DMI COLLEGE OF ENGINEERING
(An Autonomous Institution)
Palanchur – Nazarathpet P.O., Chennai – 600 123

Affiliated to Anna University, Accredited by NBA

REGULATIONS 2024
CHOICE BASED CREDIT SYSTEM

B.E ELECTRICAL AND ELECTRONICS ENGINEERING

CURRICULUM

SEMESTER III								
Sl.No	Course Code	Course Title	Category	Periods per Week			Total Contact Periods	Credits
				L	T	P		
Theory Courses								
1	MA1204	Probability and Complex Functions	BS	3	1	0	4	4
2	EE1201	Analog and Integrated circuits.	PC	3	0	0	3	3
3	EE1202	Electrical Machines – I	PC	3	0	0	3	3
Theory Courses with Laboratory Component								
4	EE1203	Digital Logic Circuits	PC	3	0	2	5	3
5	EE1204	Electric Circuit Analysis	PC	3	1	0	4	4
6	CS1211	C Programming and Data Structures	PC	3	0	2	5	4
Laboratory Course								
7	EE1205	Analog and Integrated circuits Laboratory	PC	0	0	3	3	1.5
8	EE1206	Electrical Machines Laboratory – I	PC	0	0	3	3	1.5
Employability Enhancement Courses								
9	EM1201	Professional Development$	EEC	0	0	2	2	1
Audit Course								
10	AC1201	Aptitude and Reasoning Skills II	MC	1	1	0	1	0
Total				**19**	**5**	**8**	**31**	**25**

SEMESTER IV								
Sl.No	Course Code	Course Title	Category	Periods per Week			Total Contact Periods	Credits
				L	T	P		
Theory Courses								
1	GE1251	Environmental Sciences and Sustainability	BS	2	0	0	2	2
2	EE1251	Transmission and Distribution	PC	3	0	0	3	3
3	EE1252	Electromagnetic Fields	PC	3	1	0	4	4
4	EE1253	Electrical Machines – II	PC	3	0	0	3	3
Theory Courses with Laboratory Component								

5	EE1254	Measurements and Instrumentation	PC	2	0	2	4	4
6	EE1255	Control Systems	PC	2	1	2	5	4
Laboratory Course								
7	EE1256	Electrical Machines Laboratory II	PC	0	0	3	3	1.5
Employability Enhancement Courses								
8	EM1251	Summer Internship I	EEC	0	0	2	2	1
Audit Course								
9	AC1251	Aptitude and Reasoning Skills II	MC	1	1	0	1	0
Total				**14**	**4**	**14**	**30**	**22.5**

				SEMESTER V				
Sl.No	**Course Code**	**Course Title**	**Category**	**Periods per Week**			**Total Contact Periods**	**Credits**
				L	**T**	**P**		
Theory Courses								
1	EE1301	Power System Analysis	PC	3	0	0	3	3
2	EE1302	Power Electronics	PC	3	0	0	3	3
3		Professional Elective I	PE	3	0	0	3	3
4		Professional Elective II	PE	3	0	0	3	3
5		Professional Elective III	PE	3	0	0	3	3
Theory Courses with Laboratory Component								
6	EE1303	Microprocessor and Microcontroller	PC	2	1	2	5	4
Laboratory Course								
7	EE1304	Power Electronics Laboratory	PC	0	0	4	4	2
Employability Enhancement Courses								
8	EM1304	NPTEL certification	EEC	-	-	-	1	1
Audit Course								
9	AC1301	Technical Aptitude Skills I	MC	1	1	0	1	0
10		Mandatory Course I	MC	1	0	0	1	0
Total				**18**	**2**	**8**	**27**	**22**

				SEMESTER VI				
Sl.No	**Course Code**	**Course Title**	**Category**	**Periods per Week**			**Total Contact Periods**	**Credits**
				L	**T**	**P**		

		Theory Courses						
1	EE1351	Protection and Switchgear	PC	3	0	0	3	3
2	EE1352	Power System Operation and Control	PC	3	0	0	3	3
3		Professional Elective -IV	PE	3	0	0	3	3
Theory Courses with Laboratory Component								
4		Open Elective – I*	OE	3	0	0	3	3
5		Professional Elective IV	PE	3	0	0	3	3
6		Professional Elective V	PE	3	0	0	3	3
Laboratory Course								
7	EE1353	Power System Laboratory	PC	0	0	3	3	1.5
Employability Enhancement Courses								
8	EM1354	Technical Seminar	EEC	0	0	2	2	1
Audit Course								
9		Mandatory Course-II&	MC	3	0	0	3	0
Total				17	4	10	30	20.5

