

## Details of Courses for Semester-I, 2023-24 (UG)

### B.Tech Semester-I

Course Code	Course Name	L-T-P-C	Offered By Discipline	Instructor	No. of Student	Remarks
NS1001	Mathematics-I (4 Sections)	3-1-0-4	NS	SSL+LKB+NKM +DM	558	Common for all
NS1002	Engineering Mechanics (4 Sections)	2-1-2-4	NS	MKR+NRJ+ NKJ+YSK	558	Common for all
HS1001	Effective Communications	1-2-0-2	LA	MA(C+D+E1+E2)& JAMF (A+B)	630	Common for all
IT1001	Introduction to Programming In C <b>02 Batches</b>	2-0-3-3	CSE	VKJ (T)+ Mr. Aditya Sharma(L)	280	only for CSE
IT1002	Introduction to Programming In Python	2-0-3-3	ECE	AV	140	only for ECE
IT1002	Introduction to Programming In Python	2-0-3-3	ME	Guest Faculty	208	Common for ME, SM and DS
ES1002	Fundamentals of Electrical and Electronics Engineering	3-0-2-4	ECE	PKP+VB	280	only for CSE
DS1005	Engineering Graphics	2-0-3-3	ME	PKJ+JKT [Lab: PKJ+JKT+YTD+ AKS+DSR]	345	Common for ECE,ME,SM and DS
CS1001	Introduction to Profession <b>(02 Batches)</b>	1-0-0-1	CSE	VKJ	280	Common for CSE
EC1001	Introduction to Profession	1-0-0-1	ECE	PKP	140	Common for ECE
ME1001	Introduction to Profession	1-0-0-1	ME	MZA	73	Common for ME
SM1001	Introduction to Profession	1-0-0-1	ME	MZA	69	Common for SM

### B.Des Semester-I

Course Code	Course Name	L-T-P-C	Offered By Discipline	Instructor	No. of Student	Remarks
DS1002	Design Fundamentals 1	2-0-2-3	DS	VF	66	Common for Design
DS1003	Design Drawing	1-0-3-2	DS	VF	66	Common for Design
DS1004	Representation Technique	2-0-2-3	DS	VF	66	Common for Design
DS1005	Engineering Graphics	2-0-3-3	ME	PKJ+JKT [Lab: PKJ+JKT+YTD+ AKS+DSR]	345	Common for ECE,ME,SM and DS
HS1001	Effective Communications	1-2-0-2	LA	MA(C+D+E1+E2) & JAMF (A+B)	630	Elective course
IT1002	Introduction to Programming In Python	2-0-3-3	ME	Guest Faculty	208	Common for ME, SM and DS
DS1001	Introduction to Profession	1-0-0-1	DS	PM	66	Common for Design

### Year Long Courses (common for B.Des. and B.Tech.)

ES1003	Innovation Theory and Practice	1-0-2-2	IA	Guest Faculty	630	To be checked with IIC & PCC
PC1001	Professional Development Course	1-0-0-1	PLACEMENT		630	To be given by Placement

