Curriculum and Syllabi

B.Tech. INFORMATION TECHNOLOGY

SEMESTERS I to VIII

Regulations 2025

Programme: B.Tech. INFORMATION TECHNOLOGY

2025 Regulations

(2025-29 Batch Onwards)

Curriculum for Semesters I to VIII

SEMESTER I

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
1	25IP101	Makerspace - Induction Program	-	-	-	-	-	-	-	-	-	0	-	-
Theory Cum Practical Courses														
2	25HS101	English for Communication	3	0	2	3	45	0	30	45	120	4	50/50	HS
3	25ES102	Innovation and Design Thinking	1	0	2	1	15	0	30	15	60	2	100/0	ES
4	25ES105	Problem Solving Techniques using C Programming	3	0	2	3	45	0	30	45	120	4	50/50	ES
5	25ES106	Basics of Electrical and Electronics Engineering	3	0	2	3	45	0	30	45	120	4	50/50	ES
Theory Courses														
6	25MA101	Matrices and Calculus	3	1	0	4	45	15	0	60	120	4	40/60	BS
7	25CH101	Applied Chemistry	3	0	0	3	45	0	0	45	90	3	40/60	BS
8	25AC101	Heritage of Tamils	1	0	0	1	15	0	0	15	30	1	100/0	AC
Practical Course														
9	25ES107	Computer Hardware and Networking	0	0	4	0	0	0	60	0	60	2	60/40	ES

SEMESTER II

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Cum Practical Courses														
1	25ES201	Product Design and Development	1	0	2	1	15	0	30	15	60	2	100/0	ES
2	25ES203	Problem Solving Techniques using Java	1	0	4	1	15	0	60	15	90	3	50/50	ES
3	25ES204	Fundamentals of Web Design	3	0	2	3	45	0	30	45	120	4	50/50	ES
Theory Courses														
4	25MA202	Numerical Techniques and Linear Algebra	3	1	0	4	45	15	0	60	120	4	40/60	BS

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
5	25PH102	Quantum Physics	3	0	0	3	45	0	0	45	90	3	40/60	BS
6	25HS201	Universal Human Values	2	0	0	2	30	0	0	30	60	2	40/60	HS
7	25HS202	Business Communication	3	0	0	3	45	0	0	45	90	3	40/60	HS
8	25AC201	Tamils and Technology	1	0	0	1	15	0	0	15	30	1	100/0	AC
9		Foreign Language	2	0	0	2	30	0	0	30	60	2	100/0	HS
10		Value Added Course	1	0	0	1	15	0	0	15	30	1	100/0	VAC*

*Value Added Course is Optional

SEMESTER III

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Cum Practical Courses														
1	25ES101	Problem Solving Techniques using Python	3	0	2	3	45	0	30	45	120	4	50/50	ES
2	25CS301	Data Structures and Algorithms using Java	1	0	4	1	15	0	60	15	90	3	50/50	PC
3	25CS302	Database Management Systems	3	0	2	3	45	0	30	45	120	4	50/50	PC
Theory Courses														
4	25MA303	Discrete Mathematical Structures	3	1	0	4	45	15	0	60	120	4	40/60	BS
5	25CS304	Software Engineering	3	0	0	3	45	0	0	45	90	3	40/60	PC
6	25IT301	Computer Architecture	3	0	0	3	45	0	0	45	90	3	40/60	PC
7	25EEC304	Aptitude and Soft Skills - I	1	0	0	1	15	0	0	15	30	1	100/0	EEC
8	25MC301	Environmental Science	3	0	0	0	45	0	0	0	45	0	100/0	MC
Practical Course														
9	25EEC305	Industrial Training - I	-	-	-	-	-	-	-	-	2 Weeks	1	100/0	EEC

SEMESTER IV

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Cum Practical Courses														
1	25IT401	Full Stack Development	2	0	2	2	30	0	30	30	90	3	50/50	PC
2	25IT402	Data Communication	3	0	2	3	45	0	30	45	120	4	50/50	PC

