

B TECH INFORMATION TECHNOLOGY

year	THIRD SEMESTER						FOURTH SEMESTER					
II	Sub. Code	Subject Name	L	T	P	C	Sub. Code	Subject Name	L	T	P	C
	MAT 2126	Engineering Mathematics – III	2	1	0	3	MAT 2226	Engineering mathematics – IV	2	1	0	3
	ICT 2121	Data Structures	3	1	0	4	ICT 2221	Database Systems	3	1	0	4
	ICT 2122	Object Oriented Programming	3	1	0	4	ICT 2222	Design and Analysis of Algorithms	3	1	0	4
	ICT 2123	Digital Systems and Computer Organization	4	0	0	4	ICT 2223	Embedded Systems	4	0	0	4
	ICT 2124	Principles of Data Communication	3	0	0	3	ICT 2224	Computer Networks	4	0	0	4
	ICT 2141	Data Structures Lab	0	0	3	1	ICT 2241	Database Systems Lab	0	0	3	1
	ICT 2142	Object Oriented Programming Lab	0	0	3	1	ICT 2242	Embedded Systems Lab	0	0	3	1
	ICT 2143	Digital Systems Lab	0	0	3	1	ICT 2243	Network Programming and Simulation Lab	0	0	3	1
			15	3	9	21			16	5	9	22
	Total Contact Hours (L + T + P)		27				Total Contact Hours (L + T + P)		30			
III	FIFTH SEMESTER						SIXTH SEMESTER					
III	Sub. Code	Subject Name	L	T	P	C	Sub. Code	Subject Name	L	T	P	C
	HUM 3022	Essentials of Management	3	0	0	3	HUM 3021	Engineering Economics and Financial Management	3	0	0	3
	ICT 3121	Information Security	3	0	0	3	ICT ****	Flexible Core – 2 (A2/B2/C2/D2)	3	0	0	3
	ICT 3122	Principles of Operating Systems	4	0	0	4	ICT 3221	Data Mining	4	0	0	4
	ICT 3123	Software Engineering	3	0	0	3	ICT ****	Program Elective–I/ Minor Specialization	3	0	0	3
	ICT ****	Flexible Core – 1 (A1/B1/C1/D1)	3	0	0	3	ICT ****	Program Elective -II/ Minor Specialization	3	0	0	3
	IPE 4302	Open Elective-1 Creativity, Problem Solving and Innovation	3	0	0	3	*** ****	Open Elective-2	3	0	0	3
	ICT 3141	Information Security Lab	0	0	3	1	ICT 3241	Advanced Technology Lab	0	0	3	1
	ICT 3142	Principles of Operating Systems Lab	0	0	3	1	ICT 3242	Data Mining Lab	0	0	3	1
			19	0	6	21			19	0	6	21
	Total Contact Hours (L + T + P)		27				Total Contact Hours (L + T + P)		30			
IV	SEVENTH SEMESTER						EIGHTH SEMESTER					
IV	Sub. Code	Subject Name	L	T	P	C	Sub. Code	Subject Name	L	T	P	C
	ICT ****	Program Elective –III / Minor Specialization	3	0	0	3	ICT 4291	Industrial Training				1
	ICT ****	Program Elective –IV/ Minor Specialization	3	0	0	3	ICT 4292	Project Work /Practice School				12
	ICT ****	Program Elective –V	3	0	0	3	ICT 4293	Project Work (B. Tech Honours) **				20
	ICT ****	Program Elective - VI	3	0	0	3	ICT ****	B Tech Honours (Theory 1)** (V Semester)				4
	ICT ****	Program Elective -VII	3	0	0	3	ICT ****	B Tech Honours (Theory 2)** (VI Semester)				4
	*** ****	Open Elective-3	3	0	0	3	ICT ****	B Tech Honours (Theory 3)** (VII Semester)				4
	ICT 4191	Mini Project (Minor specialization)*				8						
			18	0	0	18/26						13/33
	Total Contact Hours (L + T + P)		27				Total Contact Hours (L + T + P)		30			

*Applicable to students who opted for minor specialization

**Applicable to eligible students who opted for and successfully completed the B Tech – Honours requirements

Flexi Core 1:

A1: ICT 3124 Data Structures for Databases.

B1: ICT 3125 Software Project Management.

C1: ICT 3131 Web Technologies

D1: ICT 3126 Theoretical Foundations of Computer Science.

Flexi Core 2:

A2: ICT 3222 Distributed Database Management System

B2: ICT 3223 Software Verification and Validation

C2: ICT 3230 Full Stack Web Development Tools

D2: ICT 3224 Compiler Construction

Minor Specializations**I. Computational Intelligence**

ICT 4401 Artificial Intelligence

ICT 4402 Machine Learning

ICT 4403 Foundations Of Generative Artificial Intelligence

ICT 4404 Neural Computation and Applications

II. Computer Graphics and Visualization

ICT 4405 Computer Graphics

ICT 4406 Digital Image Processing

ICT 4407 Augmented and Virtual Reality

ICT 4408 Computer Vision

III. Data Analytics

ICT 4409 Information Retrieval

ICT 4410 Applied Data Analytics

ICT 4411 Social Network Analysis

ICT 4412 Big Data Analytics

IV. Cyber Security

ICT 4413 Cyber Forensics and Cyber laws

ICT 4414 Ethical hacking

ICT 4415 Blockchain Technology

ICT 4416 Artificial Intelligence in Cyber security

V. Software System Design

ICT 4417 Advanced Software Engineering

ICT 4418 Software Architecture

ICT 4419 Software Quality Management

ICT 4420 Software Construction

Other Program Electives

ICT 4441 Cloud Computing

ICT 4442 Deep Learning

ICT 4443 Evolutionary Computing and
Swarm Intelligence

ICT 4444 Explainable AI

ICT 4445 Game Theory and
Applications

ICT 4446 High Performance Computing

ICT 4447 Human Computer Interaction

ICT 4448 Internet of Things

ICT 4449 Mobile Computing

ICT 4450 Software Reliability

Open Electives

ICT 4311 Computer Graphics and
Animation

ICT 4312 Design and Development of
Web Applications

ICT 4313 Fundamentals of Data
Structures and Algorithms

ICT 4314 Machine Learning Tools and
Technologies

ICT 4315 Networking with TCP/IP

ICT 4316 Fundamentals of Cyber
security

ICT 4317 Game Theory & Applications