



V.S.B. ENGINEERING COLLEGE

(An Autonomous Institution)

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai

An ISO 9001:2015 Certified Institution

Accredited by NAAC, NBA Accredited Courses

REGULATIONS 2023

V.S.B. ENGINEERING COLLEGE, KARUR

REGULATIONS 2023

B. E. COMPUTER AND COMMUNICATION ENGINEERING

CURRICULUM FOR SEMESTERS I TO VIII

SEMESTER I

S.No	COURSE CODE	COURSE TITLE	CATEGORY	Int/Ext	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
					L	T	P		
1	23IP101	Induction Programme			-	-	-	-	0
THEORY									
2	23HST101	Professional English - I	HSMC	40/60	3	0	0	3	3
3	23MAT102	Calculus and Linear Algebra	BSC	40/60	3	1	0	4	4
4	23PHT101R	Engineering Physics	BSC	40/60	3	0	0	3	3
5	23CYT101R	Engineering Chemistry	BSC	40/60	3	0	0	3	3
6	23GET101	Programming in C	ESC	40/60	3	0	0	3	3
7	23GET102	தமிழர் மரபு /Heritage of Tamils	HSMC	40/60	1	0	0	1	1
PRACTICALS									
8	23GEP101	Programming in C Laboratory	ESC	60/40	0	0	4	4	2
9	23BSP101	Physics and Chemistry Laboratory	BSC	60/40	0	0	4	4	2
TOTAL				900	16	1	8	25	21

SEMESTER II

S.No	COURSE CODE	COURSE TITLE	CATEGORY	Int/Ext	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
					L	T	P		
1	23HST201	Professional English - II	HSMC	40/60	2	0	0	2	2
2	23MAT203	Random Variables and Statistics	BSC	40/60	3	1	0	4	4
3	23PHT201	Physics for Information Science	BSC	40/60	3	0	0	3	3
4	23ECT202	Digital Principles and System design	ESC	40/60	3	0	0	3	3
5	23CST202	Object Oriented Programming in C++	PCC	40/60	3	0	0	3	3
6	23CST201	Programming in Python	PCC	40/60	3	0	0	3	3

7	23GET202	Tamils and Technology	HSMC	40/60	1	0	0	1	1
PRACTICALS									
8	23CSP202	Object Oriented Programming in C++	PCC	60/40	0	0	4	4	2
9	23CSP203	Problem Solving and Python Programming Laboratory	PCC	60/40	0	0	4	4	2
TOTAL				900	18	1	12	27	23

SEMESTER III

S.No	COURSE CODE	COURSE TITLE	CATEGORY	Int/Ext	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
					L	T	P		
THEORY									
1	23MAT302	Discrete Mathematics	BSC	40/60	3	1	0	4	4
2	23CST301	Object Oriented programming using JAVA	ESC	50/50	3	0	2	5	4
		Data Structures and Algorithms - I							
3	23CST302	Foundations of Data Science	PCC	40/60	3	0	0	3	3
4	23ITT301	Data Structures and Algorithms	PCC	40/60	3	0	0	3	3
5	23ECT301	Signals and Systems	PCC	40/60	4	1	0	4	4
PRACTICALS									
6	23ITP301	Data Structures and Algorithms Laboratory	PCC	60/40	0	0	4	4	2
7	23CSP303	Data Science Laboratory	PCC	60/40	0	0	4	4	2
8	23GEP301	Professional Development [§]	EEC	60/40	0	0	2	2	1
TOTAL				800	15	2	12	29	23

[§]Skill Based Course

SEMESTER IV

S.No	COURSE CODE	COURSE TITLE	CATEGORY	Int/Ext	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
					L	T	P		
THEORY									
1	23ECT405	Communication Systems	PCC	40/60	3	0	0	3	3
2	23ALT402	Artificial Intelligence and Machine Learning	PCC	50/50	3	0	2	5	4
3	23CST403	Database Management Systems	PCC	40/60	3	0	0	3	3
4	23CST304	Object Oriented Programming	PCC	50/50	3	0	2	5	4
5	23CST402	Operating Systems	PCC	40/60	3	0	0	3	3
6	23GET401	Environmental Sciences and Engineering	BSC	40/60	2	0	0	2	2
7		NCC Credit Course Level 2#	-		3	0	0	3	3#

PRACTICALS									
8	23ECP401	Communication Systems Laboratory	PCC	60/40	0	0	4	4	1.5
9	23CSP302	Object Oriented Programming Lab	PCC	60/40	0	0	3	3	1.5
10	23CSP402	Database Management Systems Laboratory	PCC	60/40	0	0	3	3	1.5
TOTAL				800	20	0	10	30	23.5

NCC Credit Course level 2 is offered for NCC students only. The grades earned by the students will be recorded in the Mark Sheet, however the same shall not be considered for the computation of CGPA.