### B.Tech Semester III

Course Code	Course Name	L-T-P-C	Offered By Discipline	Instructor	No. of Student	Remarks
IT2001	Data Structure in C (Theory) <b>02 Batches</b>	3-0-2-4	CSE	SKM (T) +Mr. Aditya Sharma (L)	307	Common
IT2002	Data Structure in Python	3-0-2-4		Guest Faculty	267	Common for ECE, ME, SM
<b>DC1 (Discipline Core 1)</b>						
CS2002	Computer Organization and Architecture <b>(02 Batches)</b>	3-0-0-3	CSE	MKB	282	Common for CSE
EC2002	Digital Electronics and Microprocessor Interfacing	3-0-2-4	ECE	SKJ	136	Common for ECE
ME2002	Manufacturing Process	3-0-2-4	ME	PT [Lab: AKS+DSR]	128	Common for ME & SM
<b>DC2 (Discipline Core 2)</b>						
CS2003	Database Management Systems (Theory) <b>02 Batches</b>	3-0-2-4	CSE	PK	285	Common for CSE
EC203a	Principle of Analog Communications	2-0-0-2	ECE	AtulK	156	Common for ECE
EC203b	Network Theory (Analysis and Synthesis)	2-0-0-2	ECE	MSP	143	Common for ECE
ME2003	Solid Mechanics	2-2-2-4	ME	SDP	63	Common for ME
SM2003	Solid Mechanics + Design of Mechanical Components	3-1-2-4	ME	AM	68	Common for SM
<b>DC3 (Discipline Core 3)</b>						
CS2004	Introduction to Data Science <b>02 Batches</b>	3-0-2-4	CSE	KKB+YTD	289	Common for CSE
EC204a	Electronics Devices and Circuits	2-0-0-2	ECE	MDB	145	Common for ECE
EC204b	Instrumentation and Measurement	2-0-0-2	ECE	TK	148	Common for ECE
ME2004	Engineering Thermodynamics	3-2-0-4	ME	TS	66	Common for ME
SM2004	Engineering Thermodynamics + Heat Transfer	3-1-0-4	ME	TC	77	Common for SM
<b>OE1 (Choose any one course from below electives)</b>						
OE2C09	Game Theory	3-0-0-3	CSE	AO	80	
OE2E01	Sensors and Actuators	3-0-0-3	ECE	KD	43	
OE2E02	Probability and random Process	3-0-0-3	ECE	SNS	91	
EC8006	Photovoltaics: Fundamentals and Applications	3-0-0-3	ECE	DPS	97	
OE2D11	Design Thinking	2-0-2-3	DS	PT	80	
OE2D15	Design Art and Aesthetics	3-0-0-3	DS	VF	101	
OE2N12	Numerical Methods for Engineers	3-0-0-3	NS	MKP	58	
OE2D14	Science and culture a comparison	3-0-0-3	English/LA	MA	90	
NS2001	Biology for Engineers	2-0-0-2	LA	Guest Faculty	286	For CSE only
<b>IT workshop I</b>						
IT2C01	OOPs in Java <b>(05 Batches)</b>	0-0-3-2	CSE	ND	282	Common for CSE
IT2E01	Matlab and Simulink, Pspice	0-0-3-2	ECE	AV	143	Common for ECE
IT2M01	<b>SolidWorks</b>	0-0-3-2	ME	DSR	67	Common for ME
IT2S01	<b>SolidWorks</b>	0-0-3-2	ME	DSR	67	Common for SM

### B.Des Semester-III

Course Code	Course Name	L-T-P-C	Offered By Discipline	Instructor	No. of Student
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DS Check once

DS2005	Studies in Form	2-0-2-3	DS	VF	59
DS2006	Industrial Design 1	2-0-2-3	DS	VF	59
DS2007	Communication Design 1	2-0-2-3	DS	TSG	59
DS2008	Design Project 1	0-0-6-3	DS	VF	59
DS2010	Material and Processes	2-0-2-3	DS	VF	59

**OE1 (Choose any one course from below electives)**

OE2C09	Game Theory	3-0-0-3	CSE	AO	80
OE2E01	Sensors and Actuators	3-0-0-3	ECE	KD	43
OE2E02	Probability and random Process	3-0-0-3	ECE	SNS	91
EC8006	Photovoltaics: Fundamentals and Applications	3-0-0-3	ECE	DPS	97
OE2D11	Design Thinking	2-0-2-3	DS	PT	80
OE2D15	Design Art and Aesthetics	3-0-0-3	DS	VF	101
OE2N12	Numerical Methods for Engineers	3-0-0-3	NS	MKP	58
OE2D14	Science and culture a comparison	3-0-0-3	English/LA	MA	90

**Year Long Courses (common for B.Des. and B.Tech.)**

PR2002	Discipline Project	0-0-0-2		Guide	605	Specific to Discipline
PC2002	Professional Development Course	1-0-0-1	Placement	COMMON for all students	595	To be given by Placement

