



JCT College of Engineering and Technology, Pichanur

Coimbatore- 641 105

1.2.2 -ELECTIVE LIST R-2017 REGULATION
DEPARTMENT OF AUTOMOBILE ENGINEERING

SEMESTER VI, ELECTIVE - I

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	AT8001	Automotive Air-Conditioning	PE	3	3	0	0	3
2.	AT8002	Advance Theory of IC Engines	PE	3	3	0	0	3
3.	AT8003	Metrology and Measurements for Automobile Engineers	PE	3	3	0	0	3
4.	PR8072	New Product Development	PE	3	3	0	0	3
5.	GE8075	Intellectual Property Rights	PE	3	3	0	0	3
6.	GE8073	Fundamentals of Nano Science	PE	3	3	0	0	3

SEMESTER VII, ELECTIVE - II

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	AT8091	Manufacturing of Automotive Components	PE	3	3	0	0	3
2.	AT8004	New Generation and Hybrid Vehicles	PE	3	3	0	0	3
3.	AT8005	Automotive Aerodynamics	PE	3	3	0	0	3
4.	AT8006	Off Road Vehicles	PE	3	3	0	0	3
5.	MG8491	Operations Research	PE	3	3	0	0	3
6.	GE8071	Disaster Management	PE	3	3	0	0	3

SEMESTER VII, ELECTIVE - III

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	AT8007	Noise, Vibration and Measurements	PE	3	3	0	0	3
2.	PR8071	Lean Six Sigma	PE	3	3	0	0	3
3.	ME8099	Robotics	PE	3	3	0	0	3
4.	ME8092	Composite Materials and Mechanics	PE	3	3	0	0	3
5.	GE8074	Human Rights	PE	3	3	0	0	3

SEMESTER VIII, ELECTIVE - IV

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	AT8008	Transport Management	PE	3	3	0	0	3
2.	MG8091	Entrepreneurship Development	PE	3	3	0	0	3
3.	AT8009	Automotive Safety	PE	3	3	0	0	3
4.	AT8010	Automotive Pollution and Control	PE	3	3	0	0	3
5.	AT8011	Automotive Testing	PE	3	3	0	0	3

SEMESTER VIII, ELECTIVE - V

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	PR8491	Computer Integrated Manufacturing	PE	3	3	0	0	3
2.	AT8012	Alternative Fuels and Energy Systems	PE	3	3	0	0	3
3.	MG8591	Principles of Management	PE	3	3	0	0	3
4.	GE8076	Professional Ethics in Engineering	PE	3	3	0	0	3

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DEPARTMENT OF CIVIL ENGINEERING

SEMESTER V ELECTIVE - I

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	GI8012	Digital Cadastre	PE	3	3	0	0	3
2.	GI8013	Advanced Surveying	PE	3	3	0	0	3
3.	GI8014	Geographic Information System	PE	3	3	0	0	3
4.	GI8015	Geoinformatics Applications for Civil Engineers	PE	3	3	0	0	3
5.	GI8491	Total Station and GPS Surveying	PE	3	3	0	0	3
6.	GE8071	Disaster Management	PE	3	3	0	0	3
7.	GE8074	Human Rights	PE	3	3	0	0	3

SEMESTER VI ELECTIVE - II

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CE8001	Ground Improvement Techniques	PE	3	3	0	0	3
2.	CE8002	Introduction to Soil Dynamics and Machine Foundations	PE	3	3	0	0	3
3.	CE8003	Rock Engineering	PE	3	3	0	0	3
4.	CE8004	Urban Planning and Development	PE	3	3	0	0	3
5.	CE8005	Air Pollution and Control Engineering	PE	3	3	0	0	3
6.	GE8075	Intellectual Property Rights	PE	3	3	0	0	3



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SEMESTER VIII
ELECTIVE – IV

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CE8013	Coastal Engineering	PE	3	3	0	0	3
2.	CE8014	Participatory Water Resources Management	PE	3	3	0	0	3
3.	CE8015	Integrated Water Resources Management	PE	3	3	0	0	3
4.	CE8016	Groundwater Engineering	PE	3	3	0	0	3
5.	CE8017	Water Resources Systems Engineering	PE	3	3	0	0	3
6.	CE8018	Geo-Environmental Engineering	PE	3	3	0	0	3
7.	CE8091	Hydrology and Water Resources Engineering	PE	3	3	0	0	3
8.	GE8076	Professional Ethics in Engineering	PE	3	3	0	0	3

