University Core [Min. 78 Credits]

Course Code	Category	Course Title	Ver.	T	P	C	Pre/Co-Requisite	Anti-requisite	Course Discipline
BIC4002		Internship/CO-OP	1.0			10			Engineering
CAP4001		Capstone	1.0			4			Engineering
	Engineering Clinics Basket	All are Compulsory							
ECS1001		Engineering Clinics - Embedded C & Arduino	1.0	0	4	2	None		Engineering
ECS1002		Engineering Clinics - Python & Raspberry Pi	1.0	0	4	2	None		Engineering
ECS2001		Engineering Clinics - Robotics & Reverse Engineering	1.0	0	4	2	None		Engineering
ECS2002		Engineering Clinics - System Design	1.0	0	4	2	None		Engineering
	Engineering Basket	Minimum of 13 Credits from courses in the basket							
CSE1004		Problem Solving using JAVA [Compulsory]	1.0	3	2	4	None	SWE1001	Engineering
CSE2001		Data Structures and Algorithms [Compulsory]	1.1	3	2	4	CSE1001/CSE1004	SWE2001	Engineering
ECE1001		Fundamentals of Electrical Engineering	1.1	3	2	4	None	ECE1005	Engineering
ECE1002		Fundamentals of Electrical and Electronics Engineering [Compulsory]	1.1	3	2	4	None	ECE1005	Engineering
MEC1004		Engineering Drawing [Compulsory]	1.0	0	2	1	None		Engineering
MEC1002		Engineering Graphics	1.0	0	4	2	None	MEC1004	Engineering
	English Basket	Minimum of 6 Credits from courses in the basket							
ENG1001		English for Essential Communication	1.1	2	2	3	EPT	ENG1005	Humanities
ENG1002		English for Effective Communication	1.1	2	2	3	EPT, ENG1001	ENG1006	Humanities
ENG2001		English for Professional Communication	1.1	2	2	3	ENG1002	ENG2004	Humanities
	Humanities Basket	Minimum of 4 Credits from courses in the basket							
LIB1001		Anthropology - An Introduction	1.0	2	0	2	None		Humanities
LIB1002		Critical Thinking Skills	1.0	2	0	2	None		Humanities
LIB1003		Psychology - An Introduction	1.0	2	0	2	None		Humanities
LIB1004		Sociology - An Introduction	1.0	2	0	2	None		Humanities
FRL1001		Basic French	1.0	2	0	2	None		Humanities
FRL1004		Basic Spanish	1.0	2	0	2	None		Humanities
FRL2001		Proficiency in French	1.0	3	0	3	FRL1001		Humanities
	Soft skills Basket	All are Compulsory							
STS1003		Enhancing Soft Skills	1.0	0	2	1	None		Humanities
STS1004		Introduction to Problem Solving	1.0	0	2	1	STS1003		Humanities
STS2006/ STS2008		Getting started to skill enhancement (or) Numerical ability and cognitive intelligence	1.0	0	2	1	STS1004/STS1007		Humanities
STS2007/ STS2009		Enhancing problem solving skills (or) Advanced aptitude and reasoning skills	1.0	0	2	1	STS2006/STS2008		Humanities
STS3004 / STS3005		Introduction to programming skills (or) Programming skills for employment	1.0	0	2	1	CSE1001/CSE1004/SWE1001		Humanities
STS4003 / STS4004		Enhancing programming ability (or) JAVA programming and software engineering fundaments	1.0	0	2	1	STS3004/STS3005		Humanities
	Management Basket	Minimum of 5 Credits from courses in the basket							
MGT1001		Ethics and Values [Compulsory]	1.0	0	2	1	None		Management
MGT1002		Lean Start-up Management	1.1	2	0	2	None		Management
MGT1003		Fundamentals of Marketing	1.0	2	0	2	None		Management
MGT1004		Introduction to Organizational Behaviour	1.0	2	0	2	None	MGT1027	Management
MGT1005		Fundamentals of Creativity and Innovation Management	1.1	2	0	2	None		Management
MGT1006		Fundamentals of Operations Management	1.1	2	0	2	None		Management
MGT1007		Economics for Engineers	1.0	2	0	2	None		Management
MGT1008		Accounting and Finance for Engineers	1.0	2	0	2	None		Management