SEMESTER VII

Sl.No	Course Code	Course Title	Category	Periods per Week			Total Contact Periods	Credits
				L	T	P		
Theory Courses								
1	EE1401	High Voltage Engineering	PC	3	0	0	3	3
2	GE1401	Human Values and Ethics	HS	2	0	0	2	2
3		Elective – Management#	HS	3	0	0	3	3
4		Open Elective – II**	OE	3	0	0	3	3
Theory Courses with Laboratory Component								
5		Open Elective – III ***	OE	3	0	0	3	3
6		Open Elective – IV ***	OE	3	0	0	3	3
7		Professional Elective VII	PE	3	0	0	3	3
Employability Enhancement Courses								
8	EM1401	Mini project/Internship (2 months)	EEC	0	0	-	1	1
Audit Course								
9	AC1401	Technical Aptitude Skills II	MC	1	1	0	1	0
Total				18	1	10	28	21

SEMESTER VIII

				Periods per Week		Total	

Sl.No	Course Code	Course Title	Category	L	T	P	Contact Periods	Credits
Employability Enhancement Courses								
1	EE1451	Project Work / Internship	EEC	0	0	20	20	10
Audit Course								
2	AC1451	Research Article Writing	MC	3	2	0	5	0
Total				**3**	**2**	**20**	**25**	**10**

MANDATORY COURSES I

Sl.No	Course Code	Course Title	Category	Periods per Week			Total Contact Periods	Credits
				L	T	P		
1	MX1301	Introduction to Women and Gender Studies	MC	3	0	0	3	0
2	MX1302	Elements of Literature	MC	3	0	0	3	0
3	MX1303	Film Appreciation	MC	3	0	0	3	0
4	MX1304	Disaster Risk Reduction and Management	MC	3	0	0	3	0

MANDATORY COURSES II

Sl.No	Course Code	Course Title	Category	Periods per Week			Total Contact Periods	Credits
				L	T	P		
1	MX1351	Well Being with Traditional Practices - Yoga, Ayurveda and Siddha	MC	3	0	0	3	0
2	MX1352	History of Science and Technology in India	MC	3	0	0	3	0
3	MX1353	Political and Economic Thought for a Humane Society	MC	3	0	0	3	0
4	MX1354	State, Nation Building and Politics in India	MC	3	0	0	3	0
5	MX1355	Industrial Safety	MC	3	0	0	3	0

PROFESSIONAL ELECTIVE COURSES –VERTICALS								
Vertical 1		**POWER ENGINEERING**						
Sl.No	Course Code	Course Title	Category	Periods per Week			Total Contact Periods	Credits
				L	T	P		
1	EE1911	Utilization and Conservation of ElectricalEnergy	PE	3	0	0	3	3
2	EE1912	Under Ground Cable Engineering	PE	3	0	0	3	3
3	EE1913	Substation Engineering and Substation and Substation Automation	PE	3	0	0	3	3
4	EE1914	HVDC and FACTS	PE	2	0	2	4	4
5	EE1915	Energy Management and Auditing	PE	3	0	0	3	3
6	EE1916	Power Quality	PE	3	0	0	3	3
7	EE1917	Smart Grids	PE	3	0	0	3	3
8	EE1918	Restructured Power Market	PE	3	0	0	3	3
Vertical 2		**CONVERTERS AND DRIVES**						
Sl.No	Course Code	Course Title	Category	Periods per Week			Total Contact Periods	Credits
				L	T	P		
1	EE1921	Special Electrical Machines	PE	2	0	2	4	3
2	EE1922	Analysis of Electrical Machines	PE	2	0	2	4	3
3	EE1923	Multilevel Power Converters	PE	2	0	2	4	3
4	EE1924	Electrical Drives	PE	2	0	2	4	3
5	EE1925	SMPS and UPS	PE	2	0	2	4	3
6	EE1926	Power Electronics for Renewable Energy Systems	PE	2	0	2	4	3
7	EE1927	Control of Power Electronics Circuits	PE	1	0	4	5	3
Vertical 3		**EMBEDDED SYSTEMS**						
				Periods per Week			Total	