SEMESTER VIII
ELECTIVE – V

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CE8019	Computer Aided Design of Structures	PE	3	3	0	0	3
2.	CE8020	Maintenance, Repair and Rehabilitation of Structures	PE	3	3	0	0	3
3.	CE8021	Structural Dynamics and Earthquake Engineering	PE	3	3	0	0	3
4.	CE8022	Prefabricated Structures	PE	3	3	0	0	3
5.	CE8023	Bridge Engineering	PE	3	3	0	0	3
6.	GE8073	Fundamentals of Nano Science	PE	3	3	0	0	3


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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

SEMESTER VI ELECTIVE - I

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1	CS8075	Data Warehousing and Data Mining	PE	3	3	0	0	3
2	IT8076	Software Testing	PE	3	3	0	0	3
3	IT8072	Embedded Systems	PE	3	3	0	0	3
4	CS8072	Agile Methodologies	PE	3	3	0	0	3
5	CS8077	Graph Theory and Applications-	PE	3	3	0	0	3
6	IT8071	Digital Signal Processing	PE	3	3	0	0	3
7	GE8075	Intellectual Property Rights	PE	3	3	0	0	3

SEMESTER VII ELECTIVE - II

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1	CS8091	Big Data Analytics	PE	3	3	0	0	3
2	CS8082	Machine Learning Techniques	PE	3	3	0	0	3
3	CS8092	Computer Graphics and Multimedia	PE	3	3	0	0	3
4	IT8075	Software Project Management	PE	3	3	0	0	3
5	CS8081	Internet of Things	PE	3	3	0	0	3
6	IT8074	Service Oriented Architecture	PE	3	3	0	0	3
7	GE8077	Total Quality Management	PE	3	3	0	0	3

SEMESTER VII ELECTIVE - III

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CS8083	Multi-core Architectures and Programming	PE	3	3	0	0	3
2.	CS8079	Human Computer Interaction	PE	3	3	0	0	3
3.	CS8073	C# and .Net Programming	PE	3	3	0	0	3
4.	CS8088	Wireless Adhoc and Sensor Networks	PE	3	3	0	0	3
5.	CS8071	Advanced Topics on Databases	PE	3	3	0	0	3
6.	GE8072	Foundation Skills in Integrated Product Development	PE	3	3	0	0	3
7.	GE8074	Human Rights	PE	3	3	0	0	3
8.	GE8071	Disaster Management	PE	3	3	0	0	3


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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

SEMESTER V ELECTIVE I

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CS8392	Object Oriented Programming	PE	3	3	0	0	3
2.	EC8073	Medical Electronics	PE	3	3	0	0	3
3.	CS8493	Operating Systems	PE	3	3	0	0	3
4.	EC8074	Robotics and Automation	PE	3	3	0	0	3
5.	EC8075	Nano Technology and Applications	PE	3	3	0	0	3
6.	GE8074	Human Rights	PE	3	3	0	0	3
7.	GE8077	Total Quality Management	PE	3	3	0	0	3

SEMESTER VI ELECTIVE II

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CS8792	Cryptography and Network Security	PE	3	3	0	0	3
2.	EC8091	Advanced Digital Signal Processing	PE	3	3	0	0	3
3.	EC8001	MEMS and NEMS	PE	3	3	0	0	3
4.	EC8002	Multimedia Compression and Communication	PE	3	3	0	0	3
5.	EC8003	CMOS Analog IC Design	PE	3	3	0	0	3
6.	EC8004	Wireless Networks	PE	3	3	0	0	3
7.	GE8075	Intellectual Property Rights	PE	3	3	0	0	3

SEMESTER VII ELECTIVE III

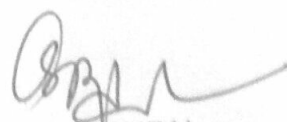
Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	EC8092	Advanced Wireless Communication	PE	3	3	0	0	3
2.	EC8071	Cognitive Radio	PE	3	3	0	0	3
3.	GE8072	Foundation Skills in Integrated Product Development	PE	3	3	0	0	3
4.	CS8082	Machine Learning Techniques	PE	3	3	0	0	3
5.	EC8005	Electronics Packaging and Testing	PE	3	3	0	0	3
6.	EC8006	Mixed Signal IC Design	PE	3	3	0	0	3
7.	GE8071	Disaster Management	PE	3	3	0	0	3

