

SESHADRI RAO GUDLAVALLERU ENGINEERING COLLEGE

(An Autonomous Institute with Permanent Affiliation to JNTUK, Kakinada)

Seshadri Rao Knowledge Village, GUDLAVALLERU-521 356, Krishna District, A.P., India

(Approved by AICTE, New Delhi and Permitted by A.P. State Government)

Accredited by NAAC

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Dr. G. V. S. N. R. V. PRASAD

M.S., M.Tech., Ph.D.,

MISTE, MIETE, MIE, MCSI, MISRS, MIAPR, MCRSI

Principal

1.2.2: List of programmes Offering Choice Based Credit system

A. Y.: 2021-2022

S.No	Programme Name	Programme Code	Year of Introduction	Year of implementation of CBCS / ECS
1	B. Tech-Civil Engineering	A01	2009	2014
2	B. Tech-Electrical and Electronics Engineering	A02	1998	2014
3	B. Tech- Mechanical Engineering	A03	1998	2014
4	B. Tech-Electronics and Communication Engineering	A04	1998	2014
5	B. Tech-Computer Science and Engineering	A05	1998	2014
6	B. Tech - Information Technology	A12	1999	2014
7	B. Tech-Computer Science and Engineering(AMIL)	A42	2020	2020
8	B. Tech - Artificial Intelligence and Data Science	A54	2020	2020
9	B. Tech - Internet of things	A60	2020	2020
10	M. Tech-Structural Engineering	D87	2014	2014
11	M. Tech-Power Electronics and Electrical Drives	D54	2009	2014
12	M. Tech- Machine Design	D15	2014	2014
13	M. Tech-VLSI Design and Embedded Systems	D77	2019	2019
14	M. Tech-CSE Artificial Intelligence & Machine Learning	D58	2020	2020
15	Master of Business Administration	1E	2006	2014


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COURSE STRUCTURE

I Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EG3501	Functional English	3	-	-	3
2	MA3501	Linear Algebra and Calculus	3	1	-	4
3	PH3501	Engineering Physics	3	-	-	3
4	CT3501	Problem Solving Using C *	3	-	2	4
5	ME3503	Engineering Graphics *	2	-	4	4
6	EG3502	Functional English Lab	-	-	2	1
7	PH3503	Engineering Physics Lab	-	-	2	1
Total			14	1	10	20
8	EN3501	Environmental Studies (Mandatory Non-Credit Course)	2	-	-	-

* Integrated Course with Theory and Laboratory

I Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EG3503	Professional Communication	2	-	-	2
2	MA3505	Integral Transforms and Vector Calculus	3	1	-	4
3	CH3501	Engineering Chemistry	3	-	-	3
4	CE3501	Applied Mechanics	3	1	-	4
5	UH3501	Universal Human Values 2: Understanding Harmony	2	1	-	3
6	EG3504	Professional Communication Lab	-	-	4	2
7	CH3502	Engineering Chemistry Lab	-	-	2	1
8	CE3502	Applied Mechanics Lab & Building Trade Practice	-	-	2	1
Total			13	3	8	20
9	BA3501	Constitution of India (Mandatory Non-Credit Course)	2	-	-	-

L : Lecture T : Tutorial P : Practical




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II Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	CE3503	Building Materials and Building Construction	2	-	-	2
2	ME3507	Elements of Mechanical and Electrical Engineering	2	1	-	3
3	CE3504	Mechanics of Solids	3	1	-	4
4	CE3505	Fluid Mechanics	2	1	-	3
5	CE3506	Surveying	2	1	-	3
6	CE3507	Engineering Geology & Geo-Spatial Applications *	2	-	2	3
7	CE3508	Mechanics of Solids Lab	-	-	2	1
8	CE3509	Survey Field Work	-	-	2	1
9	SD3501	Logic Building and Basic Coding Principles	-	-	2	1
Total			13	4	8	21
10	SG3501	Sports and Games / Cultural (Mandatory Non-Credit Course)	-	-	2	-

* Integrated Course with Theory and Laboratory

II Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	MA3513	Numerical & Statistical Methods	2	1	-	3
2	CE3510	Structural Analysis	3	1	-	4
3	CE3511	Hydraulics & Hydraulic Machines	2	1	-	3
4	CE3512	Concrete Technology	3	-	-	3
5	CT3508	Python Programming *	2	-	2	3
6		Open Elective - I	3	-	-	3
7	CE3515	Fluid Mechanics & Hydraulic Machines Lab	-	-	2	1
8	CE3516	Concrete Technology Lab	-	-	2	1
9	SD3503	Programming for Corporate	-	-	2	1
Total			15	3	8	22
10	NS3501	NSS / Fine Arts / Yoga / Self Defense (Mandatory Non-Credit Course)	-	-	2	-

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Open Elective - I

Sl. No.	Course Code	Name of the Course / Laboratory	Department Offering the Subject	No. of Periods per week			No. of Credits
				L	T	P	
1	CE3513	Elements of Civil Engineering (other than CE)	CE	3	-	-	3
2	CE3514	Environment Laws and Policies (other than CE)	CE	3	-	-	3
3	EE3513	Electrical Materials (other than EEE)	EEE	3	-	-	3
4	EE3514	Control Systems Engineering (other than EEE&ECE)	EEE	3	-	-	3
5	ME3517	Automotive Engineering (other than ME)	ME	3	-	-	3
6	ME3518	Elements of Mechanical Transmission (other than ME)	ME	3	-	-	3
7	EC3520	Introduction to Embedded Systems (other than ECE/IoT)	ECE	3	-	-	3
8	EC3521	Fundamentals of Communication Systems (other than ECE/IoT)	ECE	3	-	-	3
9	CS3503	Information Retrieval Systems (Other than CSE, CSE(AI&ML), & AI&DS)	CSE	3	-	-	3
10	CT3522	Computer Graphics (Other than CSE, IT, CSE(AI&ML) & AI&DS)	CSE	3	-	-	3
11	IT3504	System Software (Other than IT)	IT	3	-	-	3
12	IT3505	Free & Open Source Software (Other than IT)	IT	3	-	-	3
13	MA3516	Fuzzy Mathematics	BS&H	3	-	-	3



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I Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EG3501	Functional English	3	-	-	3
2	MA3501	Linear Algebra and Calculus	3	1	-	4
3	CH3503	Applied Chemistry	3	-	-	3
4	CT3501	Problem Solving Using C *	3	-	2	4
5	UH3501	Universal Human Values 2: Understanding Harmony	2	1	-	3
6	CH3504	Applied Chemistry Lab	-	-	2	1
7	EG3502	Functional English Lab	-	-	2	1
Total			14	2	6	19
8	BA3501	Constitution of India (Mandatory Non-Credit Course)	2	-	-	-

* Integrated Course with Theory and Laboratory

I Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EG3503	Professional Communication	2	-	-	2
2	MA3505	Integral Transforms and Vector Calculus	3	1	-	4
3	PH3504	Solid State Physics	3	-	-	3
4	EE3504	Circuit Theory - I	2	1	-	3
5	MA3506	Discrete Mathematics	2	1	-	3
6	ME3501	Engineering Drawing	1	-	4	3
7	EG3504	Professional Communication Lab	-	-	4	2
8	PH3505	Solid State Physics Lab	-	-	2	1
Total			13	3	10	21
9	EN3501	Environmental Studies (Mandatory Non-Credit Course)	2	-	-	-

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II Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	CT3508	Python Programming *	2	-	2	3
2	EE3508	Circuit Theory - II	2	1	-	3
3	EE3509	Control Systems	2	1	-	3
4	EE3510	DC Machines and Transformers	2	1	-	3
5	EC3504	Electronic Devices and Circuits	2	1	-	3
6	EC3505	Digital Circuits	3	-	-	3
7	EC3506	Electronic Devices and Circuits Lab	-	-	2	1
8	EC3507	Digital Circuits Lab	-	-	2	1
9	SD3501	Logic Building and Basic Coding Principles	-	-	2	1
Total			13	4	8	21
10	NS3501	NSS / Fine Arts / Yoga / Self Defense (Mandatory Non-Credit Course)	-	-	2	-

* Integrated Course with Theory and Laboratory

II Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	MA3514	Numerical Methods with Computer Applications*	2	-	2	3
2	EE3511	Induction & Synchronous Machines	2	1	-	3
3	EE3512	Power generation Systems	3	1	-	4
4	EC3510	Signals and Systems	2	1	-	3
5		Open Elective - I	3	-	-	3
6	EE3515	DC Machines and Transformers Lab	-	-	2	1
7	EE3516	Electrical Circuits Lab	-	-	2	1
8	EE3517	Simulation of Electrical Engineering Systems	-	-	4	2
9	SD3503	Programming for Corporate	-	-	2	1
Total			12	3	12	21
10	SG3501	Sports and Games / Cultural (Mandatory Non-Credit Course)	-	-	2	-

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Open Elective - I

Sl. No.	Course Code	Name of the Course / Laboratory	Department Offering the Subject	No. of Periods per week			No. of Credits
				L	T	P	
1	CE3513	Elements of Civil Engineering (other than CE)	CE	3	-	-	3
2	CE3514	Environment Laws and Policies (other than CE)	CE	3	-	-	3
3	EE3513	Electrical Materials (other than EEE)	EEE	3	-	-	3
4	EE3514	Control Systems Engineering (other than EEE&ECE)	EEE	3	-	-	3
5	ME3517	Automotive Engineering (other than ME)	ME	3	-	-	3
6	ME3518	Elements of Mechanical Transmission (other than ME)	ME	3	-	-	3
7	EC3520	Introduction to Embedded Systems (other than ECE/IoT)	ECE	3	-	-	3
8	EC3521	Fundamentals of Communication Systems (other than ECE/IoT)	ECE	3	-	-	3
9	CS3503	Information Retrieval Systems (Other than CSE, CSE(AI&ML), & AI&DS)	CSE	3	-	-	3
10	CT3522	Computer Graphics (Other than CSE, IT, CSE(AI&ML) & AI&DS)	CSE	3	-	-	3
11	IT3504	System Software (Other than IT)	IT	3	-	-	3
12	IT3505	Free & Open Source Software (Other than IT)	IT	3	-	-	3
13	MA3516	Fuzzy Mathematics	BS&H	3	-	-	3



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I Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EG3501	Functional English	3	-	-	3
2	MA3501	Linear Algebra and Calculus	3	1	-	4
3	PH3502	Physics for Engineers	3	-	-	3
4	CT3501	Problem Solving Using C *	3	-	2	4
5	ME3503	Engineering Graphics *	2	-	4	4
6	EG3502	Functional English Lab	-	-	2	1
7	PH3503	Engineering Physics Lab	-	-	2	1
Total			14	1	10	20
8	EN3501	Environmental Studies (Mandatory Non-Credit Course)	2	-	-	-

* Integrated Course with Theory and Laboratory

I Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EG3503	Professional Communication	2	-	-	2
2	MA3505	Integral Transforms and Vector Calculus	3	1	-	4
3	CH3504	Chemistry for Engineers	3	-	-	3
4	ME3504	Engineering Mechanics	3	1	-	4
5	UH3501	Universal Human Values 2: Understanding Harmony	2	1	-	3
6	EG3504	Professional Communication Lab	-	-	4	2
7	ME3505	Engineering Workshop	-	-	2	1
8	ME3506	Engineering Mechanics Lab and Fuel & Lubricants Lab	-	-	2	1
Total			13	3	8	20
9	BA3501	Constitution of India (Mandatory Non-Credit Course)	2	-	-	-

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II Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	CT3508	Python Programming *	2	-	2	3
2	EE3505	Elements of Electrical and Electronics Engineering	3	-	-	3
3	ME3508	Engineering Thermodynamics	2	1	-	3
4	ME3509	Kinematics of Machines	2	1	-	3
5	ME3510	Mechanics of Solids	2	1	-	3
6	ME3511	Materials Engineering	3	-	-	3
7	EE3506	Electrical & Electronics Engineering Lab	-	-	2	1
8	ME3512	Mechanics of Solids Lab and Materials Lab	-	-	2	1
9	SD3501	Logic Building and Basic Coding Principles	-	-	2	1
Total			14	3	8	21
10	SG3501	Sports and Games / Cultural (Mandatory Non-Credit Course)	-	-	2	-

* Integrated Course with Theory and Laboratory

II Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	MA3513	Numerical & Statistical Methods	2	1	-	3
2	ME3513	Manufacturing Science	3	-	-	3
3	ME3514	Applied Thermodynamics	2	1	-	3
4	ME3515	Dynamics of Machines	2	1	-	3
5	ME3516	Fluid Mechanics & Hydraulic Machines	2	1	-	3
6		Open Elective - I	3	-	-	3
7	ME3519	Thermal Engineering Lab	-	-	2	1
8	MA3515	Numerical & Statistical Methods Lab	-	-	2	1
9	ME3520	Manufacturing Processes Lab & Machine Dynamics Lab	-	-	2	1
10	SD3503	Programming for Corporate	-	-	2	1
Total			14	4	8	22
11	NS3501	NSS / Fine Arts / Yoga / Self Defense (Mandatory Non-Credit Course)	-	-	2	-

