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

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VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

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

I SEMESTER B.E./B.Tech (PHYSICS GROUP)

Sl. No	Course and Course Code		Course Title	Teaching Department	Paper Setting Board	Teaching Hours /Week			Examination				
						Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	Credits
						L	T	P					
1	BSC	18MAT11	Calculus and Linear Algebra	Mathematics	Maths	3	2	--	03	40	60	100	4
2	BSC	18PHY12	Engineering Physics	Physics	Physics	3	2	--	03	40	60	100	4
3	ESC	18ELE13	Basic Electrical Engineering	E and E Engineering	E and E Engineering	2	2	--	03	40	60	100	3
4	ESC	18CIV14	Elements of Civil Engineering and Mechanics	Civil Engineering	Civil Engineering	2	2	--	03	40	60	100	3
5	ESC	18EGDL15	Engineering Graphics	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	2	--	2	03	40	60	100	3
6	BSC	18PHYL16	Engineering Physics Laboratory	Physics	Physics	--	--	2	03	40	60	100	1
7	ESC	18ELEL17	Basic Electrical Engineering Laboratory	E and E Engineering	E and E Engineering	--	--	2	03	40	60	100	1
8	HSMC	18EGH18	Technical English–I	Humanities	Humanities	--	2	--	03	40	60	100	1
					TOTAL	**12**	**10**	**06**	**24**	**320**	**480**	**800**	**20**

Note: BSC: Basic Science Courses, ESC: Engineering Science Courses, HSMC: Humanity, Social Science and Management Courses.

Definition of Credit:
1 hour Lecture (L) per week per semester =1 Credit
2 hour Tutorial (T) per week per semester =1 Credit
2 hour Practical/Laboratory/Drawing (P) per week per semester =1 Credit.

32

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

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

Sl. No	Course and Course Code		Course Title	Teaching Department	Paper Setting Board	Teaching Hours /Week			Examination				Credits
						Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
						L	T	P					
1	BSC	18MAT11	Calculus and Linear Algebra	Mathematics	Mathematics	3	2	--	03	40	60	100	4
2	BSC	18CHE12	Engineering Chemistry	Chemistry	Chemistry	3	2	--	03	40	60	100	4
3	ESC	18CPS13	C Programming for Problem Solving	Computer Science and Engineering	Computer Science and Engineering	2	2	--	03	40	60	100	3
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	--	--	2	03	40	60	100	1
7	ESC	18CPL17	C Programming Laboratory	Computer Science and Engineering	Computer Science and Engineering	--	--	2	03	40	60	100	1
8	HSMC	18EGH18	Technical English– I	Humanities	Humanities	--	2	--	03	40	60	100	1
					TOTAL	**12**	**12**	**04**	**24**	**320**	**480**	**800**	**20**

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33

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

II SEMESTER B.E./B.Tech (PHYSICS GROUP)

Sl. No	Course and Course Code		Course Title	Teaching Department	Paper Setting Board	Teaching Hours /Week			Examination				Credits
						Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
						L	T	P					
1	BSC	18MAT21	Advanced Calculus and Numerical Methods	Mathematics	Mathematics	3	2	--	03	40	60	100	4
2	BSC	18PHY22	Engineering Physics	Physics	Physics	3	2	--	03	40	60	100	4
3	ESC	18ELE23	Basic Electrical Engineering	E and E Engineering	E and E Engineering	2	2	--	03	40	60	100	3
4	ESC	18CIV24	Elements of Civil Engineering and Mechanics	Civil Engineering	Civil Engineering	2	2	--	03	40	60	100	3
5	ESC	18EGDL25	Engineering Graphics	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	2	--	2	03	40	60	100	3
6	BSC	18PHYL26	Engineering Physics Laboratory	Physics	Physics	--	--	2	03	40	60	100	1
7	ESC	18ELEL27	Basic Electrical Engineering Laboratory	E and E Engineering	E and E Engineering	--	--	2	03	40	60	100	1
8	HSMC	18EGH28	Technical English– II	Humanities	Humanities	--	2	--	03	40	60	100	1
					TOTAL	12	10	06	24	320	480	800	20

Note: BSC: Basic Science Courses, ESC: Engineering Science Courses, HSMC: Humanity, Social Science and Management Courses.

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34

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

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

II SEMESTER B.E./B.Tech. (CHEMISTRY GROUP)

Sl. No	Course and Course Code		Course Title	Teaching Department	Paper Setting Board	Teaching Hours /Week			Examination					Credits
						Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks		
						L	T	P						
1	BSC	18MAT21	Advanced Calculus and Numerical Methods	Mathematics	Maths	3	2	--	03	40	60	100		4
2	BSC	18CHE22	Engineering Chemistry	Chemistry	Chemistry	3	2	--	03	40	60	100		4
3	ESC	18CPS23	C Programming for Problem Solving	Computer Science and Engineering	Computer Science and Engineering	2	2	--	03	40	60	100		3
4	ESC	18ELN24	Basic Electronics	ECE/E and I/ TC	E and C Engineering	2	2	--	03	40	60	100		3
5	ESC	18ME25	Elements of Mechanical Engineering	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	2	2	--	03	40	60	100		3
6	BSC	18CHEL26	Engineering Chemistry Laboratory	Chemistry	Chemistry	--	--	2	03	40	60	100		1
7	ESC	18CPL27	C Programming Laboratory	Computer Science and Engineering	Computer Science and Engineering	--	--	2	03	40	60	100		1
8	HSMC	18EGH28	Technical English– II	Humanities	Humanities	--	2	--	03	40	60	100		1
					TOTAL	**12**	**12**	**04**	**24**	**320**	**480**	**800**		**20**

Note: BSC: Basic Science Courses, ESC: Engineering Science Courses, HSMC: Humanity, Social Science and Management Courses.

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35