Sl.No	Course Code	Course Title	Category	L	T	P	Contact Periods	Credits
1	EE1931	Embedded System Design	PE	2	0	2	4	3
2	EE1932	Embedded C- programming	PE	2	0	2	4	3
3	EE1933	Embedded Processors	PE	2	0	2	4	3
4	EE1934	Embedded Control for Electrical Drives	PE	2	0	2	4	3
5	EE1935	Smart System Automation	PE	2	0	2	4	3
6	EE1936	Embedded System for Automotive Applications.	PE	2	0	2	4	3
7	EE1937	VLSI Design	PE	2	0	2	4	3
8	EE1938	MEMS and NEMS	PE	2	0	2	4	3
9	EE1939	Digital Signal Processing System	PE	2	0	2	4	3

Vertical 4		ELECTRIC VEHICLE TECHNOLOGY						
Sl.No	Course Code	Course Title	Category	Periods per Week			Total Contact Periods	Credits
				L	T	P		
1	EE1941	Electric Vehicle Architecture	PE	2	0	2	4	3
2	EE1942	Design of Motor and Power Converters for Electric Vehicles	PE	1	0	4	5	3
3	EE1943	Electric Vehicle Design, Mechanics and Control	PE	2	0	2	4	3
4	EE1944	Design of Electric Vehicle Charging System	PE	2	0	2	4	3
5	EE1945	Testing of Electric Vehicles	PE	3	0	0	3	3
6	EE1946	Grid Integration of Electric Vehicles	PE	3	0	0	3	3
7	EE1947	Intelligent Control of Electric Vehicles	PE	1	0	4	5	3

Vertical 5		ADVANCED CONTROL						
Sl.No	Course Code	Course Title	Category	Periods per Week			Total Contact Periods	Credits
				L	T	P		

Sl.No	Course Code	Course Title	Category	L	T	P	Total Contact Periods	Credits
1	EE1951	Process Modeling and Simulation	PE	3	0	0	3	3
2	EE1952	Computer Control of Processes	PE	3	0	0	3	3
3	EE1953	System Identification	PE	3	0	0	3	3
4	EE1954	Model Based Control	PE	3	0	0	3	3
5	EE1955	Nonlinear Control	PE	3	0	0	3	3
6	EE1956	Optimal Control	PE	3	0	0	3	3
7	EE1957	Adaptive Control	PE	3	0	0	3	3
8	EE1958	Machine Monitoring System	PE	3	0	0	3	3

