

Program Code & Name: **P132::B.Tech. (Computer Science and Engineering)**

System: **Semester**

Year of Admission: **2022**

Duration in Years: **4**

Term 1									P132-1-2022
S.No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Type	Nature
1		CORE ELECTIVE 1	2	1	0	3.0	3.0	CE	ESC
2		CORE ELECTIVE 2	3	0	0	3.0	3.0	CE	BSC
3		CORE ELECTIVE 3	0	0	2	1.0	2.0	CE	BSC
4	CSE111	ORIENTATION TO COMPUTING-I	2	0	0	2.0	2.0	CR	DSC
5	CSE326	INTERNET PROGRAMMING LABORATORY	0	0	3	2.0	3.0	CR	DSC
6	INT108	PYTHON PROGRAMMING	3	0	2	4.0	5.0	CR	DSC
7	MTH174	ENGINEERING MATHEMATICS	3	1	0	4.0	4.0	CR	BSC
8	PES318	SOFT SKILLS-I	1	2	0	3.0	3.0	CR	LCS
TOTAL			14.0	4.0	7.0	22.0	25.0		

CORE ELECTIVE 1 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours
1	ECE249	BASIC ELECTRICAL AND ELECTRONICS ENGINEERING	3	1	0	4.0	4.0
2	MEC135	BASICS OF MECHANICAL ENGINEERING	2	1	0	3.0	3.0

CORE ELECTIVE 2 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours
1	CHE110	ENVIRONMENTAL STUDIES	2	2	0	4.0	4.0
2	PHY110	ENGINEERING PHYSICS	3	0	0	3.0	3.0

CORE ELECTIVE 3 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours
1	ECE279	BASIC ELECTRICAL AND ELECTRONICS ENGINEERING LABORATORY	0	0	2	1.0	2.0

Term 2									P132-2-2022
S.No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Type	Nature
1		CORE ELECTIVE 1	2	1	0	3.0	3.0	CE	ESC
2		CORE ELECTIVE 2	3	0	0	3.0	3.0	CE	BSC
3		CORE ELECTIVE 3	0	0	2	1.0	2.0	CE	BSC
4		LANGUAGE ELECTIVE 1	1	0	3	3.0	4.0	LE	LCS
5	CSE101	COMPUTER PROGRAMMING	2	0	2	3.0	4.0	CR	DSC
6	CSE121	ORIENTATION TO COMPUTING-II	1	0	0	1.0	1.0	CR	DSC
7	CSE320	SOFTWARE ENGINEERING	3	0	0	3.0	3.0	CR	DSC
8	INT306	DATABASE MANAGEMENT SYSTEMS	3	0	2	4.0	5.0	CR	DSC
9	MTH401	DISCRETE MATHEMATICS	3	0	0	3.0	3.0	CR	BSC
TOTAL			18.0	1.0	9.0	24.0	28.0		

CORE ELECTIVE 1 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours
1	ECE249	BASIC ELECTRICAL AND ELECTRONICS ENGINEERING	3	1	0	4.0	4.0
2	MEC135	BASICS OF MECHANICAL ENGINEERING	2	1	0	3.0	3.0

CORE ELECTIVE 2 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours
1	CHE110	ENVIRONMENTAL STUDIES	2	2	0	4.0	4.0
2	PHY110	ENGINEERING PHYSICS	3	0	0	3.0	3.0

CORE ELECTIVE 3 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours
1	ECE279	BASIC ELECTRICAL AND ELECTRONICS ENGINEERING LABORATORY	0	0	2	1.0	2.0

LANGUAGE ELECTIVE 1 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours
1	PEL125	UPPER INTERMEDIATE COMMUNICATION SKILLS-I	1	0	3	3.0	4.0
2	PEL121	COMMUNICATION SKILLS-I	1	0	3	3.0	4.0
3	PEL130	ADVANCED COMMUNICATION SKILLS-I	1	0	3	3.0	4.0

Term 3									P132-3-2022
S.No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Type	Nature
1		CORE ELECTIVE 4	3	0	0	3.0	3.0	CE	DSC
2		CORE ELECTIVE 5	0	0	2	1.0	2.0	CE	DSC
3		LANGUAGE ELECTIVE 2	1	0	3	3.0	4.0	LE	LCS
4	CSE202	OBJECT ORIENTED PROGRAMMING	3	0	2	4.0	5.0	CR	DSC
5	CSE205	DATA STRUCTURES AND ALGORITHMS	3	0	2	4.0	5.0	CR1	DSC
6	CSE211	COMPUTER ORGANIZATION AND DESIGN	3	1	0	4.0	4.0	CR	DSC
7	CSE306	COMPUTER NETWORKS	3	0	0	3.0	3.0	CR1	DSC
8	CSE307	INTERNETWORKING ESSENTIALS	0	0	2	1.0	2.0	CR1	DSC
9	GEN231	COMMUNITY DEVELOPMENT PROJECT	0	0	4	2.0	4.0	CR3	PRC
TOTAL			16.0	1.0	15.0	25.0	32.0		

CORE ELECTIVE 4 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours
1	CSE316	OPERATING SYSTEMS	3	0	0	3.0	3.0
2	MTH302	PROBABILITY AND STATISTICS	3	0	0	3.0	3.0

CORE ELECTIVE 5 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours
1	CSE325	OPERATING SYSTEMS LABORATORY	0	0	2	1.0	2.0

LANGUAGE ELECTIVE 2 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours
1	PEL134	UPPER INTERMEDIATE COMMUNICATION SKILLS-II	1	0	3	3.0	4.0
2	PEL132	COMMUNICATION SKILLS-II	1	0	3	3.0	4.0
3	PEL136	ADVANCED COMMUNICATION SKILLS-II	1	0	3	3.0	4.0

Term 4										P132-4-2022
S.No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Type	Nature	
1		APTITUDE ELECTIVE 1	2	1	0	3.0	3.0	APE	EEA	
2		CORE ELECTIVE 4	3	0	0	3.0	3.0	CE	DSC	
3		CORE ELECTIVE 5	0	0	2	1.0	2.0	CE	DSC	
4		ENGINEERING MINOR ELECTIVE 1	3	0	0	3.0	3.0	EM	DSC	
5		ENGINEERING MINOR ELECTIVE 2	3	0	0	3.0	3.0	EM	DSC	
6	CSE310	PROGRAMMING IN JAVA	3	0	2	4.0	5.0	CR	DSC	
7	CSE408	DESIGN AND ANALYSIS OF ALGORITHMS	3	0	0	3.0	3.0	CR	DSC	
8	INT426	GENERATIVE ARTIFICIAL INTELLIGENCE	2	0	2	3.0	4.0	CR	DSC	
TOTAL			19.0	1.0	6.0	23.0	26.0			

APTITUDE ELECTIVE 1 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Elective Area
1	PEA305	ANALYTICAL SKILLS-I	2	1	0	3.0	3.0	
2	PEA307	ADVANCED ANALYTICAL SKILLS-I	2	1	0	3.0	3.0	

CORE ELECTIVE 4 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Elective Area
1	CSE316	OPERATING SYSTEMS	3	0	0	3.0	3.0	
2	MTH302	PROBABILITY AND STATISTICS	3	0	0	3.0	3.0	

CORE ELECTIVE 5 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Elective Area
1	CSE325	OPERATING SYSTEMS LABORATORY	0	0	2	1.0	2.0	

ENGINEERING MINOR ELECTIVE 1 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Elective Area
1	INT330	MANAGING CLOUD SOLUTIONS	2	0	2	3.0	4.0	CLOUD COMPUTING
2	INT242	CYBER SECURITY ESSENTIALS	2	0	2	3.0	4.0	CYBER SECURITY
3	INT217	INTRODUCTION TO DATA MANAGEMENT	2	0	2	3.0	4.0	DATA SCIENCE
4	INT219	FRONT END WEB DEVELOPER	2	0	2	3.0	4.0	FULL STACK WEB DEVELOPMENT
5	ECE217	INTRODUCTION TO INTERNET OF THINGS (IOT)	3	0	0	3.0	3.0	INTERNET OF THINGS (IOT)
6	INT254	FUNDAMENTALS OF MACHINE LEARNING	2	0	2	3.0	4.0	MACHINE LEARNING
7	CSE374	ADVANCE SOFTWARE ENGINEERING	3	0	0	3.0	3.0	SOFTWARE METHODOLOGIES AND TESTING

