

## Course offerings in 2009-10 Semester II

### UG Programmes

#### B.Tech I year II Semester – CSE&CSD

CD	AD	CNO	CName	Credits	Faculty
In	MA	IMA102	Mathematics II	3-1-0-4	CN Kaul
In	CS	ICS103	Data Structures	3-1-3-5	K Kothapalli
In	CS	ICS104	Computer System Organization	3-1-0-4	Suresh Purini
In	EC	IEC103	Basic Electronic Circuits	3-1-3-5	R.Govindarajulu
In	CS	ICS105	IT Workshop II	2-0-3-3	Vikram Pudi
In	HS	IHS105/106	English/HSS Group A	2-0-0-2	T.Sreedharan
In	HS	IHS107	Human Values II	0-2-0-2	
Total				16-6-9-25	

#### B.Tech I year II Semester: ECE & ECD

In	MA	IMA102	Mathematics II	3-1-0-4	CN Kaul
In	CS	ICS103	Data Structures	3-1-3-5	K Kothapalli
In	CS	ICS104	Computer System Organization	3-1-0-4	Suresh Purini
In	EC	IEC103	Basic Electronic Circuits	3-1-3-5	R.Govindarajulu
In	EC	IEC104	Electronics Workshop I (H2)	1-0-4-2	Bipin + Jayanthi Sivaswamy
In	HS	IHS105/106	English/HSS Group A	2-0-0-2	T.Sreedharan
In	HS	IHS107	Human Values II	0-2-0-2	
Total				14.5-6-8-24	

#### B.Tech I year II Semester CND

In	MA	IMA102	Mathematics II	3-1-0-4	CN Kaul
In	CS	ICS103	Data Structures	3-1-3-5	K Kothapalli
PR	SC		Science II	3-1-0-4	B.Prabhakar + Harjinder Singh
PR	CNS		Intro. to Biology	3-1-0-4	A.Rameshwar
In	CS	ICS105	IT Workshop II	2-0-3-3	Vikram Pudi
In	HS	IHS105/106	English/HSS Group A	2-0-0-2	T.Sreedharan
In	HS	IHS107	Human Values II	0-2-0-2	
Total				16-6-6-24	

#### B.Tech I year II Semester CLD

In	MA	IMA102	Mathematics II	3-1-0-4	CN Kaul
In	CS	ICS103	Data Structures	3-1-3-5	K Kothapalli
Pr	HS	HS5093	Linguistics 2: Language & Society	3-0-0-4	Dipti M Sharma + Lakshmi Bai
In	CS	ICS105	IT Workshop II	2-0-3-3	Vikram Pudi
In	HS	IHS105/106	English/HSS Group A	2-0-0-2	T.Sreedharan
In	HS	IHS107	Human Values II	0-2-0-2	
Total				16-4-6-20	

## **B.Tech II year II Semester – CSE&CSD**

In	EG	IEG201 Engineering Systems	3-1-0-4	KS Rajan
Pr	CS	CSC371 Artificial Intelligence (*)	3-1-0-4	Anoop + V.Sriram
Pr	CS	CSC251 Graphics (*)	2-1-0-3	PJ Narayanan
Pr	CS	Bouquet Core (*)	3-1-0-4	
Pr	CS	CSC311 Formal Methods	2-1-0-2	K.Srinathan
In	EC	IEC239 Digital Signal Analysis & Applications	3-1-0-4	CV Jawahar
In	SC	ISC202 Science II	3-1-0-4	B.Prabhakar + Harjinder Singh

Total 17-6-0-24

SLAB - Meet above Institute Core by the end of Second Year.

### **I1.1 Bouquet Courses**

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 three courses from Foundations and Systems Bouquet Courses.

### **Systems Courses**

CSC441 Database Systems	3-1-0-4	Kamal
CS3350 Computer Networks	3-1-0-4	Shatrunjay Rawat

## **B.Tech II year II Semester ECE & ECD**

In	EG	IEG201 Engineering Systems	3-1-0-4	KS Rajan
Pr	EC	ECE335 Communication Theory I	3-1-0-4	VU Reddy
Pr	EC	ECE341 Digital Signal Processing	3-1-0-4	Sudhir Madhav Rao
Pr	EC	ECE339 ECE Lab	0-0-3-1	Sudhir Madhav Rao

(Co-ordinator)