Course Code	Category	Course Title	Ver.	T	P	C	Pre-Requisite	Anti-requisite	Course Discipline
MGT1010		Fundamentals of Behavioral Finance	1.0	2	0	2	None		Management
MGT1015		Fundamentals of Consumer Behaviour	1.0	2	0	2	None		Management
MGT1020		Fundamentals of Services Marketing	1.0	2	0	2	None		Management
MGT1021		Fundamentals of Supply Chain Analytics	1.0	2	0	2	CSE1006		Management
MGT1022		Fundamentals of Insurance and Risk Management	1.0	2	0	2	None		Management
MGT1026		Basics of Investment Analysis and Portfolio Management	1.0	2	0	2	None		Management
MGT1027		Fundamentals of Team Building and Leadership	1.0	2	0	2	None	MGT1004	Management
MGT1028		Social Process and Social Change	1.0	2	0	2	None		Management
MGT1029		Basic Law for Engineers	1.0	2	0	2	None		Management
MGT1030		Fundamentals of Sustainability Management	1.0	2	0	2	None		Management
	Science Basket	**Minimum of 23 Credits from courses in the basket**							
MAT1001		Calculus for Engineers **[Compulsory]**	1.0	3	2	4	None	MAT1008	Science
MAT1002		Applications of Differential and Difference Equations **[Compulsory]**	1.0	3	2	4	MAT1001	MAT1009	Science
MAT1011		Applied Statistics **[Compulsory]**	1.0	1	2	2	None	MAT1014, MAT1006	Science
PHY1002		Semiconductor Device Physics	1.0	3	0	3	None		Science
PHY2003		Condensed Matter Physics	1.0	3	0	3	PHY1001/PHY1006/PHY1007		Science
PHY2004		Optoelectronics	1.0	3	0	3	None		Science
PHY2005		Introduction to Nanotechnology	1.0	3	0	3	None		Science
MAT2005		Linear Algebra	1.0	3	2	4	None	MAT1009	Science
MAT2001		Numerical Methods for Engineers	1.0	2	2	3	MAT1002/MAT1009	CSE1002	Science
MAT2002		Complex Variables and Partial Differential Equations	1.0	3	0	3	MAT1002/MAT1009		Science
PHY1001		Engineering Physics **[Compulsory]**	1.0	3	2	4	None	PHY1004	Science
CHY1001		Environmental Studies **[Compulsory]**	2.0	2	2	3	None	CHY1002	Science
		Co/Extra Curricular **[Compulsory]**	1.0			1	None		

Programme Core [Min. 54 Credits]

Course Code	Category	Course Title	Ver.	T	P	C	Pre-Requisite	Anti-requisite	Course Discipline
CSE1005		Software Engineering	1.0	3	2	4	None	SWE1002	Engineering
CSE2005		Object Oriented Programming	1.0	3	2	4	CSE1001/CSE1004	SWE2005	Engineering
CSE2007		Database Management Systems	1.0	3	2	4	CSE2001	SWE2006	Engineering
CSE2008		Operating Systems	1.0	3	2	4	None	SWE2007	Engineering
CSE3003		Computer Networks	1.0	3	2	4	CSE2005	SWE3001, ECE3003	Engineering
CSE3004		Design and Analysis of Algorithms	1.0	3	2	4	CSE2001		Engineering
MAT1003		Discrete Mathematical Structures	1.0	3	0	3	None	MAT1007	Science
ECE1003		Digital Logic Design	1.1	3	2	4	ECE 1001/ECE1002	ECE1006	Engineering
ECE2002		Computer Architecture and Organization	1.0	3	0	3	ECE1003		Engineering
ECE2004		Microcontrollers and Interfacing	1.0	3	2	4	ECE1003	ECE1006	Engineering
CSE4026		Cyber Security	1.0	2	4	4			NASSCOM
CSE4027		Data Analytics	1.0	2	4	4			NASSCOM
CSE4028		Advanced Cyber Security	1.0	2	4	4	CSE4026		NASSCOM
CSE4029		Advanced Data Analytics	1.0	2	4	4	CSE4027		NASSCOM
CSE4002		Mobile Application Development	1.0	3	2	4	CSE2005	SWE4003	Engineering
CSE4004		Web Technologies	1.0	3	2	4	None	SWE4001	Engineering

