Sem	Category	Course Code	Course Title	L	T	P	Credits
			B.Tech- Computer Science & Engineering: 2018				
Sem	Category	Course Code	Course Title	L	T	P	Credits
1	Perspective	PSP1002	Joy of Engineering	1	0	2	2
1	Skill	SKL1001	Communication and Presentation Skills	2	0	2	3
1	Foundation	ECE1005	Basic Electrical and Electronics Practice	2	0	2	3
1	Foundation	CSE1004	Computing Fundamentals & C	3	0	2	4
1	Foundation	CHE1001	Chemistry	2	0	2	3
1	Foundation	MTH1703	Mathematics-I	3	1	0	4
1	Foundation	PHY1003	Physics-1	2	1	2	4
			Semester Total				23
Sem	Category	Course Code	Course Title	L	T	P	Credits
2	Perspective	PSP1707	World Civilizations	2	0	0	2
2	Skill	SKL1004	Writing Skills	2	0	2	3
2	Foundation	CSE2009	Data Structures	3	0	2	4
2	Foundation	PSP1001	Environmental Studies	3	0	0	3
2	Foundation	MTH1702	Mathematics-II	3	1	0	4
2	Foundation	PHY1004	Physics-II	2	1	2	4
2	Foundation	MEC1003	Workshop Practice	1	0	4	3
			Semester Total				23
Sem	Category	Course Code	Course Title	L	T	P	Credits
ST1	Internship	PS 121	Practice School -I				1
			Semester Total				1
Sem	Category	Course Code	Course Title	L	T	P	Credits
3	Skill	SKL1002	Etiquette and Conversational Skills	2	0	0	2
3	Core	CSE2010	Object Oriented Programming	3	0	2	4
3	Foundation	MTH2702	Mathematics-III	3	1	0	4
3	Foundation	MEC1004	Engineering Drawing & Computer Aided Graphics	1	0	4	3
3	Core	CSE2709	Computer Organization and Architecture	3	0	2	4
3	Core	CSE2708	Discrete Mathematics	3	0	0	3
3	Core	CSE2008	Fundamentals of Digital Logic	2	1	2	4
			Semester Total				24
Sem	Category	Course Code	Course Title	L	T	P	Credits
4	Core	CSE2011	Data Base Management Systems	3	0	2	4
4	Foundation	MEC1002	Emerging Material Science and Applications	3	0	0	3
4	Core	CSE3002	Computer Networks	2	0	2	3
4	Core	CSE2012	Design and Analysis of Algorithms	3	0	2	4
4	Core	CSE3012	Operating Systems	2	0	2	3
4	Core	CSE3008	Artificial Intelligence	3	0	2	4
4	Core	ECE2704	Microprocessor Based System Design	2	1	0	3
			Semester Total				24
Sem	Category	Course Code	Course Title	L	T	P	Credits
ST2	Internship	PS221	Practice School -II				6
			Semester Total				6
Sem	Category	Course Code	Course Title	L	T	P	Credits
5	Perspective	PSP3701	Understanding Business	2	0	0	2
5	Core	CSE3014	Mobile Architecture and programming	3	0	2	4
5	Core	CSE3010	Software Engineering	3	0	2	4
5	Core	CSE3016	Machine Learning and Data Mining	3	0	2	4
5	Core	CSE3703	Cryptography	3	0	0	3
5	Core	CSE3013	Internet of things	3	0	2	4
5	Core	CSE3701	Distributed Systems	3	0	2	4
			Semester Total				25
Sem	Category	Course Code	Course Title	L	T	P	Credits
6	Perspective	PSP2705	Critical Reasoning & Systems Thinking	2	0	0	2
6	Perspective	PSP2701	Emerging Life Science	2	0	0	2
6	Core	CSE3710	System Modelling and Simulation	3	1	0	4
6	Core Elective	CSE4001	Security Attacks & Defenses	3	0	0	3
6	Core Elective	CSE2707	NLP and Text Analytics	3	0	0	3
6	Core Elective	CSC3001	Big Data Analytics	3	0	0	3
6	Core Elective	CSE3711	Neural Networks: From Theory to Practice	3	0	0	3
6	Core Elective	CSE3001	Cloud Computing	3	0	0	3
6	Core Elective	CSE4006	Blockchain	3	0	0	3
6	Open Elective	CHE4706	Computational Science of Microscopic Systems	3	0	0	3
6	Open Elective	SKL3703	Corporate Communication	3	0	0	3