SEMESTER V

S.No	COURSE CODE	COURSE TITLE	CATEGORY	Int/Ext	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
					L	T	P		
THEORY									
1	23CST501	Computer Networks	PCC	50/50	3	0	2	5	4
2	23CST503	Cryptography and Cyber Security	PCC	40/60	3	0	0	3	3
3	23CST504	Distributed Computing	PCC	40/60	3	0	0	3	3
4	23ECT404	Digital Signals Processing	PCC	50/50	3	0	2	5	4
5		Professional Elective I	PEC	40/60	-	-	-	-	3
6		Professional Elective II	PEC	40/60	-	-	-	-	3
7		Mandatory Course- I&	MC		3	0	0	3	0
PRACTICALS									
8	23ITP601	Mobile Application Development Laboratory	PCC	60/40	0	0	3	3	1.5
TOTAL					-	-	-	-	22

& Mandatory Course-I is a Non-credit Course (Student shall select one course from the list given under Mandatory Course-I)

SEMESTER VI

S.No	COURSE CODE	COURSE TITLE	CATEGORY	Int/Ext	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
					L	T	P		
THEORY									
1	23CST601	Object Oriented Software Engineering	PCC	50/50	3	0	2	5	4
2	23CST503	Embedded Systems and IoT							
3		Open Elective – I*	OEC	40/60	3	0	0	3	3
4		Professional Elective III	PEC	40/60	-	-	-	-	3
5		Professional Elective IV	PEC	40/60	-	-	-	-	3
6		Professional Elective V	PEC	40/60	-	-	-	-	3
7		Professional Elective VI	PEC	40/60	-	-	-	-	3

8		Professional Elective VII	PEC	40/60	-	-	-	-	3
9		Mandatory Course-II &	MC		3	0	0	3	0
		NCC Credit Course Level 3 [#]	-		3	0	0	3	3 #
PRACTICALS									
9	23ITP601	Mobile Application Development Laboratory	PCC	60/40	0	0	3	3	1.5
TOTAL				700	-	-	-	-	20.5

*Open Elective – I Shall be chosen from the list of open electives offered by other Programmes & Mandatory Course-II is a Non-credit Course (Student shall select one course from the list given under Mandatory Course-II)

NCC Credit Course level 3 is offered for NCC students only. The grades earned by the students will be recorded in the Mark Sheet, however the same shall not be considered for the computation of CGPA

SEMESTER VII / VIII*

S.No	COURSE CODE	COURSE TITLE	CATEGORY	Int/Ext	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
					L	T	P		
THEORY									
1	23GET701	Human Values and Ethics	HSMC	40/60	2	0	0	2	2
2		Elective - Management#	HSMC	40/60	3	0	0	3	3
3		Open Elective – II**	OEC	40/60	3	0	0	3	3
4		Open Elective – III**	OEC	40/60	3	0	0	3	3
		Open Elective – IV**	OEC	40/60	3	0	0	3	3
PRACTICALS									
5	23ITP701	Summer Internship	EEC	60/40	0	0	0	0	2
TOTAL				600	15	0	0	14	16

*If students undergo internship in Semester VII, then the courses offered during semester VII will be offered during semester VIII.

** Open Elective II - IV (Shall be chosen from the list of open electives offered by other Programmes).

Elective - Management shall be chosen from the Elective Management courses.

SEMESTER VIII / VII*

S.No	COURSE CODE	COURSE TITLE	CATEGORY	Int/Ext	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
					L	T	P		
PRACTICALS									
1	23ITP801	Project Work/Internship	EEC	60/40	0	0	20	20	10
TOTAL				100	6	0	20	20	10

*If students undergo internship in Semester VII, then the courses offered during semester VII will be offered during semester VIII.