Vertical 6		DIVERSIFIED COURSES						
Sl.No	Course Code	Course Title	Category	Periods per Week			Total Contact Periods	Credits
				L	T	P		
1	EE1961	Energy Storage Systems	PE	3	0	0	3	3
2	EE1962	Hybrid Energy Technology	PE	2	0	2	4	3
3	EE1963	Design and Modeling of Renewable Energy Systems	PE	2	0	2	4	3
4	EE1964	Grid integrating Techniques and Challenges	PE	2	0	2	4	3
5	EE1965	Sustainable and Environmentally Friendly HV Insulation System	PE	3	0	0	3	3
6	EE1966	Power System Transients	PE	3	0	0	3	3
7	EE1967	PLC Programming	PE	3	0	0	3	3
8	EE1968	Big Data Analytics	PE	3	0	0	3	3
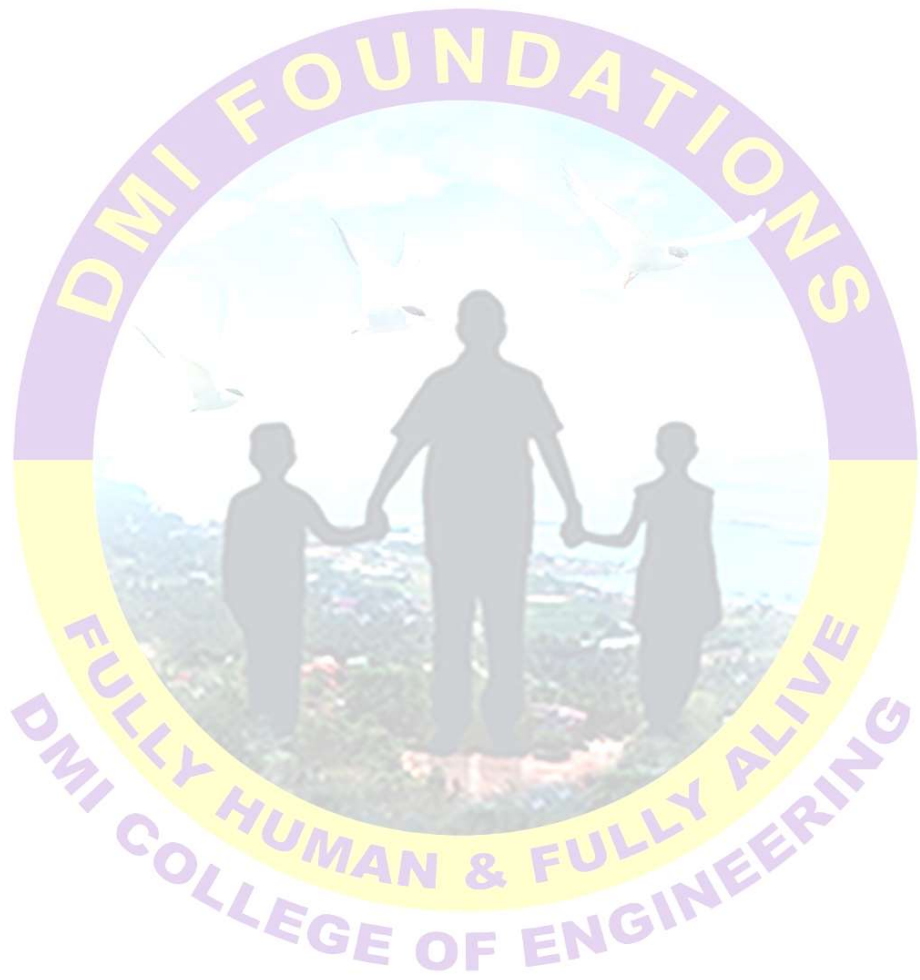
			OPEN ELECTIVES					
			OPEN ELECTIVES I & II (EMERGING TECHNOLOGIES)					
Sl.No	**Course Code**	**Course Title**	**Category**	**Periods per Week**			**Total Contact Periods**	**Credits**
				L	**T**	**P**		
1	AD1701	Artificial Intelligence and Machine Learning – Fundamentals	OE	2	0	2	4	4
2	IT1702	Internet of Things (IoT)	OE	2	0	2	4	4
3	CS1702	Augmented Reality/ Virtual Reality (AR/VR)	OE	2	0	2	4	4
4	CS1703	Block Chain	OE	2	0	2	4	4
5	CS1704	Data Science Fundamentals	OE	2	0	2	4	4
			OPEN ELECTIVES III					
Sl.No	**Course Code**	**Course Title**	**Category**	**Periods per Week**			**Total Contact Periods**	**Credits**
				L	**T**	**P**		
1	SH1701	English for Competitive Examinations	OE	3	0	0	3	3
2	MG1703	NGOs and Sustainable Development	OE	3	0	0	3	3
3	MG1704	Democracy and Good Governance	OE	3	0	0	3	3
4	SH1702	Applied Design Thinking	OE	3	0	0	3	3
5	ME1703	Reverse Engineering	OE	3	0	0	3	3
6	ME1704	Sustainable Manufacturing	OE	3	0	0	3	3
7	EE1704	Electric and Hybrid Vehicles	OE	3	0	0	3	3
8	ME1705	Fire Safety Engineering	OE	3	0	0	3	3
9	CE1702	Remote Sensing Concepts	OE	3	0	0	3	3
10	ME1706	Introduction to non-destructive testing	OE	3	0	0	3	3
11	EC1701	Foundation of Robotics	OE	3	0	0	3	3
12	EC1702	Introduction to PLC Programming	OE	3	0	0	3	3
13	ME1707	Nano Technology	OE	3	0	0	3	3
14	ME1708	Functional Materials	OE	3	0	0	3	3
15	EE1705	Energy Conservation and Management	OE	3	0	0	3	3
16	EC1703	Signals and Systems	OE	3	0	0	3	3
17	EC1704	Assistive Technology	OE	3	0	0	3	3
18	MA1702	Operations Research	OE	3	0	0	3	3