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Open Elective - I

Sl. No.	Course Code	Name of the Course / Laboratory	Department Offering the Subject	No. of Periods per week			No. of Credits
				L	T	P	
1	CE3513	Elements of Civil Engineering (other than CE)	CE	3	-	-	3
2	CE3514	Environment Laws and Policies (other than CE)	CE	3	-	-	3
3	EE3513	Electrical Materials (other than EEE)	EEE	3	-	-	3
4	EE3514	Control Systems Engineering (other than EEE&ECE)	EEE	3	-	-	3
5	ME3517	Automotive Engineering (other than ME)	ME	3	-	-	3
6	ME3518	Elements of Mechanical Transmission (other than ME)	ME	3	-	-	3
7	EC3520	Introduction to Embedded Systems (other than ECE/IoT)	ECE	3	-	-	3
8	EC3521	Fundamentals of Communication Systems (other than ECE/IoT)	ECE	3	-	-	3
9	CS3503	Information Retrieval Systems (Other than CSE, CSE(AI&ML), & AI&DS)	CSE	3	-	-	3
10	CT3522	Computer Graphics (Other than CSE, IT, CSE(AI&ML) & AI&DS)	CSE	3	-	-	3
11	IT3504	System Software (Other than IT)	IT	3	-	-	3
12	IT3505	Free & Open Source Software (Other than IT)	IT	3	-	-	3
13	MA3516	Fuzzy Mathematics	BS&H	3	-	-	3



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I Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EG3501	Functional English	3	-	-	3
2	MA350	Linear Algebra and Calculus	3	1	-	4
3	CH3503	Applied Chemistry	3	-	-	3
4	CT3501	Problem Solving Using C *	3	-	2	4
5	UH3501	Universal Human Values 2: Understanding Harmony	2	1	-	3
6	EC3503	Electronic Workshop	-	-	4	2
7	EG3502	Functional English Lab	-	-	2	1
8	CH3504	Applied Chemistry Lab	-	-	2	1
Total			14	2	10	21
9	BA3501	Constitution of India (Mandatory Non-Credit Course)	2	-	-	-

* Integrated Course with Theory and Laboratory

I Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EG3503	Professional Communication	2	-	-	2
2	MA3505	Integral Transforms and Vector Calculus	3	1	-	4
3	EE3502	Linear Electrical Networks	3	-	-	3
4	PH3504	Solid State Physics	3	-	-	3
5	ME3501	Engineering Drawing	1	-	4	3
6	EG3504	Professional Communication Lab	-	-	4	2
7	PH3506	Solid State Physics Lab	-	-	4	2
Total			12	1	12	19
8	EN3501	Environmental Studies (Mandatory Non-Credit Course)	2	-	-	-

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II Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EC3508	Probability Theory and Stochastic Processes	3	-	-	3
2	EC3509	Semiconductor Devices and Circuits	3	-	-	3
3	EC3510	Signals and Systems	2	1	-	3
4	EC3511	Electromagnetic Field Theory	3	-	-	3
5	EC3512	Digital Circuit Design	2	1	-	3
6	MA3508	Numerical Methods and Complex Analysis	2	1	-	3
7	EC3513	Semiconductor Devices and Circuits Lab	-	-	2	1
8	EE3507	Linear Electrical Networks Lab	-	-	2	1
9	SD3502	Logic Building and Algorithmic Programming	-	-	2	1
Total			15	3	6	21
10	NS3501	NSS / Fine Arts / Yoga / Self Defense (Mandatory Non-Credit Course)	-	-	2	-

* Integrated Course with Theory and Laboratory

II Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EC3516	Transmission Lines and Waveguides	3	-	-	3
2	EC3517	Analog Circuits	3	-	-	3
3	EC3518	Analog and Digital Communications	3	1	-	4
4	EC3519	VLSI Design	3	-	-	3
5	CT3509	Data Structures*	2	-	2	3
6		Open Elective - I	3	-	-	3
7	EC3522	Analog Circuits Lab	-	-	2	1
8	EC3523	Digital Circuits Design Lab	-	-	2	1
9	SD3503	Programming for Corporate	-	-	2	1
Total			17	1	8	22
10	SG3501	Sports and Games / Cultural (Mandatory Non-Credit Course)	-	-	2	-

* Integrated Course with Theory and Laboratory

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Open Elective - I

Sl. No.	Course Code	Name of the Course / Laboratory	Department Offering the Subject	No. of Periods per week			No. of Credits
				L	T	P	
1	CE3513	Elements of Civil Engineering (other than CE)	CE	3	-	-	3
2	CE3514	Environment Laws and Policies (other than CE)	CE	3	-	-	3
3	EE3513	Electrical Materials (other than EEE)	EEE	3	-	-	3
4	EE3514	Control Systems Engineering (other than EEE&ECE)	EEE	3	-	-	3
5	ME3517	Automotive Engineering (other than ME)	ME	3	-	-	3
6	ME3518	Elements of Mechanical Transmission (other than ME)	ME	3	-	-	3
7	EC3520	Introduction to Embedded Systems (other than ECE/IoT)	ECE	3	-	-	3
8	EC3521	Fundamentals of Communication Systems (other than ECE/IoT)	ECE	3	-	-	3
9	CS3503	Information Retrieval Systems (Other than CSE, CSE(AI&ML), & AI&DS)	CSE	3	-	-	3
10	CT3522	Computer Graphics (Other than CSE, IT, CSE(AI&ML) & AI&DS)	CSE	3	-	-	3
11	IT3504	System Software (Other than IT)	IT	3	-	-	3
12	IT3505	Free & Open Source Software (Other than IT)	IT	3	-	-	3
13	MA3516	Fuzzy Mathematics	BS&H	3	-	-	3


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I Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EG3501	Functional English	3	-	-	3
2	MA3501	Linear Algebra and Calculus	3	1	-	4
3	PH3509	Applied Physics	3	-	-	3
4	CT3502	Programming for Problem Solving	3	-	-	3
5	UH3501	Universal Human Values 2: Understanding Harmony	2	1	-	3
6	EG3502	Functional English Lab	-	-	2	1
7	PH3510	Applied Physics Lab	-	-	2	1
8	CT3503	C Programming Lab	-	-	4	2
Total			14	2	8	20
9	BA3501	Constitution of India (Mandatory Non-Credit Course)	2	-	-	-

I Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EG3503	Professional Communication	2	-	-	2
2	MA3505	Integral Transforms and Vector Calculus	3	1	-	4
3	EC3502	Basic Electronic Devices	2	-	-	2
4	CT3504	Python Programming	3	-	-	3
5	CT3505	Data Structures	3	-	-	3
6	EG3504	Professional Communication Lab	-	-	4	2
7	CT3506	Python Programming Lab	-	-	4	2
8	CT3507	Data Structures Lab	-	-	4	2
Total			13	1	12	20
9	EN3501	Environmental Studies (Mandatory Non-Credit Course)	2	-	-	-

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II Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	BA3502	Managerial Economics and Financial Analysis	3	-	-	3
2	MA3509	Probability and Statistics	2	1	-	3
3	CT3510	Digital Logic Design	2	1	-	3
4	CT3511	Object Oriented Programming through Java	3	-	-	3
5	CT3512	Database Management Systems	3	-	-	3
6	MA3510	Probability and Statistics Using R Lab	-	-	2	1
7	CT3514	Java Programming Lab	-	-	4	2
8	CT3515	Database Management Systems Lab	-	-	4	2
9	SD3502	Logic Building and Algorithmic Programming	-	-	2	1
Total			13	2	12	21
10	SG3501	Sports and Games / Cultural (Mandatory Non-Credit Course)	-	-	2	-

* Integrated Course with Theory and Laboratory

II Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	MA3511	Discrete Mathematical Structures	2	1	-	3
2	CT3518	Computer Organization	3	-	-	3
3	CS3501	Design and Analysis of Algorithms	3	-	-	3
4	CT3519	Operating Systems	3	-	-	3
5	CS3502	Software Engineering *	3	-	2	4
6		Open Elective - I	3	-	-	3
7	CT3523	Operating Systems Lab	-	-	2	1
8	CT3524	Game Programming	1	-	2	2
9	SD3503	Programming for Corporate	-	-	2	1
Total			18	1	8	23
10	NS3501	NSS / Fine Arts / Yoga / Self Defense (Mandatory Non-Credit Course)	-	-	2	-

* Integrated Course with Theory and Laboratory

L : Lecture T : Tutorial P : Practical




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Open Elective - I

Sl. No.	Course Code	Name of the Course / Laboratory	Department Offering the Subject	No. of Periods per week			No. of Credits
				L	T	P	
1	CE3513	Elements of Civil Engineering (other than CE)	CE	3	-	-	3
2	CE3514	Environment Laws and Policies (other than CE)	CE	3	-	-	3
3	EE3513	Electrical Materials (other than EEE)	EEE	3	-	-	3
4	EE3514	Control Systems Engineering (other than EEE&ECE)	EEE	3	-	-	3
5	ME3517	Automotive Engineering (other than ME)	ME	3	-	-	3
6	ME3518	Elements of Mechanical Transmission (other than ME)	ME	3	-	-	3
7	EC3520	Introduction to Embedded Systems (other than ECE/IoT)	ECE	3	-	-	3
8	EC3521	Fundamentals of Communication Systems (other than ECE/IoT)	ECE	3	-	-	3
9	CS3503	Information Retrieval Systems (Other than CSE, CSE(AI&ML), & AI&DS)	CSE	3	-	-	3
10	CT3522	Computer Graphics (Other than CSE, IT, CSE(AI&ML) & AI&DS)	CSE	3	-	-	3
11	IT3504	System Software (Other than IT)	IT	3	-	-	3
12	IT3505	Free & Open Source Software (Other than IT)	IT	3	-	-	3
13	MA3516	Fuzzy Mathematics	BS&H	3	-	-	3



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I Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EG3501	Functional English	3	-	-	3
2	MA350	Linear Algebra and Calculus	3	1	-	4
3	CH3506	Applied Chemistry	3	-	-	3
4	EC3501	Elements of Electronics Engineering	3	-	-	3
5	CT3502	Programming for Problem Solving	3	-	-	3
6	EG3502	Functional English Lab	-	-	2	1
7	CH3507	Applied Chemistry Lab	-	-	2	1
8	CT3503	C Programming Lab	-	-	4	2
Total			15	1	8	20
9	EN3501	Environmental Studies (Mandatory Non-Credit Course)	2	-	-	-

I Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EG3503	Professional Communication	2	-	-	2
2	MA3505	Integral Transforms and Vector Calculus	3	1	-	4
3	PH3509	Applied Physics	3	-	-	3
4	CT3505	Data Structures	3	-	-	3
5	UH3501	Universal Human Values 2: Understanding Harmony	2	1	-	3
6	EG3504	Professional Communication Lab	-	-	4	2
7	PH3510	Applied Physics Lab	-	-	2	1
8	CT3507	Data Structures Lab	-	-	4	2
Total			13	2	10	20
9	BA3501	Constitution of India (Mandatory Non-Credit Course)	2	-	-	-

L : Lecture T : Tutorial P : Practical




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II Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	MA3511	Discrete Mathematical Structures	2	1	-	3
2	BA3502	Managerial Economics and Financial Analysis	3	-	-	3
3	CT3510	Digital Logic Design	2	1	-	3
4	CT3511	Object Oriented Programming through JAVA	3	-	-	3
5	CT3513	Formal Languages and Automata Theory	2	1	-	3
6	CT3514	JAVA Programming Lab	-	-	4	2
7	IT3501	R Programming Lab	-	-	2	1
8	IT3502	Linux Programming Lab	-	-	2	1
9	SD3502	Logic Building and Algorithmic Programming	-	-	2	1
Total			12	3	10	20
10	NS3501	NSS / Fine Arts / Yoga / Self Defense (Mandatory Non-Credit Course)	-	-	2	-

* Integrated Course with Theory and Laboratory

II Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	MA3509	Probability and Statistics	2	1	-	3
2	CT3512	Database Management Systems	3	-	-	3
3	CT3518	Computer Organization	3	-	-	3
4	IT3503	Python Programming	3	-	-	3
5		Open Elective - I	3	-	-	3
6	CT3515	Database Management Systems Lab	-	-	4	2
7	IT3506	Python Programming Lab	-	-	4	2
8	CT3525	Mobile Application Development	-	-	4	2
9	SD3503	Programming for Corporate	-	-	2	1
Total			14	1	14	22
10	SG3501	Sports and Games / Cultural (Mandatory Non-Credit Course)	-	-	2	-

: Lecture T : Tutorial P : Practical




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Open Elective - I

Sl. No.	Course Code	Name of the Course / Laboratory	Department Offering the Subject	No. of Periods per week			No. of Credits
				L	T	P	
1	CE3513	Elements of Civil Engineering (other than CE)	CE	3	-	-	3
2	CE3514	Environment Laws and Policies (other than CE)	CE	3	-	-	3
3	EE3513	Electrical Materials (other than EEE)	EEE	3	-	-	3
4	EE3514	Control Systems Engineering (other than EEE&ECE)	EEE	3	-	-	3
5	ME3517	Automotive Engineering (other than ME)	ME	3	-	-	3
6	ME3518	Elements of Mechanical Transmission (other than ME)	ME	3	-	-	3
7	EC3520	Introduction to Embedded Systems (other than ECE/IoT)	ECE	3	-	-	3
8	EC3521	Fundamentals of Communication Systems (other than ECE/IoT)	ECE	3	-	-	3
9	CS3503	Information Retrieval Systems (Other than CSE, CSE(AI&ML), & AI&DS)	CSE	3	-	-	3
10	CT3522	Computer Graphics (Other than CSE, IT, CSE(AI&ML) & AI&DS)	CSE	3	-	-	3
11	IT3504	System Software (Other than IT)	IT	3	-	-	3
12	IT3505	Free & Open Source Software (Other than IT)	IT	3	-	-	3
13	MA3516	Fuzzy Mathematics	BS&H	3	-	-	3



