

Details of Courses for Semester-I, 2024-25 (UG)

B.Tech Semester-I						
Course Code	Course Name	L-T-P-C	Offered By Discipline	Instructor	No. of register students	Remarks
NS1001	Mathematics-I (4 Sections)	3-1-0-4	NS	SSL+LKB+NKM+DM		Common for all
NS1002	Engineering Mechanics (4 Sections)	2-1-2-4	NS	ACM+NRJ+NKJ+AKK		Common for all
HS1001	Effective Communications (4 Sections)	1-2-0-2	LA	MA- Batch C,D,E JAMF- Batch- A& B YTD +		Common for all
IT1001	Introduction to Programming In C (02 Batches)	2-0-3-3	CSE	Mr. Aditya Sharma-Lab AV		only for CSE only for ECE
IT1002	Introduction to Programming In Python	2-0-3-3	ECE	SKC+RP [Lab: SKC+RP]		Common for ME, SM and DS
IT1002	Introduction to Programming In Python (02 Batches)	2-0-3-3	ME	PKP+PR		only for CSE
ES1002	Fundamentals of Electrical and Electronics Engineering	3-0-2-4	ECE	MKT+SGM [Lab: MKT+SGM+PSK+ARR]		Common for ECE, ME, SM and DS
DS1005	Engineering Graphics (02 Batches)	2-0-3-3	ME			Common for ECE, ME, SM and DS
CS1001	Introduction to Profession (02 Batches)	1-0-0-1	CSE	VKJ		Common for CSE
EC1001	Introduction to Profession	1-0-0-1	ECE	PNK		Common for ECE
ME1001	Introduction to Profession	1-0-0-1	ME	MZA		Common for ME
SM1001	Introduction to Profession	1-0-0-1	ME	MZA		Common for SM

B.Des Semester-I

Course Code	Course Name	L-T-P-C	Offered By Discipline	Instructor	No. of register students	Remarks
DS1002	Design Fundamentals 1	2-0-2-3	DS	PM		Common for Design
DS1003	Design Drawing	1-0-3-2	DS	VF		Common for Design
DS1004	Representation Technique	2-0-2-3	DS	VF		Common for Design
DS1005	Engineering Graphics (02 Batches)	2-0-3-3	ME	MKT+SGM [Lab: MKT+SGM+PSK+ARR]		Common for ECE, ME, SM and DS
HS1001	Effective Communications (4 Sections)	1-2-0-2	LA	MA- Batch C,D,E JAMF- Batch- A& B		Common for all
IT1002	Introduction to Programming In Python (02 Batches)	2-0-3-3	ME	SKC+RP [Lab: SKC+RP]		Common for ME, SM and DS
DS1001	Introduction to Profession	1-0-0-1	DS	PM		Common for Design

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

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

B.Tech Semester III

Course Code	Course Name	L-T-P-C	Offered By Discipline	Pre-requisites for Elective courses	Instructor	No. of register students	Remarks
NS2001	Biology for Engineers	2-0-0-2	LA			282	For CSE only
IT2001	Data Structure in C (02 Batches)	3-0-2-4	CSE		SKM	282	For CSE only
IT2002	Data Structure in Python	3-0-2-4	ECE		VF	141	Common for ECE
IT2002	Data Structure in Python	3-0-2-4	ME, SM & DS		VF	177	Common for ME, SM & DS

DC1 (Discipline Core 1)

CS2002	Computer Organization and Architecture (02 Batches)	3-0-0-3	CSE		YTD	287	Common for CSE
EC2002	Digital Electronics and Microprocessor Interfacing	3-0-2-4	ECE		SKJ	141	Common for ECE
ME2002	Manufacturing Process	3-0-2-4	ME		HSN	66	Common for ME & SM
SM2002	Manufacturing Process	3-0-2-4	SM		PT	57	Common for ME & SM

DC2 (Discipline Core 2)

CS2003	Database Management Systems (02 Batches)	3-0-2-4	CSE		PK	287	Common for CSE
EC203a	Principle of Analog Communications	2-0-0-2	ECE		ST	141	Common for ECE
EC203b	Network Theory (Analysis and Synthesis)	2-0-0-2	ECE		MSP	141	Common for ECE
ME2003	Solid Mechanics	2-2-2-4	ME		VKG	66	Common for ME
SM2003	Solid Mechanics + Design of Mechanical Components	3-1-2-4	SM		SDP	57	Common for SM

DC3 (Discipline Core 3)

