

**Program structure**  
**B. Tech (Computer Science & Engineering)**  
**(AY 2018-19)**

	SEMESTER I				SEMESTER II			
	Course Code	Course Title	L T P U	Course No	Course Title	L T P U		
YEAR I	MA111	Mathematics -I	3 1 0 3	ES121	Engineering Mechanics	3 0 0 3		
	PH111	Physics - I	3 1 0 3	MA121	Mathematics II	3 1 0 3		
	CH111	Chemistry	3 1 0 3	PH121	Physics II	3 1 0 3		
	TA101	Engineering Graphics	2 0 4 4	TA105	Physical Sciences Lab II	0 0 2 1		
	TA104	Physical Sciences Lab -I	0 0 2 1	TA102	Workshop	2 0 4 4		
	EGL111	English Language Skill	3 0 0 3	TA121T	C Programming	3 0 0 3		
	ENV122	Environmental Studies	3 0 0 3	TA121P	C Programming Practical	0 0 3 2		
				ES211T	Basic Electrical & Electronics Engineering-I	3 0 0 3		
				ES211P	Basic Electrical & Electronics Engineering-I Practical	0 0 3 2		
		Total Unit: 20			Total Unit: 24			
Summer Term	SIP101	Summer Internship Program I				0 0 0 5		
YEAR II	SEMESTER III				SEMESTER IV			
	Course No	Course Title	L T P U	Course No	Course Title	L T P U		
	EC211T	Digital Logic Design	3 0 0 3	ECN 201	Principles of Economics	3 0 0 3		
	EC211P	Digital Logic Design Practical	0 0 3 2	MA212	Probability and Statistics	3 0 0 3		
	CS212T	Object Oriented programming through C++	3 0 0 3	MA221	Discrete Structures for Computer Science	3 0 0 3		
	CS212P	Object Oriented programming through C++ Practical	0 0 3 2	EC222T	Microprocessor Programming & Interfacing	3 0 0 3		
	CS 314T	Data structures & Algorithm	3 1 0 3	EC222P	Microprocessor Programming & Interfacing Practical	0 0 3 2		
	CS 314P	Data structures & Algorithm practical	0 0 2 2	CS223	Design and Analysis of Algorithms	3 1 0 3		
	EGL233	Technical Report Writing	3 0 0 3	CS311T	Database Management Systems	3 0 0 3		
	MA211	Mathematics III	3 0 0 3	CS311P	Database	0 0 3 2		

  
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							Management Systems Practical	
	Total Unit: 24				Total Unit: 22			
Summer Term	SIP 201	Summer Internship Program II					0 0 0 5	
YEAR III	SEMESTER V			SEMESTER VI				
	Course No	Course Title	L T P U	Course No	Course Title	L T P U		
	MA309	Numerical Analysis	3 0 0 3	HS361	Dynamics Of Social Changes	3 0 0 3		
	CS 325T	Data Communication and Computer Networks	3 0 0 3	CS 323	Computer Organization and Architecture	3 1 0 3		
	CS 325P	Data Communication and Computer Networks Practical	0 0 3 2	CS 429T	Web Technologies	3 0 0 3		
	CS 313T	Operating Systems	3 0 0 3	CS 429P	Web Technologies Practical	0 0 3 2		
	CS 313P	Operating Systems practical	0 0 3 2	CSE324T	.NET Technologies	3 1 0 3		
	CS312T	JAVA Programming	3 0 0 3	CSE324P	.NET Technologies Practical	0 0 2 2		
	CS312P	JAVA Programming practical	0 0 3 2	CSE325T	System Analysis with Software Engineering	3 0 0 3		
	CS 428	Theory of Computation	3 0 0 3	CSE326T	Compiler Design	3 1 0 3		
	CS 405	Artificial Intelligence	3 0 0 3					
	Total Unit: 24				Total Unit: 22			
Summer Term	SIP301	Summer Internship Program III					0 0 0 5	
YEAR IV	SEMESTER VII			SEMESTER VIII				
	Course No	Course Title	L T P U	Course No	Course Title	L T P U		
	CS440T	Smartphone Computing and Applications	3 0 0 3	CS437	Cloud Computing	3 0 0 3		
	CS440P	Smartphone Computing and Applications Practical	0 0 3 2	CS225T	Object Oriented Analysis Design with UML	3 0 0 3		
	CS421T	Data Warehousing and Data Mining	3 0 0 3	CS225P	Object Oriented Analysis Design with UML Practical	0 0 3 2		
	CS421P	Data Warehousing and Data Mining Practical using R	0 0 3 2	CSE424T	Advance Database Management System	3 0 0 3		

  
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		Elective 1	3 0 0 3			Elective 2	3 0 0 3
	CSE414T	Digital Image Processing	3 1 0 3	CS441		Big Data Analytics	3 0 0 3
	CSE414P	Digital Image Processing practical	0 0 3 2	CSE427T		Advanced Java Programming	3 0 0 3
	CS439	Natural Language Processing and Machine Translation	3 0 0 3	CSE427P		Advanced Java Programming practical	0 0 3 2
	SSU354	Soft Skills	3 0 0 2	GV402		Grand Viva	0 0 0 3
	CS 491	Special Project I	0 0 0 5	CS492		Special Project II	0 0 0 5
	Total Unit: 28			Total Unit: 30			

List of Electives 4th Year Semester-I

Course Code	Course Title	L T P U
CS424	Network Security	3 0 0 3
CS 438	E-Commerce	3 0 0 3
CS 403T	Parallel Computing	3 0 0 3
CS 403P	Parallel Computing Lab	
CS 413	Real Time Systems	3 0 0 3
CS 417	SQL and Database Application	2 0 2 3
CS418T	Advanced Operating System	3 0 0 3
CS418P	Advanced Operating System Practical	0 0 3 2
CS 430	Multimedia Computing	2 0 2 4
CS431	Block Chain and Applications	3 0 0 3

List of Electives 4th Year Semester-II

Course Code	Course Title	L T P U
CS433	Database Security Administration	3 0 0 3
CS422	Design Patterns	3 0 0 3
CS 423	Network Programming	2 0 2 3
CS443T	Unix and Shell Programming	3 0 0 3
CS443P	Unix and Shell Programming Practical	0 0 3 2
CS 427	Software Testing Methods	3 0 0 3
CSE416T	Python Programming	3 0 0 3
CSE416P	Python Programming practical	0 0 3 2
CS426	Service Oriented Architecture	3 0 0 3
CS 310T	Internet of Things	3 0 0 3

  
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