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COURSE STRUCTURE

I Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EG3501	Functional English	3	-	-	3
2	MA3502	Descriptive Statistics	2	1	-	3
3	MA3504	Engineering Calculus	2	1	-	3
4	CT3502	Programming for Problem Solving	3	-	-	3
5	UH3501	Universal Human Values 2: Understanding Harmony	2	1	-	3
6	EG3502	Functional English Lab	-	-	2	1
7	MA3503	Statistics Using R Lab	-	-	2	1
8	CT3503	C Programming Lab	-	-	4	2
Total			12	3	8	19
9	BA3501	Constitution of India (Mandatory Non-Credit Course)	2	-	-	-

I Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EG3503	Professional Communication	2	-	-	2
2	MA3505	Integral Transforms and Vector Calculus	3	1	-	4
3	MA3507	Linear Algebra	2	1	-	3
4	CT3504	Python Programming	3	-	-	3
5	CT3505	Data Structures	3	-	-	3
6	EG3504	Professional Communication Lab	-	-	4	2
7	CT3506	Python Programming Lab	-	-	4	2
8	CT3507	Data Structures Lab	-	-	4	2
Total			13	2	12	21
9	EN3501	Environmental Studies (Mandatory Non-Credit Course)	2	-	-	-

L : Lecture T : Tutorial P : Practical

Open Elective - I

Sl. No.	Course Code	Name of the Course / Laboratory	Department Offering the Subject	No. of Periods per week			No. of Credits
				L	T	P	
1	CE3513	Elements of Civil Engineering (other than CE)	CE	3	-	-	3
2	CE3514	Environment Laws and Policies (other than CE)	CE	3	-	-	3
3	EE3513	Electrical Materials (other than EEE)	EEE	3	-	-	3
4	EE3514	Control Systems Engineering (other than EEE&ECE)	EEE	3	-	-	3
5	ME3517	Automotive Engineering (other than ME)	ME	3	-	-	3
6	ME3518	Elements of Mechanical Transmission (other than ME)	ME	3	-	-	3
7	EC3520	Introduction to Embedded Systems (other than ECE/IoT)	ECE	3	-	-	3
8	EC3521	Fundamentals of Communication Systems (other than ECE/IoT)	ECE	3	-	-	3
9	CS3503	Information Retrieval Systems (Other than CSE, CSE(AI&ML), & AI&DS)	CSE	3	-	-	3
10	CT3522	Computer Graphics (Other than CSE, IT, CSE(AI&ML) & AI&DS)	CSE	3	-	-	3
11	IT3504	System Software (Other than IT)	IT	3	-	-	3
12	IT3505	Free & Open Source Software (Other than IT)	IT	3	-	-	3
13	MA3516	Fuzzy Mathematics	BS&H	3	-	-	3

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II Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	BA3502	Managerial Economics and Financial Analysis	3	-	-	3
2	MA3512	Advanced Statistics	3	-	-	3
3	CT3510	Digital Logic Design	2	1	-	3
4	CT3511	Object Oriented Programming through Java	3	-	-	3
5	CT3512	Database Management Systems	3	-	-	3
6	CT3513	Formal Languages and Automata Theory	2	1	-	3
7	CT3514	Java Programming Lab	-	-	4	2
8	CT3515	Database Management Systems Lab	-	-	4	2
9	SD3502	Logic Building and Algorithmic Programming	-	-	2	1
Total			16	2	10	23
10	SG3501	Sports and Games / Cultural (Mandatory Non-Credit Course)	-	-	2	-

* Integrated Course with Theory and Laboratory

II Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	MA3511	Discrete Mathematical Structures	2	1	-	3
2	CT3518	Computer Organization	3	-	-	3
3	CT3520	Compiler Design	2	1	-	3
4	CT3521	Artificial Intelligence	3	-	-	3
5	CS3502	Software Engineering *	3	-	2	4
6		Open Elective - I	3	-	-	3
7	AD3501	Artificial Intelligence Lab	-	-	2	1
8	CT3524	Game Programming	1	-	2	2
9	SD3503	Programming for Corporate	-	-	2	1
Total			17	2	8	23
10	NS3501	NSS / Fine Arts / Yoga / Self Defense (Mandatory Non-Credit Course)	-	-	2	-

* Integrated Course with Theory and Laboratory

L : Lecture T : Tutorial P : Practical

COURSE STRUCTURE

I Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EG3501	Functional English	3	-	-	3
2	MA3501	Linear Algebra and Calculus	3	1	-	4
3	PH3507	Applied Physics	3	-	-	3
4	EE3501	Basic Electrical Engineering	3	-	-	3
5	CT3501	Problem Solving Using C *	3	-	2	4
6	EG3502	Functional English Lab	-	-	2	1
7	PH3508	Engineering Physics Lab	-	-	2	1
Total			15	1	6	19
8	EN3501	Environmental Studies (Mandatory Non-Credit Course)	2	-	-	-

* Integrated Course with Theory and Laboratory

I Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EG503	Professional Communication	2	-	-	2
2	MA3505	Integral Transforms and Vector Calculus	3	1	-	4
3	IN3501	Introduction to Internet of Things	3	-	-	3
4	ME3502	Computer Aided Engineering Drawing*	1	-	4	3
5	UH3501	Universal Human Values 2: Understanding Harmony	2	1	-	3
6	EG3504	Professional Communication Lab	-	-	4	2
7	IN3502	Electronic Workshop for IoT	-	-	4	2
8	EE3503	Basic Electrical Engineering Lab	-	-	4	2
Total			11	2	16	21
9	BA3501	Constitution of India (Mandatory Non-Credit Course)	2	-	-	-

* Integrated Course with Theory and Laboratory

L : Lecture T : Tutorial P : Practical

II Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	IN3503	Analog Devices and Circuits	3	-	-	3
2	IN3504	Principles of Communication Systems	3	-	-	3
3	MA3509	Probability and Statistics	2	1	-	3
4	EC3514	Electronic Instrumentation and Measurement Principles	3	-	-	3
5	IN3505	Transducers and Signal Conditioning	3	-	-	3
6	CT3509	Data Structures*	2	-	2	3
7	IN3506	Analog Devices and Circuits Lab	-	-	2	1
8	EC3515	Analog and Digital Communications Lab	-	-	2	1
9	SD3502	Logic Building and Algorithmic Programming	-	-	2	1
Total			16	1	8	21
10	NS3501	NSS / Fine Arts / Yoga / Self Defense (Mandatory Non-Credit Course)	-	-	2	-

* Integrated Course with Theory and Laboratory

II Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	IN3507	Signal Analysis and Processing	2	1	-	3
2	CT3516	Object Oriented Programming through JAVA*	2	-	2	3
3	EC3512	Digital Circuits Design	2	1	-	3
4	IN3508	Computer Organization and Architecture	3	-	-	3
5	MA3508	Numerical Methods and Complex Analysis	2	1	-	3
6		Open Elective - I	3	-	-	3
7	EC3523	Digital Circuits Design Lab	-	-	2	1
8	IN3509	Signal Analysis and Processing Lab	-	-	2	1
9	CT3517	Python Programming	-	-	4	2
10	SD3503	Programming for Corporate	-	-	2	1
Total			14	3	12	23
10	SG3501	Sports and Games / Cultural (Mandatory Non-Credit Course)	-	-	2	-

* Integrated Course with Theory and Laboratory

L : Lecture T : Tutorial P : Practical

Open Elective - I

Sl. No.	Course Code	Name of the Course / Laboratory	Department Offering the Subject	No. of Periods per week			No. of Credits
				L	T	P	
1	CE3513	Elements of Civil Engineering (other than CE)	CE	3	-	-	3
2	CE3514	Environment Laws and Policies (other than CE)	CE	3	-	-	3
3	EE3513	Electrical Materials (other than EEE)	EEE	3	-	-	3
4	EE3514	Control Systems Engineering (other than EEE&ECE)	EEE	3	-	-	3
5	ME3517	Automotive Engineering (other than ME)	ME	3	-	-	3
6	ME3518	Elements of Mechanical Transmission (other than ME)	ME	3	-	-	3
7	EC3520	Introduction to Embedded Systems (other than ECE/IoT)	ECE	3	-	-	3
8	EC3521	Fundamentals of Communication Systems (other than ECE/IoT)	ECE	3	-	-	3
9	CS3503	Information Retrieval Systems (Other than CSE, CSE(AI&ML), & AI&DS)	CSE	3	-	-	3
10	CT3522	Computer Graphics (Other than CSE, IT, CSE(AI&ML) & AI&DS)	CSE	3	-	-	3
11	IT3504	System Software (Other than IT)	IT	3	-	-	3
12	IT3505	Free & Open Source Software (Other than IT)	IT	3	-	-	3
13	MA3516	Fuzzy Mathematics	BS&H	3	-	-	3

COURSE STRUCTURE

I Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EG3501	Functional English	3	-	-	3
2	MA3502	Descriptive Statistics	2	1	-	3
3	MA3504	Engineering Calculus	2	1	-	3
4	CT3502	Programming for Problem Solving	3	-	-	3
5	UH3501	Universal Human Values 2: Understanding Harmony	2	1	-	3
6	EG3502	Functional English Lab	-	-	2	1
7	MA3503	Statistics Using R Lab	-	-	2	1
8	CT3503	C Programming Lab	-	-	4	2
Total			12	3	8	19
9	BA3501	Constitution of India (Mandatory Non-Credit Course)	2	-	-	-

I Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EG3503	Professional Communication	2	-	-	2
2	MA3505	Integral Transforms and Vector Calculus	3	1	-	4
3	MA3507	Linear Algebra	2	1	-	3
4	CT3504	Python Programming	3	-	-	3
5	CT3505	Data Structures	3	-	-	3
6	EG3504	Professional Communication Lab	-	-	4	2
7	CT3506	Python Programming Lab	-	-	4	2
8	CT3507	Data Structures Lab	-	-	4	2
Total			13	2	12	21
9	EN3501	Environmental Studies (Mandatory Non-Credit Course)	2	-	-	-

L : Lecture T : Tutorial P : Practical

II Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	BA3502	Managerial Economics and Financial Analysis	3	-	-	3
2	MA3512	Advanced Statistics	3	-	-	3
3	CT3510	Digital Logic Design	3	-	-	3
4	CT3511	Object Oriented Programming through Java	3	-	-	3
5	CT3512	Database Management Systems	2	1	-	3
6	CT3513	Formal Languages and Automata Theory	2	1	-	3
7	CT3514	Java Programming Lab	-	-	4	2
8	CT3515	Database Management Systems Lab	-	-	4	2
9	SD3502	Logic Building and Algorithmic Programming	-	-	2	1
Total			16	2	10	23
10	SG3501	Sports and Games / Cultural (Mandatory Non-Credit Course)	-	-	2	-

* Integrated Course with Theory and Laboratory

II Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	MA3511	Discrete Mathematical Structures	2	1	-	3
2	CT3518	Computer Organization	3	-	-	3
3	CT3520	Compiler Design	2	1	-	3
4	CT3521	Artificial Intelligence	3	-	-	3
5	CS3502	Software Engineering *	3	-	2	4
6		Open Elective - I	3	-	-	3
7	AD3501	Artificial Intelligence Lab	-	-	2	1
8	CT3524	Game Programming	1	-	2	2
9	SD3503	Programming for Corporate	-	-	2	1
Total			17	2	8	23
10	NS3501	NSS / Fine Arts / Yoga / Self Defense (Mandatory Non-Credit Course)	-	-	2	-

* Integrated Course with Theory and Laboratory

L : Lecture T : Tutorial P : Practical

Open Elective - I

Sl. No.	Course Code	Name of the Course / Laboratory	Department Offering the Subject	No. of Periods per week			No. of Credits
				L	T	P	
1	CE3513	Elements of Civil Engineering (other than CE)	CE	3	-	-	3
2	CE3514	Environment Laws and Policies (other than CE)	CE	3	-	-	3
3	EE3513	Electrical Materials (other than EEE)	EEE	3	-	-	3
4	EE3514	Control Systems Engineering (other than EEE&ECE)	EEE	3	-	-	3
5	ME3517	Automotive Engineering (other than ME)	ME	3	-	-	3
6	ME3518	Elements of Mechanical Transmission (other than ME)	ME	3	-	-	3
7	EC3520	Introduction to Embedded Systems (other than ECE/IoT)	ECE	3	-	-	3
8	EC3521	Fundamentals of Communication Systems (other than ECE/IoT)	ECE	3	-	-	3
9	CS3503	Information Retrieval Systems (Other than CSE, CSE(AI&ML), & AI&DS)	CSE	3	-	-	3
10	CT3522	Computer Graphics (Other than CSE, IT, CSE(AI&ML) & AI&DS)	CSE	3	-	-	3
11	IT3504	System Software (Other than IT)	IT	3	-	-	3
12	IT3505	Free & Open Source Software (Other than IT)	IT	3	-	-	3
13	MA3516	Fuzzy Mathematics	BS&H	3	-	-	3