CS2004	Introduction to Data Science (02 Batches)	3-0-2-4	CSE		YTD	287	Common for CSE
EC204a	Electronics Devices and Circuits	2-0-0-2	ECE		TK	141	Common for ECE
EC204b	Instrumentation and Measurement	2-0-0-2	ECE		PS	141	Common for ECE
ME2004	Engineering Thermodynamics	3-2-0-4	ME		PSK	66	Common for ME
SM2004	Engineering Thermodynamics + Heat Transfer	3-1-0-4	SM		TC	57	Common for SM

OE1 (Choose any one course from below electives)

OE2C09	Discrete Structures	3-0-0-3	CSE	Pre-requisites is not required	AO	120	Open for all
OE2E01	Introduction to Sensors and Actuators	3-0-0-3	ECE	Pre-requisites is not required	KD	90	Open for all
OE2E03	Fundamentals of Signals and Systems	3-0-0-3	ECE	Pre-requisites is not required	AK	44	Open for all
OE2M07	Operations Research	3-0-0-3	ME	Pre-requisites is not required	SKC	62	Open for all
OE2M09	Probabilistic Approaches to Machine Learning	3-0-0-3	SM	Pre-requisites is not required	SA	90	Open for all
OE2N12	Numerical Methods for Engineers	3-0-0-3	NS	Pre-requisites is not required	MKP	78	Open for all
OE2N13	Semiconductor Optoelectronic Devices	3-0-0-3	NS	Pre-requisites is not required	YSK	35	Open for all
OE2D14	SCIENCE AND CULTURE - A COMPARISON	3-0-0-3	English/LA	Pre-requisites is not required	MA	90	Open for all

IT workshop I

IT2C01	IT workshop I	0-0-3-2	CSE		YTD	287	Common for CSE
IT2E01	IT workshop I	0-0-3-2	ECE		AV	141	Common for ECE
IT2M01	IT workshop I	0-0-3-2	ME		DSR	66	Common for ME
IT2S01	IT workshop I	0-0-3-2	ME		DSR	57	Common for SM

B.Des Semester-III

Course Code	Course Name	L-T-P-C	Offered By Discipline	Pre-requisites for Elective courses	Instructor	No. of register students	Remarks
DS2005	Studies in Form	2-0-2-3	DS		VF	57	only for B.Des
DS2006	Industrial Design 1	2-0-2-3	DS		VF	57	only for B.Des
DS2007	Communication Design 1	2-0-2-3	DS		TSG	57	only for B.Des
DS2008	Design Project 1	0-0-6-3	DS		Guide	57	only for B.Des
DS2010	Material and Processes	2-0-2-3	DS		VF	57	only for B.Des

OE1 (Choose any one course from below electives)							
OE2C09	Discrete Structures	3-0-0-3	CSE	Pre-requisites is not required	AO	120	Open for all
OE2E01	Introduction to Sensors and Actuators	3-0-0-3	ECE	Pre-requisites is not required	KD	90	Open for all
OE2E03	Fundamentals of Signals and Systems	3-0-0-3	ECE	Pre-requisites is not required	AK	44	Open for all
OE2M07	Operations Research	3-0-0-3	ME	Pre-requisites is not required	SKC	62	Open for all
OE2M09	Probabilistic Approaches to Machine Learning	3-0-0-3	SM	Pre-requisites is not required	SA	90	Open for all
OE2N12	Numerical Methods for Engineers	3-0-0-3	NS	Pre-requisites is not required	MKP	77	Open for all
OE2N13	Semiconductor Optoelectronic Devices	3-0-0-3	NS	Pre-requisites is not required	YSK	35	Open for all
OE2D14	SCIENCE AND CULTURE - A COMPARISON	3-0-0-3	English/LA	Pre-requisites is not required	MA	90	Open for all

Year Long Courses (common for B.Des. and B.Tech.)					
PR2002	Discipline Project	0-0-0-2			
PC2002	Professional Development Course	1-0-0-1 Placement			

B.Tech Semester V						
Course Code	Course Name	L-T-P-C	Offered By Discipline	Pre-requisites for Elective courses	Instructor	No. of register students
HS3004	Ecology & Environment Science	2-0-0-2	LA			281
DS3001	Engineering Design –Including Design and Fabrication Project	1-0-6-4				597

DC8 (Discipline Core 8)						
CS3009	Network Security & Cryptography (02 Batches)	3-0-0-3	CSE		YTD	281
EC3009	VLSI System Design (VLSI IC design, logic synthesis using VHDL)	3-0-0-3	ECE		PR	140
ME3009	Design of Mechanical Components	2-0-2-3	ME		KP	57
SM3009	Additive and Subtractive Manufacturing Processes	2-0-2-3	SM		KP	61