ENGINEERING MINOR ELECTIVE 2 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Elective Area
1	INT362	CLOUD ARCHITECTURE AND IMPLEMENTATION-I	2	0	2	3.0	4.0	CLOUD COMPUTING
2	INT249	SYSTEM ADMINISTRATION	2	0	2	3.0	4.0	CYBER SECURITY
3	INT232	DATA SCIENCE TOOLBOX : R PROGRAMMING	2	0	2	3.0	4.0	DATA SCIENCE
4	INT222	ADVANCED WEB DEVELOPMENT	2	0	2	3.0	4.0	FULL STACK WEB DEVELOPMENT
5	ECE341	PROGRAMMING IOT	1	0	3	3.0	4.0	INTERNET OF THINGS (IOT)
6	INT354	MACHINE LEARNING-I	2	0	2	3.0	4.0	MACHINE LEARNING
7	CSE375	SOFTWARE TESTING	3	0	0	3.0	3.0	SOFTWARE METHODOLOGIES AND TESTING

Term 5

P132-5-2022

S.No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Type	Nature
1		ENGINEERING MINOR ELECTIVE 3	2	0	2	3.0	4.0	EM	DSC
2		ENGINEERING MINOR ELECTIVE 4	2	0	2	3.0	4.0	EM	DSC
3		OPEN MINOR 1	3	0	0	3.0	3.0	OM	OEM
4		PATHWAY ELECTIVE 1	2	0	1	3.0	3.0	PW	PWE

5		PATHWAY ELECTIVE 2	2	0	1	3.0	3.0	PW	PWE
6		TRAINING ELECTIVE 1	0	0	6	3.0	6.0	TE	TCS
7	CSE322	FORMAL LANGUAGES AND AUTOMATION THEORY	3	0	0	3.0	3.0	CR	DSC
TOTAL			14.0	0.0	12.0	21.0	26.0		

ENGINEERING MINOR ELECTIVE 3 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Elective Area
1	INT363	CLOUD MICROSERVICES	2	0	2	3.0	4.0	CLOUD COMPUTING
2	INT250	DIGITAL EVIDENCE ANALYSIS	2	0	2	3.0	4.0	CYBER SECURITY
3	INT233	DATA VISUALIZATION	2	0	2	3.0	4.0	DATA SCIENCE
4	INT252	WEB APP DEVELOPMENT WITH REACTJS	2	0	2	3.0	4.0	FULL STACK WEB DEVELOPMENT
5	ECE128	INTRODUCTION TO IOT NETWORKING PROTOCOLS	3	0	0	3.0	3.0	INTERNET OF THINGS (IOT)
6	INT344	NATURAL LANGUAGE PROCESSING	2	0	1	3.0	3.0	MACHINE LEARNING
7	CSE376	AUTOMATED TESTING	2	0	2	3.0	4.0	SOFTWARE METHODOLOGIES AND TESTING

ENGINEERING MINOR ELECTIVE 4 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Elective Area
1	INT364	CLOUD ARCHITECTURE AND IMPLEMENTATION-II	2	0	2	3.0	4.0	CLOUD COMPUTING
2	INT244	SECURING COMPUTING SYSTEMS	2	0	2	3.0	4.0	CYBER SECURITY
3	INT234	PREDICTIVE ANALYTICS	2	0	2	3.0	4.0	DATA SCIENCE
4	INT220	SERVER SIDE SCRIPTING	2	0	2	3.0	4.0	FULL STACK WEB DEVELOPMENT
5	ECE237	ARCHITECTING SMART IOT DEVICES	1	0	3	3.0	4.0	INTERNET OF THINGS (IOT)
6	INT423	MACHINE LEARNING-II	2	0	2	3.0	4.0	MACHINE LEARNING
7	CSE377	ADVANCE TESTING TECHNOLOGIES	2	0	2	3.0	4.0	SOFTWARE METHODOLOGIES AND TESTING

PATHWAY ELECTIVE 1 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Elective Area
1	PEA306	ANALYTICAL SKILLS-II	2	1	0	3.0	3.0	GOVERNMENT JOBS
2	PEA308	ADVANCED ANALYTICAL SKILLS-II	2	1	0	3.0	3.0	GOVERNMENT JOBS
3	PEA306	ANALYTICAL SKILLS-II	2	1	0	3.0	3.0	HIGHER STUDIES
4	PEA308	ADVANCED ANALYTICAL SKILLS-II	2	1	0	3.0	3.0	HIGHER STUDIES
5	CSE329	PRELUDE TO COMPETITIVE CODING	2	0	1	3.0	3.0	PRODUCT BASED
6	PEA306	ANALYTICAL SKILLS-II	2	1	0	3.0	3.0	SERVICE BASED
7	PEA308	ADVANCED ANALYTICAL SKILLS-II	2	1	0	3.0	3.0	SERVICE BASED

PATHWAY ELECTIVE 2 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Elective Area
1	CSE333	COMBINATORIAL STUDIES-I	2	0	2	3.0	4.0	GOVERNMENT JOBS
2	CSE333	COMBINATORIAL STUDIES-I	2	0	2	3.0	4.0	HIGHER STUDIES

3	CSE330	COMPETITIVE CODING APPROACHES-TECHNIQUES	2	0	1	3.0	3.0	PRODUCT BASED
4	PEV112	VERBAL ABILITY	2	0	2	3.0	4.0	SERVICE BASED
5	PEV113	UPPERINTERMEDIATE VERBAL ABILITY	2	0	2	3.0	4.0	SERVICE BASED
6	PEV114	ADVANCED -VERBAL ABILITY	2	0	2	3.0	4.0	SERVICE BASED

TRAINING ELECTIVE 1 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Elective Area
1	CSE343	TRAINING IN PROGRAMMING	0	0	6	3.0	6.0	
2	CSE443	SEMINAR ON SUMMER TRAINING	0	0	6	3.0	6.0	

Term 6									P132-6-2022
S.No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Type	Nature
1		DEPARTMENT ELECTIVE 1	3	0	0	3.0	3.0	DE	DSC
2		ENGINEERING MINOR ELECTIVE 5	2	0	2	3.0	4.0	EM	DSC
3		OPEN MINOR 2	3	0	0	3.0	3.0	OM	OEM
4		PATHWAY ELECTIVE 3	2	0	1	3.0	3.0	PW	PWE
5		PATHWAY ELECTIVE 4	1	2	0	3.0	3.0	PW	PWE
6	CSE332	INDUSTRY ETHICS AND LEGAL ISSUES	2	0	0	2.0	2.0	CR	DSC
TOTAL			13.0	2.0	3.0	17.0	18.0		

DEPARTMENT ELECTIVE 1 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Elective Area
1	CSE393	ONLINE ACADEMIC COURSE	3	0	0	3.0	3.0	
2	INT372	IPHONE APPLICATION PROGRAMMING	2	0	2	3.0	4.0	
3	INT373	AGILE DRIVEN DEVELOPMENT AND PROJECT MANAGEMENT	2	0	2	3.0	4.0	
4	INT374	DATA ANALYTICS WITH POWER BI	2	0	2	3.0	4.0	