**B.Tech Semester V**

Course Code	Course Name	L-T-P-C	Offered By Discipline	Instructor	No. of Student	
HS3004	Ecology & Environment Science		LA	VF	243	CSE Only
DS3001	Engineering Design –Including Design and Fabrication Project	1-0-6-4		Not Applicable	517	Common for all
<b>DC8 (Discipline Core 8)</b>						
CS3009	Network Security & Cryptography (02 Batches)	3-0-0-3	CSE	VSR	243	Common for CSE
EC3009	VLSI System Design (VLSI IC desien, logic synthesis using VHDL)	3-0-0-3	ECE	PR	124	Common for ECE
ME3009	Design of Mechanical Components	2-2-0-3	ME	SM	56	
SM3009	Additive and Subtractive Manufacturing Processes	2-0-2-3	ME	KP	47	
<b>DC9 (Discipline Core 9)</b>						
CS3010	Software Engineering (02 Batches)	3-0-0-4	CSE	AG	243	Common for CSE
EC3010	Fundamentals of Electromagnetic Theory	3-0-0-3	ECE	DKV	124	Common for ECE
ME3010	Industrial Internet of Things	2-0-2-3	ME	MZA	56	Common for ME
SM3010	Computer Aided Product Development	2-0-2-3	ME	RS	47	
<b>DC10 (Discipline Core 10)</b>						
CS3011	Artificial Intelligence (02 Batches)	3-0-0-3	CSE	DS	243	Common for CSE
EC3011	Digital Communications	3-0-0-3	ECE	MDB	124	Common for ECE
ME3011	Heat Transfer	3-0-2-4	ME	TC	56	Common for ME
SM3011	Industrial Automation	2-0-2-3	SM	TS	47	
<b>DC11 (Discipline Core 11)</b>						
SM3012	Advanced Cyber Physical System	2-0-2-3	ME	SA	47	
<b>OE3 (Choose any one course from below elective)</b>						
OE2C11	Principles of Programming Languages	3-0-0-3	CSE	AS*	92	
OE3E25	VLSI Design Modeling	3-0-0-3	ECE	PS	32	
OE3E40	Computation Genomic & Proteomic	3-0-0-3	ECE	SNS	58	
OE3D15	Applied Ergonomics	3-0-0-3	DS	PM	60	
OE3D16	Visual Ergonomics	3-0-0-3	DS	PM	63	
OE3D25	Lighting Design	3-0-0-3	DS	AB	90	
OE3D26	New Media Art	3-0-0-3	DS	VF	90	
OE3N32	Material Sciences	3-0-0-3	NS	AKK	44	
<b>IT workshop III</b>						
IT3C01	Computer Network Lab (05 Batches)	0-0-3-2	CSE	MS	244	
IT3E01	Tanner Tool (Tspice), VHDL and Verilog	0-0-3-2	ECE	KD	124	
IT3M01	CATIA and Power Mill	0-0-3-2	ME	AKS	57	
IT3S01	CATIA and Power Mill	0-0-3-2	ME	AKS	47	

**B.Des Semester-V**

Course Code	Course Name	L-T-P-C	Offered By Discipline	Instructor	No. of Student	
DS3001	Engineering Design –Including Design and Fabrication Project	1-0-6-4	Not Applicable	NA	516	
DS3009	Service Design	2-0-2-3	DS	VF	46	
DS3010	Sustainable Design	2-0-2-3	DS	VF	46	
DS3011	Design Management	2-0-2-3	DS	VF	46	
<b>OE3 (Choose any one course from below elective)</b>						
OE2C11	Principles of Programming Languages	3-0-0-3	CSE	AS*	92	
OE3E25	VLSI Design Modeling	3-0-0-3	ECE	PS	32	
OE3E40	Computation Genomic & Proteomic	3-0-0-3	ECE	SNS	58	
OE3D15	Applied Ergonomics	3-0-0-3	DS	PM	60	
OE3D16	Visual Ergonomics	3-0-0-3	DS	PM	63	
OE3D25	Lighting Design	3-0-0-3	DS	AB	90	
OE3D26	New Media Art	3-0-0-3	DS	VF	90	
OE3N32	Material Sciences	3-0-0-3	NS	AKK	44	
DS3012	Design Project 4 (compulsory)	0-0-6-3	DS	GUIDE	46	