TOTAL CREDITS: 162

ELECTIVE – MANAGEMENT COURSES

S.No	COURSE CODE	COURSE TITLE	CATEGORY	Int/Ext	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
					L	T	P		
1	23GET01	Principles of Management	HSMC	40/60	3	0	0	3	3
2	23GET02	Total Quality Management	HSMC	40/60	3	0	0	3	3
3	23GET03	Engineering Economics and Financial Accounting	HSMC	40/60	3	0	0	3	3
4	23GET04	Human Resource Management	HSMC	40/60	3	0	0	3	3
5	23GET05	Knowledge Management	HSMC	40/60	3	0	0	3	3
6	23GET06	Industrial Management	HSMC	40/60	3	0	0	3	3

MANDATORY COURSES I

S.No	COURSE CODE	COURSE TITLE	CATEGORY	Int/Ext	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
					L	T	P		
1.	23MXT01	Introduction to Women and Gender Studies	MC	40/60	3	0	0	3	0
2.	23MXT02	Elements of Literature	MC	40/60	3	0	0	3	0
3.	23MXT03	Film Appreciation	MC	40/60	3	0	0	3	0
4.	23MXT04	Disaster Management	MC	40/60	3	0	0	3	0

MANDATORY COURSES II

S.No	COURSE CODE	COURSE TITLE	CATEGORY	Int/Ext	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
					L	T	P		
1	23MXT05	Well Being with traditional Practices (Yoga, Ayurveda and Siddha)	MC	40/60	3	0	0	3	0
2	23MXT06	History of Science and Technology in India	MC	40/60	3	0	0	3	0
3	23MXT07	Political and Economic Thought for a Humane Society	MC	40/60	3	0	0	3	0
4	23MXT08	State, Nation Building and Politics in India	MC	40/60	3	0	0	3	0
5	23MXT09	Industrial Safety	MC	40/60	3	0	0	3	0

PROFESSIONAL ELECTIVE COURSES: VERTICALS

Vertical I DataScience	Vertical II FullStack Development for IT	Vertical III Cloud Computing and Data Centre Technologies	Vertical IV Cyber Security and Data Privacy	Vertical V Creative Media	Vertical VI Emerging Technologies	Vertical VII Artificial Intelligence and Machine
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						Learning
Exploratory Data Analysis	Cloud Computing	Cloud Computing	Ethical Hacking	Augmented Reality/Virtual Reality	Augmented Reality/Virtual Reality	Knowledge Engineering
Recommender Systems	App Development	Virtualization	Digital and Mobile Forensics	Multimedia and Animation	Robotic Process Automation	Soft Computing
Neural Networks and Deep Learning	Cloud Services Management	Cloud Services Management	Social Network Security	Video Creation and Editing	Neural Networks and Deep Learning	Neural Networks and Deep Learning
Text and Speech Analysis	UI and UX Design	Data Warehousing	Modern Cryptography	UI and UX Design	Cyber security	Text and Speech Analysis
Business Analytics	Software Testing and Automation	Storage Technologies	Engineering Secure software systems	Digital marketing	Quantum Computing	Optimization Techniques
Image and video analytics	Web Application Security	Software Defined Networks	Crypto currency and Block chain Technologies	Visual Effects	Crypto currency and Block chain Technologies	Game Theory
Computer Vision	Dev-ops	Stream Processing	Network Security	Game Development	Game Development	Cognitive Science
Big Data Analytics	Principles of Programming Languages	Security and Privacy in Cloud	Security and Privacy in Cloud	Multimedia Data Compression and Storage	3D Printing and Design	Ethics And AI

Registration of Professional Elective Courses from Verticals:

Professional Elective Courses will be registered in Semesters V and VI. These courses are listed in groups called verticals that represent a particular area of specialization / diversified group. Students are permitted to choose all the Professional Electives from a particular vertical or from different verticals. Further, only one Professional Elective course shall be chosen in a semester horizontally (row-wise). However, two courses are permitted from the same row, provided one course is enrolled in Semester V and another in semester VI.

The registration of courses for B.E./B.Tech (Honours) or Minor degree shall be done from Semester V to VIII. The procedure for registration of courses explained above shall be followed for the courses of B.E./B.Tech (Honours) or Minor degree also. For more details on B.E./B.Tech (Honours) or Minor degree refer to the Regulations 2021, Clause 4.10.