Sem	Category	Course Code	Course Title	L	T	P	Credits
6	Open Elective	CHE3701	Energy Storage Systems - From Conventional To The Future	3	0	0	3
6	Open Elective	PSP3703	Introduction to Economics	3	0	0	3
6	Open Elective	MTH3701	Introduction to Fractals	3	0	0	3
6	Open Elective	SKL4701	Modern and Contemporary Writing	3	0	0	3
6	Open Elective	PHY4706	Quantum Matter & Technologies	3	0	0	3
			Semester Total				20
Sem	Category	Course Code	Course Title	L	T	P	Credits
7	Skill		Selling, Negotiating, and Persuading Skills		0	0	2
7	Perspective		Contemporary Challenges: Societal & Political		0	0	2
7	Perspective		Good Citizenry	2	0	0	2
7	Perspective		Innovation & Entrepreneurship	2	0	0	2
7	Core Elective			3	0	0	3
7	Core Elective			3	0	0	3
7	Open Elective			3	0	0	3
			Semester Total				17
Sem	Category	Course Code	Course Title	L	T	P	Credits
8	Internship		Practice School-III				18
			Semester Total				18
			Program Total				181

B.Tech. - Computer Science [CSC]: 2019

Sem	Category	Sub-Category	Course Code	Course Title	Credits
1	Co-Curricular				1
1	Perspective	School	PSP1003	Joy of Engineering	2
1	Skill	School	SKL1704	Communication Skills	1
1	Skill	School	SKL1706	Technical Report Writing	2
1	Foundation	School	MTH1704	Calculus for Engineers	2
1	Foundation	School	MTH1705	Ordinary Differential Equations	2
1	Foundation	School	CHE1701	Engineering Chemistry	1
1	Foundation	School	PHY1701	Physics for Engineers	2
1	Foundation	School	ECE1704	Basic Electrical Engineering	2
1	Foundation	School	CSE1702	Computer Programming	2
1	Foundation	School	CSE1703	Fundamentals of Data Science	2
1	Foundation	School	CSE1501	Programming Lab	1
1	Foundation	School	CSE1502	Data Science Lab	1
				Semester Total	21
Sem	Category	Sub-Category	Course Code	Course Title	Credits
2	Co-Curricular				1
2	Perspective	School	PSP1710	Engineering Ethics	2
2	Perspective	School	PSP1711	Environmental Studies	2
2	Skill	School	SKL1707	Coding Skills	2
2	Foundation	School	MEC1006	Engineering Graphics	2
2	Foundation	School	ECE1008	Introduction to Sensors and IoT	2
2	Foundation	School	CHE1702	Electrochemistry and Energy Storage	1
2	Foundation	School	MEC1709	Automation and Industry 4.0	1
2	Foundation	Department Specific	CSE1704	Fundamentals of Digital Logic	2
2	Foundation	Department Specific	MTH1706	Linear Algebra	2
2	Foundation	Department Specific	CSE1705	Discrete Mathematics	2
2	Core	Lab	CSE1005	Advanced Programming Lab	1
2	Core	Lab	CSE1006	FDL and IoT Lab	1
				Semester Total	21
ST1	Practice School			Practice School -I	Audit