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
		and Networks												
3	25CS403	Design and Analysis of Algorithms	1	0	4	1	15	0	60	15	90	3	50/50	PC
Theory Courses														
4	25MA302	Probability and Statistics	3	1	0	4	45	15	0	60	120	4	40/60	BS
5	25IT403	Digital Principles and System Design	3	0	0	3	45	0	0	45	90	3	40/60	PC
6	25CS402	Operating Systems	3	0	0	3	45	0	0	45	90	3	40/60	PC
7	25EEC401	Aptitude and Soft Skills - II	1	0	0	1	15	0	0	15	30	1	100/0	EEC
8	25MC402	Indian Knowledge and Heritage	3	0	0	0	45	0	0	0	45	0	100/0	MC
Practical Course														
9	25ES402	System Programming Laboratory	0	0	4	0	0	0	60	0	60	2	60/40	ES

SEMESTER V

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Cum Practical Courses														
1	25CS501	DevOps and Cloud Computing	1	0	4	1	15	0	60	15	90	3	50/50	PC
2	25CS502	Cryptography	3	0	2	3	45	0	30	45	120	4	50/50	PC
3	25IT501	Advanced Microprocessors and Microcontrollers	3	0	2	3	45	0	30	45	120	4	50/50	PC
4	25IT502	Mobile Application and Development	3	0	2	3	45	0	30	45	120	4	50/50	PC
Theory Courses														
5		Professional Elective I	3	0	0	3	45	0	0	45	90	3	40/60	PE
6		Professional Elective II	3	0	0	3	45	0	0	45	90	3	40/60	PE
7		Open Elective I	3	0	0	3	45	0	0	45	90	3	40/60	OE
Practical Course														
8	25EEC501	Industrial Training - II	-	-	-	-	-	-	-	-	2 Weeks	1	100/0	EEC
For Honours Degree														
1		Honours Elective I	3	0	0	3	45	0	0	45	90	3	40/60	
2		Honours Elective II	3	0	0	3	45	0	0	45	90	3	40/60	
For Minor Degree														
1		Minor Elective I									90	3		
2		Minor Elective II									90	3		

SEMESTER VI

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Cum Practical Course														
1	25CS601	Object Oriented Analysis and Design	1	0	4	1	15	0	60	15	90	3	50/50	PC
Theory Courses														
2	25IT601	Distributed Computing	3	0	0	3	45	0	0	45	90	3	40/60	PC
3		Professional Elective III	3	0	0	3	45	0	0	45	90	3	40/60	PE
4		Professional Elective IV	3	0	0	3	45	0	0	45	90	3	40/60	PE
5		Open Elective II	3	0	0	3	45	0	0	45	90	3	40/60	OE
6		Open Elective III	3	0	0	3	45	0	0	45	90	3	40/60	OE
Practical Course														
7	25ITP601	Mini Project	0	0	4	0	0	0	60	0	60	2	60/40	EEC
For Honours Degree														
1		Honours Elective III	3	0	0	3	45	0	0	45	90	3	40/60	
2		Honours Elective IV	3	0	0	3	45	0	0	45	90	3	40/60	
For Minor Degree														
1		Minor Elective III									90	3		
2		Minor Elective IV									90	3		

SEMESTER VII

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Cum Practical Course														
1	25CS701	Software Testing and Automation	3	0	2	3	45	0	30	45	120	4	50/50	PC
Theory Courses														
2	25HS704	Professional Ethics	3	0	0	3	45	0	0	45	90	3	40/60	HS
3		Professional Elective V	3	0	0	3	45	0	0	45	90	3	40/60	PE
4		Open Elective IV	3	0	0	3	45	0	0	45	90	3	40/60	OE
Practical Course														
5	25ITP701	Project Work - I	0	0	4	0	0	0	60	0	60	2	100/0	EEC
For Honours Degree														
1		Honours Elective V	3	0	0	3	45	0	0	45	90	3	40/60	
2		Honours Elective VI	3	0	0	3	45	0	0	45	90	3	40/60	
For Minor Degree														
1		Minor Elective V									90	3		
2		Minor Elective VI									90	3		

SEMESTER VIII

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Practical Course														
1	25ITP801	Project Work - II	0	0	20	0	0	0	300	0	300	10	60/40	EEC

TOTAL NO. OF CREDITS: 164

FOREIGN LANGUAGE

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Courses														
1	25HS203	German	2	0	0	2	30	0	0	30	60	2	100/0	HS
2	25HS204	Japanese	2	0	0	2	30	0	0	30	60	2	100/0	HS

