

SEMESTER 1: COMMON TO ALL BRANCHES

Course Code	Course Name	Credit Structure			
		L	T	P	C
MA 105	Calculus	3	1	0	4
PH 107	Quantum Physics	2	1	0	3
CS 101	Computer Programming	3	0	2	4
CH 102	Organic and Inorganic Chemistry	1	1	0	2
CH 101	Physical Chemistry	1	1	0	2
CH 101L	Chemistry Lab	0	0	3	2
ME 101	Introduction to Manufacturing	0	0	3	2
HS 101	Foundation Programme in Humanities and Social Sciences	3	0	0	3
CS 100 EE 100 ME 100 MC 100	Introduction to Profession	1	0	0	1
NO 101	National Sports Organisation	0	0	0	P/NP
Total Credits					23

COMPUTER SCIENCE AND ENGINEERING
SEMESTER 3

Course Code	Course Name	Credit Structure			
		L	T	P	C
CS 207	Discrete Structures	3	0	0	6
HS 201	Economics	3	0	0	6
EE 101	Introduction to Electrical & Electronics Circuits	3	1	0	8
CS216/ EE 224	Digital Logic Design/ Digital systems	3	0	0	6
CS254/ EE 214	Digital Logic Design Lab/ Digital circuits Lab	0	0	3	3
CS 251	Software Systems Lab	1	3	0	8
Total Credits					37

ELECTRICAL ENGINEERING
SEMESTER 3

Course Code	Course Name	Credit Structure			
		L	T	P	C
MA 205	Complex Analysis	3	1	0	4*
MA 207	Differential Equations II	3	1	0	4*
HS 201	Economics	3	0	0	6
EE 224/ CS216	Digital Systems/Digital Logic Design	2	1	0	6
EE 214/ CS254	Digital Systems/Digital Logic Design	0	0	3	3
EE 225	Network theory	2	1	0	6
EE 207	Electronic devices	2	1	0	6
EE 236	Electronic devices Lab	0	0	3	3
Total Credits					38

MECHANICAL ENGINEERING

SEMESTER 3

Course Code	Course Name	Credit Structure			
		L	T	P	C
ME 201	Mechanics of materials	3	1	0	8

ME 209	Thermodynamics	2	1	0	6
EE 101	Introduction to electrical and electronic circuits	3	1	0	8
ME 219	Fluid Mechanics	2	1	0	6
MA 207	Differential Equations II	3	1	0	4*
HS 201	Economics	3	0	0	6
	Total credits				38

**COMPUTER SCIENCE AND ENGINEERING
SEMESTER 5**

Course Code	Course Name	Credit Structure			
		L	T	P	C
CS 305	Computer Architecture	3	0	0	6
CS 341	Computer Architecture Lab	0	0	3	3
CS 344	Artificial Intelligence	3	0	0	6
CS 386	Artificial Intelligence Lab	0	0	3	3
CS 228	Logic in Computer Science	3	0	0	6
HS 301	Language and Society	3	0	0	6
	Elective I	3	0	0	6
Total Credits					36

**Department
Electives(CSE)**

Course Code	Course Name	Credit Structure			
		L	T	P	C
CS 570	Model Checking and Software Verification	3	0	0	6
CS 572	Modelling and Simulation of Systems	3	0	0	6

ELECTRICAL ENGINEERING

SEMESTER 5

Course Code	Course Name	Credit Structure			
		L	T	P	C
EE309	Microprocessors	2	1	0	6
HS 301	Language and Society	3	0	0	6

EE308	Communication Systems	2	1	0	6
EE301	EM Waves	2	1	0	6
EE325	Probability and Random Processes	2	1	0	6
EE337	Microprocessor Lab	0	0	3	3
	Total Credits				33

**MECHANICAL ENGINEERING
SEMESTER 5**

Course Coode	Course Name	Credit Structure			
		L	T	P	C
ME 346	Heat Transfer	2	1	0	6
ME 372	Heat Transfer and Metrology Lab	0	0	3	3
ME 338	Manufacturing Processes II	2	1	0	6
HS 301	Language and Society	3	0	0	6
ME 374	Manufacturing Processes Lab	0	0	3	3
ME 307	Mechanical Measurements Lab	0	0	3	3
ME 306	Applied Thermodynamics	2	1	0	6
ME 443	Applied Thermodynamics Lab	0	0	3	3
	Total credits				36