PROFESSIONAL ELECTIVE COURSES

VERTICALS

VERTICAL 1: DATA SCIENCE

S. No	COURSE CODE	COURSE TITLE	CATEGORY	Int/Ext	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
					L	T	P		
1	23CCT01	Exploratory Data Analysis	PEC	40/60	2	0	2	4	3
2	23CCT02	Recommender Systems	PEC	40/60	2	0	2	4	3
3	23CCT03	Neural Networks and Deep Learning	PEC	40/60	2	0	2	4	3
4	23CCT04	Text and Speech Analysis	PEC	40/60	2	0	2	4	3
5	23CCT05	Business Analytics	PEC	40/60	2	0	2	4	3
6	23CCT06	Image and video analytics	PEC	40/60	2	0	2	4	3
7	23CCT07	Computer Vision	PEC	40/60	2	0	2	4	3
8	23CCT08	Big Data Analytics	PEC	40/60	2	0	2	4	3

VERTICAL 2: FULL STACK DEVELOPMENT FOR IT

S. No	COURSE CODE	COURSE TITLE	CATEGORY	Int/Ext	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
					L	T	P		
1	23CCT09	Cloud Computing	PEC	40/60	2	0	2	4	3
2	23CCT10	App Development	PEC	40/60	2	0	2	4	3
3	23CCT11	Cloud Services Management	PEC	40/60	2	0	2	4	3
4	23CCT12	UI and UX Design	PEC	40/60	2	0	2	4	3
5	23CCT13	Software Testing and Automation	PEC	40/60	2	0	2	4	3
6	23CCT14	Web Application Security	PEC	40/60	2	0	2	4	3
7	23CCT15	Dev-ops	PEC	40/60	2	0	2	4	3
8	23CCT16	Principles of Programming Languages	PEC	40/60	2	0	2	4	3

VERTICAL 3: CLOUD COMPUTING AND DATA CENTRE TECHNOLOGIES

S. No	COURSE CODE	COURSE TITLE	CATEGORY	Int/Ext	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
					L	T	P		

1	23CCT09	Cloud Computing	PEC	40/60	2	0	2	4	3
2	23CCT18	Virtualization	PEC	40/60	2	0	2	4	3
3	23CCT19	Cloud Services Management	PEC	40/60	2	0	2	4	3
4	23CCT20	Data Warehousing	PEC	40/60	2	0	2	4	3
5	23CCT21	Storage Technologies	PEC	40/60	3	0	0	3	3
6	23CCT22	Software Defined Networks	PEC	40/60	2	0	2	4	3
7	23CCT23	Stream Processing	PEC	40/60	2	0	2	4	3
8	23CCT24	Security and Privacy in Cloud	PEC	40/60	2	0	2	4	3

VERTICAL 4: CYBER SECURITY AND DATA PRIVACY

S. No	COURSE CODE	COURSE TITLE	CATEGORY	Int/Ext	PERIODS PERWEEK			TOTAL CONTACT PERIODS	CREDITS
					L	T	P		
1	23CCT25	Ethical Hacking	PEC	40/60	2	0	2	4	3
2	23CCT26	Digital and Mobile Forensics	PEC	40/60	2	0	2	4	3
3	23CCT27	Social Network Security	PEC	40/60	2	0	2	4	3
4	23CCT28	Modern Cryptography	PEC	40/60	2	0	2	4	3
5	23CCT29	Engineering Secure Software Systems	PEC	40/60	2	0	2	4	3
6	23CCT30	Crypto currency and Block chain Technologies	PEC	40/60	2	0	2	4	3
7	23CCT31	Network Security	PEC	40/60	2	0	2	4	3
8	23CCT32	Security and Privacy in Cloud	PEC	40/60	2	0	2	4	3

VERTICAL 5: CREATIVE MEDIA

S. No	COURSE CODE	COURSE TITLE	CATEGORY	Int/Ext	PERIODS PERWEEK			TOTAL CONTACT PERIODS	CREDITS
					L	T	P		
1	23CCT33	Augmented Reality/Virtual Reality	PEC	40/60	2	0	2	4	3
2	23CCT34	Multimedia and Animation	PEC	40/60	2	0	2	4	3
3	23CCT35	Video Creation and Editing	PEC	40/60	2	0	2	4	3

4	23CCT36	UI and UX Design	PEC	40/60	2	0	2	4	3
5	23CCT37	Digital marketing	PEC	40/60	2	0	2	4	3
6	23CCT38	Visual Effects	PEC	40/60	2	0	2	4	3
7	23CCT39	Game Development	PEC	40/60	2	0	2	4	3
8	23CCT40	Multimedia Data Compression and Storage	PEC	40/60	2	0	2	4	3