SEMESTER VIII
ELECTIVE - IV

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1	EC8093	Digital Image Processing	PE	3	3	0	0	3
2	CS8085	Social Network Analysis	PE	3	3	0	0	3
3	IT8073	Information Security	PE	3	3	0	0	3
4	CS8087	Software Defined Networks	PE	3	3	0	0	3
5	CS8074	Cyber Forensics	PE	3	3	0	0	3
6	CS8086	Soft Computing	PE	3	3	0	0	3
7	GE8076	Professional Ethics in Engineering	PE	3	3	0	0	3

SEMESTER VIII
ELECTIVE - V

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1	CS8080	Information Retrieval Techniques	PE	3	3	0	0	3
2	CS8078	Green Computing	PE	3	3	0	0	3
3	CS8076	GPU Architecture and Programming	PE	3	3	0	0	3
4	CS8084	Natural Language Processing	PE	3	3	0	0	3
5	CS8001	Parallel Algorithms	PE	3	3	0	0	3
6	IT8077	Speech Processing	PE	3	3	0	0	3
7	GE8073	Fundamentals of Nano Science	PE	3	3	0	0	3



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SEMESTER VIII
ELECTIVE IV

Sl.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	EC8072	Electro Magnetic Interference and Compatibility	PE	3	3	0	0	3
2.	EC8007	Low power SoC Design	PE	3	3	0	0	3
3.	EC8006	Photonic Networks	PE	3	3	0	0	3
4.	EC8009	Compressive Sensing	PE	3	3	0	0	3
5.	EC8093	Digital Image Processing	PE	3	3	0	0	3
6.	GE8076	Professional Ethics in Engineering	PE	3	3	0	0	3

SEMESTER VIII
ELECTIVE V

Sl.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	EC8010	Video Analytics	PE	3	3	0	0	3
2.	EC8011	DSP Architecture and Programming	PE	3	3	0	0	3
3.	EC8094	Satellite Communication	PE	3	3	0	0	3
4.	CS8086	Soft Computing	PE	3	3	0	0	3
5.	IT8006	Principles of Speech Processing	PE	3	3	0	0	3
6.	GE8073	Fundamentals of Nano Science	PE	3	3	0	0	3


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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

PROFESSIONAL ELECTIVE - I (VI SEMESTER)

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	IC8651	Advanced Control System	PE	4	2	2	0	3
2.	EE8001	Visual Languages and Applications	PE	3	3	0	0	3
3.	EE8002	Design of Electrical Apparatus	PE	3	3	0	0	3
4.	EE8003	Power Systems Stability	PE	3	3	0	0	3
5.	EE8004	Modern Power Converters	PE	3	3	0	0	3
6.	GE8075	Intellectual Property Rights	PE	3	3	0	0	3

PROFESSIONAL ELECTIVE - II (VI SEMESTER)

1.	RO8591	Principles of Robotics	PE	3	3	0	0	3
2.	EE8005	Special Electrical Machines	PE	3	3	0	0	3
3.	EE8006	Power Quality	PE	3	3	0	0	3
4.	EE8007	EHVAC Transmission	PE	3	3	0	0	3
5.	EC8395	Communication Engineering	PE	3	3	0	0	3

PROFESSIONAL ELECTIVE - III (VII SEMESTER)

1.	GE8071	Disaster Management	PE	3	3	0	0	3
2.	GE8074	Human Rights	PE	3	3	0	0	3
3.	MG8491	Operations Research	PE	3	3	0	0	3
4.	MA8391	Probability and Statistics	PE	4	4	0	0	4
5.	EI8075	Fibre Optics and Laser Instrumentation	PE	3	3	0	0	3
6.	GE8072	Foundation Skills in Integrated Product Development	PE	3	3	0	0	3

PROFESSIONAL ELECTIVE - IV (VII SEMESTER)

1.	EE8008	System Identification and Adaptive Control	PE	3	3	0	0	3
2.	CS8491	Computer Architecture	PE	3	3	0	0	3
3.	EE8009	Control of Electrical Drives	PE	3	3	0	0	3
4.	EC8095	VLSI Design	PE	3	3	0	0	3
5.	EE8010	Power Systems Transients	PE	3	3	0	0	3
6.	GE8077	Total Quality Management	PE	3	3	0	0	3


