

CURRICULUM
B.Tech. Information Technology
Regulation 2023 | Total Credits: 160

SEMESTER I								
SI. NO.	COURSE CODE	COURSE TITLE	Category	Contact Periods	L	T	P	C
THEORY COURSES								
1.	HS23111	Technical Communication - I	HS	2	2	0	0	2
2.	MA23111	Linear Algebra & Calculus	BS	4	3	1	0	4
3.	GE23111	Engineering Graphics	ES	6	2	2	0	4
4.	GE23117	தமிழர் மரபு / Heritage of Tamils	HS	1	1	0	0	1
LAB ORIENTED THEORY COURSES								
5.	EE23133	Basic Electrical and Electronics Engineering	ES	5	3	0	2	4
6.	GE23131	Programming using C	ES	7	1	0	6	4
LABORATORY COURSES								
7.	GE23122	Engineering Practices- Electrical and Electronics	ES	2	0	0	2	1
8.	MC23112	Environmental Science and Engineering	MC	3	3	0	0	0
TOTAL				30	15	3	10	20

SEMESTER II								
SI. NO.	COURSE CODE	COURSE TITLE	Category	Contact Periods	L	T	P	C
THEORY COURSES								
1.	MA23213	Discrete Mathematical Structures	BS	4	3	1	0	4
2.	GE23217	தமிழரும் தொழில்நுட்பமும் / Tamils and Technology	HS	1	1	0	0	1
LAB ORIENTED THEORY COURSES								
3.	PH23132	Physics for Information Science	BS	5	3	0	2	4
4.	EC23331	Microprocessors and Microcontroller	PC	5	3	0	2	4
5.	CS23231	Data Structures	PC	7	3	0	4	5
LABORATORY COURSES								
6.	GE23121	Engineering Practices-Civil and Mechanical	ES	2	0	0	2	1
7.	CS23221	Python Programming Lab	PC	4	0	0	4	2
8.	HS 23221 / HS 23222	Technical Communication - II / English for Professional Competence	HS	2	0	0	2	1
9.	MC23111	Indian Constitution and Freedom Movement	MC	3	3	0	0	0
TOTAL				33	16	1	16	22

SEMESTER III								
Sl. No.	COURSE CODE	COURSE TITLE	Category	Contact Periods	L	T	P	C
THEORY COURSES								
1.	MA23312	Fourier Series and Number Theory	BS	4	3	1	0	4
2.	EC23314	Analog and Digital Communication	ES	3	3	0	0	3
LAB ORIENTED THEORY COURSES								
3.	CS23331	Design and Analysis of Algorithms	PC	5	3	0	2	4
4.	CS23332	Database Management Systems	PC	7	3	0	4	5
5.	CS23333	Object Oriented Programming using Java	PC	7	1	0	6	4
6.	IT23331	Digital Logic and Computer Architecture	PC	5	3	0	2	4
TOTAL				31	16	1	14	24

SEMESTER IV								
Sl. No.	COURSE CODE	COURSE TITLE	Category	Contact Periods	L	T	P	C
THEORY COURSES								
1.	MA23435	Probability, Statistics and Simulation	BS	4	3	0	2	4
2.	GE23311	Fundamentals of Management for Engineers	HS	3	3	0	0	3
3.		Open Elective - I	OE	3	3	0	0	3
LAB ORIENTED THEORY COURSES								
4.	CS23431	Operating Systems	PC	7	3	0	4	5
5.	CS23432	Software Construction	PC	5	3	0	2	4
6.	IT23431	Software Testing	PC	4	2	0	2	3
EMPLOYABILITY ENHANCEMENT COURSES								
7.	GE23421	Soft Skills - I	EEC	2	0	0	2	1
8.	IT23421	Industry Internship (2/4 weeks)	EEC	0	0	0	0	1
TOTAL				28	17	0	12	24

SEMESTER V								
SI. NO.	COURSE CODE	COURSE TITLE	Category	Contact Periods	L	T	P	C
THEORY COURSES								
1.		Professional Elective - I	PE	3	3	0	0	3
2.	IT23511	Automata Theory & Compiler Design	PC	3	3	0	0	3
LAB ORIENTED THEORY COURSES								
3.	IT23531	Computer Vision	PC	5	3	0	2	4
4.	CS23531	Web Programming	PC	7	1	0	6	4
5.	AI23231	Principles of Artificial Intelligence	PC	5	3	0	2	4
6.	CS23532	Computer Networks	PC	7	3	0	4	5
EMPLOYABILITY ENHANCEMENT COURSES								
7.	GE23521	Soft Skills - II	EEC	2	0	0	2	1
TOTAL				32	16	0	16	24