VERTICAL 6: EMERGING TECHNOLOGIES

S. No	COURSE CODE	COURSE TITLE	CATEGORY	Int/Ext	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
					L	T	P		
1	23CCT41	Augmented Reality/Virtual Reality	PEC	40/60	2	0	2	4	3
2	23CCT42	Robotic Process Automation	PEC	40/60	2	0	2	4	3
3	23CCT43	Neural Networks and Deep Learning	PEC	40/60	2	0	2	4	3
4	23CCT44	Cyber security	PEC	40/60	2	0	2	4	3
5	23CCT45	Quantum Computing	PEC	40/60	2	0	2	4	3
6	23CCT46	Crypto currency and Block chain Technologies	PEC	40/60	2	0	2	4	3
7	23CCT47	Game Development	PEC	40/60	2	0	2	4	3
8	23CCT48	3D Printing and Design	PEC	40/60	2	0	2	4	3

VERTICAL 7: ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

S. No	COURSE CODE	COURSE TITLE	CATEGORY	Int/Ext	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
					L	T	P		
1	23CCT49	Knowledge Engineering	PEC	40/60	2	0	2	4	3
2	23CCT50	Soft Computing	PEC	40/60	2	0	2	4	3
3	23CCT51	Neural Networks and Deep Learning	PEC	40/60	2	0	2	4	3
4	23CCT52	Text and Speech Analysis	PEC ₉	40/60	2	0	2	4	3
5	23CCT53	Optimization Techniques	PEC	40/60	2	0	2	4	3
6	23CCT54	Game Theory	PEC	40/60	2	0	2	4	3
7	23CCT55	Cognitive Science	PEC	40/60	2	0	2	4	3
8	23CCT56	Ethics And AI	PEC	40/60	2	0	2	4	3

OPEN ELECTIVES

(Students shall choose the open elective courses, such that the course contents are not similar to any other course contents/title under other course categories).

OPEN ELECTIVES – I

S. No	COURSE CODE	COURSE TITLE	CATEGORY	Int/Ext	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
					L	T	P		
1	23OET01	Space Science	PEC	40/60	2	0	2	4	3
2	23OET02	Introduction to Industrial Engineering	PEC	40/60	2	0	2	4	3
3	23OET03	Climate Change and its Impact	PEC	40/60	2	0	2	4	3
4	23OET04	Environment and Social Impact Assessment	PEC	40/60	2	0	2	4	3
5	23OET05	Renewable Energy System	PEC	40/60	2	0	2	4	3
6	23OET06	Introduction to Industrial Instrumentation and Control	PEC	40/60	2	0	2	4	3
7	23OET07	Graph Theory	PEC	40/60	2	0	2	4	3

OPEN ELECTIVES – II

S. No	COURSE CODE	COURSE TITLE	CATEGORY	Int/Ext	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
					L	T	P		
1	23OET09	Resource Management Techniques	PEC	40/60	2	0	2	4	3
2	23OET10	Fintech Regulations	PEC	40/60	2	0	2	4	3
3	23OET11	Holistic Nutrition	PEC	40/60	2	0	2	4	3
4	23OET12	IT in Agricultural System	PEC	40/60	2	0	2	4	3
5	23OET13	Introduction to Control Engineering	PEC	40/60	2	0	2	4	3
6	23OET14	Pharmaceutical Nanotechnology	PEC	40/60	2	0	2	4	3
7	23OET15	Aviation Management	PEC	40/60	2	0	2	4	3