Sem	Category	Sub-Category	Course Code	Course Title	Credits
3	Co-Curricular				1
3	Skill	School	SKL2701	Etiquettes and Conversational Skills	2
3	Perspective	School	PSP2705	Critical Reasoning and Design Thinking	2
3	Foundation	Department Specific	MTH2705	Probability and Statistics	2
3	Foundation	Department Specific	CSE2711	Data Structures and Algorithms	3
3	Foundation	Department Specific	CSE2013	Data Structures and Algorithms Lab	1
3	Core	Classroom	CSE2710	Object Oriented Programming	2
3	Core	Classroom	CSE2712	Computer Networks	2
3	Core	Classroom	CSE2713	Computer Organization and Architecture	2
3	Core	Classroom	CSE2714	Database Management Systems	3
3	Core	Lab	CSE2014	Object Oriented Programming Lab	1
3	Core	Lab	CSE2015	Computer Networks Lab	1
				Semester Total	22
Sem	Category	Sub-Category	Course Code	Course Title	Credits
4	Co-Curricular				1
4	Perspective	School	PSP2706	Global Energy: Politics, Markets and Policy	1
4	Perspective	School	PSP2707	Innovation and Entrepreneurship	1
4	Skill	Student Specific	SKL2702	Resume Writing and Career Skills	1
4	Skill	Student Specific	SKL2703	Selling, Negotiating and Persuading Skills	
4	Skill	Student Specific	SKL2704	Theatre Studies	1
4	Skill	Student Specific	SKL2705	Cross Cultural Communication Skills	
4	Foundation	Department Specific	CSE2715	Python Programming	3
4	Foundation	Department Specific	CSE2716	Web Programming	1
4	Core	Classroom	CSE2717	Operating Systems	2
4	Core	Classroom	CSE2718	Data Analytics	2
4	Core	Classroom	CSE2719	Design and Analysis of Algorithms	3
4	Core	Classroom	CSE2720	Image Processing	2
4	Core	Classroom	CSE2721	Theory of Computation	2
4	Core	Lab	CSE2016	Design and Analysis of Algorithms Lab	1
4	Core	Lab	CSE2017	Image Processing Lab	1

Sem	Category	Sub-Category	Course Code	Course Title	Credits
				Semester Total	22
ST2	Practice School			Practice School -II	4
Sem	Category	Sub-Category	Course Code	Course Title	Credits
5	Co-Curricular				1
5	Perspective	Student Specific	PSP3701	Understanding Bussiness	2
			PSP3706	Principles of Management	
			PSP3707	Living Literature and Arts	
5	Core	Classroom	CSE3704	Software Engineering	2
5	Core	Classroom	CSE3705	Artificial Intelligence	3
5	Core	Classroom	CSE3706	Fundamentals of Machine Learning	2
5	Core	Classroom	CSE3707	Information Retrieval	3
5	Core	Classroom	CSE3708	Internet of Things	2
5	Core	Classroom	CSE3709	Mobile Application Development	2
5	Core	Lab	CSE3017	Internet of Things Lab	1
5	Core	Lab	CSE3018	Fundamentals of Machine Learning Lab	1
5	Core	Seminar / Case Studies			2
				Semester Total	21
Sem	Category	Sub-Category	Course Code	Course Title	Credits
6	Perspective	Student Specific	PSP3708	Intellectual property rights	1
			PSP3709	International Human Rights	
			PSP3711	Right to Information Act.	
6	Core Elective	Classroom	CSE3001	Cloud Computing	3
			CSE4006	Blockchain	
			CSE4706	Cyber Security tools and Cyber Attacks	
			CSC3001	Big Data Analytics	
			CSE4003	Deep Learning	
			CSE2707	Natural Language Processing and Text Analysis	
			CSE4707	Advance Data science	
6	Core Elective	Major Project	PRJ4001	Major Project	2
6	Core Elective	Classroom	PHY3701	Excel: Novice to Competent-	3
			SKL3703	Corporate Communication-	

Sem	Category	Sub-Category	Course Code	Course Title	Credits
			CVL4708	Remote Sensing and Geographic Information Systems-	
			MTH3702	~~Mathematical Modeling of Infectious Diseases~~ as an open elective ~~course~~	
			PSP3710	Managing Technology & Innovation-	
			CHE3701	~~Energy Data Analysis and Energy Storage Systems: From Conventional to the Future 2020~~	
				Semester Total	15
Sem	Category	Sub-Category	Course Code	Course Title	Credits
7	Core Elective	Classroom			3
7	Core Elective	Classroom			3
7	Core Elective	Major Project			3
7	Open Elective	Classroom / Lab			3
7	Open Elective	Classroom / Lab			3
				Semester Total	15
Sem	Category	Sub-Category	Course Code	Course Title	Credits
8	Practice School			Practice School-III	14
				Semester Total	14
				Program Total	155

Sem	Category	Sub Category		Minor Program	Credit
VI & VII	Minor Program	Minor Program		1. Minor in Nanotechnology	15
				2. Minor in Energy Harvesting and Storage	15
				3. Minor in Computational Mathematics	15