SEMESTER VI								
SI. NO.	COURSE CODE	COURSE TITLE	Category	Contact Periods	L	T	P	C
THEORY COURSES								
1.		Professional Elective - II	PE	3	3	0	0	3
2.		Open Elective - II	OE	3	3	0	0	3
3.	CS23512	Fundamentals of Mobile Computing	PC	3	3	0	0	3
LAB ORIENTED THEORY COURSES								
4.	CS23632	Cryptography and Network Security	PC	4	2	0	2	3
5.	AI23331	Fundamentals of Machine Learning	PC	5	3	0	2	4
6.	IT23631	Design Thinking for Innovation in Information Technology	EEC	3	1	0	2	2
LABORATORY COURSES								
6.	CS23621	Mobile Application Development Laboratory	PC	4	0	0	4	2
7.	GE23622	Problem Solving Techniques	EEC	2	0	0	2	1
TOTAL				27	15	0	12	21

SEMESTER VII								
Sl. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
THEORY COURSES								
1.		Professional Elective - III	PE	3	3	0	0	3
2.		Professional Elective - IV	PE	3	3	0	0	3
LAB ORIENTED THEORY COURSES								
3.	IT23731	Cloud and Big data Architecture	PC	5	3	0	2	4
LABORATORY COURSES								
4.	IT23721	Data Science using R	PC	4	0	0	4	2
5.	IT23722	Project Phase - I	EEC	6	0	0	6	3
TOTAL				21	9	0	12	15

SEMESTER VIII								
Sl. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
THEORY COURSES								
1.		Professional Elective - V	PE	3	3	0	0	3
2.		Professional Elective - VI	PE	3	3	0	0	3
LABORATORY COURSES								
3.	IT23821	Project Phase - II	EEC	12	0	0	12	6
TOTAL				18	6	0	12	12

TOTAL NO. OF CREDITS: 162

PROFESSIONAL ELECTIVES (PE)

Emerging Technologies								
Sl. No.	COURSE CODE	COURSE TITLE	Category	Contact Periods	L	T	P	C
1.	IT23A31	Internet of Things	PE	4	2	0	2	3
2.	CS23A32	Robotic Process Automation	PE	4	1	0	4	3
3.	CB23G11	Quantum Computation and Quantum Information	PE	3	3	0	0	3
4.	IT23A11	Edge Computing	PE	3	3	0	0	3
5.	IT23A32	AI based Conversational System	PE	4	2	0	2	3
6.	IT23A12	Introduction to Drone	PE	3	3	0	0	3
7.	IT23A33	3D Modeling and Animation	PE	4	2	0	2	3
8.	AI23B32	Soft Computing	PE	4	2	0	2	3

FULL STACK DEVELOPMENT								
SL. NO.	COURSE CODE	COURSE TITLE	Category	Contact Periods	L	T	P	C
1.	IT23B31	C# and .Net Programming	PE	4	2	0	2	3
2.	CS23A34	User Interface Design	PE	4	2	0	2	3
3.	IT23B32	Advanced Web Programming	PE	4	2	0	2	3
4.	IT23B33	DevOps	PE	4	2	0	2	3
5.	CS23A35	Web Application Security	PE	4	2	0	2	3
6.	IT23B34	Advanced Java Programming	PE	4	2	0	2	3
7.	IT23B35	Graphics and Multimedia	PE	4	2	0	2	3

SOFTWARE TECHNOLOGY MANAGEMENT								
SL. NO.	COURSE CODE	COURSE TITLE	Category	Contact Periods	L	T	P	C
1.	IT23C11	Business Intelligence	PE	3	3	0	0	3
2.	IT23C12	Software Project Management	PE	3	3	0	0	3
3.	IT23C13	Startup Management	PE	3	3	0	0	3
4.	IT23C14	Lateral Thinking Techniques	PE	3	3	0	0	3
5.	IT23C15	Software Quality Assurance	PE	3	3	0	0	3
6.	IT23C16	Green Computing	PE	3	3	0	0	3
7.	IT23C17	Ubiquitous Computing	PE	3	3	0	0	3
8.	IT23C18	Agile Methodologies	PE	3	3	0	0	3