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III Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2522	Theory of Structures	3	1	-	3
2	CE2523	Geotechnical Engineering	2	1	-	2
3	CE2524	Hydrology and Water Resources Engineering	4	-	-	3
4	CE2525	Water and Waste Water Engineering	3	1	-	3
5		Professional Elective - I	4	-	-	3
6		Open Elective-II (see list of Open Electives)	4	-	-	3
7	CE2532	Geotechnical Engineering Lab	-	-	4	2
8	CE2533	Water and Waste Water Engineering Lab	-	-	4	2
Total			20	3	8	21
9		Optional Elective - III	-	-	-	3
	CE2534	i) Infrastructure Development				
	ME2509	ii) Basics of Power Plant Engineering				
	CT2507	iii) Object Oriented Programming through JAVA				
10	CE2535	Optional Elective - IV (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

III Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2536	Foundation Engineering	3	-	-	2
2	CE2537	Highway Engineering	4	-	-	3
3	CE2538	Design of RC Structures	3	1	-	3
4		Professional Elective - II	4	-	-	3
5		Open Elective-III (see list of Open Electives)	4	-	-	3
6	CE2545	Structural Engineering Lab	-	-	4	2
7	CE2546	Highway Engineering Lab	-	-	4	2
8	CE2547	Mini Project / Survey Camp	-	-	4	2
Total			18	1	12	20
9		Optional Elective - V	-	-	-	3
	CE2548	i) Smart Buildings and Automation				
	CE2549	ii) Building Information Modeling				
	CT2513	iii) Database Management Systems				
10	CE2550	Optional Elective - VI (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

* Integrated Course with Theory and Laboratory

L : Lecture T : Tutorial P : Practical



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IV Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2551	Project Management and Finance	4	-	-	3
2	CE2552	Estimation, Costing and Valuation	3	1	-	3
3	CE2553	Design of Steel Structures	3	1	-	3
4		Professional Elective - III	4	-	-	3
5		Professional Elective - IV	4	-	-	3
6		Open Elective-IV (see list of Open Electives)	4	-	-	3
7	CE2564	Computer Applications in Civil Engineering Lab	-	-	4	2
8	CE2565	Internship / Industrial Training / Practical Training	-	-	-	2
Total			22	2	4	22
9		Optional Elective - VII	-	-	-	3
	CE2566	i) Project Scheduling and Contracts				
	MA2515	ii) Optimization Techniques				
	BA2504	iii) Entrepreneurship				
10	CE2567	Optional Elective - VIII (MOOCs)	-	-	-	2
Students shall opt from the list of MOOCs given by the Department)						

IV Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1		Professional Elective - V	4	-	-	3
2		Professional Elective - VI	4	-	-	3
3	CE2576	Project	-	-	20	10
Total			8	-	20	16

L : Lecture T : Tutorial P : Practical


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Open Elective - I

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2515 Elements of Civil Engineering (Other than CE)	CE	4	-	-	3
2	CE2516 Building Services	CE	4	-	-	3
3	EE2515 Electrical Materials	EEE	4	-	-	3
4	EE2516 Control Systems Engineering (Other than EEE & ECE)	EEE	4	-	-	3
5	ME2520 Elements of Manufacturing Processes (Other than ME)	ME	4	-	-	3
6	ME2521 Automotive Engineering (Other than ME)	ME	4	-	-	3
7	EC2531 Introduction to MPMC (Other than ECE/EEE/CSE/IT)	ECE	4	-	-	3
8	EC2532 Fundamentals of Communications (Other than ECE)	ECE	4	-	-	3
9	CT2514 Computer Graphics (Other than IT)	CSE	4	-	-	3
10	CT2507 Object Oriented Programming through Java (other than CSE & IT)	CSE	4	-	-	3
11	CT2515 Systems Software	IT	4	-	-	3
12	IT2502 Web Programming (Other than CSE & IT)	IT	4	-	-	3
13	MA2516 Mathematical Cryptography (Other than CSE)	BS&H	4	-	-	3
14	PH2508 Semiconductor Physics (Other than ECE)	BS&H	4	-	-	3

Open Elective - II

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2530 Geoinformatics (other than CE)	CE	4	-	-	3
2	CE2531 Environmental Sanitation	CE	4	-	-	3
3	EE2523 Modeling & Simulation of Engineering Systems	EEE	4	-	-	3
4	EE2524 Power Systems Engineering (Other than EEE)	EEE	4	-	-	3
5	ME2532 Elements of Mechanical Transmission (Other than ME)	ME	4	-	-	3
6	ME2533 Material Handling Equipment	ME	4	-	-	3
7	EC2543 Automotive Electronics	ECE	4	-	-	3
8	EC2544 Introduction to MEMS (other than ECE)	ECE	4	-	-	3
9	CS2508 Data Science	CSE	4	-	-	3
10	CT2524 Virtual and Augmented Reality (other than IT)	CSE	4	-	-	3
11	IT2505 Open Source Software	IT	4	-	-	3
12	IT2506 Cyber Laws	IT	4	-	-	3
13	MA2517 Quality, Reliability and Operations Research	BS&H	4	-	-	3

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Open Elective - III

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2543 Hydrology (Other than CE)	CE	4	-	-	3
2	CE2544 Planning for Sustainable Development	CE	4	-	-	3
3	EE2531 Electrical and Hybrid Vehicles	EEE	4	-	-	3
4	EE2532 Power Plant Instrumentation	EEE	4	-	-	3
5	ME2541 Material Science (Other than ME)	ME	4	-	-	3
6	ME2542 Renewable Energy Sources (Other than ME)	ME	4	-	-	3
7	EC2523 Assistive Technologies (Other than ECE)	ECE	4	-	-	3
8	EC2507 Bio-Medical Engineering (Other than EEE & ECE)	ECE	4	-	-	3
9	CS2512 Node and Angular JS	CSE	4	-	-	3
10	CS2513 Cyber Security	CSE	4	-	-	3
11	CT2529 Scripting Languages (Other than CSE)	IT	4	-	-	3
12	CT2531 Software Project Management (Other than CSE)	IT	4	-	-	3
13	MA2518 Elements of Stochastic Processes	BS&H	4	-	-	3
14	EG2505 Academic Communication	ENGLISH	4	-	-	3

Open Elective - IV

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2562 Disaster Management (Other than CE)	CE	4	-	-	3
2	CE2563 Repair and Retrofitting Techniques	CE	4	-	-	3
3	EE2542 Modern Optimization Techniques	EEE	4	-	-	3
4	EE2543 Electrical Power Utilization (Other than EEE)	EEE	4	-	-	3
5	ME2553 Green Engineering	ME	4	-	-	3
6	ME2554 Non Destructive Evaluation (Other than ME)	ME	4	-	-	3
7	EC2563 Cyber Physical Systems	ECE	4	-	-	3
8	EC2508 Signals and Systems (Other than EEE & ECE)	ECE	4	-	-	3
9	CS2521 Digital Forensics	CSE	4	-	-	3
10	CS2522 Business Intelligence & Decision Support Systems	CSE	4	-	-	3
11	IT2521 Adhoc and Sensor Networks	IT	4	-	-	3
12	CT2537 Information Retrieval Systems (Other than CSE)	IT	4	-	-	3
13	MA2514 Fuzzy Logic (Other than EEE, ME & CSE)	BS&H	4	-	-	3

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Professional Electives

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods			No. of Credits
			per week			
			L	T	P	
		Professional Elective - I	4	-	-	3
	CE2526	i) Advanced Strength of Materials				
	CE2527	ii) GIS and GPS				
	CE2528	iii) Green Buildings				
	CE2529	iv) Construction Management				
		Professional Elective - II	4	-	-	3
	CE2539	i) Advanced Structural Analysis				
	CE2540	ii) Environmental Pollution and Its Control				
	CE2541	iii) Ground Water Development and Management				
	CE2542	iv) Ground Improvement Techniques				
		Professional Elective - III	4	-	-	3
	CE2554	i) Pre-stressed Concrete				
	CE2555	ii) Advanced Foundation Engineering				
	CE2556	iii) Traffic Engineering				
	CE2557	iv) Industrial Wastewater Management				
		Professional Elective - IV	4	-	-	3
	CE2558	i) Advanced Design of RC Structures				
	CE2559	ii) Hydraulic Structures				
	CE2560	iii) Geosynthetics				
	CE2561	iv) Disaster Preparedness and Planning				
		Professional Elective - V	4	-	-	3
	CE2568	i) Earthquake Resistant Design of Structures				
	CE2569	ii) Logistics Infrastructure Engineering				
	CE2570	iii) Finite Element Methods				
	CE2571	iv) Design and Drawing of Irrigation Structures				
		Professional Elective - VI	4	-	-	3
	CE2572	i) Pre-Engineered Buildings				
	CE2573	ii) Urban Transportation Planning				
	CE2574	iii) Soil Dynamics and Machine Foundations				
	CE2575	iv) Environmental Impact Assessment				

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III Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EE2520	Electrical Measurements & Instrumentation	4	-	-	3
2	EC2508	Signals and Systems	3	1	-	3
3	EE2521	Power Systems - II	3	1	-	3
4		Professional Elective - I	4	-	-	3
5		Open Elective-II (see list of Open Electives)	4	-	-	3
6	EE2525	Control Systems Lab	-	-	4	2
7	EE2526	Electrical Machines- II Lab	-	-	4	2
8	EE2527	Mini Project	-	-	4	2
Total			18	2	12	21
9		Optional Elective - III	-	-	-	3
	ME2549	i) Mechatronics				
	CT2507	ii) Object Oriented Programming Through Java				
	EE2528	iii) Control System Design				
10	EE2529	Optional Elective - IV (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

III Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EE2530	Power Electronics	3	1	-	3
2	MA251	Probability and Fuzzy Mathematics	3	1	-	3
3	EC2510	Microprocessors, Microcontrollers and Its Applications **	3	1	-	3
4		Professional Elective - II	4	-	-	3
5		Open Elective-III (see list of Open Electives)	4	-	-	3
6	EE2533	Electrical Systems Simulation Lab	-	-	4	2
7	EE2534	Electrical Measurements & Instrumentation Lab	-	-	4	2
8	EC2515	Microprocessors, Microcontrollers and Its Applications Lab	-	-	4	2
Total			17	3	12	21
9		Optional Elective - V	-	-	-	3
	CT2513	i) Data Base Management Systems				
	EC2516	ii) Nano Electronics				
	EE2535	iii) Solar and Wind Energy Systems				
10	EE2536	Optional Elective - VI (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

* Project Based Theory Course

L : Lecture T : Tutorial P : Practical

IV Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods			No. of Credits
			per week			
			L	T	P	
1	EE2537	Power System Analysis	3	1	-	3
2		Professional Elective - III	3	1	-	3
3		Professional Elective - IV	3	1	-	3
4		Open Elective-IV(see list of Open Electives)	4	-	-	3
5	MA2512	Engineering Optimization	2	1	-	2
6	EE2544	Power Electronics Lab	-	-	4	2
7	EE2545	Power Systems Lab	-	-	4	2
8	EE2546	Internship / Industrial Training / Practical Training	-	-	4	2
Total			15	4	12	20
9		Optional Elective - VII	-	-	-	3
	EC2519	i) Analog and Digital Communication				
	CS2502	ii) Introduction to Python Programming				
	EE2547	iii) Integration of Renewable Energy Sources				
10	EE2548	Optional Elective - VIII (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

IV Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods			No. of Credits
			per week			
			L	T	P	
1		Professional Elective - V	3	1	-	3
2		Professional Elective - VI	3	1	-	3
3	EE2557	Project	-	-	20	10
Total			6	2	20	16

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Open Elective - I

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2515 Elements of Civil Engineering (Other than CE)	CE	4	-	-	3
2	CE2516 Building Services	CE	4	-	-	3
3	EE2515 Electrical Materials	EEE	4	-	-	3
4	EE2516 Control Systems Engineering (Other than EEE & ECE)	EEE	4	-	-	3
5	ME2520 Elements of Manufacturing Processes (Other than ME)	ME	4	-	-	3
6	ME2521 Automotive Engineering (Other than ME)	ME	4	-	-	3
7	EC2531 Introduction to MPMC (Other than ECE/EEE/CSE/IT)	ECE	4	-	-	3
8	EC2532 Fundamentals of Communications (Other than ECE)	ECE	4	-	-	3
9	CT2514 Computer Graphics (Other than IT)	CSE	4	-	-	3
10	CT2507 Object Oriented Programming through Java (other than CSE & IT)	CSE	4	-	-	3
11	CT2515 Systems Software	IT	4	-	-	3
12	IT2502 Web Programming (Other than CSE & IT)	IT	4	-	-	3
13	MA2516 Mathematical Cryptography (Other than CSE)	BS&H	4	-	-	3
14	PH2508 Semiconductor Physics (Other than ECE)	BS&H	4	-	-	3

Open Elective - II

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2530 Geoinformatics (other than CE)	CE	4	-	-	3
2	CE2531 Environmental Sanitation	CE	4	-	-	3
3	EE2523 Modeling & Simulation of Engineering Systems	EEE	4	-	-	3
4	EE2524 Power Systems Engineering (Other than EEE)	EEE	4	-	-	3
5	ME2532 Elements of Mechanical Transmission (Other than ME)	ME	4	-	-	3
6	ME2533 Material Handling Equipment	ME	4	-	-	3
7	EC2543 Automotive Electronics	ECE	4	-	-	3
8	EC2544 Introduction to MEMS (other than ECE)	ECE	4	-	-	3
9	CS2508 Data Science	CSE	4	-	-	3
10	CT2524 Virtual and Augmented Reality (other than IT)	CSE	4	-	-	3
11	IT2505 Open Source Software	IT	4	-	-	3
12	IT2506 Cyber Laws	IT	4	-	-	3
13	MA2517 Quality, Reliability and Operations Research	BS&H	4	-	-	3