Pr	EC	ECE361 Intro to VLSI *	3-1-0-4	Syed Azeemuddin
Pr	EC	ECE291 Electronics Workshop II	1-0-4-4	K.Madhav Krishna
In	SC	ISC202 Science II	3-1-0-4	B.Prabhakar + Harjinder Singh

Total 18-5-6-25

---

Course Code	Title	Credits	Faculty
-------------	-------	---------	---------

### **B.Tech III year II Semester - CSE**

CS3600	*Software Engineering	3-0-2-4	Kirti Garg
--------	-----------------------	---------	------------

	Elective	3-1-0-4
	Elective	3-1-0-4
CS4975	Major Project I	0-0-8-4
	HSSM	3-1-0-4

### **B.Tech III year II Semester - CSD**

CS3600	*Software Engineering	3-0-2-4	Kirti Garg
	Elective	3-1-0-4	
	Elective	3-1-0-4	
CS3960	Honours Project II	0-0-8-4	
	HSSM	3-1-0-4	

### **B.Tech III year II Semester ECE**

EC4975	Major Project I	0-0-8-4
	Open Elective	3-1-0-4
	Elective	3-1-0-4
	Elective	3-1-0-4
	HSSM	3-1-0-4

### **B.Tech III year II Semester – ECD**

EC3960	Honours Project II	0-0-8-4
	Open Elective	3-1-0-4
	Elective	3-1-0-4
	Elective	3-1-0-4
	HSSM	3-1-0-4

### **B.Tech IV year II semester - CSE**

	Honours Project II	3-1-0-4
	Elective[Open/IT]	3-1-0-4
	Elective[Open/IT/Proj]	3-1-0-4
	HSSM	3-1-0-4

### **B.Tech IV year II semester - CSD**

	Elective	3-1-0-4
	Elective[Open/IT]	3-1-0-4
	Elective[Open/IT/Proj]	3-1-0-4
	HSSM	3-1-0-4

### **B.Tech IV year II Semester ECE**

EE3305	Transmission Lines&Antennas	3-1-0-4	K R Sarma
	Open Elective	3-1-0-4	
	Elective	3-1-0-4	

HSSM	3-1-0-4
Honours Project II	3-1-0-4

### **B.Tech IV year II Semester – ECD**

EE3305	Transmission Lines&Antennas	3-1-0-4	K R Sarma
	Open Elective	3-1-0-4	
	Elective	3-1-0-4	
	HSSM	3-1-0-4	

---

### **Post BSc II year II Semester**

CSC 311	Formal Methods	2-1-0-2	K.Srinathan
CSC 441	Database Systems	3-0-3-4	Kamal
	Elective [Proj/Domain/IT]	3-1-0-4	
	HSSM	3-1-0-4	
	General Seminars	0-2-0-2	

### **Post BSc III year II Semester**

CSC251	* Computer Graphics	2-1-0-3	PJ Narayanan
CS 3600	* Software Engg.	3-0-2-4	Kirti Garg
CS 3700	* AI	3-1-0-4	Anoop + V.Sriram
	Elective [Proj/Domain/IT]	3-1-0-4	
	HSSM	3-1-0-4	
	General Seminars	0-2-0-2	

### **Post BSc IV year II Semester**

Thesis	12
--------	----

---

### **PG Programmes**

#### **M.Tech CSE**

#### **I Year II Semester**

CS3110	Algorithms	3-0-2-4	Ananda Swarup Das (L) + K.Srinathan (G)
CSE441	*Database Systems	3-0-3-4	Kamal
CS3600	*Software Engg.	3-0-2-4	Kirti Garg
CS3350	*Computer Networks	3-1-0-4	Shatrunjay Rawat
CS3002	Software Technologies (H1)	2-0-2-2	Saurabh Barjatiya
	Elective	3-1-0-4	

#### **II year II semester**

Elective	3-1-0-4
----------	---------

Elective	3-1-0-4
Elective	3-1-0-4
Elective	3-1-0-4

---

### M.Tech CSIS – I year II semester

CS3110	Algorithms	3-0-2-4	Ananda Swarup Das (L) + K.Srinathan (G)
CS3600	Software Engineering	3-0-2-4	Kirti Garg
CS3350	Computer Networks	3-1-0-4	Shatrunjay Rawat
	Information Security: Research & Mgmt	3-1-0-4	Bruhadeshwar
	Elective	3-1-0-4	

### M.Tech CSIS – II year II Semester

CS5470	System and Network Security Project work	3-1-0-4 12 credits	Bruhadeshwar
--------	---------------------------------------------	-----------------------	--------------