ENGINEERING MINOR ELECTIVE 5 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Elective Area
1	INT327	CLOUD INFRASTRUCTURE AND RESOURCE MANAGEMENT	2	0	2	3.0	4.0	CLOUD COMPUTING
2	INT245	PENETRATION TESTING	2	0	2	3.0	4.0	CYBER SECURITY
3	INT312	BIG DATA FUNDAMENTALS	2	0	2	3.0	4.0	DATA SCIENCE
4	INT221	MVC PROGRAMMING	2	0	2	3.0	4.0	FULL STACK WEB DEVELOPMENT
5	ECE129	IOT FOR DIGITAL SOCIETY	3	0	0	3.0	3.0	INTERNET OF THINGS (IOT)
6	INT345	COMPUTER VISION	2	0	2	3.0	4.0	MACHINE LEARNING
7	CSE378	WEBSERVICES API AUTOMATION TESTING	2	0	2	3.0	4.0	SOFTWARE METHODOLOGIES AND TESTING

PATHWAY ELECTIVE 3 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Elective Area
1	CSE334	COMBINATORIAL STUDIES-II	2	0	2	3.0	4.0	GOVERNMENT JOBS
2	CSE334	COMBINATORIAL STUDIES-II	2	0	2	3.0	4.0	HIGHER STUDIES
3	CSE331	CODING PEARLS	2	0	1	3.0	3.0	PRODUCT BASED
4	CSE357	COMBINATORIAL STUDIES	2	0	2	3.0	4.0	SERVICE BASED
5	CSE358	COMBINATORIAL STUDIES	2	0	4	4.0	6.0	SERVICE BASED
6	CSE382	COMBINATORIAL STUDIES	2	0	4	4.0	6.0	SERVICE BASED
7	CSE392	COMBINATORIAL STUDIES	2	0	4	4.0	6.0	SERVICE BASED

PATHWAY ELECTIVE 4 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Elective Area
1	PES319	SOFT SKILLS-II	1	2	0	3.0	3.0	PRODUCT BASED
2	PES319	SOFT SKILLS-II	1	2	0	3.0	3.0	SERVICE BASED

Term 7 (For those students who opt for course work)

P132-7-2022

S.No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Type	Nature
1		DEPARTMENT ELECTIVE 2	3	0	0	3.0	3.0	DE	DSC
2		DEPARTMENT ELECTIVE 2 LAB	0	0	2	1.0	2.0	DE	DSC
3		ENGINEERING MINOR ELECTIVE 6	0	0	4	3.0	4.0	EM	DSC
4		OPEN MINOR 3	3	0	0	3.0	3.0	OM	OEM
5		PATHWAY ELECTIVE 4	2	0	2	3.0	4.0	PW	PWE
6	CSE339	CAPSTONE PROJECT-I	0	0	4	2.0	4.0	CR	PRJ

TOTAL		8.0	0.0	12.0	15.0	20.0		
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DEPARTMENT ELECTIVE 2 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Elective Area
1	CSE304	COMPUTER GRAPHICS AND VISUALIZATION	3	1	0	4.0	4.0	
2	CSE327	SIMULATION AND MODELLING	3	0	0	3.0	3.0	
3	CSE406	ADVANCED JAVA PROGRAMMING	3	0	2	4.0	5.0	
4	CSE434	GAME DEVELOPMENT IN 3D	3	0	2	4.0	5.0	
5	CSE436	BLOCKCHAIN	3	0	2	4.0	5.0	
6	INT402	MODERN WEB PROGRAMMING TOOLS AND TECHNIQUES	3	0	2	4.0	5.0	
7	INT404	ARTIFICIAL INTELLIGENCE	3	1	0	4.0	4.0	

DEPARTMENT ELECTIVE 2 LAB BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Elective Area
1	CSE328	SIMULATION AND MODELLING LABORATORY	0	0	2	1.0	2.0	

ENGINEERING MINOR ELECTIVE 6 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Elective Area
1	INT328	NETWORK VIRTUALIZATION AND CLOUD SECURITY	2	0	2	3.0	4.0	CLOUD COMPUTING
2	INT251	MALWARE ANALYSIS AND CYBER DEFENCE	2	0	2	3.0	4.0	CYBER SECURITY
3	INT315	CLUSTER COMPUTING	2	0	2	3.0	4.0	DATA SCIENCE
4	INT253	WEB DEVELOPMENT IN PYTHON USING DJANGO	2	0	2	3.0	4.0	FULL STACK WEB DEVELOPMENT
5	ECE140	WORKSHOP ON IOT FOR DIGITAL SOCIETY	1	0	3	3.0	4.0	INTERNET OF THINGS (IOT)
6	INT422	DEEP LEARNING	2	0	2	3.0	4.0	MACHINE LEARNING
7	CSE379	MOBILE AUTOMATED TESTING	0	0	4	3.0	4.0	SOFTWARE METHODOLOGIES AND TESTING

PATHWAY ELECTIVE 4 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Elective Area
1	CSE335	COMBINATORIAL STUDIES-III	2	0	2	3.0	4.0	GOVERNMENT JOBS
2	CSE335	COMBINATORIAL STUDIES-III	2	0	2	3.0	4.0	HIGHER STUDIES

Term 7 (For those students who opt for industrial internship)

P132A-7-2022

S.No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Type	Nature
1	CSE447	INDUSTRY CO-OP PROJECT-I	0	0	32	16.0	32.0	CR	TCF
TOTAL			0.0	0.0	32.0	16.0	32.0		

Term 8 (For those students who opt for course work)

P132-8-2022

S.No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Type	Nature
1		DEPARTMENT ELECTIVE 3	3	0	0	3.0	3.0	DE	DSC
2		DEPARTMENT ELECTIVE 3 LAB	0	0	2	1.0	2.0	DE	DSC
3		OPEN MINOR 4	3	0	0	3.0	3.0	OM	OEM

4	CSE435	COMPREHENSIVE SEMINAR	0	0	2	1.0	2.0	CR	SMN
5	CSE439	CAPSTONE PROJECT-II	0	0	16	8.0	16.0	CR	PRJ
TOTAL			6.0	0.0	20.0	16.0	26.0		

DEPARTMENT ELECTIVE 3 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours
1	CSE403	NETWORK SECURITY AND CRYPTOGRAPHY	3	0	2	4.0	5.0
2	CSE493	LINUX SYSTEM ADMINISTRATION	3	0	2	4.0	5.0
3	CSE504	STORAGE TECHNOLOGY FOUNDATION	3	0	0	3.0	3.0
4	INT411	SOFTWARE PROJECT MANAGEMENT	3	0	0	3.0	3.0

DEPARTMENT ELECTIVE 3 LAB BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours
1	CSE507	STORAGE TECHNOLOGY FOUNDATION LABORATORY	0	0	2	1.0	2.0
2	INT416	SOFTWARE PROJECT MANAGEMENT LABORATORY	0	0	3	2.0	3.0

Term 8 (For those students who opt for industrial internship)

P132A-8-2022

S.No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Type	Nature
1		TRAINING ELECTIVE 2	0	0	32	16.0	32.0	TE	TCF
TOTAL			0.0	0.0	32.0	16.0	32.0		

TRAINING ELECTIVE 2 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Contact Hours
1	CSE441	INDUSTRY INTERNSHIP PROJECT	0	0	32	16.0	32.0
2	CSE448	INDUSTRY CO-OP PROJECT-II	0	0	32	16.0	32.0