**COMPUTER SCIENCE AND ENGINEERING
SEMESTER 7**

Course Coode	Course Name	Credit Structure			
		L	T	P	C
CS 302b	Introduction to Compilation Techniques II	3	0	0	3*
CS 306b	Introduction to Compilation Techniques Lab II	0	0	3	1*
CS 317a	Database and Information systems I	3	0	0	3*
	Elective I	3	0	0	6
	Elective II or B. Tech. Project	3	0	0	6
	Institute Elective	3	0	0	6
Total Credits					25

**Department
Electives(CSE)**

Course Code	Course Name	Credit Structure			
		L	T	P	C
CS 570	Model Checking and Software Verification	3	0	0	6
CS 572	Modelling and Simulation of Systems	3	0	0	6
CS 462 / CS 662	Markov chains and their Applications	3	0	0	6

Institute Electives

Course Coode	Course Name	Credit Structure			
		L	T	P	C
SL400	Technology And Society - Learning (TASLe)	3	0	0	6
MA 605	Probability Theory	3	0	0	6
HS 431	Film Appreciation through World Cinema	3	0	0	6
HS441	Foundational Course in Entrepreneurship	3	0	0	6
EE 611	Applied Linear Algebra in Electrical Engineering	2	1	0	6
ME 615	Finite Element Analysis	3	0	0	6

**ELECTRICAL ENGINEERING
SEMESTER 7**

Course Code	Course Name	Credit Structure			
		L	T	P	C
	Elective I	3	0	0	6
	Elective II	3	0	0	6
	Elective III or Institute Elective	3	0	0	6
	BTP	0	0	12	12
	Total Credits				30

Department Electives(EE)

Course Code	Course Name	Credit Structure			
		L	T	P	C
EE 601	Introduction to Switched Electrical Circuits	2	1	0	6
EE 602	Advanced Digital Signal Processing	2	1	0	6
EE 603	Sensors and Analog Interfacing Circuits	2	1	0	6

Institute Electives

Course Coode	Course Name	Credit Structure			
		L	T	P	C
SL400	Technology And Society - Learning (TASLe)	3	0	0	6
HS 431	Film Appreciation through World Cinema	3	0	0	6
HS441	Foundational Course in Entrepreneurship	3	0	0	6
EE 611	Applied Linear Algebra in Electrical Engineering	2	1	0	6
ME 615	Finite Element Analysis	3	0	0	6

MECHANICAL ENGINEERING**SEMESTER 7**

Course Coode	Course Name	Credit Structure			
		L	T	P	C
ME423	Machine design	2	1	2	8
ME443	Applied thermodynamics lab	0	0	3	3
	Elective I	3	0	0	6
	Elective II or Institute Elective I	3	0	0	6
	Project stage 1				12
	Total				35

Department Electives(ME)

Course Code	Course Name	Credit Structure			
		L	T	P	C
ME 606	Computer Integrated Manufacturing	3	0	0	6
ME 613	Continuum Mechanics	3	0	0	6
ME 610	Mathematical Methods	3	0	0	6
ME 615	Finite Element Method	3	0	0	6

Institute Electives

Course Coode	Course Name	Credit Structure			
		L	T	P	C
SL400	Technology And Society - Learning (TASLe)	3	0	0	6
HS 431	Film Appreciation through World Cinema	3	0	0	6
HS 441	Foundational Course in Entrepreneurship	3	0	0	6
EE 611	Applied Linear Algebra in Electrical Engineering	2	1	0	6

MTech course list**Computer Science & Engineering**

Course Code	Course Name	Credit Structure			
		L	T	P	C
CS 540	Fundamentals of Computing Systems Design	3	0	3	9
EE 611	Applied Linear Algebra in Electrical Engineering	3	0	0	6
CS 510	Foundations of Theoretical Computer Science	3	0	0	6
	Elective I	3	0	0	6
	Total				35

Department Electives(CSE)