VALUE ADDED COURSE

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Courses														
1	25VAC01	French	1	0	0	1	15	0	0	15	30	1	100/0	VAC
2	25VAC02	Hindi	1	0	0	1	15	0	0	15	30	1	100/0	VAC

PROFESSIONAL ELECTIVE COURSES : VERTICALS

VERTICAL I Cloud Computing and Data Centre Technologies	VERTICAL II Internet of Things	VERTICAL III Data Security	VERTICAL IV Data Science	VERTICAL V Generative AI	VERTICAL VI Data Protection and Recovery
Virtualization and Cloud Computing	Sensor and Actuator Interfacing	Malware Analysis	Vibe Coding	Generative AI Security	Data Backup and Disaster Recovery Systems
Cloud Services and Data Management	Smart System and Design	Secure Communication Protocols	AI for Business and Finance	Generative AI Trends and Applications	Secure Software Design and Data Protection
Cloud Storage Technologies	IoT Device Management	Cryptanalysis	Pattern Recognition	Introduction to Large Language Models	Information Storage and Management
Cloud Automation Tools and Applications	IoT Data Integration	Security Tools and Techniques	Designing Data Intensive Applications	Generative AI Design Patterns	Cybersecurity for Data Resilience
Software Defined Networks	IoT Connectivity Service	Information Security Management	Predictive Modeling	Machine Intelligence for Medical Image Analysis	Storage Virtualization and Recovery Mechanisms
Security and Privacy in Cloud	IoT Cloud Platforms	Quantum Cryptography	Prompt Engineering	Transformer Models	Business Continuity and IT Service Recovery

VERTICAL I : Cloud Computing and Data Centre Technologies

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Courses														
1	25PCS11	Virtualization and Cloud Computing	3	0	0	3	45	0	0	45	90	3	40/60	PE
2	25PCS12	Cloud Services and Data Management	3	0	0	3	45	0	0	45	90	3	40/60	PE
3	25PCS13	Cloud Storage Technologies	3	0	0	3	45	0	0	45	90	3	40/60	PE
4	25PCS14	Cloud Automation Tools and Applications	3	0	0	3	45	0	0	45	90	3	40/60	PE
5	25PCS15	Software Defined Networks	3	0	0	3	45	0	0	45	90	3	40/60	PE
6	25PCS16	Security and Privacy in Cloud	3	0	0	3	45	0	0	45	90	3	40/60	PE

VERTICAL II : Internet of Things

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Courses														
1	25PIT21	Sensor and Actuator Interfacing	3	0	0	3	45	0	0	45	90	3	40/60	PE
2	25PIT22	Smart System and Design	3	0	0	3	45	0	0	45	90	3	40/60	PE
3	25PIT23	IoT Device Management	3	0	0	3	45	0	0	45	90	3	40/60	PE
4	25PIT24	IoT Data Integration	3	0	0	3	45	0	0	45	90	3	40/60	PE
5	25PIT25	IoT Connectivity Service	3	0	0	3	45	0	0	45	90	3	40/60	PE
6	25PIT26	IoT Cloud Platforms	3	0	0	3	45	0	0	45	90	3	40/60	PE

VERTICAL III : Data Security

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Courses														
1	25PCY31	Malware Analysis	3	0	0	3	45	0	0	45	90	3	40/60	PE
2	25PCY32	Secure Communication Protocols	3	0	0	3	45	0	0	45	90	3	40/60	PE
3	25PCY33	Cryptanalysis	3	0	0	3	45	0	0	45	90	3	40/60	PE
4	25PCY34	Security Tools and Techniques	3	0	0	3	45	0	0	45	90	3	40/60	PE

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
5	25PCY35	Information Security Management	3	0	0	3	45	0	0	45	90	3	40/60	PE
6	25PCY36	Quantum Cryptography	3	0	0	3	45	0	0	45	90	3	40/60	PE