DC9 (Discipline Core 9)						
CS3010	Software Engineering (02 Batches)	3-0-2-4	CSE		AG	281
EC3010	Fundamentals of Electromagnetic Theory	3-0-0-3	ECE		DKV	140
ME3010	Industrial Internet of Things	2-0-2-3	ME		MZA	57
SM3010	Computer Aided Product Development	2-0-2-3	SM		ARR	61

DC10 (Discipline Core 10)						
CS3011	Artificial Intelligence (02 Batches)	3-0-0-3	CSE		DS	281
EC3011	Digital Communications	3-0-0-3	ECE		MDB	140
ME3011	Heat Transfer	3-0-2-4	ME		TC	57
SM3011	Industrial Automation	2-0-2-3	SM		TS	61

DC11 (Discipline Core 11)						
SM3012	Advanced Cyber Physical System	2-0-2-3	ME		SKS	61

OE3 (Choose any one course from below elective)						
CS8028	Hardware Security (02 Batches)	3-0-0-3	CSE	CS2002 - Computer Organization and Architecture MATLAB/C++/Python and Biology for Engineers	VSR	254
OE3E40	Computation Genomic & Proteomic	3-0-0-3	ECE	(OE2E02)Probability and random Process	SNS	90
OE4E50	Detection and Estimation Theory	3-0-0-3	ECE		ST	44
OE3M26	Computer-Aided Design (CAD)	3-0-0-3	ME	ME2002/SM2002	MS	13
OE4M23	Business Analytics using R	3-0-0-3	SM	ME2007/SM2007/ OE2M07	SA	82
OE3N36	Probability and Statistics	3-0-0-3	NS	Only for ECE, ME & SM Discipline	BG	44
OE3D16	Visual Ergonomics	2-0-2-3	DS	DS1002- Design Fundamentals I and DS1006 - Design Fundamentals II	PM	58

IT workshop III						
IT3C01	IT workshop III	0-0-3-2	CSE		Mr. Aditya Sharma	281
IT3E01	IT workshop III	0-0-3-2	ECE		KD	140
IT3M01	IT workshop III	0-0-3-2	ME		AKS	57
IT3S01	IT workshop III	0-0-3-2	ME		AKS	61

B.Des Semester-V						
Course Code	Course Name	L-T-P-C	Offered By Discipline	Pre-requisites for Elective courses	Instructor	No. of register students
DS3001	Engineering Design –Including Design and Fabrication Project	1-0-6-4	Not Applicable			597
DS3009	Service Design	2-0-2-3	DS		SP	58
DS3010	Sustainable Design	2-0-2-3	DS		AB	58
DS3011	Design Management	2-0-2-3	DS		VF	58
DS3012	Design Project 4 (compulsory)	0-0-6-3	DS		GUIDE	58

OE3 (Choose any one course from below elective)						
CS8028	Hardware Security (02 Batches)	3-0-0-3	CSE	CS2002 - Computer Organization and Architecture MATLAB/C++/Python and Biology for Engineers	VSR	254
OE3E40	Computation Genomic & Proteomic	3-0-0-3	ECE	(OE2E02)Probability and random Process	SNS	90
OE4E50	Detection and Estimation Theory	3-0-0-3	ECE		ST	44
OE3M26	Computer-Aided Design (CAD)	3-0-0-3	ME	ME2002/SM2002	MS	15
OE4M23	Business Analytics using R	3-0-0-3	SM	ME2007/SM2007/ OE2M07	SA	82
OE3N36	Probability and Statistics	3-0-0-3	NS	Only for ECE, ME & SM Discipline	BG	44
OE3D16	Visual Ergonomics	2-0-2-3	DS	DS1002- Design Fundamentals I and DS1006 - Design Fundamentals II	PM	58

Year Long Courses (Common for B.Des. and B.Tech.)						
PR3003	Optional Project	0-0-0-2				
PC3003	Professional Development Course	1-0-0-1	Placement			

B.Tech Semester VII						
Course Code	Course Name	L-T-P-C	Offered By Discipline	Pre-requisites for Elective courses	Instructor	No. of register students
OE07 (Choose any one course from below elective)						
CS8016	Cloud Computing (02 Batches)	3-0-0-3	CSE	CS2008-Computer Networks	MS	242
EC8033	Radio Frequency Integrated Circuits Design	3-0-0-3	ECE	EC3010 - Fundamentals of Electromagnetic Theory	MSP	85