B.Tech- Computer Science & Engineering: 2020
Sem	Course Code	Course Title	Credits
1	CHE1701	Engineering Chemistry	1
1	SKL1704	Communication Skills	1
1	PSP1710	Engineering Ethics	2
1	PHY1701	Physics for Engineers	2
1	CSE1703	Fundamentals of Data Science	2
1	CSE1502	Data Science Lab	1
1	MTH1704	Calculus for Engineers	2
1	PSP1711	Environmental Studies	2
1	SKL1706	Technical Report Writing	2
1	CSE1702	Computer Programming	2
1	CSE1501	Programming Lab	1
			18
Sem	Course Code	Course Title	Credits
2		Co-Curricular	2
2	MEC1006	Engineering Graphics	2
2	CSE1704	Fundamentals of Digital Logic	2
2	CSE1006	Fundamentals of Digital Logic Lab	1
2	SKL1707	Coding Skills	2
2	MTH1705	Ordinary Differential Equations	2
2	ECE1704	Basic Electrical Engineering	2
2	CHE1702	Electrochemistry and Energy Storage	1
2	CSE1005	Advanced Programming Lab	1
2	PSP1003	Joy of Engineering	2
2	MEC1709	Automation and Industry 4.0	1
2	ECE1008	Introduction to Sensors and IoT	2
2	MTH1706	Linear Algebra	2
2	CSE1705	Discrete Mathematics	2
			24
Sem	Course Code	Course Title	Credits
3	SKL2701	Etiquettes and Conversational Skills	2
3	MTH2705	Probability and Statistics	2
3	CSE2711	Data Structures and Algorithms	3
3	CSE2710	Object Oriented Programming	2
3	CSE2712	Computer Networks	2
3	CSE2713	Computer Organization and Architecture	2
3	CSE2714	Database Management Systems	3
3	CSE2013	Data Structures and Algorithms Lab	1
3	CSE2014	Object Oriented Programming Lab	1
3	CSE2015	Computer Networks Lab	1
3	PSP2705	Critical Reasoning and Design Thinking	2
			21

Sem	Course Code	Course	Credits
4		Co-Curricular	2
4	PSP2707	Innovation and Entrepreneurship	1
4		Student specific Skill (Opt only one)	2
4	SKL2706	Cross Cultural Communication Skills	
4	SKL2707	Resume Writing and Career Skills	
4	SKL2709	Theatre Studies	
4	CSE2716	Web Programming	1
4	CSE2717	Operating Systems	2
4	CSE2722	Microprocessors based System Design	2
4	CSE2719	Design and Analysis of Algorithms	3
4	CSE2723	Mobile Computing	2
4	CSE2724	Human Computer Interaction	2
4	CSE2018	Assembly Language Programming Lab	1
4	CSE2715	Python Programming	3
4	CSE2016	Design and Analysis of Algorithms Lab	1
4	PSP2706	Global Energy: Politics, Markets and Policy	1
			23
	ST2	Practice School	4

Sem	Category	Sub-Category	Credits
5	Co-Curricular		1
5	Perspective	Student Specific	2
5	Core	Classroom	2
5	Core	Classroom	3
5	Core	Classroom	2
5	Core	Classroom	3
5	Core	Classroom	2
5	Core	Classroom	2
5	Core	Lab	1
5	Core	Lab	1
5	Core	Seminar / Case Studies	2
		Semester Total	21

Sem	Category	Sub-Category	Credits
6	Perspective	Student Specific	1
6	Core Elective	Classroom	3
6	Core Elective	Classroom	3
6	Core Elective	Classroom	3
6	Core Elective	Major Project	2
6	Core Elective	Classroom	3
		Semester Total	15

Sem	Category	Sub-Category	Credits
7	Core Elective	Classroom	3
7	Core Elective	Classroom	3

Sem	Category	Sub-Category	Credits
7	Core Elective	Major Project	3
7	Open Elective	Classroom / Lab	3
7	Open Elective	Classroom / Lab	3
		Semester Total	**15**
Sem	**Category**	**Sub-Category**	**Credits**
8	Practice School	Practice School-III	14
		Semester Total	**14**
		Program Total	**155**
Sem	**Category**	**Sub Category**	**Credit**
VI	Minor Program	Minor Program	
VII	Minor Program	Minor Program	15

Sem	Category	Sub-Category	Course Title	Credits	L-D-P
B.Tech. - Computer Science & Engineering [CSE]: 2021				

