

Course offerings in 2018-19 Semester II (Spring)

Version-1 (30.11.2018)

PG Programmes

CD	AD	CNO	CName	Credits	Faculty Name(s)
M.Tech I year II Semester - CSE					
			Bouquet core	3-1-0-4	
			Bouquet core	3-1-0-4	
			Area electives	3-1-0-4	
			Area/Open elec/PG-Project/ /PG-Independent study	3-1-0-4	
			Total 12-4-0-16		
M.Tech II year II Semester – CSE					
			Area elective / Bouquet core	3-1-0-4	
			Area elective / Bouquet core	3-1-0-4	
			Area project (or)	0-0-16-8	
			Area /CS/Open elective	3-1-0-4	
			Area /CS/Open elective	3-1-0-4	
			Total 12-4-0-16 / 6-2-16-16		
M.Tech I year II Semester – CSIS					
		CSE538	System and Network Security	3-1-0-4	Ashok Kumar Das
		CSE418	Principles of Information Security	3-1-0-4	Srinathan Kannan
			Bouquet core elective	3-1-0-4	
			Bouquet core elective	3-1-0-4	
			Total 12-4-0-16		
M.Tech II year II Semester – CSIS					
		CSE704	PG-Project (8 Cr)	0-0-16-8	
		CSE581	Information Security Audit and Assurance	3-1-0-4	Shatrunjay Rawat
			Bouquet/Area/C/IT Elective	3-1-0-4	
			Total 6-2-16-16		
M.Tech I Year II Semester – CASE					
		CSE604	Computing Tools	3-1-3-4	Sriranjini K
			SE Elective	3-1-0-4	
			SE Elective	3-1-0-4	
			SE Elective / CASE Project	3-1-0-4	
			Total 12-4-3-16		
M.Tech II Year II Semester – CASE					
			Elective	3-1-0-4	
			Elective	3-1-0-4	
			Elective	3-1-0-4	
			Elective	3-1-0-4	
			Total 12-4-0-16		
M.Tech I Year II Semester - Bioinformatics					
		CSE604	Computing Tools	3-1-0-4	Sriranjini K
		SCI433 /SCI633	Modeling and Simulations	3-1-0-4	Prabhakar B + Suresh Kumar NV
		SCI652	Advanced Bioinformatics	3-1-0-4	Nita Parekh
			Domain/IT elective	3-1-0-4	
			Total 12-4-0-16		
M.Tech II Year II Semester – Bioinformatics					
		SCI400	CCNSB Seminar	0 Cr	Vinod Palakkad (Coordinator)
		SCI652	Advanced Bioinformatics	3-1-0-4	Nita Parekh

		SCI764	Computational Biology Project / Elective	0-0-8-4	CCNSB Faculty
			Domain/IT elective	3-1-0-4	
			Total 6-2-8-12		

Electives

		CNO	CName	Credits	Faculty Name(s)
Electives for BSD Students					
		CES442	Disaster Management	3-1-0-4	Sunitha P
		CEB413	Heat, Ventilation, Air Conduction (HVAC)	3-1-0-4	Vishal Garg
			Advanced Mechanics of Structures	3-1-0-4	Venkateswarlu M
		CEW612	Design of Hydraulic Structures	3-1-0-4	Shaik Rehana
		CES617	Stability of Structures	3-1-0-4	Sunitha P
		CEF631	Foundation Engineering & Design	3-1-0-4	Pradeep R
		CES641	Earthquake Engineering	3-1-0-4	Pradeep R
		CEG461	Remote Sensing	3-1-0-4	RC Prasad
		CSE471	Statistical Methods in AI	3-1-0-4	Santosh Ravi Kiran
Electives for CND Students					
		SCI652	Advanced Bioinformatics	3-1-0-4	Nita Parekh
		SCI761	Topics in Nanosciences	3-1-0-4	Tapan Kumar Sau
		SCI491	Nonlinear Dynamics	3-1-0-4	Vinod Palakkad
		SCI455	Materials Science and Engineering	3-1-0-4	Suresh Kumar NV
			AI/ML for Natural Sciences	3-1-0-4	Deva Priyakumar + Girish Varma + Jawahar CV + Prabhakar.B + Raghunathan Ramakrishnan (TIFR) + Vinod PK
Electives for CLD Students					
		CLG452	Linguistic Data 2: Collection & Modeling	3-1-0-4	Radhika M + Aditi Mukherjee + Dipti M Sharma
			Indian Semantics and Ontology	3-1-0-4	Peter Scharf
		CLG423	Phonotactics and Phonology	3-1-0-4	TBD
Electives for CHD Students					
		HSS424	CTR-IV: Research Specific	3-1-0-4	CEH Faculty

