	100	1
8	HSMC	18EGH18	Technical English-I	Humanities	Engineering Humanities		_				1	55,04: 42	1
Inte	PSC. P.	1.6.1				12	2		03	40	60	100	_1
.o.c.	Doc. Das	I bour	rses, ESC: Engineering Sci r Lecture (L) per week per s	ence Courses, HS	MC: Humanity. S	ocial Sc	ience c	04 Mo	24	320	480	800	20
)efin	nition of C	redit: 2 hour	r Lecture (L) per week per s r Tutorial (T) per week per s r Practical/Laboratory/Draw	composter I.G. I	573 143		-caree a	nu man	agemen	Cours	ses.		

Scheme of Teaching and Examination 2018 – 19
Outcome Based Education(OBE) and Choice Based Credit System (CBCS)
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					11		Veek		10000	nination		
Course and Course Code		Course Title	Teaching Department	Paper Setting Board	Theory	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	Cradite
		Advanced Calculus			L	T	P	O	0	SE	Tot	-
BSC	18MAT21	and Numerical Methods	Mathematics	Mathematics	3	2	-	03	40	60	100	
BSC	18PHY22	Engineering Physics	Physics	Physics	2	2				330050	→ 37/255°4	
ESC	18ELE23	Basic Electrical	E and E	E and E				03	40	60	100	4
		Elements of Civil	Engineering	Engineering	2	2		03	40	60	100	3
ESC	18CIV24	Engineering and Mechanics	Civil Engineering	Civil Engineering	2	2		03	40	60	100	3
ESC	18EGDL25	Engineering Graphics	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	2		2	03	40	60	100	3
BSC	18PHYL26	Laboratory	Physics	Physics			2	03	40	60	100	-
SC	18ELEL27	Basic Electrical Engineering Laboratory	E and E Engineering	E and E Engineering	#1	-	2	03	40	60	100	1
ISMC	18EGH28	Technical English-II	Humanities	Humanities	44	2		03	40	60	100	1
				TOTAL	12	10	06	24	320	480	1/200metra	20
E ::	SSC SSC SSC SSC SSC SSC SSC	3SC 18PHY22 3SC 18ELE23 3SC 18ELE23 3SC 18CIV24 3SC 18EGDL25 3SC 18PHYL26 3SC 18PHYL26 3SC 18ELEL27 3SMC 18EGH28	and Numerical Methods BSC 18PHY22 Engineering Physics Basic Electrical Engineering Elements of Civil Engineering and Mechanics SC 18EGDL25 Engineering Graphics SC 18PHYL26 Engineering Physics Laboratory Basic Electrical Engineering Elements of Civil Engineering and Mechanics SC 18EGDL25 Engineering Graphics Laboratory Basic Electrical Engineering Laboratory SMC 18EGH28 Technical English—II	and Numerical Methods BSC 18PHY22 Engineering Physics Physics Basic Electrical Engineering Elements of Civil Engineering and Mechanics BSC 18EGDL25 Engineering Graphics Engineering Graphics Engineering Physics Engineering BME, Auto, IP, IEM, Mfg Engineering Engineering Physics Laboratory Basic Electrical Engineering Engineering Physics Laboratory Basic Electrical Engineering Engineering Engineering Basic Electrical Engineering Engineering Engineering Engineering Engineering Engineering Humanities	and Numerical Methods BSC 18PHY22 Engineering Physics Physics Physics Basic Electrical Engineering Elements of Civil Engineering and Mechanics BSC 18EGDL25 Engineering Graphics Engineering SC 18PHYL26 Engineering Physics Engineering Physics Basic Electrical Engineering Civil Engineering SC 18PHYL26 Engineering Physics Laboratory Engineering Engin	Advanced Calculus and Numerical Methods BSC 18PHY22 Engineering Physics Physics Physics 3 BSC 18ELE23 Basic Electrical Engineering Elements of Civil Engineering and Mechanics Elements of Civil Engineering Elements of Civil Engineering Elements of Engineering Physics Engineering Physics Laboratory SC 18ELEL27 Basic Electrical Engineering	Advanced Calculus and Numerical Methods BSC 18PHY22 Engineering Physics Physics Physics 3 2 Basic Electrical Engineering Eng	Advanced Calculus and Numerical Methods BSC 18PHY22 Engineering Physics Physics Physics Physics SSC 18ELE23 Basic Electrical Engineering Elements of Civil Engineering and Mechanics Elements of Civil Engineering and Mechanics Engineering Engineer	Advanced Calculus and Numerical Methods BSC 18PHY22 Engineering Physics Physics Physics 3 2 03 Basic Electrical Engineering Engineeri	Advanced Calculus and Numerical Methods Mathematics Mathematics	Advanced Calculus and Numerical Methods Mathematics Mathematics	Advanced Calculus and Numerical Methods Mathematics Mathematics 3 2 03 40 60 100

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Scheme of Teaching and Examination 2018 – 19
Outcome Based Education(OBE) and Choice Based Credit System (CBCS)
(Effective from the academic year 2018 – 19)

SI. No		Course and		£ 25	ing	1	Teachi Iours /		Examination				
	Course Code		Course Title	Teaching	Paper Setting Board	Theory	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	110
1	BSC	18MAT21	Advanced Calculus and	ELECTION OF		L	Т	P	ā	5	SE	Tot	
_	DSC	18MA121	Numerical Methods	Mathematics	Maths	3	2	1.02	03	40			+
2	BSC	18CHE22	Engineering Chemistry	Chamin			- 50		03	40	60	100	
			antifug chemistry	Chemistry	Chemistry	3	2	144	03	40	60	100	
3	ESC	18CPS23	C Programming for Problem Solving	Computer Science and Engineering	Computer Science and Engineering	2	2	-	03	40	60	100	
4	ESC	18ELN24	Basic Electronics	ECE/E and I/	E and C Engineering	2	2		03	40	60	100	
5	ESC	18ME25	Elements of Mechanical Engineering	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	2	2		03	40	60	100	
6	BSC	18CHEL26	Engineering Chemistry Laboratory	Chemistry	Chemistry	275	**	2	03	40	60		
7	ESC	18CPL27	C Programming Laboratory	Computer Science and Engineering	Computer Science and Engineering	(April	44	2	03	40	60	100	1
8	HSMC	18EGH28	Technical English-II	Humanities	Humanities	1 598	2		03	40	60	100	1
or and					TOTAL	12	12	04	24	320	480	800	20
vote Defir	: BSC: Ba	reuit: 2 noui	rses, ESC: Engineering Scient r Lecture (L) per week per sent r Tutorial (T) per week per sent r Practical/Laboratory/Drawin	master I C II			Scienc	e and M	anagen	nent Co	urses.	000	20