Open Minor Elective (OM) Basket

S.No	Course Code	Course Title	L	T	P	Credit	Contact Hours	Elective Area
1	HMT150	AIR TRAFFIC MANAGEMENT	2	1	0	3.0	3.0	AIRLINES CABIN AND AIRPORT OPERATIONS
2	HMT246	AIRLINES AND AIRPORT MANAGEMENT	3	0	0	3.0	3.0	AIRLINES CABIN AND AIRPORT OPERATIONS
3	HMT250	AIRPORT GROUND HANDLING OPERATIONS	2	1	0	3.0	3.0	AIRLINES CABIN AND AIRPORT OPERATIONS
4	HMT259	AIRLINES TICKETING AND AIRFARE CONSTRUCTION	2	1	0	3.0	3.0	AIRLINES CABIN AND AIRPORT OPERATIONS
5	CSE224	FUNDAMENTALS OF ANDROID	2	0	2	3.0	4.0	ANDROID APPLICATION DEVELOPMENT
6	CSE225	DEVELOPING ANDROID APPS	2	0	2	3.0	4.0	ANDROID APPLICATION DEVELOPMENT
7	CSE226	ANDROID APP DEPLOYMENT	2	0	2	3.0	4.0	ANDROID APPLICATION DEVELOPMENT
8	CSE227	ADVANCED ANDROID APP DEVELOPMENT	2	0	2	3.0	4.0	ANDROID APPLICATION DEVELOPMENT
9	ARC511	COMPUTER AIDED DESIGN-BASICS	0	0	3	2.0	3.0	ARCHITECTURE
10	ARC512	COMPUTER AIDED DESIGN-TECHNICAL	1	0	3	3.0	4.0	ARCHITECTURE
11	ARC513	COMPUTER AIDED DESIGN-ADVANCE	0	0	3	2.0	3.0	ARCHITECTURE
12	ARC514	COMPUTER AIDED DESIGN-GRAPHICS	0	0	3	2.0	3.0	ARCHITECTURE

13	FIN309	CAPITAL MARKET OPERATIONS	0	0	3	2.0	3.0	BANKING AND FINANCIAL SERVICES
14	FIN318	MONEY, BANKING AND FINANCIAL SERVICES	3	0	0	3.0	3.0	BANKING AND FINANCIAL SERVICES
15	FIN319	INVESTMENT BANKING AND FINANCIAL SERVICES	3	0	0	3.0	3.0	BANKING AND FINANCIAL SERVICES
16	FIN901	FUNDAMENTALS OF BANKING AND INSURANCE	3	0	0	3.0	3.0	BANKING AND FINANCIAL SERVICES
17	LAW252	BASICS OF CONTRACT	3	0	0	3.0	3.0	BUSINESS LAWS
18	LAW255	SPECIAL CONTRACTS	3	0	0	3.0	3.0	BUSINESS LAWS
19	LAW256	BASICS OF COMPANY LAW	3	0	0	3.0	3.0	BUSINESS LAWS
20	LAW257	BASICS OF INVESTMENT LAW	3	0	0	3.0	3.0	BUSINESS LAWS
21	INT327	CLOUD INFRASTRUCTURE AND RESOURCE MANAGEMENT	2	0	2	3.0	4.0	CLOUD COMPUTING
22	INT328	NETWORK VIRTUALIZATION AND CLOUD SECURITY	2	0	2	3.0	4.0	CLOUD COMPUTING
23	INT330	MANAGING CLOUD SOLUTIONS	2	0	2	3.0	4.0	CLOUD COMPUTING
24	INT362	CLOUD ARCHITECTURE AND IMPLEMENTATION-I	2	0	2	3.0	4.0	CLOUD COMPUTING
25	INT363	CLOUD MICROSERVICES	2	0	2	3.0	4.0	CLOUD COMPUTING
26	INT364	CLOUD ARCHITECTURE AND IMPLEMENTATION-II	2	0	2	3.0	4.0	CLOUD COMPUTING
27	INT242	CYBER SECURITY ESSENTIALS	2	0	2	3.0	4.0	CYBER SECURITY
28	INT244	SECURING COMPUTING SYSTEMS	2	0	2	3.0	4.0	CYBER SECURITY
29	INT245	PENETRATION TESTING	2	0	2	3.0	4.0	CYBER SECURITY
30	INT249	SYSTEM ADMINISTRATION	2	0	2	3.0	4.0	CYBER SECURITY
31	INT250	DIGITAL EVIDENCE ANALYSIS	2	0	2	3.0	4.0	CYBER SECURITY
32	INT251	MALWARE ANALYSIS AND CYBER DEFENCE	2	0	2	3.0	4.0	CYBER SECURITY
33	INT217	INTRODUCTION TO DATA MANAGEMENT	2	0	2	3.0	4.0	DATA SCIENCE
34	INT232	DATA SCIENCE TOOLBOX : R PROGRAMMING	2	0	2	3.0	4.0	DATA SCIENCE
35	INT233	DATA VISUALIZATION	2	0	2	3.0	4.0	DATA SCIENCE
36	INT234	PREDICTIVE ANALYTICS	2	0	2	3.0	4.0	DATA SCIENCE
37	INT312	BIG DATA FUNDAMENTALS	2	0	2	3.0	4.0	DATA SCIENCE
38	INT315	CLUSTER COMPUTING	2	0	2	3.0	4.0	DATA SCIENCE
39	INT375	DATA SCIENCE TOOLBOX: PYTHON PROGRAMMING	2	0	2	3.0	4.0	DATA SCIENCE
40	INT331	FUNDAMENTALS OF DEVOPS	2	0	2	3.0	4.0	DEVOPS
41	INT332	DEVOPS VIRTUALIZATION AND CONFIGURATION MANAGEMENT	2	0	2	3.0	4.0	DEVOPS
42	INT333	DEVOPS ADVANCE CONFIGURATION MANAGEMENT	2	0	2	3.0	4.0	DEVOPS
43	INT334	ENTERPRISE APPLICATION AUTOMATION	2	0	2	3.0	4.0	DEVOPS
44	MKT309	DIGITAL MARKETING	1	3	0	4.0	4.0	DIGITAL MARKETING
45	MKT905	SEARCH ENGINE OPTIMIZATION	3	0	0	3.0	3.0	DIGITAL MARKETING
46	MKT906	SOCIAL MEDIA MARKETING	0	0	3	2.0	3.0	DIGITAL MARKETING
47	MKT907	WEB ANALYTICS	0	0	3	2.0	3.0	DIGITAL MARKETING
48	HMT141	INTRODUCTION TO TRAVEL AND TOURISM INDUSTRY	3	0	0	3.0	3.0	DIGITAL TRANSFORMATION IN TOURISM AND HOSPITALITY
49	HMT722	DIGITAL MARKETING FOR TOURISM AND HOSPITALITY	3	0	0	3.0	3.0	DIGITAL TRANSFORMATION IN TOURISM AND HOSPITALITY
50	HMT723	E-COMMERCE IN TOURISM AND HOSPITALITY	3	0	0	3.0	3.0	DIGITAL TRANSFORMATION IN TOURISM AND HOSPITALITY