Programme Electives [Min. 21 Credits]

Course Code	Category	Course Title	Ver.	T	P	C	Pre-Requisite	Anti-requisite	Course Discipline
	Data Analytics Basket	**Minimum of 7 Credits from courses in the basket**							
CSE3009		No SQL Databases	1.0	3	2	4	CSE2007/SWE2006		Engineering
MAT2003		Optimization Techniques	1.0	3	2	4	MAT1001	MAT2004, MEC4012	Science

Course Code		Course Title	Ver.	T	P	C	Pre-Requisite	Anti-requisite	
CSE1006		Foundations for Data Analytics	1.0	2	2	3	None		Engineering
CSE4005		Data warehousing and Data Mining	1.0	3	2	4	CSE2007/SWE2006		Engineering
CSE3008		Introduction to Machine Learning	1.0	3	2	4	MAT2003/MAT2004	ECE3011	Engineering
	Networking and Security Basket	**Minimum of 7 Credits from courses in the basket**							
CSE1007		Introduction to Cryptography	1.0	3	0	3	None	SWE3003	Engineering
CSE2010		Secure Coding	1.0	3	2	4	CSE2001		Engineering
CSE3011		Network Programming	1.0	3	2	4	CSE3003		Engineering
CSE3012		Network Security	1.0	3	2	4	CSE1007/SWE3003		Engineering
CSE2013		Information Theory and Coding	1.0	3	2	4	None		Engineering
	General Electives	**Any course for PE Credit fulfillment**							
CSE3005		Distributed Systems	1.0	3	2	4	CSE2008		Engineering
CSE1008		Theory of Computation	1.0	3	0	3	None		Engineering
CSE3002		Artificial Intelligence	1.0	3	2	4	CSE1001/CSE1004/SWE1001		Engineering
CSE4003		Parallel Computing	1.0	3	2	4	CSE2001/CSE2002/SWE2001		Engineering
CSE3001		Agile Development Process	1.0	3	2	4	CSE1005/CSE1003/SWE1002		Engineering
CSE4007		Digital Image Processing	1.0	3	2	4	None		Engineering
CSE4008		Social Network Analysis	1.0	3	2	4	CSE1006		Engineering
CSE2009		Soft Computing	1.1	3	2	4	None		Engineering
CSE3007		Information Retrieval	1.0	3	2	4	CSE2001		Engineering
CSE3006		Data Visualization	1.0	3	2	4	CSE1006		Engineering
CSE2011		Cyber Security and Digital Forensics	1.0	3	2	4	CSE1007/SWE3003		Engineering
CSE4010		Wireless and Mobile Security	1.0	3	0	3	CSE3012		Engineering
CSE4009		Wireless and Mobile Computing	1.0	3	0	3	CSE3003/SWE3001		Engineering
CSE3010		Network Design and Performance Evaluation	1.0	3	2	4	CSE3003		Engineering
CSE3014		Web Application Security	1.0	3	2	4	CSE3012		Engineering
CSE4006		Deep Learning	1.0	3	2	4	CSE3008		Engineering
ECE4003		Embedded Programming	1.0	3	2	4	ECE2004		Engineering
CSE4016		Database Administration	1.0	3	2	4	CSE2007/SWE2006		Engineering
CSE3013		Secure Group Communications	1.0	3	2	4	CSE1007/SWE3003		Engineering
CSE3018		Software Configuration Management	1.0	3	0	3	CSE1005/SWE1002/CSE1003		Engineering
CSE3019		Software Quality and Reliability	1.0	3	0	3	CSE1005/SWE1002/CSE1003		Engineering
CSE3020		Product Definition and Validation	1.0	3	0	3	CSE1005/SWE1002/CSE1003		Engineering
CSE4011		Internet of Things	1.0	3	2	4	None		Engineering
CSE4012		UI UX User Experience Design	1.0	3	2	4	None		Engineering
CSE4013		Reverse Engineering	1.0	3	0	3	CSE1005/SWE1002/CSE1003		Engineering
CSE4014		Team Software Process	1.0	3	0	3	CSE1005/SWE1002/CSE1003		Engineering
CSE4015		Network Administration	1.0	3	2	4	CSE3003/SWE3001		Engineering
CSE4017		Health Care Analytics	1.0	3	2	4	CSE1006		Engineering
CSE4018		Computer Vision and Robotics	1.0	3	2	4	CSE4007		Engineering
CSE4019		Applications of Artificial Intelligence	1.0	3	0	3	CSE3002		Engineering
CSE4020		Agent Based Intelligent Systems	1.0	3	2	4	CSE3002		Engineering
CSE4021		Introduction to Cognitive Modelling	1.0	3	2	4	CSE3002		Engineering
CSE2006		Computer Graphics	1.1	3	2	4	None		Engineering
CSE4001		Cloud Computing	1.0	3	0	3	CSE3003	SWE4004	Engineering
CSE4022		Modelling and Simulation	1.0	3	0	3	None		Engineering
CSE4023		Introduction to Blockchain Technology	1.0	3	0	3	CSE1007/SWE3003		Engineering