VERTICAL IV : Data Science

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Courses														
1	25PAI41	Vibe Coding	3	0	0	3	45	0	0	45	90	3	40/60	PE
2	25PAI42	AI for Business and Finance	3	0	0	3	45	0	0	45	90	3	40/60	PE
3	25PAI43	Pattern Recognition	3	0	0	3	45	0	0	45	90	3	40/60	PE
4	25PAI44	Designing Data Intensive Applications	3	0	0	3	45	0	0	45	90	3	40/60	PE
5	25PAI45	Predictive Modeling	3	0	0	3	45	0	0	45	90	3	40/60	PE
6	25PAI46	Prompt Engineering	3	0	0	3	45	0	0	45	90	3	40/60	PE

VERTICAL V : Generative AI

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Courses														
1	25PML51	Generative AI Security	3	0	0	3	45	0	0	45	90	3	40/60	PE
2	25PML52	Generative AI Trends and Applications	3	0	0	3	45	0	0	45	90	3	40/60	PE
3	25PML53	Introduction to Large Language Models	3	0	0	3	45	0	0	45	90	3	40/60	PE
4	25PML54	Generative AI Design Patterns	3	0	0	3	45	0	0	45	90	3	40/60	PE
5	25PML55	Machine Intelligence for Medical Image Analysis	3	0	0	3	45	0	0	45	90	3	40/60	PE
6	25PML56	Transformer Models	3	0	0	3	45	0	0	45	90	3	40/60	PE

VERTICAL VI : Data Protection and Recovery

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Courses														
1	25PIT61	Data Backup and Disaster Recovery Systems	3	0	0	3	45	0	0	45	90	3	40/60	PE
2	25PIT62	Secure Software Design and Data Protection	3	0	0	3	45	0	0	45	90	3	40/60	PE
3	25PIT63	Information Storage and Management	3	0	0	3	45	0	0	45	90	3	40/60	PE
4	25PIT64	Cybersecurity for Data Resilience	3	0	0	3	45	0	0	45	90	3	40/60	PE
5	25PIT65	Storage Virtualization and Recovery Mechanisms	3	0	0	3	45	0	0	45	90	3	40/60	PE
6	25PIT66	Business Continuity and IT Service Recovery	3	0	0	3	45	0	0	45	90	3	40/60	PE

OPEN ELECTIVES

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Courses														
1	25OIT11	UI & UX Design	3	0	0	3	45	0	0	45	90	3	40/60	OE
2	25OIT12	High Performance Computing	3	0	0	3	45	0	0	45	90	3	40/60	OE
3	25OCY11	Information Security	3	0	0	3	45	0	0	45	90	3	40/60	OE
4	25OCY12	Cyber Physical Systems	3	0	0	3	45	0	0	45	90	3	40/60	OE
5	25OCY13	Information Retrieval System	3	0	0	3	45	0	0	45	90	3	40/60	OE
6	25OAI11	Intelligent Healthcare Solutions	3	0	0	3	45	0	0	45	90	3	40/60	OE
7	25OML12	AI for Precision Agriculture	3	0	0	3	45	0	0	45	90	3	40/60	OE
8	25OCS12	Cloud Web Services	3	0	0	3	45	0	0	45	90	3	40/60	OE
9	25OCS13	Blockchain Technologies	3	0	0	3	45	0	0	45	90	3	40/60	OE
10	25OCS14	Data Mining	3	0	0	3	45	0	0	45	90	3	40/60	OE
11	25OME11	Air Pollution and Control Engineering	3	0	0	3	45	0	0	45	90	3	40/60	OE
12	25OME12	Automotive Systems	3	0	0	3	45	0	0	45	90	3	40/60	OE
13	25OME13	Digital Manufacturing	3	0	0	3	45	0	0	45	90	3	40/60	OE
14	25OME14	Industrial Design and Rapid Prototyping Techniques	3	0	0	3	45	0	0	45	90	3	40/60	OE
15	25OME15	Lean Six Sigma	3	0	0	3	45	0	0	45	90	3	40/60	OE
16	25OME16	Low-Cost Automation	3	0	0	3	45	0	0	45	90	3	40/60	OE
17	25OME17	Micro and Precision Engineering	3	0	0	3	45	0	0	45	90	3	40/60	OE
18	25OME18	Plant Layout and Material Handling	3	0	0	3	45	0	0	45	90	3	40/60	OE
19	25OME19	Vehicle Styling and Design	3	0	0	3	45	0	0	45	90	3	40/60	OE
20	25OEC11	Wireless Communication	3	0	0	3	45	0	0	45	90	3	40/60	OE
21	25OEC12	Internet of Things and Applications	3	0	0	3	45	0	0	45	90	3	40/60	OE
22	25OEC13	Embedded Systems	3	0	0	3	45	0	0	45	90	3	40/60	OE
23	25OEC14	Introduction to Quantum Communication	3	0	0	3	45	0	0	45	90	3	40/60	OE