51	HMT724	ARTIFICIAL INTELLIGENCE AND BIG DATA IN TOURISM AND HOSPITALITY	3	0	0	3.0	3.0	DIGITAL TRANSFORMATION IN TOURISM AND HOSPITALITY
52	ECO214	INTRODUCTION TO ECONOMIC ANALYSIS	3	0	0	3.0	3.0	ECONOMICS
53	ECO215	INDIAN ECONOMIC ISSUES AND POLICIES	3	0	0	3.0	3.0	ECONOMICS
54	ECO324	ECONOMICS OF MONEY AND BANKING	3	0	0	3.0	3.0	ECONOMICS
55	ECO325	ECONOMICS OF TRADE	3	0	0	3.0	3.0	ECONOMICS
56	ENG606	CONTEMPORARY SHORT STORIES	3	0	0	3.0	3.0	ENGLISH
57	ENG607	CONTEMPORARY PROSE AND POETRY	3	0	0	3.0	3.0	ENGLISH
58	ENG608	CONTEMPORARY DRAMA	3	0	0	3.0	3.0	ENGLISH
59	ENG609	CONTEMPORARY FICTION	3	0	0	3.0	3.0	ENGLISH
60	HMT141	INTRODUCTION TO TRAVEL AND TOURISM INDUSTRY	3	0	0	3.0	3.0	ENTREPRENUERSHIP AND VENTURE ESTABLISHMENT IN TOURISM AND HOSPITALITY
61	HMT321	MARKETING CONCEPTS AND STRATEGIES IN TOURISM AND HOSPITALITY	2	1	0	3.0	3.0	ENTREPRENUERSHIP AND VENTURE ESTABLISHMENT IN TOURISM AND HOSPITALITY
62	HMT368	HOSPITALITY ENTREPRENEURSHIP	3	1	0	4.0	4.0	ENTREPRENUERSHIP AND VENTURE ESTABLISHMENT IN TOURISM AND HOSPITALITY
63	HMT179	BASICS OF EVENT MANAGEMENT	2	1	0	3.0	3.0	EVENT PLANNING AND MANAGEMENT
64	HMT196	EVENT MARKETING AND DISTRIBUTION	2	1	0	3.0	3.0	EVENT PLANNING AND MANAGEMENT
65	HMT291	BUDGETING AND COSTING OF EVENTS	3	1	0	4.0	4.0	EVENT PLANNING AND MANAGEMENT
66	ERT428	FAMILY BUSINESS DYNAMICS	3	0	0	3.0	3.0	FAMILY BUSINESS MANAGEMENT
67	ERT429	GROWTH PLAN FORMULATION	3	0	0	3.0	3.0	FAMILY BUSINESS MANAGEMENT
68	ERT430	BUILDING LASTING FAMILY BUSINESS – SYNERGY IN VISION, VALUES AND STRATEGY	3	0	0	3.0	3.0	FAMILY BUSINESS MANAGEMENT
69	ERT431	BUSINESS RISK MANAGEMENT	3	0	0	3.0	3.0	FAMILY BUSINESS MANAGEMENT
70	FST801	FASHION STUDIES	3	0	0	3.0	3.0	FASHION BASICS
71	FST802	INDIAN CULTURE STUDIES	3	0	0	3.0	3.0	FASHION BASICS
72	FST803	FASHION DESIGN PROCESS	0	0	5	3.0	5.0	FASHION BASICS
73	FST804	SURFACE DEVELOPMENT	0	0	5	3.0	5.0	FASHION BASICS
74	FIN214	INTRODUCTION TO FINANCIAL MARKETS	3	0	0	3.0	3.0	FINANCIAL MARKETS
75	FIN215	MUTUAL FUNDS AND EXCHANGE TRADED FUNDS	3	0	0	3.0	3.0	FINANCIAL MARKETS
76	FIN309	CAPITAL MARKET OPERATIONS	0	0	3	2.0	3.0	FINANCIAL MARKETS
77	FIN358	DERIVATIVE MARKET OPERATIONS	3	0	0	3.0	3.0	FINANCIAL MARKETS
78	FRN114	ELEMENTARY FRENCH I	3	0	0	3.0	3.0	FRENCH
79	FRN115	ELEMENTARY FRENCH II	3	0	0	3.0	3.0	FRENCH
80	FRN116	ELEMENTARY FRENCH III	3	0	0	3.0	3.0	FRENCH
81	FRN117	ELEMENTARY FRENCH IV	3	0	0	3.0	3.0	FRENCH
82	INT219	FRONT END WEB DEVELOPER	2	0	2	3.0	4.0	FULL STACK WEB DEVELOPMENT
83	INT220	SERVER SIDE SCRIPTING	2	0	2	3.0	4.0	FULL STACK WEB DEVELOPMENT
84	INT221	MVC PROGRAMMING	2	0	2	3.0	4.0	FULL STACK WEB DEVELOPMENT

85	INT222	ADVANCED WEB DEVELOPMENT	2	0	2	3.0	4.0	FULL STACK WEB DEVELOPMENT
86	INT252	WEB APP DEVELOPMENT WITH REACTJS	2	0	2	3.0	4.0	FULL STACK WEB DEVELOPMENT
87	INT253	WEB DEVELOPMENT IN PYTHON USING DJANGO	2	0	2	3.0	4.0	FULL STACK WEB DEVELOPMENT
88	FIN212	BASIC FINANCIAL MANAGEMENT	3	0	0	3.0	3.0	FUNDAMENTALS OF FINANCE
89	FIN213	INDIAN FINANCIAL SYSTEM	3	0	0	3.0	3.0	FUNDAMENTALS OF FINANCE
90	FIN308	BANKING AND INSURANCE	3	0	0	3.0	3.0	FUNDAMENTALS OF FINANCE
91	FIN309	CAPITAL MARKET OPERATIONS	0	0	3	2.0	3.0	FUNDAMENTALS OF FINANCE
92	URP806	INFRASTRUCTURE PLANNING AND SMART CITIES	3	0	0	3.0	3.0	FUNDAMENTALS OF URBAN PLANNING
93	URP807	INTRODUCTION TO CITY PLANNING	3	0	0	3.0	3.0	FUNDAMENTALS OF URBAN PLANNING
94	URP808	REAL ESTATE DEVELOPMENT FUNDAMENTALS	3	0	0	3.0	3.0	FUNDAMENTALS OF URBAN PLANNING
95	URP809	TRANSPORTATION PLANNING: FUNDAMENTALS AND INNOVATIONS	3	0	0	3.0	3.0	FUNDAMENTALS OF URBAN PLANNING
96	CAP818	GAME TOOL-I	0	0	3	2.0	3.0	GAMING
97	CAP819	GAME TOOL-II	0	0	5	3.0	5.0	GAMING
98	CAP820	GAME TOOL-III	0	0	3	2.0	3.0	GAMING
99	CAP821	PROJECT	0	0	5	3.0	5.0	GAMING
100	SSC231	INDIAN CULTURE AND HISTORY	4	0	0	4.0	4.0	GENERAL STUDIES
101	SSC232	INDIAN GEOGRAPHY AND SOCIETY	4	0	0	4.0	4.0	GENERAL STUDIES
102	SSC233	INDIAN POLITY, GOVERNANCE AND INTERNATIONAL RELATIONS	4	0	0	4.0	4.0	GENERAL STUDIES
103	SSC234	INDIAN ECONOMY	4	0	0	4.0	4.0	GENERAL STUDIES
104	GEO295	PHYSICAL GEOGRAPHY	3	0	0	3.0	3.0	GEOGRAPHY
105	GEO296	HUMAN GEOGRAPHY	3	0	0	3.0	3.0	GEOGRAPHY
106	GEO297	GEOGRAPHY OF INDIA-I	3	0	0	3.0	3.0	GEOGRAPHY
107	GEO298	GEOGRAPHY OF INDIA-II	3	0	0	3.0	3.0	GEOGRAPHY
108	GER107	ELEMENTARY GERMAN I	3	0	0	3.0	3.0	GERMAN
109	GER108	ELEMENTARY GERMAN II	3	0	0	3.0	3.0	GERMAN
110	GER109	ELEMENTARY GERMAN III	3	0	0	3.0	3.0	GERMAN
111	GER110	ELEMENTARY GERMAN IV	3	0	0	3.0	3.0	GERMAN
112	HIS291	ANCIENT INDIAN HISTORY AND CULTURE	3	0	0	3.0	3.0	HISTORY
113	HIS292	MEDIEVAL INDIAN HISTORY AND CULTURE	3	0	0	3.0	3.0	HISTORY
114	HIS293	HISTORY OF THE BRITISH RAJ IN INDIA	3	0	0	3.0	3.0	HISTORY
115	HIS294	MODERN WORLD HISTORY	3	0	0	3.0	3.0	HISTORY
116	HRM203	HUMAN RESOURCE PLANNING AND DEVELOPMENT	3	0	0	3.0	3.0	HUMAN RESOURCE MANAGEMENT
117	HRM204	COMPENSATION MANAGEMENT	3	0	0	3.0	3.0	HUMAN RESOURCE MANAGEMENT
118	HRM301	INDUSTRIAL PSYCHOLOGY	3	0	0	3.0	3.0	HUMAN RESOURCE MANAGEMENT
119	HRM302	CONFLICT MANAGEMENT AND NEGOTIATION	3	0	0	3.0	3.0	HUMAN RESOURCE MANAGEMENT
120	SSC217	SCIENCE AND TECHNOLOGY-I	3	1	0	3.0	4.0	INDIAN ECONOMY AND SCIENCE
121	SSC218	SCIENCE AND TECHNOLOGY-II	3	1	0	3.0	4.0	INDIAN ECONOMY AND SCIENCE
122	SSC221	INDIAN ECONOMY-I	3	1	0	3.0	4.0	INDIAN ECONOMY AND SCIENCE