---

### M.Tech VLSI - I year II semester

CS3110	Algorithms	3-0-2-4	Ananda Swarup Das (L) + K.Srinathan (G)
ET5650	Digital Design with HDLs	4-0-2-6	Ipshita Chakrabarty
ET4291	Embedded Systems II	3-0-1-4	Chidambar Kulkarni
ET5605	VLSI Tools	0-0-2-2	Ipshita Chakrabarty
	Elective	3-1-0-4	

### II year II semester

Project	0-0-12-12
---------	-----------

---

### M.Tech (CASE) - I year II semester

Elective	3-1-0-4
Elective	3-1-0-4
Elective	3-1-0-4
Elective	3-1-0-4

### Electives for I year M.Tech CASE

AM6201	Finite Element Method	3-1-0-4	Pradeep Ramancharla
CS3010	Computing Tools	3-1-0-4	Prabhakar B (Coordinator)
AM6101	Theory of Elasticity	3-1-0-4	Venkateswarlu M
SE6401	Earthquake Engineering	3-1-0-4	Neelima Satyam D
	CASE Project	4 credits	
	Any Open Elective		

### II year II Semester

Elective	3-1-0-4
Elective	3-1-0-4
Elective	3-1-0-4
Elective	3-1-0-4

### Electives for II year M.Tech CASE

SE7702	CASE Project	4/8 Credits	
SE6503	Advanced Structural Design	3-1-0-4	Pradeep Ramancharla
	Rock Mechanics	3-1-0-4	Neelima Satyam D
	Any Open Elective	3-1-0-4	

### M.Tech Bioinformatics

#### I year II semester

BI 4300	Intro. to Bioinformatics	3-1-0-4	Nita Parekh
SC3201	Intro. to Biology	3-1-0-4	A Rameshwar
BI5100	BMSID	3-1-0-4	Abhijit Mitra + Gopal
	Applications of Classical & Quantum Mechanics	3-1-1-5	Prabhakar B + Deva Priyakumar
	Elective	3-1-0-4	

#### II year II Semester

BI8200	Biology Term paper/ Seminar	2	
	Project/elective	0-0-0-4	
	Projects	0-0-0-8	

### Electives MS/PhD in Bioinformatics

BI 4300	Intro to Bioinformatics	3-1-0-4	Nita Parekh
BI5100	BMSID	3-1-0-4	Abhijit Mitra + Gopal
	Readings in Bioinformatics	3-1-0-4	

### M.Tech CL

#### I year II semester

CS5728	NLP Applications	3-0-2-4	Sriram V + Samar Husain
HS5091	Computational Linguistics 2	3-0-0-4	Lakshmi Bai + Soma Paul
HS5093	Linguistics 2: Language & Society	3-0-0-4	Dipti M Sharma + Lakshmi Bai
	Elective (Computer Science)	3-0-0-4	
	Elective	3-0-1-4	

#### II Year II Semester

**PGDAAIT****I year II Semester**

Agricultural Marketing	1-0-0-2	Narender Irukulla
Applied Agriculture workshop II	0-1-3-3	G.Syamasundar Reddy
Applied Crop Production Technology II	2-1-0-3	B.Bhaskar Reddy
Applied Crop Protection Technology II	2-1-0-3	TB Gaur
ICTs in Agriculture	2-1-1-3	P. Krishna Reddy
SDLC, Database Application Development & Project Mgmt	2-1-1-3	P.Krishna Reddy <b>(Coordinator)</b>

**MS by Research in Computational Linguistics****I year II Semester**

CS 5728	NLP Applications	3-0-2-4	Sriram V + Samar Husain
HS 5091	Computational Linguistics 2	3-0-1-4	Lakshmi Bai + Soma Paul
	CS Elective	3-0-1-4	
	Stream/Breadth Elective	3-0-1-4	

**II year II Semester**

MS Thesis	0-0-36-12
-----------	-----------

**PhD CL****I year II semester****Stream I (CS, Science and Maths):**

CS5728	NLP Applications	3-0-2-4	Sriram V + Samar Husain
HS5091	Computational Linguistics-2	3-0-0-4	Lakshmi Bai + Soma Paul
	Elective (Computer Science)	3-0-0-4	
	Project	0-0-6-2	