		OPEN ELECTIVE IV						
Sl.No	Course Code	Course Title	Category	Periods per Week			Total Contact Periods	Credits
				L	T	P		
1	CE1703	Basics of Integrated Water Resources Management	OE	3	0	0	3	3
2	SH1703	Project Report Writing	OE	3	0	0	3	3
3	MA1703	Advanced Numerical Methods	OE	3	0	0	3	3
4	MG1705	Production and Operations Management for Entrepreneurs	OE	3	0	0	3	3
5	MA1704	Multivariate Data Analysis	OE	3	0	0	3	3
6	ME1709	Micro and Precision Engineering	OE	3	0	0	3	3
7	EE1706	Sensors and Actuators	OE	3	0	0	3	3
8	ME1710	Nanomaterials and applications	OE	3	0	0	3	3
9	EE1707	Sensors	OE	3	0	0	3	3
10	EC1705	Concepts in Mobile Robots	OE	3	0	0	3	3
11	EC1706	Drone Technologies	OE	3	0	0	3	3
12	MG1706	Agriculture Entrepreneurship Development	OE	3	0	0	3	3
13	EC1707	Wearable devices	OE	3	0	0	3	3
14	EC1708	Medical Informatics	OE	3	0	0	3	3
15	CE1704	Biotechnology for Waste Management	OE	3	0	0	3	3
16	EC1709	Biotechnology in Health Care	OE	3	0	0	3	3

MINOR I: FINTECH AND BLOCK CHAIN

SL. NO.	COURSE CODE	COURSE TITLE	PERIODS PER WEEK			Total Contact Periods	Credits
			L	T	P		
1.	MG1611	Financial Management	3	0	0	3	3
2.	MG1612	Fundamentals ofInvestment	3	0	0	3	3
3.	MG1613	Banking, Financial Services and Insurance	3	0	0	3	3
4.	MG1614	Introduction to Blockchain and its Applications	3	0	0	3	3
5.	MG1615	Fintech Personal Finance and Payments	3	0	0	3	3
6.	MG1616	Introduction to Fintech	3	0	0	3	3

II: ENTREPRENEURSHIP

SL. NO.	COURSE CODE	COURSE TITLE	PERIODS PER WEEK			Total Contact Periods	Credits
			L	T	P		
1.	MG1621	Foundations of Entrepreneurship	3	0	0	3	3
2.	MG1622	Team Building & Leadership Management for Business	3	0	0	3	3
3.	MG1623	Creativity & Innovation in Entrepreneurship	3	0	0	3	3
4.	MG1624	Principles of Marketing Management ForBusiness	3	0	0	3	3
5.	MG1625	Human ResourceManagement for Entrepreneurs	3	0	0	3	3
6.	MG1626	Financing New Business Ventures	3	0	0	3	3

III: PUBLIC ADMINISTRATION

SL. NO.	COURSE CODE	COURSE TITLE	PERIODS PER WEEK			Total Contact Periods	Credits
			L	T	P		
1.	MG1631	Principles of PublicAdministration	3	0	0	3	3
2.	MG1632	Constitution of India	3	0	0	3	3
3.	MG1633	Public PersonnelAdministration	3	0	0	3	3
4.	MG1634	Administrative Theories	3	0	0	3	3
5.	MG1635	Indian AdministrativeSystem	3	0	0	3	3
6.	MG1636	Public Policy Administration	3	0	0	3	3

IV : BUSINESS DATA ANALYTICS

SL. NO.	COURSE CODE	COURSE TITLE	PERIODS PER WEEK			Total Contact Periods	Credits
			L	T	P		
1.	MG1641	Statistics ForManagement	3	0	0	3	3
2.	MG1642	Datamining For BusinessIntelligence	3	0	0	3	3
3.	MG1643	Human ResourceAnalytics	3	0	0	3	3
4.	MG1644	Marketing And Social Media Web Analytics	3	0	0	3	3
5.	MG1645	Operation And SupplyChain Analytics	3	0	0	3	3
6.	MG1646	Financial Analytics	3	0	0	3	3

V : ENVIRONMENT AND SUSTAINABILITY

SL. NO.	COURSE CODE	COURSE TITLE	PERIODS PER WEEK			Total Contact Periods	Credits
			L	T	P		
1.	CE1651	Sustainable infrastructure Development	3	0	0	3	3
2.	CE1652	Sustainable Agriculture and Environmental Management	3	0	0	3	3
3.	CE1653	Sustainable Bio Materials	3	0	0	3	3

4.	CE1654	Materials for Energy Sustainability	3	0	0	3	3
5.	CE1655	Green Technology	3	0	0	3	3
6.	CE1656	Environmental Quality Monitoring and Analysis	3	0	0	3	3
7.	CE1657	Integrated Energy Planning for Sustainable Development	3	0	0	3	3
8.	CE1658	Energy Efficiency for Sustainable Development	3	0	0	3	3