123	SSC222	INDIAN ECONOMY-II	3	1	0	3.0	4.0	INDIAN ECONOMY AND SCIENCE
124	INT323	DATABASE ESSENTIALS TOWARD INFORMATICA	2	0	2	3.0	4.0	INFORMATICA
125	INT324	INFORMATICA DATA QUALITY MANAGEMENT	2	0	2	3.0	4.0	INFORMATICA
126	INT325	INFORMATICA DATA INTEGRATION	2	0	2	3.0	4.0	INFORMATICA
127	INT326	CLOUD APPLICATION INTEGRATION PROCESSES	2	0	2	3.0	4.0	INFORMATICA
128	LAW351	COPYRIGHTS AND DESIGNS LAW	3	0	0	3.0	3.0	INTELLECTUAL PROPERTY AND CYBER LAWS
129	LAW352	TRADEMARKS AND ALLIED LAWS	3	0	0	3.0	3.0	INTELLECTUAL PROPERTY AND CYBER LAWS
130	LAW353	PATENTS AND GEOGRAPHICAL INDICATIONS	3	0	0	3.0	3.0	INTELLECTUAL PROPERTY AND CYBER LAWS
131	LAW354	CYBER LAWS	3	0	0	3.0	3.0	INTELLECTUAL PROPERTY AND CYBER LAWS
132	IFD801	FUNDAMENTALS OF DESIGN	3	0	0	3.0	3.0	INTERIOR DESIGN
133	IFD802	STUDIES IN FORM	0	0	3	2.0	3.0	INTERIOR DESIGN
134	IFD803	COMPUTER SKILLS	0	0	3	2.0	3.0	INTERIOR DESIGN
135	IFD804	SET DESIGN STUDIO	0	0	3	2.0	3.0	INTERIOR DESIGN
136	FIN348	INTERNATIONAL FINANCIAL MANAGEMENT	3	0	0	3.0	3.0	INTERNATIONAL BUSINESS
137	MGN220	INTRODUCTION TO INTERNATIONAL BUSINESS	3	0	0	3.0	3.0	INTERNATIONAL BUSINESS
138	MGN902	EXPORT IMPORT PROCEDURE AND DOCUMENTATION	3	0	0	3.0	3.0	INTERNATIONAL BUSINESS
139	MKT211	INTERNATIONAL MARKETING	3	0	0	3.0	3.0	INTERNATIONAL BUSINESS
140	ECE128	INTRODUCTION TO IOT NETWORKING PROTOCOLS	3	0	0	3.0	3.0	INTERNET OF THINGS (IOT)
141	ECE129	IOT FOR DIGITAL SOCIETY	3	0	0	3.0	3.0	INTERNET OF THINGS (IOT)
142	ECE140	WORKSHOP ON IOT FOR DIGITAL SOCIETY	1	0	3	3.0	4.0	INTERNET OF THINGS (IOT)
143	ECE217	INTRODUCTION TO INTERNET OF THINGS (IOT)	3	0	0	3.0	3.0	INTERNET OF THINGS (IOT)
144	ECE237	ARCHITECTING SMART IOT DEVICES	1	0	3	3.0	4.0	INTERNET OF THINGS (IOT)
145	ECE341	PROGRAMMING IOT	1	0	3	3.0	4.0	INTERNET OF THINGS (IOT)
146	JAP105	BASIC JAPANESE-I	3	0	0	3.0	3.0	JAPANESE
147	JAP106	BASIC JAPANESE-II	3	0	0	3.0	3.0	JAPANESE
148	JAP107	ELEMENTARY JAPANESE III	3	0	0	3.0	3.0	JAPANESE
149	JAP108	ELEMENTARY JAPANESE IV	3	0	0	3.0	3.0	JAPANESE
150	INT254	FOUNDATIONS OF MACHINE LEARNING	2	0	2	3.0	4.0	MACHINE LEARNING
151	INT344	NATURAL LANGUAGE PROCESSING	2	0	1	3.0	3.0	MACHINE LEARNING
152	INT345	COMPUTER VISION	2	0	2	3.0	4.0	MACHINE LEARNING
153	INT354	MACHINE LEARNING-I	2	0	2	3.0	4.0	MACHINE LEARNING
154	INT422	DEEP LEARNING	2	0	2	3.0	4.0	MACHINE LEARNING
155	INT423	MACHINE LEARNING-II	2	0	2	3.0	4.0	MACHINE LEARNING
156	ACC211	FINANCIAL ACCOUNTING	3	0	0	3.0	3.0	MANAGEMENT FUNDAMENTALS
157	FIN212	BASIC FINANCIAL MANAGEMENT	3	0	0	3.0	3.0	MANAGEMENT FUNDAMENTALS
158	HRM203	HUMAN RESOURCE PLANNING AND DEVELOPMENT	3	0	0	3.0	3.0	MANAGEMENT FUNDAMENTALS
159	MKT202	MARKETING MANAGEMENT	3	0	0	3.0	3.0	MANAGEMENT FUNDAMENTALS
160	MKT202	MARKETING MANAGEMENT	3	0	0	3.0	3.0	MARKETING MANAGEMENT