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
24	25OEC15	Introduction to Quantum Sensing	3	0	0	3	45	0	0	45	90	3	40/60	OE
25	25OEC16	Engineering Foundations of Quantum Technologies	3	0	0	3	45	0	0	45	90	3	40/60	OE
26	25OEC17	Solid State Physics for Quantum Technologies	3	0	0	3	45	0	0	45	90	3	40/60	OE
27	25OEC18	Quantum Optics	3	0	0	3	45	0	0	45	90	3	40/60	OE

VERTICALS FOR MINOR DEGREE (In addition to all the verticals of other programmes)

VERTICAL I Fintech and Block Chain	VERTICAL II Entrepreneurship	VERTICAL III Public Administration	VERTICAL IV Business Data Analytics	VERTICAL V Environment and Sustainability	VERTICAL VI Quantum Technologies
Finance for Managers	Foundations of Entrepreneurship	Principles of Public Administration	Statistics for Management	Sustainable Infrastructure Development	Foundations of Quantum Computing: Physics, Engineering, and Mathematics Computing
Fundamentals of Investment	Team Building and Leadership Management for Business	Public Finance and Budgeting	Business Analytics and Decision-Making	Sustainable Agriculture and Environmental Management	Survey of Quantum Technologies and Applications
Banking, Financial Services and Insurance	Creativity and Innovation in Entrepreneurship	Public Personnel Administration	Human Resource Analytics	Sustainable Bio Materials	Foundations of Quantum Technologies
Introduction to Blockchain and its Applications	Principles of Marketing Management for Business	Administrative Law and Governance	Marketing and Social Media Web Analytics	Materials for Energy Sustainability	Basic Laboratory Course for Quantum Technologies
Fintech Personal Finance and Payments	Human Resource Management for Entrepreneurs	Indian Administrative System	Operation and Supply Chain Analytics	Waste Management and Circular Economy	Introduction to Quantum Computation
Introduction to Fintech	Financing New Business Ventures	Public Policy Administration	Financial Analytics	Environmental Quality Monitoring and Analysis	Introduction to Quantum Materials
		Comparative Public Administration and Development Studies		Integrated Energy Planning for Sustainable Development	
				Energy Efficiency for Sustainable Development	

VERTICAL I : Fintech and Block Chain

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Courses														
1	25OMI11	Finance for Managers	3	0	0	3	45	0	0	45	90	3	40/60	OE
2	25OMI12	Fundamentals of Investment	3	0	0	3	45	0	0	45	90	3	40/60	OE
3	25OMI13	Banking, Financial Services and Insurance	3	0	0	3	45	0	0	45	90	3	40/60	OE
4	25OMI14	Introduction to Blockchain and its Applications	3	0	0	3	45	0	0	45	90	3	40/60	OE
5	25OMI15	Fintech Personal Finance and Payments	3	0	0	3	45	0	0	45	90	3	40/60	OE
6	25OMI16	Introduction to Fintech	3	0	0	3	45	0	0	45	90	3	40/60	OE

VERTICAL II : Entrepreneurship

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Courses														
1	25OMI21	Foundations of Entrepreneurship	3	0	0	3	45	0	0	45	90	3	40/60	OE
2	25OMI22	Team Building and Leadership Management for Business	3	0	0	3	45	0	0	45	90	3	40/60	OE
3	25OMI23	Creativity and Innovation in Entrepreneurship	3	0	0	3	45	0	0	45	90	3	40/60	OE
4	25OMI24	Principles of Marketing Management for Business	3	0	0	3	45	0	0	45	90	3	40/60	OE
5	25OMI25	Human Resource Management for Entrepreneurs	3	0	0	3	45	0	0	45	90	3	40/60	OE
6	25OMI26	Financing New Business Ventures	3	0	0	3	45	0	0	45	90	3	40/60	OE