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PROFESSIONAL ELECTIVE – V (VIII SEMESTER)

1.	EE8011	Flexible AC Transmission Systems	PE	3	3	0	0	3
2.	EE8012	Soft Computing Techniques	PE	3	3	0	0	3
3.	EE8013	Power Systems Dynamics	PE	3	3	0	0	3
4.	EE8014	SMPS and UPS	PE	3	3	0	0	3
5.	EE8015	Electric Energy Generation, Utilization and Conservation	PE	3	3	0	0	3
6.	GE8076	Professional Ethics in Engineering	PE	3	3	0	0	3
7.	MG8591	Principles of Management	PE	3	3	0	0	3

PROFESSIONAL ELECTIVE – VI (VIII SEMESTER)

1.	EE8016	Energy Management and Auditing	PE	3	3	0	0	3
2.	CS8391	Data Structures	PE	3	3	0	0	3
3.	EE8017	High Voltage Direct Current Transmission	PE	3	3	0	0	3
4.	EE8018	Microcontroller Based System Design	PE	3	3	0	0	3
5.	EE8019	Smart Grid	PE	3	3	0	0	3
6.	EI8073	Biomedical Instrumentation	PE	3	3	0	0	3
7.	GE8073	Fundamentals of Nano Science	PE	3	3	0	0	3


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DEPARTMENT OF FOOD TECHNOLOGY

PROFESSIONAL ELECTIVE I, SEMESTER V

S. No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	FD8001	Biology and Chemistry of Food Flavours	PE	3	3	0	0	3
2.	FD8002	Pulse and Oil Seed Technology	PE	3	3	0	0	3
3.	FD8003	Traditional Foods	PE	3	3	0	0	3
4.	GE8071	Disaster Management	PE	3	3	0	0	3

PROFESSIONAL ELECTIVE II, SEMESTER VI

S. No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	FD8004	Process Economics and Industrial Management	PE	3	3	0	0	3
2.	FD8005	Functional Foods and	PE	3	3	0	0	3

		Nutraceuticals						
3.	FD8006	Food Toxicology and Allergy	PE	3	3	0	0	3
4.	FD8007	Spices and Plantation Technology	PE	3	3	0	0	3
5.	GE8075	Intellectual Property Rights	PE	3	3	0	0	3

PROFESSIONAL ELECTIVE III, SEMESTER VI

S. No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	FD8008	Food Process Equipment Design	PE	3	3	0	0	3
2.	FD8009	Cereal Technology	PE	3	3	0	0	3
3.	GE8076	Professional Ethics in Engineering	PE	3	3	0	0	3
4.	BT8091	Instrumentation and Process Control	PE	3	3	0	0	3
5.	BT8071	Biological Spectroscopy	PE	3	3	0	0	3


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PROFESSIONAL ELECTIVE IV, SEMESTER VI

S. No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	FD8010	Meat, Fish and Poultry Processing Technology	PE	3	3	0	0	3
2.	GE8073	Fundamentals of Nanoscience	PE	3	3	0	0	3
3.	FD8011	Food Plant Design	PE	3	3	0	0	3
4.	FD8012	Speciality Foods	PE	3	3	0	0	3
5.	FD8013	Entrepreneurship	PE	3	3	0	0	3

PROFESSIONAL ELECTIVE V, SEMESTER VII

S. No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	FD8014	Beverage Technology	PE	3	3	0	0	3
2.	FD8015	Post Harvest Technology	PE	3	3	0	0	3
3.	FD8016	Milling Technology	PE	3	3	0	0	3
4.	FD8017	Creativity, Innovation and New Food Product Development	PE	3	3	0	0	3
5.	BT8751	Downstream Processing	PE	3	3	0	0	3
6.	GE8074	Human Rights	PE	3	3	0	0	3

S. No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	FD8018	Management of Food Waste	PE	3	3	0	0	3
2.	FD8019	Food Safety Management Systems	PE	3	3	0	0	3

3.	FD8020	Genetic Engineering and Genetically Modified Foods	PE	3	3	0	0	3
4.	FD8021	Storage Engineering	PE	3	3	0	0	3
5.	FD8022	Technology of Fat and Oil	PE	3	3	0	0	3
6.	FD8023	Emerging Technologies in Food Processing	PE	3	3	0	0	3
7.	GE8077	Total Quality Management	PE	3	3	0	0	3