161	MKT203	PRODUCT AND BRAND MANAGEMENT	3	0	0	3.0	3.0	MARKETING MANAGEMENT
162	MKT302	MOBILE MARKETING	3	0	0	3.0	3.0	MARKETING MANAGEMENT
163	MKT303	WEB AND SOCIAL MEDIA ANALYTICS	0	0	3	2.0	3.0	MARKETING MANAGEMENT
164	MTH265	DISCRETE MATHEMATICS FOR COMPUTING	3	0	0	3.0	3.0	MATHEMATICS FOR PROGRAMMER
165	MTH280	LINEAR ALGEBRA	3	0	0	3.0	3.0	MATHEMATICS FOR PROGRAMMER
166	MTH381	NUMBER THEORY AND CRYPTOGRAPHY	3	0	0	3.0	3.0	MATHEMATICS FOR PROGRAMMER
167	MTH563	COMPUTATIONAL TECHNIQUES	0	0	3	2.0	3.0	MATHEMATICS FOR PROGRAMMER
168	ERT432	NEW VENTURE CREATION	3	0	0	3.0	3.0	MY NEW VENTURE
169	ERT433	NEW VENTURE MARKETING	3	0	0	3.0	3.0	MY NEW VENTURE
170	ERT434	NEW VENTURE FINANCING	3	0	0	3.0	3.0	MY NEW VENTURE
171	ERT435	NEW VENTURE EXECUTION	3	0	0	3.0	3.0	MY NEW VENTURE
172	ACC304	COST MANAGEMENT	3	0	0	3.0	3.0	OPERATIONS
173	OPR201	LEAN MANAGEMENT	3	0	0	3.0	3.0	OPERATIONS
174	OPR202	SUPPLY CHAIN MANAGEMENT	3	0	0	3.0	3.0	OPERATIONS
175	OPR301	TOTAL QUALITY MANAGEMENT	3	0	0	3.0	3.0	OPERATIONS
176	POL371	POLITICAL CRISIS MANAGEMENT AND COMMUNICATION	3	0	0	3.0	3.0	POLITICAL SCIENCE
177	POL372	THE GLOBAL DIPLOMACY	3	0	0	3.0	3.0	POLITICAL SCIENCE
178	POL373	ETHNIC STUDIES	3	0	0	3.0	3.0	POLITICAL SCIENCE
179	POL374	MORAL FOUNDATIONS OF POLITICS	3	0	0	3.0	3.0	POLITICAL SCIENCE
180	PID801	FUNDAMENTALS OF DESIGN	3	0	0	3.0	3.0	PRODUCT DESIGN
181	PID802	PRODUCT DESIGN STUDIO-I	0	0	3	2.0	3.0	PRODUCT DESIGN
182	PID803	PRODUCT DESIGN STUDIO-II	0	0	3	2.0	3.0	PRODUCT DESIGN
183	PID804	PACKAGING DESIGN	0	0	3	2.0	3.0	PRODUCT DESIGN
184	FST807	VISUAL MERCHANDISING	3	0	0	3.0	3.0	PRODUCT DEVELOPMENT AND MARKETING
185	FST809	PRODUCT DEVELOPMENT AND MARKETING	0	0	5	3.0	5.0	PRODUCT DEVELOPMENT AND MARKETING
186	FST811	PRINT DEVELOPMENT	0	0	5	3.0	5.0	PRODUCT DEVELOPMENT AND MARKETING
187	FST812	LIFESTYLE PRODUCT DESIGNING	0	0	5	3.0	5.0	PRODUCT DEVELOPMENT AND MARKETING
188	PSY291	PSYCHOLOGICAL TESTING	0	0	3	2.0	3.0	PSYCHOLOGY
189	PSY292	POSITIVE PSYCHOLOGY	3	0	0	3.0	3.0	PSYCHOLOGY
190	PSY293	PSYCHOLOGY OF HIGH PERFORMANCE	3	0	0	3.0	3.0	PSYCHOLOGY
191	PSY294	PSYCHOMETRICS	3	0	0	3.0	3.0	PSYCHOLOGY
192	PSY281	FOUNDATIONS OF PSYCHOLOGY-I	3	0	0	3.0	3.0	PSYCHOLOGY (UPSC)
193	PSY282	FOUNDATIONS OF PSYCHOLOGY - II	3	0	0	3.0	3.0	PSYCHOLOGY (UPSC)
194	PSY283	ISSUES AND APPLICATIONS OF PSYCHOLOGY-I	3	0	0	3.0	3.0	PSYCHOLOGY (UPSC)
195	PSY284	ISSUES AND APPLICATIONS OF PSYCHOLOGY-II	3	0	0	3.0	3.0	PSYCHOLOGY (UPSC)
196	PBA396	INTRODUCTION TO PUBLIC ADMINISTRATION	3	0	0	3.0	3.0	PUBLIC ADMINISTRATION
197	PBA397	INTRODUCTION TO ADMINISTRATIVE BEHAVIOR	3	0	0	3.0	3.0	PUBLIC ADMINISTRATION
198	PBA398	COMPARATIVE PUBLIC ADMINISTRATION	3	0	0	3.0	3.0	PUBLIC ADMINISTRATION

199	PBA399	PUBLIC POLICY AND ANALYSIS	3	0	0	3.0	3.0	PUBLIC ADMINISTRATION
200	PUN401	EXPLORING PUNJABI THEATRE	3	0	0	3.0	3.0	PUNJABI
201	PUN402	TRENDS IN PUNJABI FICTION	3	0	0	3.0	3.0	PUNJABI
202	PUN403	DEVELOPMENT IN PUNJABI PROSE	3	0	0	3.0	3.0	PUNJABI
203	PUN404	PUNJABI POETRY AND ITS FORMS	3	0	0	3.0	3.0	PUNJABI
204	GEN330	SCIENTIFIC RESEARCH ESSENTIALS	3	0	0	3.0	3.0	RESEARCH
205	GEN331	WORKSHOP ON DESIGN THINKING FOR INNOVATION	0	0	3	2.0	3.0	RESEARCH
206	GEN332	PRODUCT DEVELOPMENT AND TESTING	0	0	3	2.0	3.0	RESEARCH
207	GEN333	RESEARCH DISSEMINATION	0	0	3	3.0	3.0	RESEARCH
208	INT346	ROBOTIC PROCESS AUTOMATION	2	0	2	3.0	4.0	ROBOTIC PROCESS AUTOMATION
209	INT347	SOFTWARE BOTS	2	0	2	3.0	4.0	ROBOTIC PROCESS AUTOMATION
210	INT348	BOT AUTOMATION	2	0	2	3.0	4.0	ROBOTIC PROCESS AUTOMATION
211	INT349	ROBOTICS AND AUTOMATION	2	0	2	3.0	4.0	ROBOTIC PROCESS AUTOMATION
212	SOC371	SOCIOLOGY OF MEDIA	3	0	0	3.0	3.0	SOCIOLOGY
213	SOC372	SOCIOLOGY OF AGING	3	0	0	3.0	3.0	SOCIOLOGY
214	SOC373	ENVIRONMENT AND SOCIETY	3	0	0	3.0	3.0	SOCIOLOGY
215	SOC374	UNDERSTANDING CRIMINOLOGY	3	0	0	3.0	3.0	SOCIOLOGY
216	CSE374	ADVANCE SOFTWARE ENGINEERING	3	0	0	3.0	3.0	SOFTWARE METHODOLOGIES AND TESTING
217	CSE375	SOFTWARE TESTING	3	0	0	3.0	3.0	SOFTWARE METHODOLOGIES AND TESTING
218	CSE376	AUTOMATED TESTING	2	0	2	3.0	4.0	SOFTWARE METHODOLOGIES AND TESTING
219	CSE377	ADVANCE TESTING TECHNOLOGIES	2	0	2	3.0	4.0	SOFTWARE METHODOLOGIES AND TESTING
220	CSE378	WEBSERVICES API AUTOMATION TESTING	2	0	2	3.0	4.0	SOFTWARE METHODOLOGIES AND TESTING
221	CSE379	MOBILE AUTOMATED TESTING	0	0	4	3.0	4.0	SOFTWARE METHODOLOGIES AND TESTING
222	SPA107	ELEMENTARY SPANISH I	3	0	0	3.0	3.0	SPANISH
223	SPA108	ELEMENTARY SPANISH II	3	0	0	3.0	3.0	SPANISH
224	SPA109	ELEMENTARY SPANISH III	3	0	0	3.0	3.0	SPANISH
225	SPA110	ELEMENTARY SPANISH IV	3	0	0	3.0	3.0	SPANISH
226	HMT141	INTRODUCTION TO TRAVEL AND TOURISM INDUSTRY	3	0	0	3.0	3.0	TOURISM OPERATIONS AND MANAGEMENT
227	HMT324	SUSTAINABLE TOURISM PLANNING AND DEVELOPMENT	2	1	0	3.0	3.0	TOURISM OPERATIONS AND MANAGEMENT
228	HMT366	HUMAN RESOURCE MANAGEMENT FOR TOURISM AND HOSPITALITY	2	1	0	3.0	3.0	TOURISM OPERATIONS AND MANAGEMENT
229	HMT712	MANAGEMENT FOR TOURISM AND HOSPITALITY	3	0	0	3.0	3.0	TOURISM OPERATIONS AND MANAGEMENT
230	IXD801	INTERACTION DESIGN	0	0	3	2.0	3.0	USER INTERFACE AND EXPERIENCE DESIGN
231	IXD802	FUNDAMENTALS TOOLS OF USER INTERFACE	0	0	4	2.0	4.0	USER INTERFACE AND EXPERIENCE DESIGN
232	IXD803	DESIGN OF USER INTERFACE AND EXPERIENCE	0	0	4	2.0	4.0	USER INTERFACE AND EXPERIENCE DESIGN
233	IXD804	HUMAN COMPUTER INTERACTIONS	0	0	3	2.0	3.0	USER INTERFACE AND EXPERIENCE DESIGN
234	HMT141	INTRODUCTION TO TRAVEL AND TOURISM INDUSTRY	3	0	0	3.0	3.0	VACATION PLANNING AND MANAGEMENT
235	HMT712	MANAGEMENT FOR TOURISM AND HOSPITALITY	3	0	0	3.0	3.0	VACATION PLANNING AND MANAGEMENT

236	HMT752	ITINERARY PLANNING AND MANAGEMENT	3	0	0	3.0	3.0	VACATION PLANNING AND MANAGEMENT
237	HMT754	TRAVEL DOCUMENTATION	3	0	0	3.0	3.0	VACATION PLANNING AND MANAGEMENT

The list of Open Minor Elective courses to be offered in a term is subject to change from time to time.