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Open Elective - III

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2543 Hydrology (Other than CE)	CE	4	-	-	3
2	CE2544 Planning for Sustainable Development	CE	4	-	-	3
3	EE2531 Electrical and Hybrid Vehicles	EEE	4	-	-	3
4	EE2532 Power Plant Instrumentation	EEE	4	-	-	3
5	ME2541 Material Science (Other than ME)	ME	4	-	-	3
6	ME2542 Renewable Energy Sources (Other than ME)	ME	4	-	-	3
7	EC2523 Assistive Technologies (Other than ECE)	ECE	4	-	-	3
8	EC2507 Bio-Medical Engineering (Other than EEE & ECE)	ECE	4	-	-	3
9	CS2512 Node and Angular JS	CSE	4	-	-	3
10	CS2513 Cyber Security	CSE	4	-	-	3
11	CT2529 Scripting Languages (Other than CSE)	IT	4	-	-	3
12	CT2531 Software Project Management (Other than CSE)	IT	4	-	-	3
13	MA2518 Elements of Stochastic Processes	BS&H	4	-	-	3
14	EG2505 Academic Communication	ENGLISH	4	-	-	3

Open Elective - IV

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2562 Disaster Management (Other than CE)	CE	4	-	-	3
2	CE2563 Repair and Retrofitting Techniques	CE	4	-	-	3
3	EE2542 Modern Optimization Techniques	EEE	4	-	-	3
4	EE2543 Electrical Power Utilization (Other than EEE)	EEE	4	-	-	3
5	ME2553 Green Engineering	ME	4	-	-	3
6	ME2554 Non Destructive Evaluation (Other than ME)	ME	4	-	-	3
7	EC2563 Cyber Physical Systems	ECE	4	-	-	3
8	EC2508 Signals and Systems (Other than EEE & ECE)	ECE	4	-	-	3
9	CS2521 Digital Forensics	CSE	4	-	-	3
10	CS2522 Business Intelligence & Decision Support Systems	CSE	4	-	-	3
11	IT2521 Adhoc and Sensor Networks	IT	4	-	-	3
12	CT2537 Information Retrieval Systems (Other than CSE)	IT	4	-	-	3
13	MA2514 Fuzzy Logic (Other than EEE, ME & CSE)	BS&H	4	-	-	3

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Professional Electives

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods			No. of Credits
			L	T	P	
		Professional Elective - I	4	-	-	3
	EE2522	i) Switch Gear and Protection				
	CT2519	ii) Computer Networks				
	EC2509	iii) Pulse and Integrated Circuits				
	CT2505	iv) Data Structures				
		Professional Elective - II	4	-	-	3
	EC2511	i) Digital Signal Processing				
	EC2512	ii) Embedded System Design				
	EC2513	iii) Principles of VLSI Design				
	EC2514	iv) DSP Processors and Architecture				
		Professional Elective - III	3	1	-	3
	CT2534	i) Big Data Analytics				
	EC2517	ii) CMOS Digital IC Design				
	EE2538	iii) Power Semiconductor Drives				
	EE2539	iv) Flexible AC Transmission Systems				
		Professional Elective - IV	3	1	-	3
	CS2513	i) Cyber Security				
	EC2518	ii) Digital Image Processing				
	EE2540	iii) Power System Operation & Control				
	EE2541	iv) High Voltage Engineering				
		Professional Elective - V	-	-	-	3
	EE2549	i) Electrical Distribution System	3	1	-	
	EE2550	ii) Artificial Intelligence Techniques	4	-	-	
	EE2551	iii) Advanced Control Systems	3	1	-	
	EE2552	iv) Energy Audit, Conservation and Management	3	1	--	
		Professional Elective - VI	3	1	-	3
	EE2553	i) Special Electrical Machines				
	EE2554	ii) Digital Control Systems				
	EE2555	iii) Utilization of Electrical Energy				
	EE2556	iv) HVDC Transmission Systems				

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III Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	MA2509	Numerical and Statistical Methods	3	1	-	3
2	ME2527	Metal Cutting and Machine Tools	4	-	-	3
3	ME2528	Turbo Machinery	3	1	-	3
4		Professional Elective - I	4	-	-	3
5		Open Elective-II (see list of Open Electives)	4	-	-	3
6	ME2534	Fluid Mechanics and Turbo Machinery Lab	-	-	4	2
7	ME2535	Machine Tools Lab	-	-	4	2
8	ME2536	Computer Aided Machine Drawing Lab	-	-	4	2
Total			18	2	12	21
9		Optional Elective - III	-	-	-	3
	CT2514	i) Computer Graphics				
	EE2503	ii) Fuzzy Logic Systems				
	EC2520	iii) Micro Processors and Interfacing				
10	ME2537	Optional Elective - IV (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

III Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	BA2503	Engineering Economics and Accountancy	4	-	-	3
2	ME2538	Metrology and Instrumentation	3	1	-	3
3	ME2539	Design of Machine Members	3	1	-	3
4	ME2540	Heat Transfer	3	1	-	3
5		Professional Elective - II	4	-	-	3
6		Open Elective-III (see list of Open Electives)	4	-	-	3
7	ME2546	Heat Transfer Lab	-	-	4	2
8	ME2547	Metrology and Instrumentation Lab	-	-	4	2
9	ME2548	Computer Aided Engineering Analysis Lab	-	-	2	1
Total			21	3	10	23
10		Optional Elective - V	-	-	-	3
	CT2507	i) Object Oriented Programming through Java				
	ME2549	ii) Mechatronics				
	EC2512iii)	Embedded System Design				
11	ME2550	Optional Elective - VI (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

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IV Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	ME2551	Industrial Engineering and Management	3	1	-	3
2	ME2552	CAD / CAM	3	1	-	3
3		Professional Elective - III	4	-	-	3
4		Professional Elective - IV	4	-	-	3
5		Open Elective-IV (see list of Open Electives)	4	-	-	3
6	ME2562	Simulation Lab	-	-	4	2
7	ME2563	Mini Project	-	-	4	2
8	ME2564	Internship / Industrial Training / Practical Training	-	-	-	2
Total			18	2	8	21
9		Optional Elective - VII	-	-	-	3
	CT2534	i) Big Data Analytics				
	CT2512	ii) Computer Organization and Architecture				
	ME2565	iii) Cryogenics				
10	ME2566	Optional Elective - VIII (MOOCs)	-	-	-	2
Students shall opt from the list of MOOCs given by the Department)						

IV Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1		Professional Elective - V	4	-	-	3
2		Professional Elective - VI	4	-	-	3
3	ME2575	Project	-	-	20	10
Total			8	-	20	16

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Open Elective - I

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2515 Elements of Civil Engineering (Other than CE)	CE	4	-	-	3
2	CE2516 Building Services	CE	4	-	-	3
3	EE2515 Electrical Materials	EEE	4	-	-	3
4	EE2516 Control Systems Engineering (Other than EEE & ECE)	EEE	4	-	-	3
5	ME2520 Elements of Manufacturing Processes (Other than ME)	ME	4	-	-	3
6	ME2521 Automotive Engineering (Other than ME)	ME	4	-	-	3
7	EC2531 Introduction to MPMC (Other than ECE/EEE/CSE/IT)	ECE	4	-	-	3
8	EC2532 Fundamentals of Communications (Other than ECE)	ECE	4	-	-	3
9	CT2514 Computer Graphics (Other than IT)	CSE	4	-	-	3
10	CT2507 Object Oriented Programming through Java (other than CSE & IT)	CSE	4	-	-	3
11	CT2515 Systems Software	IT	4	-	-	3
12	IT2502 Web Programming (Other than CSE & IT)	IT	4	-	-	3
13	MA2516 Mathematical Cryptography (Other than CSE)	BS&H	4	-	-	3
14	PH2508 Semiconductor Physics (Other than ECE)	BS&H	4	-	-	3

Open Elective - II

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2530 Geoinformatics (other than CE)	CE	4	-	-	3
2	CE2531 Environmental Sanitation	CE	4	-	-	3
3	EE2523 Modeling & Simulation of Engineering Systems	EEE	4	-	-	3
4	EE2524 Power Systems Engineering (Other than EEE)	EEE	4	-	-	3
5	ME2532 Elements of Mechanical Transmission (Other than ME)	ME	4	-	-	3
6	ME2533 Material Handling Equipment	ME	4	-	-	3
7	EC2543 Automotive Electronics	ECE	4	-	-	3
8	EC2544 Introduction to MEMS (other than ECE)	ECE	4	-	-	3
9	CS2508 Data Science	CSE	4	-	-	3
10	CT2524 Virtual and Augmented Reality (other than IT)	CSE	4	-	-	3
11	IT2505 Open Source Software	IT	4	-	-	3
12	IT2506 Cyber Laws	IT	4	-	-	3
13	MA2517 Quality, Reliability and Operations Research	BS&H	4	-	-	3

L : Lecture T : Tutorial P : Practical




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Open Elective - III

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2543 Hydrology (Other than CE)	CE	4	-	-	3
2	CE2544 Planning for Sustainable Development	CE	4	-	-	3
3	EE2531 Electrical and Hybrid Vehicles	EEE	4	-	-	3
4	EE2532 Power Plant Instrumentation	EEE	4	-	-	3
5	ME2541 Material Science (Other than ME)	ME	4	-	-	3
6	ME2542 Renewable Energy Sources (Other than ME)	ME	4	-	-	3
7	EC2523 Assistive Technologies (Other than ECE)	ECE	4	-	-	3
8	EC2507 Bio-Medical Engineering (Other than EEE & ECE)	ECE	4	-	-	3
9	CS2512 Node and Angular JS	CSE	4	-	-	3
10	CS2513 Cyber Security	CSE	4	-	-	3
11	CT2529 Scripting Languages (Other than CSE)	IT	4	-	-	3
12	CT2531 Software Project Management (Other than CSE)	IT	4	-	-	3
13	MA2518 Elements of Stochastic Processes	BS&H	4	-	-	3
14	EG2505 Academic Communication	ENGLISH	4	-	-	3

Open Elective - IV

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2562 Disaster Management (Other than CE)	CE	4	-	-	3
2	CE2563 Repair and Retrofitting Techniques	CE	4	-	-	3
3	EE2542 Modern Optimization Techniques	EEE	4	-	-	3
4	EE2543 Electrical Power Utilization (Other than EEE)	EEE	4	-	-	3
5	ME2553 Green Engineering	ME	4	-	-	3
6	ME2554 Non Destructive Evaluation (Other than ME)	ME	4	-	-	3
7	EC2563 Cyber Physical Systems	ECE	4	-	-	3
8	EC2508 Signals and Systems (Other than EEE & ECE)	ECE	4	-	-	3
9	CS2521 Digital Forensics	CSE	4	-	-	3
10	CS2522 Business Intelligence & Decision Support Systems	CSE	4	-	-	3
11	IT2521 Adhoc and Sensor Networks	IT	4	-	-	3
12	CT2537 Information Retrieval Systems (Other than CSE)	IT	4	-	-	3
13	MA2514 Fuzzy Logic (Other than EEE, ME & CSE)	BS&H	4	-	-	3

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Professional Electives

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods			No. of Credits
			per week			
			L	T	P	
		Professional Elective - I	4	-	-	3
	ME2529	i) Non Conventional Sources of Energy				
	ME2530	ii) Mechanical Vibrations				
	ME2531	iii) Mechanics of Composite Materials				
	CT2505	iv) Data Structures				
		Professional Elective - II	4	-	-	3
	ME2543	i) Principles of Finite Element Method				
	ME2544	ii) Robotics				
	ME2545	iii) Automobile Engineering				
	CT2513	iv) Database Management Systems				
		Professional Elective - III	4	-	-	3
	MA2515	i) Optimization Techniques				
	ME2555	ii) Refrigeration and Air Conditioning				
	ME2556	iii) Unconventional Machining Process				
	ME2557	iv) Tribology				
		Professional Elective - IV	4	-	-	3
	ME2558	i) Total Quality Management				
	ME2559	ii) Computational Fluid Dynamics				
	ME2560	iii) Condition Monitoring				
	ME2561	iv) Design of Transmission Elements				
		Professional Elective - V	4	-	-	3
	ME2567	i) Design for Manufacturing and Assembly				
	ME2568	ii) Production Planning and Control				
	ME2569	iii) Power Plant Engineering				
	ME2570	iv) Theory of Elasticity				
		Professional Elective - VI	4	-	-	3
	ME2571	i) Rapid Prototyping				
	ME2572	ii) Gas Dynamics and Jet Propulsion				
	ME2573	iii) Automation in Manufacturing				
	ME2574	iv) Non Destructive Techniques				

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III Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EC2536	Linear Integrated Circuits Applications	3	1	-	3
2	EC2537	Digital Communications	3	-	-	2
3	EC2538	Antennas and Wave Propagation	4	-	-	3
4	EC2539	Principles of VLSI Design	3	-	-	2
5		Professional Elective - I	4	-	-	3
6		Open Elective-II (see list of Open Electives)	4	-	-	3
7	EC2545	Linear Integrated Circuits Applications Lab	-	-	4	2
8	EC2546	Analog and Digital Communications Lab	-	-	4	2
Total			21	1	8	20
9		Optional Elective - III	-	-	-	3
	CT2528	i) Data Warehousing and Data Mining				
	ME2549	ii) Mechatronics				
	EC2544	iii) Introduction to MEMS				
10	EC2547	Optional Elective - IV (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

III Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EC2511	Digital Signal Processing	4	-	-	3
2	EE2512	Control Systems	3	1	-	3
3	EC2510	Microprocessors, Microcontrollers and Applications**	3	-	1	3
4	EC2548	Microwave and Optical Communications	3	-	-	2
5		Professional Elective - II	4	-	-	3
6		Open Elective-III (see list of Open Electives)	4	-	-	3
7	EC2515	Microprocessor and Microcontroller Interfacing Lab	-	-	4	2
8	EC2552	Digital Signal Processing Lab	-	-	4	2
9	EC2553	VLSI Lab	-	-	4	2
Total			21	1	13	23
10		Optional Elective - V	-	-	-	3
	CT2534	i) Big Data Analytics				
	EC2554	ii) Cognitive Radio Networks				
	CT2533	iii) Cryptography and Network Security				
10	EC2555	Optional Elective - VI (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

* Project Based Theory Course

L : Lecture T : Tutorial P : Practical

IV Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods			No. of Credits
			per week			
			L	T	P	
1	EC2517	CMOS Digital IC Design	4	-	-	3
2	EC2512	Embedded System Design	3	-	-	2
3	EC2556	Electronic Measurements and Instrumentation	3	-	-	2
4		Professional Elective - III	4	-	-	3
5		Professional Elective - IV	4	-	-	3
6		Open Elective-IV (see list of Open Electives)	4	-	-	3
7	EC2564	Microwave and Optical Communications Lab	-	-	4	2
8	EC2565	Mini Project on Smart Applications	-	-	4	2
9	EC2566	Internship / Industrial Training / Practical Training	-	-	-	2
Total			22	-	8	22
9		Optional Elective - VII	-	-	-	3
	EE2554	i) Digital Control Systems				
	CT2521	ii) Artificial Intelligence				
	EC2567	iii) Transform Techniques				
10	EC2568	Optional Elective - VIII (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

IV Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods			No. of Credits
			per week			
			L	T	P	
1		Professional Elective - V	4	-	-	3
2		Professional Elective - VI	4	-	-	3
3	EC2577	Project	-	-	20	10
Total			8	-	20	16

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Open Elective - I

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2515 Elements of Civil Engineering (Other than CE)	CE	4	-	-	3
2	CE2516 Building Services	CE	4	-	-	3
3	EE2515 Electrical Materials	EEE	4	-	-	3
4	EE2516 Control Systems Engineering (Other than EEE & ECE)	EEE	4	-	-	3
5	ME2520 Elements of Manufacturing Processes (Other than ME)	ME	4	-	-	3
6	ME2521 Automotive Engineering (Other than ME)	ME	4	-	-	3
7	EC2531 Introduction to MPMC (Other than ECE/EEE/CSE/IT)	ECE	4	-	-	3
8	EC2532 Fundamentals of Communications (Other than ECE)	ECE	4	-	-	3
9	CT2514 Computer Graphics (Other than IT)	CSE	4	-	-	3
10	CT2507 Object Oriented Programming through Java (other than CSE & IT)	CSE	4	-	-	3
11	CT2515 Systems Software	IT	4	-	-	3
12	IT2502 Web Programming (Other than CSE & IT)	IT	4	-	-	3
13	MA2516 Mathematical Cryptography (Other than CSE)	BS&H	4	-	-	3
14	PH2508 Semiconductor Physics (Other than ECE)	BS&H	4	-	-	3

Open Elective - II

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2530 Geoinformatics (other than CE)	CE	4	-	-	3
2	CE2531 Environmental Sanitation	CE	4	-	-	3
3	EE2523 Modeling & Simulation of Engineering Systems	EEE	4	-	-	3
4	EE2524 Power Systems Engineering (Other than EEE)	EEE	4	-	-	3
5	ME2532 Elements of Mechanical Transmission (Other than ME)	ME	4	-	-	3
6	ME2533 Material Handling Equipment	ME	4	-	-	3
7	EC2543 Automotive Electronics	ECE	4	-	-	3
8	EC2544 Introduction to MEMS (other than ECE)	ECE	4	-	-	3
9	CS2508 Data Science	CSE	4	-	-	3
10	CT2524 Virtual and Augmented Reality (other than IT)	CSE	4	-	-	3
11	IT2505 Open Source Software	IT	4	-	-	3
12	IT2506 Cyber Laws	IT	4	-	-	3
13	MA2517 Quality, Reliability and Operations Research	BS&H	4	-	-	3

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Open Elective - III

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2543 Hydrology (Other than CE)	CE	4	-	-	3
2	CE2544 Planning for Sustainable Development	CE	4	-	-	3
3	EE2531 Electrical and Hybrid Vehicles	EEE	4	-	-	3
4	EE2532 Power Plant Instrumentation	EEE	4	-	-	3
5	ME2541 Material Science (Other than ME)	ME	4	-	-	3
6	ME2542 Renewable Energy Sources (Other than ME)	ME	4	-	-	3
7	EC2523 Assistive Technologies (Other than ECE)	ECE	4	-	-	3
8	EC2507 Bio-Medical Engineering (Other than EEE & ECE)	ECE	4	-	-	3
9	CS2512 Node and Angular JS	CSE	4	-	-	3
10	CS2513 Cyber Security	CSE	4	-	-	3
11	CT2529 Scripting Languages (Other than CSE)	IT	4	-	-	3
12	CT2531 Software Project Management (Other than CSE)	IT	4	-	-	3
13	MA2518 Elements of Stochastic Processes	BS&H	4	-	-	3
14	EG2505 Academic Communication	ENGLISH	4	-	-	3

Open Elective - IV

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2562 Disaster Management (Other than CE)	CE	4	-	-	3
2	CE2563 Repair and Retrofitting Techniques	CE	4	-	-	3
3	EE2542 Modern Optimization Techniques	EEE	4	-	-	3
4	EE2543 Electrical Power Utilization (Other than EEE)	EEE	4	-	-	3
5	ME2553 Green Engineering	ME	4	-	-	3
6	ME2554 Non Destructive Evaluation (Other than ME)	ME	4	-	-	3
7	EC2563 Cyber Physical Systems	ECE	4	-	-	3
8	EC2508 Signals and Systems (Other than EEE & ECE)	ECE	4	-	-	3
9	CS2521 Digital Forensics	CSE	4	-	-	3
10	CS2522 Business Intelligence & Decision Support Systems	CSE	4	-	-	3
11	IT2521 Adhoc and Sensor Networks	IT	4	-	-	3
12	CT2537 Information Retrieval Systems (Other than CSE)	IT	4	-	-	3
13	MA2514 Fuzzy Logic (Other than EEE, ME & CSE)	BS&H	4	-	-	3

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Professional Electives

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods			No. of Credits
			per week			
			L	T	P	
		Professional Elective - I	4	-	-	3
	EC2540	i) CAD for VLSI				
	EC2541	ii) Computer Organization				
	EC2542	iii) Computer and Communication Networks				
	EC2507	iv) Biomedical Engineering				
		Professional Elective - II	4	-	-	3
	EC2549	i) Analog IC Design				
	EC2516	ii) Nano Electronics				
	EC2550	iii) Smart Antennas				
	EC2551	iv) Coding Theory				
		Professional Elective - III	4	-	-	3
	EC2557	i) Mixed Signal IC Design				
	EC2558	ii) Cellular and Mobile Communications				
	EC2559	iii) Digital TV Engineering				
	EC2514	iv) DSP Processors and Architectures				
		Professional Elective - IV	4	-	-	3
	EC2560	i) System on Chip Design				
	EC2561	ii) Wireless Sensor Networks				
	EC2562	iii) Satellite Communication				
	EC2518	iv) Digital Image Processing				
		Professional Elective - V	4	-	-	3
	EC2569	i) Low Power VLSI Circuits				
	EC2570	ii) Real Time Operating Systems				
	EC2571	iii) Speech Processing				
	EC2572	iv) Adaptive Signal Processing				
		Professional Elective - VI	4	-	-	3
	EC2573	i) ASIC Design				
	EC2574	ii) Embedded C				
	EC2575	iii) RADAR Engineering				
	EC2576	iv) Multi Rate Signal Processing				

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III Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	CT2517	Software Engineering	3	1	-	3
2	CT2518	Compiler Design	3	1	-	3
3	CT2519	Computer Networks	3	1	-	3
4	CT2520	Web Technologies	4	-	-	3
5		Professional Elective - I	4	-	-	3
6		Open Elective-II (see list of Open Electives)	4	-	-	3
7	CS2509	Computer Networks and Compiler Design Lab	-	-	4	2
8	CT2525	Web Technologies Lab	-	-	4	2
Total			21	3	8	22
9		Optional Elective - III	-	-	-	3
	CT2526	i) Human Computer Interaction				
	EC2511	ii) Digital Signal Processing				
	EE2512	iii) Control Systems				
10	CS2510	Optional Elective - IV (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

III Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	CT2527	Design and Analysis of Algorithms	3	1	-	3
2	CT2528	Data Warehousing and Data Mining	4	-	-	3
3	CS2511	UML and Design Patterns *	3	-	2	3
5		Professional Elective - II (OR) Any other Elective Depending on Industry Needs	4	-	-	3
6		Open Elective-III (see list of Open Electives)	4	-	-	3
7	CS2514	Data Mining Lab	-	-	4	2
8	CS2515	Mini Project	-	-	4	2
Total			18	1	10	19
9		Optional Elective - V	-	-	-	3
	CS2516	i) Graph Theory				
	EC2512	ii) Embedded System Design				
	EE2554	iii) Digital Control Systems				
10	CS2517	Optional Elective - VI (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

* Integrated Course with Theory and Laboratory

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IV Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	CT2533	Cyptography and Network Securty	4	-	-	3
2	CT2534	Big Data Analytics	4	-	-	3
3		Professional Elective - III	4	-	-	3
4		Professional Elective - IV	4	-	-	3
5		Open Elective-IV (see list of Open Electives)	4	-	-	3
6	CT2538	Big Data Analytics Lab	-	-	4	2
7	CS2523	Cryptography and Network Security Lab	-	-	4	2
8	CS2524	Internship / Industrial Training / Practical Training	-	-	-	2
Total			20	-	8	21
9		Optional Elective - VII	-	-	-	3
	CS2525	i) Network Programming				
	CT2515	i) Systems Software				
	ME2544	iii) Robotics				
10	CS2526	Optional Elective - VIII (MOOCs)	-	-	-	2
Students shall opt from the list of MOOCs given by the Department)						

IV Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1		Professional Elective - V	4	-	-	3
2		Professional Elective - VI	4	-	-	3
3	CS2531	Project	-	-	20	10
Total			8	-	20	16

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Open Elective - I


Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2515 Elements of Civil Engineering (Other than CE)	CE	4	-	-	3
2	CE2516 Building Services	CE	4	-	-	3
3	EE2515 Electrical Materials	EEE	4	-	-	3
4	EE2516 Control Systems Engineering (Other than EEE & ECE)	EEE	4	-	-	3
5	ME2520 Elements of Manufacturing Processes (Other than ME)	ME	4	-	-	3
6	ME2521 Automotive Engineering (Other than ME)	ME	4	-	-	3
7	EC2531 Introduction to MPMC (Other than ECE/EEE/CSE/IT)	ECE	4	-	-	3
8	EC2532 Fundamentals of Communications (Other than ECE)	ECE	4	-	-	3
9	CT2514 Computer Graphics (Other than IT)	CSE	4	-	-	3
10	CT2507 Object Oriented Programming through Java (other than CSE & IT)	CSE	4	-	-	3
11	CT2515 Systems Software	IT	4	-	-	3
12	IT2502 Web Programming (Other than CSE & IT)	IT	4	-	-	3
13	MA2516 Mathematical Cryptography (Other than CSE)	BS&H	4	-	-	3
14	PH2508 Semiconductor Physics (Other than ECE)	BS&H	4	-	-	3

Open Elective - II

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2530 Geoinformatics (other than CE)	CE	4	-	-	3
2	CE2531 Environmental Sanitation	CE	4	-	-	3
3	EE2523 Modeling & Simulation of Engineering Systems	EEE	4	-	-	3
4	EE2524 Power Systems Engineering (Other than EEE)	EEE	4	-	-	3
5	ME2532 Elements of Mechanical Transmission (Other than ME)	ME	4	-	-	3
6	ME2533 Material Handling Equipment	ME	4	-	-	3
7	EC2543 Automotive Electronics	ECE	4	-	-	3
8	EC2544 Introduction to MEMS (other than ECE)	ECE	4	-	-	3
9	CS2508 Data Science	CSE	4	-	-	3
10	CT2524 Virtual and Augmented Reality (other than IT)	CSE	4	-	-	3
11	IT2505 Open Source Software	IT	4	-	-	3
12	IT2506 Cyber Laws	IT	4	-	-	3
13	MA2517 Quality, Reliability and Operations Research	BS&H	4	-	-	3