Course Code	Course Name	Credit Structure			
		L	T	P	C
CS 570	Model Checking and Software Verification	3	0	0	6
CS 572	Modelling and Simulation of Systems	3	0	0	6
CS 462 / CS 662	Markov chains and their Applications	3	0	0	6
MA 605	Probability Theory	3	0	0	6

Electrical Engineering

Course Code	Course Name	Credit Structure			
		L	T	P	C
EE 611	Applied Linear Algebra in Electrical Engineering	2	1	0	6
EE 601	Introduction to Switched Electrical Circuits	2	1	0	6
EE 602	Advanced Digital Signal Processing	2	1	0	6
EE 603	Sensors and Analog Interfacing Circuits	2	1	0	6
EE 621	Multidisciplinary Lab	0	0	3	3
	Total				35

Mechanical Engineering

Course Code	Course Name	Credit Structure			
		L	T	P	C
ME610	Mathematical Methods	2	1	0	6
ME613	Continuum Mechanics	2	1	0	6
ME614	Thermofluids Engineering	2	1	0	6
ME606	Computer integrated Manufacturing	2	1	0	6
	Total				24

PhD course list

Computer Science & Engineering

Course Code	Course Name	Credit Structure			
		L	T	P	C
CS 540	Fundamentals of Computing Systems Design	3	0	3	9
EE 611	Applied Linear Algebra in Electrical Engineering	3	0	0	6
CS 510	Foundations of Theoretical Computer Science	3	0	0	6
	Elective I	3	0	0	6

Department Electives(CSE)

Course Code	Course Name	Credit Structure			
		L	T	P	C
CS 570	Model Checking and Software Verification	3	0	0	6
CS 572	Modelling and Simulation of Systems	3	0	0	6
CS 462 / CS 662	Markov chains and their Applications	3	0	0	6
MA 605	Probability Theory	3	0	0	6

PG Seminar Course	Course Name	L	T	P	C
CS 750	Graduate Seminar	0	0	0	4

Electrical Engineering

Course Code	Course Name	Credit Structure			
		L	T	P	C
EE 611	Applied Linear Algebra in Electrical Engineering	2	1	0	6
EE 601	Introduction to Switched Electrical Circuits	2	1	0	6
EE 602	Advanced Digital Signal Processing	2	1	0	6
EE 603	Sensors and Analog Interfacing Circuits	2	1	0	6
EES 801	Research Seminar	0	0	0	4

Mechanical Engineering

Course Code	Course Name	Credit Structure			
		L	T	P	C
ME610	Mathematical Methods	2	1	0	6
ME 615	Finite Element Analysis	3	0	0	6

Department Electives(ME)

ME613	Continuum Mechanics	2	1	0	6
ME614	Thermofluids Engineering	2	1	0	6
ME606	Computer integrated Manufacturing	2	1	0	6

Physics

Compulsory PhD courses for all January 2019 enrolled students

Elective course for all January 2019 enrolled students

Course Code	Course Name	Credit Structure			
		L	T	P	C
PH 804	Research Methodology	1	0	0	2
PH 805	Project Work and Presentation *	--	--	--	8
PH 807	Physics of Materials	3	1	0	8
PH 806	Field Theory	3	1	0	8
	Total Credits				

Course Code	Course Name	Credit Structure
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		L	T	P	C
PH 803	Topical Literature Review *	--	--	3	3

Chemistry

Course Code	Course Name	Credit Structure			
		L	T	P	C
CH801	Trends in Chemistry	3	0	0	6
CH 813	Advanced Organometallic Chemistry	3	0	0	6
CH 843	Methods in Organic Synthesis	3	0	0	6
CH 871	Quantum chemistry	3	0	0	6
	Total Credits				

Humanities

Course Code	Course Name	Credit Structure			
		L	T	P	C
HS 801	Topics in Time Series Econometrics	3	0	0	6
HS 803	Research Methods	3	0	0	6
HSS 801	Seminar I	0	0	0	4
HSS 802	Seminar II	0	0	0	4

Mathematics

Course Code	Course Name	Credit Structure			
		L	T	P	C
MA601	Graduate course in Analysis	3	0	0	6
MA609	Topics in Numerical Analysis	3	0	0	6
MA608	Computational Finance: A PDE approach	3	0	0	6