EC8029	Advanced Digital Filter Design	3-0-0-3	ECE	EC2005 - Digital Signal Processing	AK	39	Those who have done pre-requisites
OE4M75	Fundamentals of Tribology & Rheology	3-0-0-3	ME	ME2003/SM2003	MKT	36	Those who have done pre-requisites
MT5003	Advance in Sensors and Actuators	3-0-0-3	MT	ME3010/SM3010	MS	52	Those who have done pre-requisites
ME5D03	Finite Element Methods for Mechanical Engineering	3-0-0-3	ME	ME2003/SM2003	SDP	15	Those who have done pre-requisites

OE08 (Choose any one course from below elective)

CS8031	Cyber Security (02 Batches)	2-0-2-3	CSE	CS2008 - Computer Networks and CS2002 - Computer Organization and Architecture	ND	242	Those who have done pre-requisites
OE4E25	Advance Antenna Theory Design	3-0-0-3	ECE	EC3010 - Fundamentals of Electromagnetic Theory	TK	40	Those who have done pre-requisites
EC8030	CMOS Memory Design	3-0-0-3	ECE	EC2008 - Analog Integrated Circuit	KD	84	Those who have done pre-requisites
OE4M76	Digital Twins in Manufacturing	3-0-0-3	SM	ME3010/SM3010	SKS	21	Those who have done pre-requisites
ME5D02	Mechanical Vibrations and Condition Monitoring	3-0-0-3	ME	ME2003/SM2003	AM	21	Those who have done pre-requisites
OE4M35	Advanced Manufacturing Processes and Technologies	3-0-0-3	ME	ME2002/SM2002	RP	61	Those who have done pre-requisites

OE09 (Choose any one course from below elective)

CS8018	Web Mining	3-0-0-3	CSE	Pre-requisites is not required	ACP	119	Open for all
CS8013	Mobile and Wireless Networks	3-0-0-3	CSE	Pre-requisites is not required	VKI	71	Open for all
EC8004	Pattern Recognition and Machine Learning	3-0-0-3	ECE	Pre-requisites is not required	AV	27	Open for all
OE4E69	Optical Communication	3-0-0-3	ECE	Pre-requisites is not required	DKV	47	Open for all
ME8016	Biomaterials Science and Engineering	3-0-0-3	ME	Pre-requisites is not required	HSN	90	Open for all
OE4M52	Rapid Product Development Technologies	3-0-0-3	ME	Pre-requisites is not required	PKI	90	Open for all
OE4N77	Nano technology for Engineers	3-0-0-3	NS	Pre-requisites is not required	MKR	23	Open for all

OE10 (Choose any one course from below elective)

CS8032	Soft Computing	3-0-0-3	CSE	Pre-requisites is not required	AS	119	Open for all
CS8004	Deep Learning and Applications	2-0-2-3	CSE	Pre-requisites is not required	AO	89	Open for all
EC8006	Photovoltaics: Fundamentals and Applications	3-0-0-3	ECE	Pre-requisites is not required	DPS	88	Open for all
OE4M22	Industrial Instrumentation & Metrology	3-0-0-3	ME	Pre-requisites is not required	CD	43	Open for all
ME8010	MEMS: Microfabrication and Application	3-0-0-3	ME	Pre-requisites is not required	MZA	38	Open for all
OE4L73	LIFE SKILLS MANAGEMENT	3-1-0-3	English/LA	Pre-requisites is not required	JAMF	90	Open for all

OE11 (Choose any one course from below elective)

CS8007	Social Network Analysis	2-0-2-3	CSE	Pre-requisites is not required	ACP	120	Open for all
CS8025	Fuzzy Sets, Logic and Applications	3-0-0-3	CSE	Pre-requisites is not required	AS	120	Open for all
NEW	Wireless Communications	3-0-0-3	ECE	Pre-requisites is not required	MDB	46	Open for all
EC5N01	Physics of Semiconductor Devices	3-0-0-3	ECE	Pre-requisites is not required	PNK	41	Open for all
ME5C01	Computer Aided Geometric Design	3-0-0-3	ME	Pre-requisites is not required	PKI	18	Open for all
ME8002	Design for Experiments	3-0-0-3	ME	Pre-requisites is not required	CD	45	Open for all
OE4M74	AI and ML for Engineering	3-0-0-3	SM	Pre-requisites is not required	VKG	77	Open for all

B.Des Semester-VII

Course Code	Course Name	Credit	Offered By Discipline	Instructor	
DS4013	Design Seminar I	3	DS	GUIDE	46
DS4014	Design Thesis II	14	DS	GUIDE	46
Year Long Courses (Common for B.Des. and B.Tech.)					
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

The Senate has decided a batch size

Type	Batch Size (no. of Maximum students)
Theory	125
Lab (experimental)	30
Lab (simulations)	60

Accordingly the number of batches and instructors to be decided.

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