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Open Elective - III

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2543 Hydrology (Other than CE)	CE	4	-	-	3
2	CE2544 Planning for Sustainable Development	CE	4	-	-	3
3	EE2531 Electrical and Hybrid Vehicles	EEE	4	-	-	3
4	EE2532 Power Plant Instrumentation	EEE	4	-	-	3
5	ME2541 Material Science (Other than ME)	ME	4	-	-	3
6	ME2542 Renewable Energy Sources (Other than ME)	ME	4	-	-	3
7	EC2523 Assistive Technologies (Other than ECE)	ECE	4	-	-	3
8	EC2507 Bio-Medical Engineering (Other than EEE & ECE)	ECE	4	-	-	3
9	CS2512 Node and Angular JS	CSE	4	-	-	3
10	CS2513 Cyber Security	CSE	4	-	-	3
11	CT2529 Scripting Languages (Other than CSE)	IT	4	-	-	3
12	CT2531 Software Project Management (Other than CSE)	IT	4	-	-	3
13	MA2518 Elements of Stochastic Processes	BS&H	4	-	-	3
14	EG2505 Academic Communication	ENGLISH	4	-	-	3

Open Elective - IV

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2562 Disaster Management (Other than CE)	CE	4	-	-	3
2	CE2563 Repair and Retrofitting Techniques	CE	4	-	-	3
3	EE2542 Modern Optimization Techniques	EEE	4	-	-	3
4	EE2543 Electrical Power Utilization (Other than EEE)	EEE	4	-	-	3
5	ME2553 Green Engineering	ME	4	-	-	3
6	ME2554 Non Destructive Evaluation (Other than ME)	ME	4	-	-	3
7	EC2563 Cyber Physical Systems	ECE	4	-	-	3
8	EC2508 Signals and Systems (Other than EEE & ECE)	ECE	4	-	-	3
9	CS2521 Digital Forensics	CSE	4	-	-	3
10	CS2522 Business Intelligence & Decision Support Systems	CSE	4	-	-	3
11	IT2521 Adhoc and Sensor Networks	IT	4	-	-	3
12	CT2537 Information Retrieval Systems (Other than CSE)	IT	4	-	-	3
13	MA2514 Fuzzy Logic (Other than EEE, ME & CSE)	BS&H	4	-	-	3

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Professional Electives

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods			No. of Credits
			per week			
			L	T	P	
		Professional Elective - I	4	-	-	3
	CS2506	i) C#.NET				
	CT2522	ii) Advanced Data Structures				
	CT2523	iii) Software Testing Methodologies				
	CS2507	iv) Principles of Programming Languages				
		Professional Elective - II	4	-	-	3
	CT2521	i) Artificial Intelligence				
	CT2529	ii) Scripting Languages				
	EC2520	iii) Microprocessors and Interfacing				
	CT2531	iv) Software Project Management				
		Professional Elective - III	4	-	-	3
	CS2518	i) Machine Learning				
	CT2535	ii) Internet of Things				
	CS2519	iii) NoSQL Databases				
	CS2520	iv) Software Requirements Engineering and Estimation				
		Professional Elective - IV	4	-	-	3
	CT2536	i) Mobile Computing				
	CT2530	ii) Image Processing				
	CT2537	iii) Information Retrieval Systems				
	MA2515	iv) Optimization Techniques				
		Professional Elective - V	4	-	-	3
	CS2527	i) Web Mining				
	CT2540	ii) Cloud Computing				
	CT2532	iii) Agile Software Development Process				
	CT2541	iv) Blockchain Technologies				
		Professional Elective - VI	4	-	-	3
	CS2528	i) Distributed Systems				
	CT2539	ii) Social Networks				
	CS2529	iii) Web Services				
	CS2530	iv) Deep Learning				

L : Lecture T : Tutorial P : Practical




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III Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	CT2517	Software Engineering	3	1	-	3
2	CT2518	Compiler Design	3	1	-	3
3	CT2510	Operating Systems	3	1	-	3
4	CT2520	Web Technologies	4	-	-	3
5		Professional Elective - I	4	-	-	3
6		Open Elective-II (see list of Open Electives)	4	-	-	3
7	IT2507	Operating Systems and Compiler Design Lab	-	-	4	2
8	CT2525	Web Technologies Lab	-	-	4	2
Total			21	3	8	22
9		Optional Elective - III	-	-	-	3
	IT2508	i) Object Oriented Programming through C++				
	EC2522	ii) Data Communication				
	CE2549	iii) Building Information Modelling				
10	IT2509	Optional Elective - IV (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

III Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	CT2527	Design and Analysis of Algorithms	3	1	-	3
2	CT2528	Data Warehousing and Data Mining	4	-	-	3
3	IT2510	Object Oriented Analysis and Design *	4	-	2	4
4	CT2519	Computer Networks	3	1	-	3
5		Professional Elective - II	4	-	-	3
6		Open Elective-III (see list of Open Electives)	4	-	-	3
7	IT2513	Computer Networks and Data Mining Lab	-	-	4	2
Total			22	2	6	21
8		Optional Elective - V	-	-	-	3
	IT2514	i) Secure Web Technologies				
	IT2515	ii) Management Information Systems				
	ME2544	iii) Robotics				
9	IT2516	Optional Elective - VI (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

* Integrated Course with Theory and Laboratory

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IV Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	BA2502	Managerial Economics and Financial Analysis	3	-	-	2
2	CT2534	Big Data Analytics	4	-	-	3
3		Professional Elective - III	4	-	-	3
4		Professional Elective - IV	4	-	-	3
5		Open Elective-IV (see list of Open Electives)	4	-	-	3
6	CT2538	Big Data Analytics Lab	-	-	4	2
7	IT2522	Mini Project	-	-	4	2
8	IT2523	Internship / Industrial Training / Practical Training	-	-	-	2
Total			19	-	8	20
9		Optional Elective - VII	-	-	-	3
	CT2539	i) Social Networks				
	EC2523	ii) Assistive Technologies				
	ME2542	iii) Renewable Energy Sources				
10	IT2524	Optional Elective - VIII (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

IV Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1		Professional Elective - V	4	-	-	3
2		Professional Elective - VI	4	-	-	3
3	IT2529	Project	-	-	20	10
Total			8	-	20	16

L : Lecture T : Tutorial P : Practical


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Open Elective - I

Sl. No.	Course Code	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
				L	T	P	
1		Elements of Civil Engineering (Other than CE)	CE	4	-	-	3
2	CE2516	Building Services	CE	4	-	-	3
3	EE2515	Electrical Materials	EEE	4	-	-	3
4	EE2516	Control Systems Engineering (Other than EEE & ECE)	EEE	4	-	-	3
5	ME2520	Elements of Manufacturing Processes (Other than ME)	ME	4	-	-	3
6	ME2521	Automotive Engineering (Other than ME)	ME	4	-	-	3
7	EC2531	Introduction to MPMC (Other than ECE/EEE/CSE/IT)	ECE	4	-	-	3
8	EC2532	Fundamentals of Communications (Other than ECE)	ECE	4	-	-	3
9	CT2514	Computer Graphics (Other than IT)	CSE	4	-	-	3
10	CT2507	Object Oriented Programming through Java (other than CSE & IT)	CSE	4	-	-	3
11	CT2515	Systems Software	IT	4	-	-	3
12	IT2502	Web Programming (Other than CSE & IT)	IT	4	-	-	3
13	MA2516	Mathematical Cryptography (Other than CSE)	BS&H	4	-	-	3
14	PH2508	Semiconductor Physics (Other than ECE)	BS&H	4	-	-	3

Open Elective - II

Sl. No.		Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
				L	T	P	
1	CE2530	Geoinformatics (other than CE)	CE	4	-	-	3
2	CE2531	Environmental Sanitation	CE	4	-	-	3
3	EE2523	Modeling & Simulation of Engineering Systems	EEE	4	-	-	3
4	EE2524	Power Systems Engineering (Other than EEE)	EEE	4	-	-	3
5	ME2532	Elements of Mechanical Transmission (Other than ME)	ME	4	-	-	3
6	ME2533	Material Handling Equipment	ME	4	-	-	3
7	EC2543	Automotive Electronics	ECE	4	-	-	3
8	EC2544	Introduction to MEMS (other than ECE)	ECE	4	-	-	3
9	CS2508	Data Science	CSE	4	-	-	3
10	CT2524	Virtual and Augmented Reality (other than IT)	CSE	4	-	-	3
11	IT2505	Open Source Software	IT	4	-	-	3
12	IT2506	Cyber Laws	IT	4	-	-	3
13	MA2517	Quality, Reliability and Operations Research	BS&H	4	-	-	3

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Open Elective - III

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2543 Hydrology (Other than CE)	CE	4	-	-	3
2	CE2544 Planning for Sustainable Development	CE	4	-	-	3
3	EE2531 Electrical and Hybrid Vehicles	EEE	4	-	-	3
4	EE2532 Power Plant Instrumentation	EEE	4	-	-	3
5	ME2541 Material Science (Other than ME)	ME	4	-	-	3
6	ME2542 Renewable Energy Sources (Other than ME)	ME	4	-	-	3
7	EC2523 Assistive Technologies (Other than ECE)	ECE	4	-	-	3
8	EC2507 Bio-Medical Engineering (Other than EEE & ECE)	ECE	4	-	-	3
9	CS2512 Node and Angular JS	CSE	4	-	-	3
10	CS2513 Cyber Security	CSE	4	-	-	3
11	CT2529 Scripting Languages (Other than CSE)	IT	4	-	-	3
12	CT2531 Software Project Management (Other than CSE)	IT	4	-	-	3
13	MA2518 Elements of Stochastic Processes	BS&H	4	-	-	3
14	EG2505 Academic Communication	ENGLISH	4	-	-	3

Open Elective - IV

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2562 Disaster Management (Other than CE)	CE	4	-	-	3
2	CE2563 Repair and Retrofitting Techniques	CE	4	-	-	3
3	EE2542 Modern Optimization Techniques	EEE	4	-	-	3
4	EE2543 Electrical Power Utilization (Other than EEE)	EEE	4	-	-	3
5	ME2553 Green Engineering	ME	4	-	-	3
6	ME2554 Non Destructive Evaluation (Other than ME)	ME	4	-	-	3
7	EC2563 Cyber Physical Systems	ECE	4	-	-	3
8	EC2508 Signals and Systems (Other than EEE & ECE)	ECE	4	-	-	3
9	CS2521 Digital Forensics	CSE	4	-	-	3
10	CS2522 Business Intelligence & Decision Support Systems	CSE	4	-	-	3
11	IT2521 Adhoc and Sensor Networks	IT	4	-	-	3
12	CT2537 Information Retrieval Systems (Other than CSE)	IT	4	-	-	3
13	MA2514 Fuzzy Logic (Other than EEE, ME & CSE)	BS&H	4	-	-	3

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Professional Electives

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods			No. of Credits
			per week			
			L	T	P	
		Professional Elective - I	4	-	-	3
	CT2521	i) Artificial Intelligence				
	EC2512	ii) Embedded System Design				
	CT2514	iii) Computer Graphics				
	CT2522	iv) Advanced Data Structures				
		Professional Elective - II	4	-	-	3
	IT2511	i) Soft Computing Techniques				
	IT2512	ii) Real Time Systems				
	CT2530	iii) Image Processing				
	CT2532	iv) Agile Software Development Process				
		Professional Elective - III	4	-	-	3
	IT2517	i) Machine Learning and Pattern Recognition				
	IT2518	ii) Distributed Operating Systems				
	CT2526	iii) Human Computer Interaction				
	CT2523	iv) Software Testing Methodologies				
		Professional Elective - IV	4	-	-	3
	IT2519	i) Business Intelligence				
	CT2536	ii) Mobile Computing				
	IT2520	iii) Multimedia Tools				
	CT2533	iv) Cryptography and Network Security				
		Professional Elective - V	4	-	-	3
	IT2525	i) Steganography and Biometrics				
	IT2526	ii) Parallel Computing				
	CT2524	iii) Virtual and Augmented Reality				
	IT2527	iv) E-Commerce				
		Professional Elective - VI	4	-	-	3
	CT2535	i) Internet of Things				
	CT2540	ii) Cloud Computing				
	CT2541	iii) Blockchain Technologies				
	IT2528	iv) Design Patterns				

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I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	CE3901	Advanced Structural Analysis **	3	-	-	3
2	CE3902	Theory of Elasticity	3	-	-	3
3		Professional Elective - I	3	-	-	3
4		Professional Elective - II	3	-	-	3
5	BA3901	Research Methodology & IPR	3	-	-	3
6	CE3908	Advanced Structural Engineering Lab	-	-	4	2
7	CE3909	Advanced Concrete Technology Lab	-	-	4	2
Total			15	-	8	19
8	BA3902	Constitution of India (Audit Course)	2	-	-	

II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	CE3910	Finite Element Methods in Structural Engineering **	3	-	-	3
2	CE3911	Structural Dynamics	3	-	-	3
3		Professional Elective - III	3	-	-	3
4		Professional Elective - IV	3	-	-	3
5	CE3918	Computer Applications in Structural Engineering Lab	-	-	4	2
6	CE3919	Structural Design Lab	-	-	4	2
7	CE3920	Mini Project with Seminar	-	-	6	3
Total			12	-	14	19
8	EG3901	English for Research Paper Writing (Audit Course)	2	-	-	-

III Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1		Professional Elective - V	3	-	-	3
2		Open Elective	3	-	-	3
3		Dissertation Phase - I	-	-	20	10
Total			6	-	20	16

** Project Based Course

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IV Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1		Dissertation Phase - II	-	-	32	16
Total			-	-	32	16

Professional Electives:

Professional Elective - I

- MA3901 Computational Methods in Structural Engineering
- CE3903 Advanced R.C. Design
- CE3904 Experimental Stress Analysis

Professional Elective - II

- CE3905 Theory of Plates and Shells
- CE3906 Advancements in Concrete Technology
- CE3907 Design of Pre-stressed Concrete Structures