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OPEN ELECTIVES – III

COURSE	CATEGORY	PERIODS PER WEEK	TOTAL
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S. No	CODE	COURSE TITLE		Int/Ext	L	T	P	CONTACT PERIODS	CREDITS
1	23OET17	English for Competitive Examinations	OEC	40/60	3	0	0	3	3
2	23OET18	NGOs and Sustainable Development	OEC	40/60	3	0	0	3	3
3	23OET19	Democracy and Good Governance	OEC	40/60	3	0	0	3	3
4	23OET20	Renewable Energy Technologies	OEC	40/60	3	0	0	3	3
5	23OET21	Applied Design Thinking	OEC	40/60	2	0	2	4	3
6	23OET22	Reverse Engineering	OEC	40/60	3	0	0	3	3
7	23OET23	Sustainable Manufacturing	OEC	40/60	3	0	0	3	3
8	23OET24	Electric and Hybrid Vehicle	OEC	40/60	3	0	0	3	3
9	23OET25	Space Engineering	OEC	40/60	3	0	0	3	3
10	23OET26	Industrial Management	OEC	40/60	3	0	0	3	3
11	23OET27	Quality Engineering	OEC	40/60	3	0	0	3	3
12	23OET28	Fire Safety Engineering	OEC	40/60	3	0	0	3	3
13	23OET29	Introduction to non- destructive testing	OEC	40/60	3	0	0	3	3
14	23OET30	Mechatronics	OEC	40/60	3	0	0	3	3
15	23OET31	Foundation of Robotics	OEC	40/60	3	0	0	3	3
16	23OET32	Fundamentals of Aeronautical engineering	OEC	40/60	3	0	0	3	3
17	23OET33	Remote Sensing Concepts	OEC	40/60	3	0	0	3	3
18	23OET34	Urban Agriculture	OEC	40/60	3	0	0	3	3
19	23OET35	Drinking Water Supply and Treatment	OEC	40/60	3	0	0	3	3
20	23OET36	Electric Vehicle technology	OEC	40/60	3	0	0	3	3
21	23OET37	Introduction to PLC Programming	OEC	40/60	3	0	0	3	3
22	23OET38	Nano Technology	OEC	40/60	3	0	0	3	3
23	23OET39	Functional Materials	OEC	40/60	3	0	0	3	3
24	23OET40	Biomedical Instrumentation	OEC	40/60	3	0	0	3	3
25	23OET41	Traditional Indian Foods	OEC	40/60	3	0	0	3	3
26	23OET42	Introduction to food processing	OEC	40/60	3	0	0	3	3
27	23OET43	IPR for Pharma Industry	OEC	40/60	3	0	0	3	3
28	23OET44	Basics of Textile Finishing	OEC	40/60	3	0	0	3	3
29	23OET45	Industrial Engineering for Garment Industry	OEC	40/60	3	0	0	3	3

30	23OET46	Basics of Textile Manufacture	OEC	40/60	3	0	0	3	3
31	23OET47	Introduction to Petroleum Refining and Petrochemicals	OEC	40/60	3	0	0	3	3
32	23OET48	Energy Conservation and Management	OEC	40/60	3	0	0	3	3
33	23OET49	Basics of Plastics Processing	OEC	40/60	3	0	0	3	3
34	23OET50	Signals and Systems	OEC	40/60	3	0	0	3	3
35	23OET51	Fundamentals of Electronic Devices and Circuits	OEC	40/60	3	0	0	3	3
36	23OET52	Foundation Skills in integrated product Development	OEC	40/60	3	0	0	3	3
37	23OET53	Assistive Technology	OEC	40/60	3	0	0	3	3
38	23OET54	Operations Research	OEC	40/60	3	0	0	3	3
39	23OET55	Algebra and Number Theory	OEC	40/60	3	0	0	3	3
40	23OET56	Linear Algebra	OEC	40/60	3	0	0	3	3
41	23OET57	Lean Concepts, Tools And Practices	OEC	40/60	3	0	0	3	3

OPEN ELECTIVES – IV

S. No	COURSE CODE	COURSE TITLE	CATEGORY	Int/Ext	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
					L	T	P		
1	23OET58	Project Report Writing	OEC	40/60	3	0	0	3	3
2	23OET59	Advanced Numerical Methods	OEC	40/60	3	0	0	3	3
3	23OET60	Random Processes	OEC	40/60	3	0	0	3	3
4	23OET61	Queuing and Reliability Modelling	OEC	40/60	3	0	0	3	3
5	23OET62	Production and Operations Management for Entrepreneurs	OEC	40/60	3	0	0	3	3
6	23OET63	Multivariate Data Analysis	OEC	40/60	3	0	0	3	3
7	23OET64	Additive Manufacturing	OEC	40/60	3	0	0	3	3
8	23OET65	New Product Development	OEC ¹²	40/60	3	0	0	3	3
9	23OET66	Industrial Design & Rapid Prototyping Techniques	OEC	40/60	2	0	2	4	3