ECE Electives (Also applicable as CSE/Open Electives)

Note for UG ECE/ECD Students: Please read carefully the guidelines for choosing of ECE Electives before

Signal Processing Stream					
		Level 1			
		ECE442	Time Frequency Analysis	3-1-0-4	Anil Kumar V
		ECE431	Signal Detection and Estimation Theory	3-1-0-4	Sachin Chaudhari
		ECE446	Speech Systems	3-1-0-4	Suryakanth VG
		ECE441	Adaptive Signal Processing	3-1-0-4	Santosh Nannuru
		Level 2			
		CSE578	Computer Vision	3-1-0-4	Anoop
		CSE471	Statistical Methods in AI	3-1-0-4	Santosh Ravi Kiran
		ECE575	Medical Image Analysis	3-1-0-4	Jayanthi Sivaswamy
Communications Stream					
		Level 1			
		ECE431	Signal Detection and Estimation Theory	3-1-0-4	Sachin Chaudhari
		ECE439	Error Correcting Codes	3-1-0-4	Prasad Krishnan
		Level 2			
			Fiber Optic Communication Systems	3-1-0-4	Kavitha Vemuri
VLSI and Embedded Systems Stream					
		Level 1			

			Digital VLSI Design	3-1-0-4	Zia Abbas + Syed Azeemuddin
		Level 2			
		CSE422	Advanced Computer Architecture	3-1-0-4	Govindarajulu R
			Flexible Electronics	3-1-0-4	Aftab Hussain
		Robotics Stream			
		Level 1			
		ECE452	Intro to Robotics: Mechanics & Control	3-1-0-4	Abhishek Sarkar
		Level 2			
		CSE578	Computer Vision	3-1-0-4	Anoop
		CSE471	Statistical Methods in AI	3-1-0-4	Santosh Ravi Kiran
		ECE551	Advances in Robotics & Control	3-1-0-4	Madhava Krishna + Abhishek Sarkar
		Electives for PG CASE Students			
		CES442	Disaster Management	3-1-0-4	Sunitha P
		CEB413	Heat, Ventilation, Air Conduction (HVAC)	3-1-0-4	Vishal Garg
			Advanced Mechanics of Structures	3-1-0-4	Venkateswarlu M
		CEF631	Foundation Engineering & Design	3-1-0-4	Pradeep R
		CES641	Earthquake Engineering	3-1-0-4	Pradeep R
		CEG461	Remote Sensing	3-1-0-4	RC Prasad
		CES771	CASE Project	4 credits	
		Electives for PG Bioinformatics Students			
		SCI760	Computer Aided Drug Design	3-1-0-4	Deva Priyakumar
		SCI761	Topics in Nanosciences	3-1-0-4	Tapan Kumar Sau
		Bouquet Courses			

Note for UG CSE/CSD students: Bouquet courses for Computer Science cater to developing breadth in computer science in Foundations and Systems Area. Some of these courses are also Research Stream Courses. A student must take at least **3** courses each from **5** in Foundations and **5** in Systems Bouquet Courses during their entire B.Tech Programme.

Note for M.Tech CSE Students: Every student must register for 20 bouquet core credits. Of the 20 bouquet core credits, at least 2 must be from the foundations and at least 2 must be from the systems stream. Further, at least two of these bouquet core courses must be done in the second semester and at least one in the third semester.

		Foundation Courses - Registration Limit: 175			
		CSE471	Statistical Methods in AI	3-1-0-4	Santosh Ravi Kiran
		CSE418	Principles of Information Security	3-1-0-4	Srinathan Kannan
		CSE481	Optimization Methods	3-1-0-4	CV Jawahar
		Systems Courses - Registration Limit: 175			
		CSE441	Database Systems	3-1-0-4	Vikram Pudi
		CSE461	Software Engineering	3-1-0-4	Raghu Reddy
		CSE431	Distributed Systems Prerequisite: Operating Systems. Networks desirable	3-1-0-4	Kishore Kothapalli
		CSE/Open Electives			
		CSE578	Computer Vision	3-1-0-4	Anoop
		ECE446	Speech Systems	3-1-0-4	Suryakanth VG
		CSE498	Introduction to Game Theory	3-1-0-4	Sujit K Gujar
		CSE581	Information Security Audit and Assurance	3-1-0-4	Shatrunjay Rawat
		CSE538	System and Network Security	3-1-0-4	Ashok Kumar Das
		CSE573	NLP Applications	3-1-0-4	Manish Shrivastava
		CLG422	Computational Linguistics 2	3-1-0-4	Radhika M + Dipti M Sharma
		CSE541	Advances in Database Systems	3-1-0-4	Krishna Reddy P