VERTICAL III : Public Administration

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Courses														
1	25OMI31	Principles of Public Administration	3	0	0	3	45	0	0	45	90	3	40/60	OE
2	25OMI32	Public Finance and Budgeting	3	0	0	3	45	0	0	45	90	3	40/60	OE

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
3	25OMI33	Public Personnel Administration	3	0	0	3	45	0	0	45	90	3	40/60	OE
4	25OMI34	Administrative Law and Governance	3	0	0	3	45	0	0	45	90	3	40/60	OE
5	25OMI35	Indian Administrative System	3	0	0	3	45	0	0	45	90	3	40/60	OE
6	25OMI36	Public Policy Administration	3	0	0	3	45	0	0	45	90	3	40/60	OE
7	25OMI37	Comparative Public Administration and Development Studies	3	0	0	3	45	0	0	45	90	3	40/60	OE

VERTICAL IV : Business Data Analytics

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Courses														
1	25OMI41	Statistics for Management	3	0	0	3	45	0	0	45	90	3	40/60	OE
2	25OMI42	Business Analytics and Decision-Making	3	0	0	3	45	0	0	45	90	3	40/60	OE
3	25OMI43	Human Resource Analytics	3	0	0	3	45	0	0	45	90	3	40/60	OE
4	25OMI44	Marketing and Social Media Web Analytics	3	0	0	3	45	0	0	45	90	3	40/60	OE
5	25OMI45	Operation and Supply Chain Analytics	3	0	0	3	45	0	0	45	90	3	40/60	OE
6	25OMI46	Financial Analytics	3	0	0	3	45	0	0	45	90	3	40/60	OE

VERTICAL V : Environment and Sustainability

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Courses														
1	25OMI51	Sustainable Infrastructure Development	3	0	0	3	45	0	0	45	90	3	40/60	OE
2	25OMI52	Sustainable Agriculture and Environmental Management	3	0	0	3	45	0	0	45	90	3	40/60	OE
3	25OMI53	Sustainable Bio Materials	3	0	0	3	45	0	0	45	90	3	40/60	OE
4	25OMI54	Materials for Energy Sustainability	3	0	0	3	45	0	0	45	90	3	40/60	OE

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
5	25OMI55	Waste Management and Circular Economy	3	0	0	3	45	0	0	45	90	3	40/60	OE
6	25OMI56	Environmental Quality Monitoring and Analysis	3	0	0	3	45	0	0	45	90	3	40/60	OE
7	25OMI57	Integrated Energy Planning for Sustainable Development	3	0	0	3	45	0	0	45	90	3	40/60	OE
8	25OMI58	Energy Efficiency for Sustainable Development	3	0	0	3	45	0	0	45	90	3	40/60	OE

VERTICAL VI : Quantum Technologies

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Courses														
1	25OMI61	Foundations of Quantum Computing: Physics, Engineering, and Mathematics Computing	3	0	0	3	45	0	0	45	90	3	40/60	OE
2	25OMI62	Survey of Quantum Technologies and Applications	3	0	0	3	45	0	0	45	90	3	40/60	OE
3	25OMI63	Foundations of Quantum Technologies	3	0	0	3	45	0	0	45	90	3	40/60	OE
Practical Course														
4	25OMI64	Basic Laboratory Course for Quantum Technologies	2	0	2	2	30	0	30	30	90	3	50/50	OE
Theory Courses														
5	25OMI65	Introduction to Quantum Computation	3	0	0	3	45	0	0	45	90	3	40/60	OE
6	25OMI66	Introduction to Quantum Materials	3	0	0	3	45	0	0	45	90	3	40/60	OE

SUMMARY

S.No.	COURSE CATEGORY	CREDITS AS PER SEMESTER								TOTAL CREDITS
		I	II	III	IV	V	VI	VII	VIII	
1	HS	4	7					3		14
2	BS	7	7	4	4					22
3	ES	12	9	4	2					27
4	PC			13	16	15	6	4		54
5	PE					6	6	3		15
6	OE					3	6	3		12
7	EEC			2	1	1	2	2	10	18
8	AC	1	1							2
9	MC			✓	✓					
TOTAL CREDITS		24	24	23	23	25	20	15	10	164