

**B.Tech. 2nd Year Courses (CCM Chairperson: Dr. Aditya Nigam)**

Sl. No.	Course No.	Course Title	Credits L-T-P-C	Instructor	Remarks (if any)
1	IC121	Mechanics of Particles and Waves	2.5-0.5-0-3	PP	
2	IC 136	Understanding Biotechnology and Its Applications	3-0-0-3	Kasturi	
3	IC 240	Mechanics of Rigid Bodies	1.5-1.5-0-3	RG	
4	IC 241	Materials Science for Engineers	3-0-0-3	SSR	
5	IC 260	Signals and Systems	3-0-0-3	ST	
6	IC 272	Data Science III	2-0-2-3	Dileep, AKS, VD, RP	
7	BE 201	Cell Biology	3-0-2-4	TB	
8	BE 202	Molecular Biology and Biochemistry	2-0-2-3	AP	
9	CS 202	Data Structure and Algorithms	3-0-2-4	VJ,VD	
10	CS 208	Mathematical Foundations of Computer Science	3-1-0-4	Samar, Astrid	
11	EP 301	Engineering Mathematics – 2	3-1-0-4	SP	
12	PH 301	Quantum Mechanics and Applications	3-0-0-3	SKP	
13	CE 251	Hydraulics Engineering	3-0-0-3	RV	
14	EE 203	Network Theory	3-0-0-3	SS, SB	
15	HS 105	Basic Communication Skills	3-0-0-3	Suman/RD	

**B.Tech. 3rd & 4th year CSE Courses (CCM Chairperson: Dr. Nitu Kumari)**

Sl. No.	Course No.	Course Title	Credits L-T-P-C	Instructor	Remarks (if any)
1	CS 307	System Practicum	0-0-3-2	AN	
2	CS 308	Large Applications Practicum	0-0-3-2	PR	
3	CS 310	Introduction to Communicating Distributed Processes	3-0-2-4	SK	
4	CS 502	Compiler Design	3-0-2-4	Manas	
5	CS 523	Verification of Reactive Systems	3-0-0-3	Astrid	
6	CS 551	Computer Graphics and Game Design	2-0-2-3	JM	
7	CS 592	Reactive Design Patterns	2-0-0-2	BDC	
8	CS 669	Pattern Recognition	3-1-0-4	AB	
9	DP 401P	Major Technical Project	3-0-0-3	FA: CSE	

**B.Tech. 3rd & 4th year EE Courses (CCM Chairperson: Dr. M. Talha)**

<b>Sl. No.</b>	<b>Course No.</b>	<b>Course Title</b>	<b>Credits L-T-P-C</b>	<b>Instructor</b>	<b>Remarks (if any)</b>
1	EE 301	Control Systems	2.5-0.5-0-3	TJ	
2	EE 303	Power Systems	3-1-0-4	Pratim	
3	EE 305	Digital Signal Processing	3-1-0-4	RMR	
4	EE 503	Advanced Communication Theory	3-0-0-3	Adarsh	
5	EE 580	Network Systems: Modelling and Analysis	3-0-0-3	Sree	
6	EE 608	Digital Image Processing	3-0-2-4	AKS	
7	DP 401P	Major Technical Project	3-0-0-3	FA: EE	
8	EE 622	Microwave Integrated Circuits	3-0-0-3	GSR	

**B.Tech. 3rd & 4th year ME Courses (CCM Chairperson: Dr. Aditi H.)**

Sl. No.	Course No.	Course Title	Credits L-T-P-C	Instructor	Remarks (if any)
1	ME 206	Mechanics of Solids	2.5-0.5-0-3	AG	
2	ME 303	Heat Transfer	2.5-0.5-0-3	GB	
3	ME 305	Design of Machine Elements	3-1-0-4	RK	
4	ME 308	Manufacturing Engineering	3-0-0-3	SZ	
5	ME 601	Advanced Finite Element Methods	3-0-0-3	RK, SCJ	
6	ME 604	Experimental Methods in Thermal Engineering	3-0-0-3	Parmod	
7	DP 401P	Major Technical Project	3-0-0-3	FA: ME	

**B.Tech. 3rd & 4th Year CE Courses (CCM Chairperson: Dr. Muslim Malik)**

Sl. No.	Course No.	Course Title	Credits L-T-P-C	Instructor	Remarks (if any)
1	CE 303	Water Resources Engineering	3-0-0-3	DS	
2	CE 351	Design of Reinforced Concrete Structures	2-1-0-3	Sandip	
3	CE 352	Transportation Engineering	3-0-0-3	VUK	
4	CE 402	Geotechnical Engineering II	2-1-0-3	Mousumi	
5	CE 501	Remote Sensing	2-0-2-3	DPS	
6	CE 558	Air Pollution and its Mitigation	3-0-0-3	Sayantan	
7	CE 559	Biological Wastewater Treatment	3-0-0-3	AJP	
8	CE 560	Soil Dynamics	3-0-0-3	Ashutosh	
9	DP 401P	Major Technical Project	3-0-0-3	FA: CE	