University Electives [Min. of 5 Credits]

Course Code		Course Title	Ver.	T	P	C	Pre-Requisite	Anti-requisite	
		Any Course after fulfilling Programme Core & University Core requirements and without duplicity can be taken as University Elective							

	Fall Semester 2018-19			
S. No.	**Course Name**	**T**	**P**	**C**
1	English Basket-1	2	2	3
2	Calculus for Engineers	3	2	4
3	Fundamentals of Electrical and Electronics Engineering	3	2	4
4	Problem Solving using Java	3	2	4
5	Engineering Clinics-1	0	4	2
6	Ethics and Values	0	2	1
7	Environmental Studies	2	2	3
8	Soft Skills-1	1	0	1
	Total Credits			**22**

	Winter Semester 2018-19			
S. No.	**Course Name**	**T**	**P**	**C**
1	English Basket-2	2	2	3
2	Applications of Differential And Difference Equations	3	2	4
3	Data Structures and Algorithms	3	2	4
4	Engineering Clinics-2	0	4	2
5	Engineering Physics	3	2	4
6	Digital Logic Design	3	2	4
7	Engineering Drawing	0	2	1
8	Soft Skills-2	1	0	1
	Total Credits			**23**

	Fall Semester 2019-20			
S. No.	**Course Name**	**T**	**P**	**C**
1	Object Oriented Programming with Java	3	2	4
2	Computer Architecture and Organization	3	0	3
3	Microcontrollers and Interfacing	3	2	4
4	CSE DA/NS Basket-1	3	0	3
5	Applied Statistics	1	2	2
6	Management Basket-1	2	0	2
7	Engineering Clinics-3	0	4	2
8	Soft Skills-3	1	0	1
	Total Credits			**21**

	Winter Semester 2019-20			
S. No.	**Course Name**	**T**	**P**	**C**
1	Science Basket-1	3	0	3
2	Discrete Mathematical Structures	3	0	3
3	Engineering Clinics-4	0	4	2
4	Computer Networks	3	2	4
5	CSE DA/NS Basket -2	3	0	3
6	Database Management System	3	2	4
7	Humanities Basket-1	2	0	2
8	Soft Skills-4	1	0	1
	Total Credits			**22**

Fall Semester 2020-21			
S. No.	Course Name	T	P	C
1	NASSCOM Basket-1	2	4	4
2	Design and Analysis of Algorithms	3	2	4
3	Software Engineering	3	2	4
4	Operating Systems	3	2	4
5	CSE DA/NS Basket-3	3	2	4
6	Science Basket-2	3	0	3
7	Soft Skills-5	0	2	1
Total Credits				24

Winter Semester 2020-21			
S. No.	Course Name	T	P	C
1	NASSCOM Basket-2	2	4	4
2	Management Basket-2	2	0	2
3	Mobile Application Development	3	2	4
4	Web Technologies	3	2	4
5	CSE DA/NS Basket-4	3	2	4
6	Program (General) Elective-1	3	0	3
7	Humanities Basket-2	2	0	2
8	Soft Skills-6	1	0	1
Total Credits				24

Fall Semester 2020-21			
S. No.	Course Name	T	P	C
1	Capstone	0	4	4
2	University Elective	3	0	3
3	Program (General) Elective-2	3	2	4
Total Credits				11

Winter Semester 2020-21			
S. No.	Course Name	T	P	C
1	Internship	x	x	10
				10

Extra Curricular			1