Sem	Category	Sub-Category	Course Title	Credits	L-D-P
1	Co-Curricular			1	1-0-0
1	Perspective	School	Joy of Engineering – I	3	2-0-2
1	Skill	School	Communication Skills	1	1-0-0
1		School	Engineering Ethics	1	1-0-0
1	Foundation	School	Basic Electrical and Electronics Engineering	3	2-0-2
1		School	Mathematics for Engineers – I	2	2-0-0
		School	Engineering Chemistry	1	1-0-0
		School	Physics for Engineers	2	2-0-0
1		Program Specific	Fundamentals of Data Science	3	2-0-2
1		Program Specific	Object Oriented Programming using C++	4	2-0-4
			Semester Total	21	
Sem	Category	Sub-Category	Course Title	Credits	L-D-P
2	Co-Curricular			1	1-0-0
2	Perspective	School	Joy of Engineering – II	3	1-0-4
2		School	Environmental Studies	2	2-0-0
2	Skill	School	Technical Report Writing	2	2-0-0
2	Foundation	School	Mathematics for Engineers – II	3	2-0-2
2	Foundation	Program Specific	Fundamentals of Digital Logic	3	2-0-2
2		Program Specific	Data Structures and Algorithms	3	2-0-2
2		Program Specific	Database Management Systems	3	2-0-2
	Core	Classroom	Applied Data Science	2	1-0-2
			Semester Total	22	
ST1	Practice School		Practice School –I	Audit	
Sem	Category	Sub-Category	Course Title	Credits	L-D-P
3	Co-Curricular			1	1-0-0
3	Skill	School	Etiquettes and Conversational Skills	2	2-0-0
3	Foundation	Program Specific	Software Engineering	2	1-0-2
3		Program Specific	Design and Analysis of Algorithms	3	2-0-2
3	Core	Classroom	Java Programming	3	2-0-2
3		Classroom	Web Programming	2	1-0-2
3		Classroom	Computer Organization & Architecture	3	01-02-2000
3		Classroom	Operating Systems	3	2-0-2
3		Classroom	IoT Sensors, Peripherals and Processors	2	1-0-2
3	Core		Project I	1	
			Semester Total	22	
Sem	Category	Sub-Category	Course Title	Credits	L-D-P
4	Co-Curricular			1	1-0-0
4	Perspective	School	Global Energy: Politics, Markets and Policy	1	1-0-0
4		School	Innovation and Entrepreneurship	1	1-0-0
4	Foundation	Program Specific	Machine Learning	3	2-0-2
4	Core	Classroom	Artificial Intelligence	3	3-0-0
4		Classroom	Data Communications &Computer Networks	3	2-0-2
4		Classroom	Mobile Application Development	2	2-0-0
4		Classroom	Human Computer Interaction	2	2-0-0
4		Classroom	Network Security	2	2-0-0
4	Core		Project II(MAD/Web Programming/HCI/ML)	3	
			Semester Total	21	
ST2	Practice School		Practice School –II	4	

Sem	Category	Sub-Category	Course Title	Credits	L-D-P
5	Co-Curricular			1	1-0-0
5	Perspective	Student Specific		2	
5	Core	Classroom	Digital Image Processing	4	3-0-2
5	Foundation	School	Discrete Mathematics	3	01-02-2000
5		Classroom	Cryptography	3	3-0-0
5		Classroom	IoT Networks, Architectures and Applications	3	3-0-0
5	Core Elective	Classroom	Elective-I (Specialization Specific)	3	
5	Core	Seminar / Case Studies		2	
			Semester Total	21	
Sem	Category	Sub-Category	Course Title	Credits	
6	Practice School		Practice School-III	14	
			Semester Total	14	
Sem	Category	Sub-Category	Course Title	Credits	L-D-P
7	Perspective	Student Specific		1	
7	Core	Classroom	Theory of Computation	3	01-02-2000
7	Core Elective	Classroom	Elective II (Specialization Specific)	3	
7	Core	Project-III		4	
7	Open Elective	Classroom / Lab		3	
			Semester Total	14	
Sem	Category	Sub-Category	Course Title	Credits	L-D-P
8	Core Elective	Classroom	Elective III (Specialization Specific)	3	
8		Classroom	Elective IV (Specialization Specific)	3	
8	Core	Project IV		4	
8	Open Elective	Classroom / Lab		3	
8		Classroom / Lab		3	
			Semester Total	16	
			Program Total	155	