		CSE563	Internals of Application Servers	3-1-0-4	Ramesh Loganathan
		CSE586	Cognitive Neuroscience	3-1-0-4	Kavitha Vemuri
		CSE504	Intro to Parallel Scientific Computing	3-1-0-4	Pawan Kumar
		CSE595	ICTs for Development	3-1-0-4	Nimmi Rangaswamy
		CSE588	Music, Mind, and Technology	3-1-0-4	Vinoo Alluri
		CSE567	Usability Engineering	3-1-0-4	Priyanka Srivastava
			Big Data and Policing	3-1-0-4	Ponnurangam K
			Quantum Information and Computation	3-1-0-4	Indranil Chakrabarthy
Engineering Electives (Random Selection) Max. no of students for each course is given in the brackets					
		CES442	Disaster Management (40)	3-1-0-4	Sunitha P
		CEG461	Remote Sensing (40)	3-1-0-4	RC Prasad
			Hydroinformatics (40)	3-1-0-4	Shaik Rehana
Math Electives (Random selection) Maximum no. of students for the following courses is: 50 each)					
		IMA303	Differential Equations	3-1-0-4	Lakshmi Burra
		IMA307	Mathematical Methods	3-1-0-4	Subhadip Mitra
			Multivariate Statistical Inference	3-1-0-4	Venkateswarlu M
Science Electives (Random selection) Max. no of students for each course is given in the brackets					
		SCI341	General & Structural Chemistry (25) (a) First-come-first serve registration (b) 4th year students get preference (c) interview, in case of over-subscription.	3-1-0-4	Abhijit Mitra
		SCI372	Science Lab II (5-10) Selection through interview by the faculty	0-1-4-4	Tapan Kumar Sau + Prabhakar B
		SCI347	Select topics in Physical Chemistry (20)	3-1-0-4	Harjinder Singh
		SCI433/ SCI633	Modeling and Simulations (20)	3-1-0-4	Prabhakar B + Suresh Kumar NV
		SCI761	Topics in Nanosciences (25)	3-1-0-4	Tapan Kumar Sau
		SCI438	Electromagnetism & Optics (25)	3-1-0-4	Prabhakar B
		SCI491	Nonlinear Dynamics (25)	3-1-0-4	Vinod Palakkad
		SCI455	Materials Science and Engineering (40)	3-1-0-4	Suresh Kumar NV
			AI/ML for Natural Sciences (18) Selecton Process: It is proposed that a limited number of students (6 CSD/CSE Honors + 6 CND + up to 6 early-PhD students from TIFR) will be interviewed and selected for this course.	3-1-0-4	Deva Priyakumar + Girish Varma + Jawahar CV + Prabhakar.B + Raghunathan Ramakrishnan (TIFR) + Vinod PK
Humanities Electives for UG3 and UG4 (Random selection) Max. no of students for each course is 40					
		HSS482	Digital Humanities Project Note: Register with faculty consent only	4 Cr	CEH Faculty
		LAN318	Readings from Hindi Literature	3-1-0-4	Harjinder Singh
		TS17001	Critical Thinking	3-1-0-4	Jolly Thomas
		TS17004	The State in Colonial India	3-1-0-4	Aniket Alam
		TS17003	Literature –American Classics	3-1-0-4	Aruna Chaluvadi
		HSS337	Comprehension of Indian Music	3-1-0-4	T K Saroja
		CSE595	ICTs for Development	3-1-0-4	Nimmi Rangaswamy
		TS18006	Environment & Politics in India	3-1-0-4	Radhika Krishnan
			Introduction to Philosophy of Technology	3-1-0-4	Nishad Patnaik
			Gender and Society	3-1-0-4	Sushmita Banerji
			Introduction to Sanskrit	3-1-0-4	Peter Scharf

Sd/-

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Date: 30.11.2018

Dean (Academics)

Director