10	23OET67	Micro and Precision Engineering	OEC	40/60	3	0	0	3	3
11	23OET68	Cost Management of Engineering Projects	OEC	40/60	3	0	0	3	3
12	23OET69	Batteries and Management system	OEC	40/60	3	0	0	3	3
13	23OET70	Sensors and Actuators	OEC	40/60	3	0	0	3	3
14	23OET71	Space Vehicles	OEC	40/60	3	0	0	3	3
15	23OET72	Management Science	OEC	40/60	3	0	0	3	3
16	23OET73	Production Planning and Control	OEC	40/60	3	0	0	3	3
17	23OET74	Operations Management	OEC	40/60	3	0	0	3	3
18	23OET75	Industrial Hygiene	OEC	40/60	3	0	0	3	3
19	23OET76	Chemical Process Safety	OEC	40/60	3	0	0	3	3
20	23OET77	Electrical, Electronic and Magnetic materials	OEC	40/60	3	0	0	3	3
21	23OET78	Nano materials and applications	OEC	40/60	3	0	0	3	3
22	23OET79	Hydraulics and Pneumatics	OEC	40/60	3	0	0	3	3
23	23OET80	Sensors	OEC	40/60	3	0	0	3	3
24	23OET81	Foundation of Automation	OEC	40/60	3	0	0	3	3
25	23OET82	Concepts in Mobile Robotics	OEC	40/60	3	0	0	3	3
26	23OET83	Marine Propulsion	OEC	40/60	3	0	0	3	3
27	23OET84	Marine Merchant Vehicles	OEC	40/60	3	0	0	3	3
28	23OET85	Elements of Marine Engineering	OEC	40/60	3	0	0	3	3
29	23OET86	Drone Technologies	OEC	40/60	3	0	0	3	3
30	23OET87	Geographical Information System	OEC	40/60	3	0	0	3	3
31	23OET88	Agriculture Entrepreneurship Development	OEC	40/60	3	0	0	3	3
32	23OET89	Biodiversity Conservation	OEC	40/60	3	0	0	3	3
33	23OET90	Introduction to control systems	OEC	40/60	3	0	0	3	3
34	23OET91	Introduction to Industrial Automation	OEC	40/60	3	0	0	3	3

35	23OET92	Energy Technology	OEC	40/60	3	0	0	3	3
36	23OET93	Surface Science	OEC	40/60	3	0	0	3	3
37	23OET94	Environment and Agriculture	OEC	40/60	3	0	0	3	3
38	23OET95	Fundamentals of Food Engineering	OEC	40/60	3	0	0	3	3
39	23OET96	Food safety and Quality regulations	OEC	40/60	3	0	0	3	3
40	23OET97	Nutraceuticals	OEC	40/60	3	0	0	3	3
41	23OET98	Basics of Dyeing and Printing	OEC	40/60	3	0	0	3	3
42	23OET99	Fibre Science	OEC	40/60	3	0	0	3	3
43	23OET100	Garment Manufacturing Technology	OEC	40/60	3	0	0	3	3
44	23OET101	Industrial Safety	OEC	40/60	3	0	0	3	3
45	23OET102	Unit Operations in Petro Chemical Industries	OEC	40/60	3	0	0	3	3
46	23OET103	Plastic Materials for Engineers	OEC	40/60	3	0	0	3	3
47	23OET104	Properties and Testing of Plastics	OEC	40/60	3	0	0	3	3
48	23OET105	VLSI Design	OEC	40/60	3	0	0	3	3
49	23OET106	Industrial IoT and Industry 4.0	OEC	40/60	3	0	0	3	3
50	23OET107	Wearable Devices	OEC	40/60	3	0	0	3	3
51	23OET108	Medical Informatics	OEC	40/60	3	0	0	3	3
52	23OET109	Basics of Integrated Water Resources Management	OEC	40/60	3	0	0	3	3

SUMMARY

Name of the Programme: B.Tech. Information Technology										
S.No	Subject Area	Credits per Semester								Total Credits
		I	II	III	IV	V	VI	VII/VI II	VIII/V II	
1	HSMC	4	3					5		12
2	BSC	12	7	4	2					25
3	ESC	5	9	4						18
4	PCC		5	14.5	1420	16	5.5			61
5	PEC					6	12			18
6	OEC						3	9		12
7	EEC	1	2	1				2	10	16

8	Non-Credit /(Mandatory)					√	√			
Total		22	26	23.5	22	22	20.5	16	10	162