Professional Elective - III

- CE3912 Advanced Design of Steel Structures
- CE3913 Stability of Structures
- CE3914 Design of High-rise Structures

Professional Elective - IV

- CE3915 Design of Bridge Structures
- CE3916 Repairs and Retrofitting of Structures
- CE3917 Ground Improvement Methods

Professional Elective - V

- CE3921 Earthquake Resistant Design of Structures
- CE3922 Design of Sub-structures
- CE3923 MOOCs

Open Electives:

- CE3924 Sustainable Development
- EE3924 Energy Audit, Conservation & Management
- ME3924 Rapid Prototyping
- EC4924 Automotive Electronics (Other than VLSI&ES)
- CS3924 Soft Computing Techniques



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I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EE3901	Electrical Machine Modeling and Analysis	3	-	-	3
2	EE3902	Analysis of Power Electronic Converters**	3	-	-	3
3		Professional Elective - I	3	-	-	3
4		Professional Elective - II	3	-	-	3
5		Research Methodology & IPR	3	-	-	3
6	EE3909	Power Electronics Simulation Laboratory	-	-	4	2
7	EE3910	Power Converters Laboratory	-	-	4	2
Total			15	-	8	19
8	BA3902	Constitution of India (Audit Course)	2	-	-	

II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EE3911	Switched Mode Power Conversion	3	-	-	3
2	EE3912	Power Electronic Control of Electrical Drives **	3	-	-	3
3		Professional Elective - III	3	-	-	3
4		Professional Elective - IV	3	-	-	3
5	EE3919	Electric Drives Simulation Laboratory	-	-	4	2
6	EE3920	Electric Drives Laboratory	-	-	4	2
7	EE3921	Mini Project with Seminar	-	-	6	3
Total			12	-	14	19
8	EG3901	English for Research Paper Writing (Audit Course)	2	-	-	-

III Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1		Professional Elective - V	3	-	-	3
2		Open Elective	3	-	-	3
3		Dissertation Phase - I	-	-	20	10
Total			6	-	20	16

** Project Based Course

L : Lecture T : Tutorial P : Practical




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IV Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1		Dissertation Phase - II	-	-	32	16
Total			-	-	32	16

Professional Electives:

Professional Elective - I

- EE3903 Modern Control Theory
- EE3904 Power Quality and Custom Power Devices
- EE3905 Programmable Logic Controllers and Applications

Professional Elective - II

- EE3906 Artificial Intelligence Techniques
- EE3907 Renewable Energy Technologies
- EE3908 Flexible AC Transmission Systems

Professional Elective - III

- EE3913 Control and Integration of Renewable Energy Systems
- EE3914 Hybrid Electric Vehicles
- EE3915 Advanced Digital Control Systems

Professional Elective - IV

- EE3916 Advanced Digital Signal Processing
- EE3917 Applications of Power Converters
- EE3918 Microcontrollers

Professional Elective - V

- EE3922 Digital Signal Processing Controlled Drives
- EE3923 Smart Grid Technologies
- EE39.... MOOCs

Open Electives:

- CE3924 Sustainable Development
- EE3924 Energy Audit, Conservation & Management
- ME3924 Rapid Prototyping
- EC4924 Automotive Electronics (Other than VLSI&ES)
- CS3924 Soft Computing Techniques



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I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	ME3901	Mechanical Vibrations and Acoustics **	3	-	-	3
2	ME3902	Advanced mechanics of Solids	3	-	-	3
3		Professional Elective - I	3	-	-	3
4		Professional Elective - II	3	-	-	3
5	BA3901	Research Methodology & IPR	3	-	-	3
6	ME3909	Machine Dynamics Lab	-	-	4	2
7	ME3910	Advanced Material Testing Lab	-	-	4	2
Total			15	-	8	19
8	BA3902	Constitution of India (Audit Course)	2	-	-	

II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	MA3902	Computational Methods in Engineering	3	-	-	3
2	ME3911	Advanced Finite Element Methods **	3	-	-	3
3		Professional Elective - III	3	-	-	3
4		Professional Elective - IV	3	-	-	3
5	ME3918	Modeling and Simulation Lab	-	-	4	2
6	ME3919	Computational Methods Lab	-	-	4	2
7	ME3920	Mini Project with Seminar	-	-	6	3
Total			12	-	14	19
8	EG3901	English for Research Paper Writing (Audit Course)	2	-	-	-

III Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1		Professional Elective - V	3	-	-	3
2		Open Elective	3	-	-	3
3	ME3926	Dissertation Phase - I	-	-	20	10
Total			6	-	20	16

** Project Based Course

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IV Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	ME3927	Dissertation Phase - II	-	-	32	16
Total			-	-	32	16

Professional Electives:**Professional Elective - I**

- ME3903 Analysis and Synthesis of Mechanisms
- ME3904 Advanced Materials
- ME3905 Industrial Robotics

Professional Elective - II

- ME3906 Gear Engineering
- ME3907 Advanced Optimization Techniques
- ME3908 Rotor Dynamics

Professional Elective - III

- ME3912 Design for Manufacturing and Assembly
- ME3913 Mechatronics
- ME3914 Vehicle Dynamics

Professional Elective - IV

- ME3915 Signal Analysis and Condition Monitoring
- ME3916 Fracture Mechanics
- ME3917 Experimental Stress Analysis

Professional Elective - V

- ME3921 Tribology
- ME3922 Composite Materials
- ME3923 MOOCs

Open Electives:

- CE3924 Sustainable Development
- EE3924 Energy Audit, Conservation & Management
- ME3924 Rapid Prototyping
- EC4924 Automotive Electronics (Other than VLSID&ES)
- CS3924 Soft Computing Techniques



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I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EC4901	CMOS VLSI Design	3	-	-	3
2	EC4902	Advanced Microcontrollers *	3	-	-	3
3		Professional Elective - I	3	-	-	3
4		Professional Elective - II	3	-	-	3
5	BA3901	Research Methodology & IPR	3	-	-	3
6	EC4909	CMOS VLSI Design Lab	-	-	4	2
7	EC4910	Advanced Microcontrollers Lab	-	-	4	2
Total			15	-	8	19
8	BA3902	Constitution of India (Audit Course)	2	-	-	

II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EC4911	VLSI System Design *	3	-	-	3
2	EC4912	Embedded System Based IoT	3	-	-	3
3		Professional Elective - III	3	-	-	3
4		Professional Elective - IV	3	-	-	3
5	EC4919	VLSI System Design Lab	-	-	4	2
6	EC4920	Embedded System and IoT Lab	-	-	4	2
7	EC4921	Mini Project with Seminar	-	-	6	3
Total			12	-	14	19
8	EG3901	English for Research Paper Writing (Audit Course)	2	-	-	-

III Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1		Professional Elective - V	3	-	-	3
2		Open Elective	3	-	-	3
3	EC4925	Dissertation Phase - I	-	-	20	10
Total			6	-	20	16

* Project Based Theory Course

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IV Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EC4925	Dissertation Phase - II	-	-	32	16
Total			-	-	32	16

Professional Electives:

Professional Elective - I

- EC4903 Testing and Testability of VLSI Circuits
- EC4904 Advanced Digital Design
- EC4905 Digital Signal and Image Processing

Professional Elective - II

- EC4906 VLSI Signal Processing
- EC4907 System Design with Embedded Linux
- EC4908 Parallel Processing

Professional Elective - III

- EC4913 Advances in VLSI Design
- EC4914 Embedded Computer Architecture
- EC4915 System on Chip Design

Professional Elective - IV

- EC4916 VLSI Interconnects
- EC4917 Communication Buses and Interfaces
- EC4918 Advanced Digital Signal Processing

Professional Elective - V

- EC4922 Lower Power VLSI Design
- EC4923 Network Security and Cryptography
- ME49... MOOCs

Open Electives:

- CE3924 Sustainable Development
- EE3924 Energy Audit, Conservation & Management
- ME3924 Rapid Prototyping
- EC4924 Automotive Electronics (Other than VLSI&ES)
- CS3924 Soft Computing Techniques



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Department of Computer Science and Engineering

R20 PG – M.Tech CSE (AI&ML)

Course Structure

I Semester

Sl. No.	Course Code	Name of the Course / Laboratory		No. of hours per week			Total Credits
				L	T	P	
1		Research Methodologies and IPR	HSS	3	-	-	3
2	CS3901	Advanced Data Structures and Algorithm Analysis	PC	3	-	-	3
3	CS3902	Data Science	ES	3	-	-	3
4	CS3903 CS3904 CS3905	Professional Elective – I 1. Digital Image Processing 2. Ad hoc and Sensor Networks 3. Intelligent Systems	PE	3	-	-	3
5	CS3906 CS3907 CS3908	Professional Elective – II 1. Internet of Things 2. Principles of Computer Security 3. Distributed Systems	PE	3	-	-	3
6	CS3909	Advanced Data Structures and Algorithm Analysis Lab	PC	-	-	4	2
7	CS3910	Data Science Lab	ES	-	-	4	2
8		Constitution of India	AC	2	-	-	-
Total :				17	-	8	19

II Semester

Sl. No.	Course code	Name of the Course / Laboratory		No. of hours per week			No. of Credits
				L	T	P	
1	CS3911	MEAN Stack Technologies	PC	3	-	-	3
2	CS3912	Machine Learning	PC	3	-	-	3
3	CS3913 CS3914 CS3915	Professional Elective – III 1. Blockchain Technology 2. Data Preparation and Analysis 3. Natural Language Processing	PE	3	-	-	3
4	CS3916 CS3917 CS3918	Professional Elective – IV 1. Cloud Computing 2. Quantum Computing 3. Digital Forensics	PE	3	-	-	3
5	CS3919	MEAN Stack Technologies Lab	PC	-	-	4	2
6	CS3920	Machine Learning using Python Lab	PC	-	-	4	2
7	CS3921	Mini Project with Seminar	PROJ	-	-	6	3
8		English for Research Paper Writing	AC	2	-	-	-
Total:				14	-	14	19


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III Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of hours per week			No. of Credits	
			L	T	P		
1	CS3922 CS3923	Professional Elective – V 1. Deep Learning 2. Recommender Systems 3. MOOCs-1 (NPTEL/SWAYAM) 12 Week Program related to the program which is not listed in the course structure	PE	3	-	-	3
2		Open Elective- I 1. Courses Offered by Other Departments 2. MOOCs-2 (NPTEL/SWAYAM)-Any 12 Week Course on Engineering/ Management/ Mathematics offered by other than parent department	OE	3	-	-	3
3	CS3925	Dissertation (Initiated in third Semester)	PROJ	-	-	20	10
Total :				6	-	20	16

IV Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of hours per week			No. of Credits	
			L	T	P		
1	CS3926	Dissertation (Carried out in third & fourth Semesters)	PROJ	-	-	32	16
Total :				-	-	32	16

Open Elective-I	CS3924	Soft Computing Techniques
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COURSE STRUCTURE

I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	BA3902	Perspectives of Management	4	-	-	4
2	BA3903	Managerial Economics	4	-	-	4
3	BA3904	Accounting for Managers	3	-	1	4
4	BA3905	Business Communication & Skill Development	4	-	-	4
5	BA3906	Business Environment and Legislation	4	-	-	4
6	BA3907	Quantitative Analysis for Business Decisions	3	-	1	4
7	BA3908	Business Law	4	-	-	4
8	BA3909	Information Technology Lab for Business Management	-	-	4	2
Total			26	-	6	30

II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	BA3910	Financial Management	3	-	1	4
2	BA3911	Marketing Management	4	-	-	4
3	BA3912	Human Resource Management	4	-	-	4
4	BA3913	Production & Operations Management	4	-	-	4
5	BA3914	Business Research Methods	3	-	1	4
6	BA3915	International Business	4	-	-	4
7	BA3916	Organizational Behaviour	4	-	-	4
Total			26	-	-	28

L : Lecture T : Tutorial P : Practical




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III Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits	
			L	T	P		
1	BA3917	Business Policy & Strategic Management	4	-	-	4	
2	BA3918	Logistics & Supply Chain Management	4	-	-	3	
3	BA3919	Retail Management	4	-	-	3	
4	BA3920	Business Ethics & Corporate Governance	4	-	-	3	
5		Specialisation - I	Marketing subjects common to all	4	-	-	3
6		Specialisation - II		4	-	-	3
7		Specialisation - III		4	-	-	3
8		Specialisation - IV		4	-	-	3
Total			32	-	-	25	

IV Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits	
			L	T	P		
1	BA3927	Entrepreneurship & Project Management	4	-	-	4	
2	BA3928	Management of Retail Operations	4	-	-	3	
3		Specialisation - V	Marketing subjects common to all	4	-	-	3
4		Specialisation - VI		4	-	-	3
5		Specialisation - VII	Finance (or) HR	4	-	-	3
6		Specialisation - VIII		4	-	-	3
7		Project Report	-	-	-	5	
8		Comprehensive Viva-Voce	-	-	-	1	
Total			20	0	0	25	

Specialisations:

III Semester	IV Semester
Marketing BA3921 Advertising & Brand Management BA3922 Consumer Behaviour Finance BA3923 Security Analysis & Portfolio Mgt. BA3924 International Financial Management HR BA3925 Human Resources Analytics BA3926 Industrial Relations and Labour Laws	Marketing BA3929 Marketing of Services BA3930 Sales & Distribution Management Finance BA3931 Financial Derivatives BA3932 Financial Institutions and Services HR BA3933 Compensation Management BA3934 Management of Change and Development




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