**B.Tech. 3rd & 4th year SHSS Courses (CCM Chairperson: Dr. Pradeep Kumar (SoE))**

Sl. No.	Course No.	Course Title	Credits L-T-P-C	Instructor	Remarks (if any)
1	HS 202	Principles of Economics	3-0-0-3	VR/Ramna	
3	HS 205	Financial Accounting	3-0-0-3	Puran	
4	HS 304	Organizational Management	3-0-0-3	SD	
5	HS 352	German II	3-0-0-3	Neha	
6	HS 358	Science Writing	3-0-0-3	Aruna	
7	HS 391	Introduction to World History	3-0-0-3	RD	
8	HS 461	Consumer Behavior	3-0-0-3	SD	
9	HS 531	Gender and Development	3-0-0-3	Suman	
10	HS 537	Post-Reform India: Polity, Society and Economy	3-0-0-3	surya	
11	HS 532	Sustainable Development and Environmental Protection	3-0-0-3	SDG	
12	HS 538	Development Economics	3-0-0-3	Ramna	
13	HS 522	Research Methodology to Social Science	3-0-0-3	MVD, SDG	MA Courses
14	HS 524	India in the 1950s: Biography of a Foundational Decade	3-0-0-3	Devika	MA Courses
15	HS 552P	Development Studies Practicum 2	0-0-8-4	NC (Coordinator)	MA Courses
16	HS 526	Human Geography: A Western Himalayan Perspective	3-0-0-3	Devika, NC	MA Courses
17	HS 527	Indian Social Structure and Development	3-0-0-3	NC	MA Courses
18	HS 528	Information Technology and Development	3-0-0-3	VD, SRC	MA Courses
19	HS 529	Natural Resource and Development	3-0-0-3	Powar, SKM, Sayantan	MA Courses

**M.Sc Chem & Physics/I-Ph.D Courses (CCM Chairperson: Dr. Renu R.)**

Sl. No.	Course No.	Course Title	Credits L-T-P-C	Instructor	Remarks (if any)
1	CY 501	Organic Reaction and Mechanism	4-0-0-4	Amit P	
2	CY 506	Chemistry of Transition Elements	3-1-0-4	GA	
3	CY 508	Organometallic Chemistry	2-0-0-2	PCP	
4	CY 512	Advanced Quantum Chemistry	3-0-0-3	AC	
5	CY 514	Chemical Thermodynamics & Electrochemistry	3-0-0-3	AH	
6	CY 521	Mathematics for Chemists	3-0-0-3	AC	
7	CY-522	Computational Chemistry	3-0-0-3	BM	
8	CY 598P	Mini Project	0-0-8-4	AP	
9	CY 646	Advanced NMR Spectroscopy: A Problem Based Approach	3-0-0-3	SG	
10	CY 670	Fluorescence Spectroscopy Microscopy and Applications	3-0-0-3	CKN	
11	DP 501P	Design Practicum - 1	0-0-4-2	BM	
12	PH 508	Magnetism and Magnetic Materials	3-0-0-3	KM	
13	PH 511	Mathematical Physics	4-0-0-4	SP	
14	PH 512	Classical Mechanics	4-0-0-4	Girish	
15	PH 513	Quantum Mechanics	3-0-0-3	SKP	
16	PH 514	Electronics	3-0-0-3	BR	
17	PH 516	Research Project I	0-0-4-2	KM	
18	PH 517	Research Project II	0-0-8-4	KM	
19	PH 518P	Post Graduate Project-I	0-0-6-3	PK	
20	PH 601	Mesoscopic Physics and Quantum Transport	3-0-0-3	ajay	
21	PH 603	Advanced Condensed Matter Physics	3-0-0-3	CSY	
22	PH 611P	Experimental Research Techniques	0-0-7-4	CSY	
23	PH 613	Special Topics in Quantum Mechanics	3-0-0-3	HV	
24	PH 614	Seminar and Report	0-0-4-2	PK	
25	PH 615P	Mini Thesis I	0-0-6-3	PK	
26	PH 701	Introduction to Molecular Simulation	2-0-4-4	PJ	