**Year Long Courses (Commonfor B.Des. and B.Tech.)**

PR3003	Optional Project	0-0-0-2			517	Optional specific to discipline
PC3003	Professional Development Course	1-0-0-1	Placement		517	Common for all
<b>B.Tech Semester VII</b>						
<b>Course Code</b>	<b>Course Name</b>	<b>L-T-P-C</b>	<b>Offered By Discipline</b>	<b>Instructor</b>	<b>No. of Student</b>	
ES1003	Innovation Theory and Practice	1-0-2-2	IA	Guest Faculty	512	To be checked with IIC & PCC
<b>OE07 (Choose any one course from below elective)</b>						
CS8016	Cloud Computing	3-0-0-3	CSE	MS	120+14	
OE3C28	Cyber Security	2-0-2-3	CSE	ND	75	
EC8033	Radio Frequency Integrated Circuits Design	3-0-0-3	ECE	MSP	36	
OE4E69	Optical Communication	3-0-0-3	ECE	DKV	17	
ME8021	Advanced Mechanics of Solids	3-0-0-3	ME	VKG	2+2	
OE4M41	Micro and Nano Manufacturing	3-0-0-3	ME	KP	63	
OE4L73	Life Skills Management	3-0-0-3	English/LA	JAMF	91	
<b>OE08 (Choose any one course from below elective)</b>						
CS8018	Web Mining	3-0-0-3	CSE	ACP	120+14	
CS8013	Mobile and Wireless Networks	3-0-0-3	ECE	RKJ	108	
OE4E71	Satellite communication	3-0-0-3	ECE	AtulK	89	
ME5D02	Mechanical Vibration and Condition Monitoring	3-0-0-3	ME	SDP	26	
ME5020	Advanced Manufacturing Processes and Technologies	3-0-0-3	ME	RS	50	
MT5004	Microcontroller+PLC	2-0-2-3	ME	VKG+TS	5+1	
<b>OE09 (Choose any one course from below elective)</b>						
CS8025	Fuzzy Sets, Logic and Applications	3-0-0-3	CSE	AS	120+2	
EC8004	Pattern Recognition and Machine Learning	3-0-0-3	ECE	AV	84	
ME8003	Sensors and Actuators	2-0-2-3	ME	MS	64	
ME8002	Design of Experiments	3-0-0-3	ME	AM	14+8	
OE4N77	Optimization Theory and Applications	3-0-0-4	NS	DM	74	
<b>OE10 (Choose any one course from below elective)</b>						
CS8007	Social Network Analysis	2-0-2-3	CSE	ACP	118+16	
EC8030	CMOS Memory Design	3-0-0-3	ECE	PR	81	
OE4M52	Rapid Product Development Technologies	3-0-0-3	ME	MS	84+1	
ME8016	Biomaterials Science and Engineering	3-0-0-3	ME	HSN	88	
DS5004	Product Design-I	2-0-2-3	DS	PT	6+21	
<b>OE11 (Choose any one course from below elective)</b>						
CS8004	Deep Learning and Applications	2-0-2-3	CSE	AO	56+15	
EC8017	Internet of Things	3-0-0-3	ECE	RKJ	90	
EC8032	Numerical Techniques in Electromagnetics	3-0-0-3	ECE	BM	52	
OE4M74	AI and ML in Mechanical Engineering	2-0-2-3	ME	VKG/JKT	13+6	
OE4M22	Industrial Instrumentation and Metrology	3-0-0-3	ME	CD	30+1	
OE4L02	Japanese Language Course	3-0-0-3	LA	Guest Faculty	44	
<b>B.Des Semester-VII</b>						
<b>Course Code</b>	<b>Course Name</b>	<b>Credit</b>	<b>Offered By Discipline</b>	<b>Instructor</b>	<b>No. of Student</b>	
DS4013	Design Seminar I	3	DS	Guide	54	
DS4014	Design Thesis II	14	DS	Guide	54	
<b>Year Long Courses (Common for B.Des. and B.Tech.)</b>						
PC4004	Professional Development Course	1-0-0-1	Placement			Common for all

DC	Discipline Core (All students of that discipline should register for the course)	
	Those who have already done the course can not take the course	
<b>The Senate has decided a batch size</b>		
<b>Type</b>	<b>Batch Size (no. of Maximum students)</b>	
Theory	125	
Lab (experimental)	30	
Lab (simulations)	60	

Accordingly the number of batches and instructors to be decided.

**Note : This is a final list of courses, however slight changes are possible. For your kind information.**

Elective Course Limit	Offer by CSE Discipline	120
	Offer by ECE Discipline	90
	Offer by ME Discipline	90
	Offer by SM Discipline	90
	Offer by DS Discipline	90