Important Points

- The calculation of Total Contact hours in Lecture (L), Tutorial (T) and Practical (P) for Elective Course slots reflecting the minimum L, T and P of a course in Elective Basket.
- Every Course has a 'Type' and 'Nature' which defines its character.

Program Structure

Program Code: P132::B.Tech. (Computer Science and Engineering)
Program Batch: 2022

Category	Category Description	Sub Category	Number of Theory (T)/Practical (P) BYOD (B)	Total Credits
A1	Language & Communication Skills (LCS)	<i>PES (Soft Skills)</i>	<i>1T</i>	3
		<i>Language & Communication Skills(LCS)</i>	<i>2T 2B</i>	6
B1	Basic Science(BSC)	<i>Maths</i>	<i>2T</i>	7
		<i>Basic Science(BSC)</i>	<i>2T 2P</i>	8
C1	Discipline Core(DSC)	<i>Discipline Core(DSC)</i>	<i>25T 7P 10B</i>	87
D	Open Minor/Open Elective(OEM)	<i>Open Minor/Open Elective(OEM)</i>	<i>4T</i>	12
E	Project (including Capstone Project and Research Project)(PRJ)	<i>Project (including Capstone Project and Research Project)(PRJ)</i>	<i>2P</i>	10
F	Community Development Project (PRC)	<i>Community Development Project(PRC)</i>	<i>1P</i>	2
	Employability Enhancement Activities (EEA)	<i>Employability Enhancement Activities (EEA)</i>	<i>1T</i>	3
	Engineering Science (ESC)	<i>Engineering Science(ESC)</i>	<i>2T</i>	6
	Pathway Elective(PWE)	<i>Pathway Elective(PWE)</i>	<i>5T 4B</i>	15
	Seminar(SMN)	<i>Seminar(SMN)</i>	<i>1P</i>	1
	Training Compulsory - Summer (TCS)	<i>Training Compulsory - Summer (TCS)</i>	<i>1P</i>	3
Total			<i>44T 14P 16B</i>	163

Note

- For applicable programs, students can graduate with 2 Minors (1 within discipline and 1 outside discipline and as depicted in the structure under the headings Discipline Minors and Open Elective/Minors respectively).
- Discipline Core (DSC) are be mapped with GATE/UGCNET/CSIRNET/IES/AMCAT/ICAR as per applicability.

Term-wise Credits

Term	Semester	Path	Credit (without rounding)	Credit(with rounding)
1	Term 1	Common	21.5	22.0
2	Term 2	Common	23.5	24.0
3	Term 3	Common	24.5	25.0
4	Term 4	Common	23	23.0
5	Term 5	Common	20	21.0
6	Term 6	Common	16.5	17.0
7	Term 7 (For students who opt for industrial internship)	A	16	16.0

7	Term 7 (For students who opt for course work)	B	14	15.0
8	Term 8 (For students who opt for industrial internship)	A	16	16.0
8	Term 8 (For students who opt for course work)	B	16	16.0

Term path wise Credits (Including Common Term)

Path	Credit (without rounding)	Credit(with rounding)
A	161	164.0
B	159	163.0

Course Prerequisites

Term 8 (For students who opt for course work)

CSE439-CAPSTONE PROJECT-II

Course Code	Course Title	L	T	P	Credit	Type	Nature
CSE439	CAPSTONE PROJECT-II	0.0	0.0	16.0	8.0	CR	PRJ

Term-8 Course Prerequisite Data

Course Code	Course Name	L	T	P	Credit
CSE339	CAPSTONE PROJECT-I	0.0	0.0	4.0	2.0

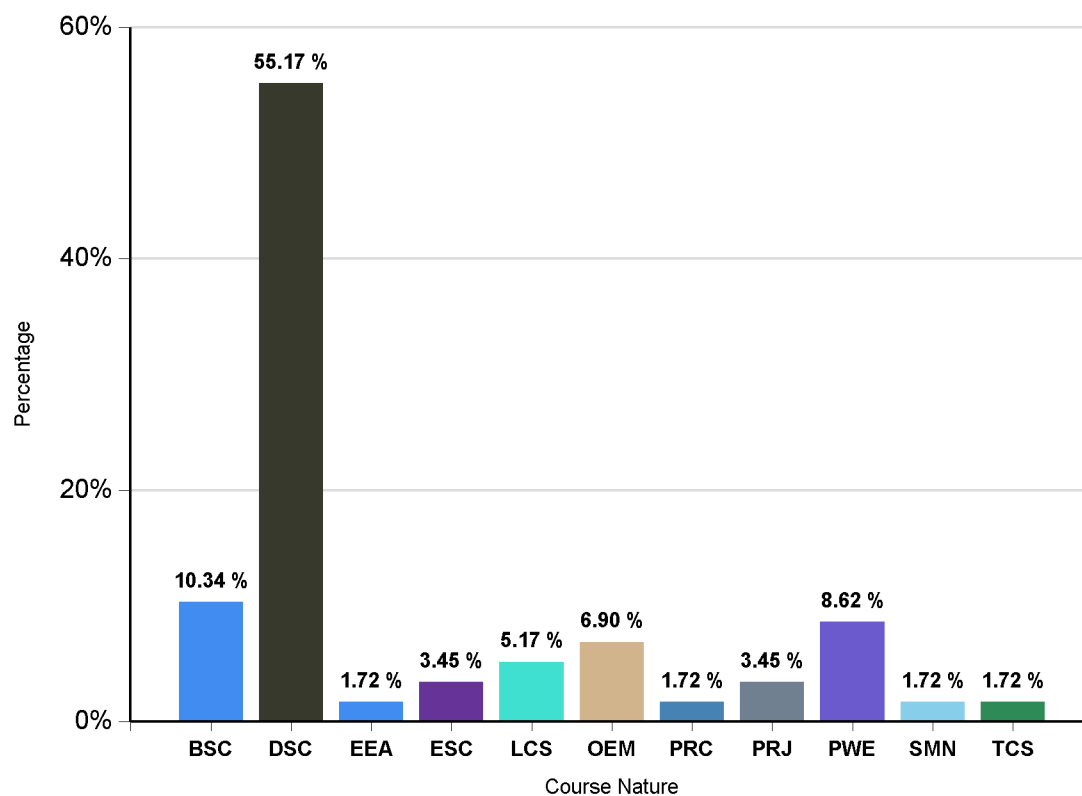
Course Type

APE	Aptitude Elective
CE	Core Elective
CR	Core Course
CR1	CORE-I
CR3	
DE	Departmental Elective
EM	Engineering Minor
LE	Language Elective
OM	Open/Minor
PW	Pathway Elective
TE	Training Elective

Course Nature

BSC	Basic Science
DSC	Discipline Core
EEA	Employability Enhancement Activities
ESC	Engineering Science
LCS	Language & Communication Skills
OEM	Open Minor/Open Elective
PRC	Community Development Project
PRJ	Project (including Capstone Project and Research Project)
PWE	Pathway Elective
SMN	Seminar
TCF	Training Compulsory – Full term
TCS	Training Compulsory - Summer

Program Structure



Sr No	NAME	Nature Name	Total
1	BSC	Basic Science	6
2	DSC	Discipline Core	32
3	EEA	Employability Enhancement Activities	1
4	ESC	Engineering Science	2
5	LCS	Language & Communication Skills	3
6	OEM	Open Minor/Open Elective	4
7	PRC	Community Development Project	1
8	PRJ	Project (including Capstone Project and Research Project)	2
9	PWE	Pathway Elective	5
10	SMN	Seminar	1
11	TCS	Training Compulsory - Summer	1