Data Science								
Sl. NO.	COURSE CODE	COURSE TITLE	Category	Contact Periods	L	T	P	C
1.	AI23A31	Social Network Analysis	PE	4	2	0	2	3
2.	AD23B33	Explorative and Forecasting Analytics	PE	4	2	0	2	3
3.	AI23A35	Recommendation System	PE	4	2	0	2	3
4.	IT23D31	Deep Learning Concepts	PE	4	2	0	2	3
5.	AD23B34	Text and Speech Analysis	PE	4	2	0	2	3
6.	CS23A31	Business Analytics	PE	4	2	0	2	3
7.	AD23A36	Image and Video Analytics	PE	4	2	0	2	3
8.	AI23A36	Big Data Analytics	PE	4	2	0	2	3
9.	AD23A32	Natural Language Processing	PE	4	2	0	2	3

Cyber Security								
Sl. NO.	COURSE CODE	COURSE TITLE	Category	Contact Periods	L	T	P	C
1.	CR23A11	Security Assessment and Risk Analysis	PE	3	3	0	0	3
2.	CS23A11	Malware Detection and Analysis	PE	3	3	0	0	3
3.	CR23A31	Ethical Hacking and Security	PE	4	2	0	2	3
4.	CR23A32	Digital and Mobile Forensics	PE	4	2	0	2	3
5.	CR23A33	Cryptocurrency and Blockchain Technologies	PE	4	2	0	2	3
6.	CR23A34	Security and Privacy in Cloud	PE	4	2	0	2	3
7.	CR23A35	Social Network Security	PE	4	2	0	2	3
8.	CS23A35	Web Application Security	PE	4	2	0	2	3
9.	CR23A36	Information Security and Management	PE	4	2	0	2	3

Virtual and Augmented Reality								
Sl. No.	COURSE CODE	COURSE TITLE	Category	Contact Periods	L	T	P	C
1.	CS23A37	Augmented Reality and Virtual Reality	PE	4	2	0	2	3
2.	CD23B21	Data Visualization	PE	6	0	0	6	3
3.	CS23A39	Game Development	PC	4	2	0	2	3
4.	CS23B31	Introduction to Metaverse	PE	4	2	0	2	3
5.	IT23B35	Graphics and Multimedia	PE	4	2	0	2	3
6.	CS23A38	Digital Marketing	PE	4	2	0	2	3
7.	CD23721	Visual Effects	PE	6	0	0	6	3
8.	CD23731	Film Making and Radio podcasting	PE	4	2	0	2	3
9.	CS23A34	User Interface Design	PE	4	2	0	2	3

OPEN ELECTIVE COURSES OFFERED BY IT

SL. NO.	COURSE CODE	COURSE TITLE	Category	Contact Periods	L	T	P	C
1..	IT23O31	Data Science using Python	OE	5	1	0	4	3

Credit Distribution

Category	AICTE 2022	R2019	R2023
Humanities and Social Sciences including Management courses HS	16	6	8
Basic Science courses BS	23	27	20
Engineering Science courses including workshop, drawing, basics of electrical/mechanical/computer etc. ES	29	25	17
Professional core courses PC	59	67	78
Professional Elective courses PE	12	15	18
Open Electives from other technical and /or emerging subjects OE	9	6	6
Project work, seminar and internship in industry or elsewhere EEC	15	17	15
Mandatory Courses [Environmental Sciences, Induction Program, Indian Constitution, Essence of Indian Knowledge Tradition] MC	Non-credit	0	0
Total	163	163	162

SUMMARY OF ALL COURSES

B.Tech INFORMATION TECHNOLOGY										
S.NO	Course Category	Credits per Semester								Total Credits
		I	II	III	IV	V	VI	VII	VIII	
1	HS	3	2		3					8
2	BS	4	8	4	4					20
3	ES	13	1	3						17
4	PC		11	17	12	20	12	6		78
5	PE					3	3	6	6	18
6	OE				3		3			6
7	EEC				2	1	3	3	6	15
8	MC		0	0						0
	Total	20	22	24	24	24	21	15	12	162