DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
TEZPUR UNIVERSITY
Napaam – 784028 :: Sonitpur – Assam

Date: 27/01/2023

The following are the courses being offered for Ph.D., M.Tech(CSE), M.Tech(IT), MCA and B.Tech. (1st year) Programmes in the department of Computer Science & Engineering for Spring Semester 2023. In addition, the students shall have to take CBCT/Open Elective courses as applicable. Elective courses can be selected from MOOCs courses with maximum limit of 20% of Total Credits.

Offered Courses - Spring 2023 (1st year)

Course Code	Course Title	L	T	P	Course Credit	Course Type
M. Tech. (CSE) 2nd Semester						
		Credit Structure				
CS606	Computer Architecture and Parallel Processing	3	0	0	3	Core
CS544	Advanced Programming Lab II	0	1	2	3	Core
CS545	Seminar	0	2	0	2	Core
XXXXX	Elective I				3/4	
XXXXX	Elective II				3/4	
XXXXX	Open Elective-I	3	0	0	3	
		Total Credits			17/19	
Choose Elective-I and Elective-II from following groups of electives or from MOOCs list given below. (Not more than one course from one group)						
Group-1						
CO503	Fuzzy Logic and Neural Networks	3	0	0	3	Elective
IT517	Pattern Recognition	3	0	1	4	Elective
Group-2						
CS607	Optimization Techniques	3	0	0	3	Elective
IT509	Data Mining & Data Warehousing	3	0	1	4	Elective
CS625	Web Technology	3	0	1	4	Elective
Group-3						
CS731	Data Mining in Security	4	0	0	4	Elective
CS529	Embedded Systems	3	0	1	4	Elective
Group-4						
IT610	Advanced Database System	3	0	1	4	Elective

M. Tech. (IT) 2nd Semester

Course Code	Course Title	Credit Structure			Course Credit	Course Type
		L	T	P		
IT610	Advanced Database System	3	0	1	4	Core
CS545	Seminar	0	2	0	2	Core
XXXXX	Elective-II				3/4	
XXXXX	Elective-III				3/4	
XXXXX	Elective-IV				3/4	
XXXXX	Open Elective-II	3	0	0	3	
		Total Credits			18/21	

Choose Elective-II, Elective-III and Elective-IV from following groups or from MOOCs list given below. (Not more than one course from one group)

	Group-1					
CO503	Fuzzy Logic and Neural Networks	3	0	0	3	Elective
IT517	Pattern Recognition	3	0	1	4	Elective
	Group-2					
CS607	Optimization Techniques	3	0	0	3	Elective
IT509	Data Mining & Data Warehousing	3	0	1	4	Elective
CS625	Web Technology	3	0	1	4	Elective
	Group-3					
CS731	Data Mining in Security	4	0	0	4	Elective
CS529	Embedded Systems	3	0	1	4	Elective
	Group-4					
CS606	Computer Architecture and Parallel Processing	3	0	0	3	Elective

MCA Bridge 2nd Semester

Course Code	Course Title	Credit Structure			Course Credit	Course Type
		L	T	P		
CO208	Object Oriented Programming	3	0	1	4	Audit
CO214	Computer Architecture and Organization	3	1	0	4	Audit
CO215	Computer Organization Lab	0	0	1	1	Audit
CO218	Data Communication	3	0	0	3	Audit
CS305	Internet Concepts and Web Technology	2	1	0	3	Audit

MCA 2nd Semester

Course Code	Course Title	Credit Structure			Course Credit	Course Type
		L	T	P		
IC361	Accounting and Financial Management	3	0	0	3	Core
CS413	Database Management Systems	3	0	0	3	Core

CS414	Database Management Systems Lab	0	0	2	2	Core
CS417	Operating Systems	3	0	0	3	Core
CS418	Operating Systems Lab	0	1	1	2	Core
XXXXX	Elective-IV				3/4	
XXXXX	Elective-V				3/4	
XXXXX	Open Elective-I	3	0	0	3	
		Total Credits			22/24	

Choose Elective-IV and Elective-V from following groups of electives or from MOOCs list given below.
(Not more than one course from one group)

	Group-1					
CO503	Fuzzy Logic and Neural Networks	3	0	0	3	Elective
IT517	Pattern Recognition	3	0	1	4	Elective
	Group-2					
CS607	Optimization Techniques	3	0	0	3	Elective
IT509	Data Mining & Data Warehousing	3	0	1	4	Elective
CS625	Web Technology	3	0	1	4	Elective
	Group-3					
CS601	Design and Analysis of Algorithms	4	0	0	4	Elective
CS529	Embedded Systems	3	0	1	4	Elective

B. Tech. 2nd Semester

Course Code	Course Title	Credit Structure			Course Credit	Course Type
		L	T	P		
CO103	Introductory Computing	2	1	0	3	Core
CO104	Computing Lab	0	0	2	2	Core
CO105	Discrete Mathematics	3	1	0	4	Core

Ph. D. 2nd Semester

Course Code	Course Title	Credit Structure			Course Credit	Course Type
		L	T	P		
CS704	Doctoral Research Methodology	4	0	0	4	Core

Choose area specific Electives from following groups of electives or from MOOCs list given below.
(Not more than one course from one group)

	Group-1					
CO503	Fuzzy Logic and Neural Networks	3	0	0	3	Elective
IT517	Pattern Recognition	3	0	1	4	Elective
	Group-2					
CS607	Optimization Techniques	3	0	0	3	Elective
IT509	Data Mining & Data Warehousing	3	0	1	4	Elective

	Group-3					
CS731	Data Mining in Security	4	0	0	4	Elective
	Group-4					
CS606	Computer Architecture and Parallel Processing	3	0	0	3	Elective

MOOCs Courses (Elective)
(Maximum allowed is 20% of total credits)

Course code	Course Name & Instructor(s)	Offering Institute	UG/PG	Duration (in Week)	Total Credit
CS654	Programming, Data Structures and Algorithms Using Python, Prof. Madhavan Mukund	CMI	UG	8	2
CS657	Cloud Computing, Prof. Soumya Kanti Ghosh	IITKGP	UG	8	2
CS658	Social Networks, Prof. Sudarshan Iyengar, IIT Ropar	IITR	UG	12	3
CS660	Programming in Java, Prof. Debasis Samanta	IITKGP	UG	12	3
CS661	Data Science for Engineers, Prof. Ragunathan Rengasamy and Prof. Shankar Narasimhan	IITM	UG/PG	8	2
CS667	Introduction to Soft Computing, Prof. Debasis Samanta	IITKGP	UG/PG	8	2
CS669	Introduction to Industry 4.0 and Industrial Internet of Things, Prof. Sudip Misra, IIT KGP	IITKGP	PG	12	3
CS670	Deep Learning, Prof. Prabir Kumar Biswas	IITKGP	UG/PG	12	3
CS671	Reinforcement Learning, Prof. Balaraman Ravindran, IIT Madras	IITM	UG/PG	12	3
CS672	Ethical Hacking, Prof. Indranil Sengupta	IITKGP	UG/PG	12	3
CS677	Introduction to Machine Learning, Prof. Balaraman Ravindran	IITM	UG/PG	12	3
CS681	GPU Architectures and Programming, Prof. Soumyajit Dey	IITKGP	UG/PG	12	3
CS683	Data Analytics with Python, Prof. A. Ramesh	IITR	UG/PG	12	3
CS684	Cloud Computing and Distributed Systems, Prof. Rajiv Misra	IITP	UG/PG	8	2

(S. Saharia)

HoD, CSE