**Stream II (Language and Linguistics):**

MA3004	Basic Maths 2	3-0-0-4	Santhi Karlapalem
HS5091	Computational Linguistics 2	3-0-0-4	Lakshmi Bai + Soma Paul
CS5003	Computer and Scripting 2	3-0-2-4	Nihar Sharma (Coordinator: Soma Paul)

## Elective

HS5096 Linguistic Data 2 3-0-0-4 Dipti M Sharma

## \* Flexi core

### Electives

CS4731	Information Retrieval and Extraction	3-1-0-4	Vasudeva Varma
CS4210	Parallel Programming	3-1-0-4	R.Govindarjulu
CS6206	Multicore Architectures	3-1-0-4	Kishore Kothapalli
CS4772	Artificial Neural Networks	3-1-0-4	Yegnanarayana
ET6651	Design for Testability (For M.Tech VLSI Students)	3-1-0-4	M.Satyam
ET4351	Time Frequency Analysis	3-1-0-4	Suryakanth VG
CS4450	Web Data Knowledge Mgmt	3-1-0-5	Vikram Pudi
CS5765	Computer Vision	3-1-0-4	CV Jawahar
CS4740	Speech Technology	3-1-0-4	Suryakanth VG
ECE467	CMOS Radio Frequency IC Design	3-1-0-4	Syed Azeemuddin
CS5900	Product Development	3-1-0-4	Kavita Vemuri
CS5470	System and Network Security	3-1-0-4	Bruhadeshwar
CS5728	NLP Applications	3-0-2-4	Sriram V + Samar Husain
CS6728	Topics in NL Semantics	3-1-0-4	Soma Paul
CS4462	Internals of Application Servers	3-1-0-4	Ramesh Loganathan
	Embedded Robotics II	3-1-0-4	K.Madhav Krishna
	Intro to Robotics: Mechanics & Control	3-1-0-4	E.Vijay Prakash
	Applications of Classical & Quantum Mechanics	3-1-1-5	Prabhakar B + Deva Priyakumar
	e-Governance	3-1-0-4	R K Bagga
	Remote Sensing	3-1-0-4	KS Rajan+RC Prasad <b>(Max No: 40)</b>
	Process Engineering	3-1-0-4	Kesav V Nori
	Dynamic, Concurrent Functional Language	3-1-0-4	Prasad Y (Kido Software)
ET4105	Signal Detection & Estimation Theory (From UG3 onwards)	3-1-0-4	PRK Rao
CS5755	Advanced Signal & Image Processing	3-1-0-4	Jayanthi Sivaswamy

### Open Electives

MG4575	Environmental Planning & Policy	3-1-0-4	KS Rajan <b>(Max. No: 30)</b>
CS6985	Intro. to Cognitive Neurophysiology	3-1-0-4	PS Deb
HS5091	Computational Linguistics-2	3-0-0-4	Lakshmi Bai + Soma Paul

CS4786	Advanced Cognitive Science	3-1-0-4	Amitash Ojha + Bipin
SC3201	Intro. to Biology	3-1-0-4	A Rameshwar
MA3700	Linear Programming	3-1-0-4	S.B. Sinha
	Cognitive Neuroscience	3-1-0-4	Bipin
	Building Energy Simulation	3-1-0-4	Vishal Garg
	Learning Science by doing: A Lab-based Approach	3-1-0-4	Tapan Kumar Sau + Deva Priyakumar <b>(Max. No: 30)</b>

**HSSM (Max. No. of students in each course are 35)**

HS3009	Understanding work and life <b>(Pre-Requisite: Human Values 1&amp;2)</b>	3-1-0-4	Pradeep Ramancharla
	Meaning: Cognition, Language & Ontology Phenomenology of Perception	3-1-0-4	Navjyoti Singh PRK Rao & Navjyoti Singh
	Introduction to Vedic Darshan	3-1-0-4	Shatrunjay Rawat
HS3008	Life Literature & Thought	3-0-0-4	Vinish Gupta (SIDH)
	Social & Technical Innovation	3-0-3-4	Vinish Gupta (SIDH)
	Understanding Human Society & Cultural Variations	3-1-0-4	M. Romesh Singh (Dept of Anthropology, UOH)
	Partitioned Politics, Fragmented Nation	3-1-0-4	Anuja Madan (Literature, DU)
	Minds and Machines	3-1-0-4	Anil Nukala (Philosophy, UOH)

**Sd/-  
Dean (Academics)**

**Date: 04.12.09**

**Sd/-  
Director**