**M.Tech(Biox)/M.Sc(Maths)/MA(Development) Courses (CCM Chairperson: Dr. Suman S.)**

Sl. No.	Course No.	Course Title	Credits L-T-P-C	Instructor	Remarks (if any)
1	BY 510	Advanced Cell Biology	3-0-0-3	PM	
2	BY 511	Cell Physiology in health and disease	3-0-0-3	AP	
3	BY 512	Quantitative and computational Biology	3-0-0-3	TPS	
4	BY 513	Cellular Bioprocess Technology	3-0-0-3	SKM	
5	BY 525	Seminar	0-0-2-1	BioX faculties (Rajanish will coordinate)	
6	BY 698P	Post Graduate Project-I	0-0-32-16	BioX and other faculties (AJ, TB will coordinate)	
7	MA 511	Real Analysis	3-1-0-4	Qaiser	
8	MA 512	Linear Algebra	3-1-0-4	SA	
9	MA 513	Ordinary Differential Equation	3-1-0-4	MM	
10	MA 514	Computer Programming	3-0-0-3	R Ray	
11	MA 514P	Computer Programming Lab	0-0-3-2	R Ray	
12	MA 515	Applied Mathematical Programming	3-1-0-4	MT	
13	MA 581P	Post Graduate Project-I	9	R Ray	
14	MA 603	Advanced Partial Differential Equations	3-0-0-3	NK	
15	MA 612	Operator Theory	3-0-1-4	KH	
16	MA 653	Computational Financial Modelling	2-1-0-3	MT	
17	MA 653P	Computational Financial Modelling Lab	0-0-2-1	MT	



**M. Tech ES, EM & SE Courses (CCM Chairperson: Dr. Bindu Radhamay)**

Sl. No.	Course No.	Course Title	Credits L-T-P-C	Instructor	Remarks (if any)
1	CE 511	Structural Dynamics with Application to Earthquake Engineering	3-0-0-3	Subhamoy	
2	CE 555	Advanced Design of Structures	3-0-0-3	KS	
3	CE 557	Solid Mechanics in Structural Engineering	3-0-0-3	MG	
4	CE 688P	Post Graduate Project-I	3-0-0-3	Mousumi	
5	EN 501	Energy Sources and Power Plants	3-0-0-3	Atul	
6	EN 502	Emerging Energy Sources	3-0-0-3	Powar	
7	EN 503	Energy Storage Technologies	3-0-0-3	Rik	
8	EN 504	Energy: Environment Policy and Law	3-0-0-3	SDG,VR	
9	EN 613	Creep-Fatigue Interaction	3-0-0-3	VB	
10	ME 504	Numerical Methods for Engineering Computation	3-0-0-3	HP	
11	ME 509	Nano-manufacturing	3-0-0-3	JKR	
12	ME 515	Carbon Materials and Technology	3-0-0-3	Swati	
13	ME 602	Mechanical Vibration	3-0-0-3	Amit	
14	ME 603	Advanced Fluid Mechanics	3-0-0-3	PAK	
15	ME 614	Compressible Flow and Gas Dynamics	2.5-0.5-0-3	Pradeep	
16	ME 632	Mechanics for Energy Systems	3-0-0-3	talha	
17	ME 696P	Post Graduate Project-I	0-0-28-14	Guide	
18	ME 698P	Post Graduate Project-I	0-0-28-14	Guide	
19	HS 541	Technical Communication	1-0-0-1	Aruna	
20	CE 591_1	Special Topics in Civil and Mechanical Engineering	3-0-0-3	Prof. Tarun Kant (LC: Sandip Saha)	

**M. Tech VLSI, CSP & PED Courses (CCM Chairperson: Dr. Manu D. & Dr. Anil Kr. Sao)**

Sl. No.	Course No.	Course Title	Credits L-T-P-C	Instructor	Remarks (if any)
1	CS 571	Programming Practicum	1-0-3-3	RP	
2	EE 504	Switch Mode Power Conversion	2.5-0.5-0-3	NRT	
3	EE 506	Solar Photovoltaic Energy Systems	2.5-0.5-0-3	RO	
4	EE 508	Fundamentals of Electric Drives	3-0-0-3	HM	
5	EE 509	Linear Dynamical Systems	3-0-0-3	Singha	
6	EE 512	CMOS analog IC design	3-0-2-4	Rahul	
7	EE 514	Robust Control Systems	3-0-0-3	TJ	
8	EE 516	Biomedical Systems	2.5-0.5-2-4	SRC	
9	EE 520	Microelectronics devices and modeling	3-0-0-3	Ankush, KG	
10	EE 522	Matrix Theory	3-0-0-3	RMR	
11	EE 524	Digital MOS LSI Circuits	3-0-0-3	HS	
12	EE 527	Analysis and Design of Power Electronic Converters	3-0-0-3	MD	
13	EE 528	Modeling and Analysis of Electrical Machines	3-0-0-3	BSR	
14	EE 534	Probability and Random Processes	3-0-0-3	Sharma	
15	EE 540	Wide Band Gap Devices in Power Electronics Applications	3-0-0-3	MD	
16	EE 615	Nano-electronics and nano-microfabrication	3-0-0-3	SKS	
17	EE 621	Radiating Systems	3-1-0-4	GSR	
18	EE 624P	Post Graduate Project-I	0-0-16-15	Guide	
19	EE 626P	Post Graduate Project-I	0-0-20-10	Guide	
20	EE 650P	Post Graduate Project-I	0-0-34-17	Guide	