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DEPARTMENT OF MECHANICAL ENGINEERING

PROFESSIONAL ELECTIVES FOR B.E. MECHANICAL ENGINEERING

SEMESTER VI, ELECTIVE I

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	ME8091	Automobile Engineering	PE	3	3	0	0	3
2.	PR8592	Welding Technology	PE	3	3	0	0	3
3.	ME8095	Gas Dynamics and Jet Propulsion	PE	3	3	0	0	3
4.	GE8075	Intellectual Property Rights	PE	3	3	0	0	3
5.	GE8073	Fundamentals of Nano Science	PE	3	3	0	0	3

SEMESTER VII, ELECTIVE II

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	ME8071	Refrigeration and Air conditioning	PE	3	3	0	0	3
2.	ME8072	Renewable Sources of Energy	PE	3	3	0	0	3
3.	ME8098	Quality Control and Reliability Engineering	PE	3	3	0	0	3
4.	ME8073	Unconventional Machining Processes	PE	3	3	0	0	3
5.	MC8491	Operations Research	PE	3	3	0	0	3
6.	MF8071	Additive Manufacturing	PE	3	3	0	0	3
7.	GE8077	Total Quality Management	PE	3	3	0	0	3

SEMESTER VII, ELECTIVE III

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	ME8099	Robotics	PE	3	3	0	0	3
2.	ME8095	Design of Jigs, Fixtures and Press Tools	PE	3	3	0	0	3
3.	ME8093	Computational Fluid Dynamics	PE	3	3	0	0	3
4.	ME8097	Non Destructive Testing and Evaluation	PE	3	3	0	0	3
5.	ME8092	Composite Materials and Mechanics	PE	3	3	0	0	3
6.	GE8074	Human Rights	PE	3	3	0	0	3
7.	GE8071	Disaster Management	PE	3	3	0	0	3


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SEMESTER VIII, ELECTIVE IV

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	IE8693	Production Planning and Control	PE	3	3	0	0	3
2.	MG8091	Entrepreneurship Development	PE	3	3	0	0	3
3.	ME8094	Computer Integrated Manufacturing Systems	PE	3	3	0	0	3
4.	ME8074	Vibration and Noise Control	PE	3	3	0	0	3
5.	EE8091	Micro Electro Mechanical Systems	PE	3	3	0	0	3
6.	GE8076	Professional Ethics in Engineering	PE	3	3	0	0	3

EMPLOYABILITY ENHANCEMENT COURSES (EEC)

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	HS8381	Interpersonal Skills/Listening &	EEC	4	0	0	4	2
2.	ME8712	Technical Seminar	EEC	2	0	0	2	1
3.	ME8811	Project Work	EEC	20	0	0	20	12
4.	HS8461	Advanced Reading and Writing	EEC	2	0	0	2	1
5.	ME8682	Design and Fabrication Project	EEC	4	0	0	4	2
6.	HS8581	Professional Communication	EEC	2	0	0	2	1



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DEPARTMENT OF PETRO CHEMICAL ENGINEERING

PROFESSIONAL ELECTIVES

PROFESSIONAL ELECTIVE I, SEMESTER V

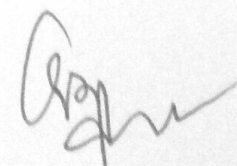
S. No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	PM8078	Petrochemical Unit Processes	PE	3	3	0	0	3
2.	PM8075	Instrumentation and Instrumental Analysis	PE	3	3	0	0	3
3.	CH8094	Polymer Technology	PE	3	3	0	0	3
4.	PM8076	Non-Conventional hydrocarbon sources	PE	3	3	0	0	3
5.	GE8071	Disaster Management	PE	3	3	0	0	3

PROFESSIONAL ELECTIVE II, SEMESTER VI

S. No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	PM8073	Design of Pressure Vessels and Piping	PE	3	3	0	0	3
2.	PM8074	Drilling and Well Engineering	PE	3	3	0	0	3
3.	PM8080	Production Engineering	PE	3	3	0	0	3
4.	PE8071	Advanced Separation Techniques	PE	3	3	0	0	3
5.	GE8075	Intellectual Property Rights	PE	3	3	0	0	3
6.	CH8791	Transport Phenomena	PE	3	3	0	0	3

PROFESSIONAL ELECTIVE III, SEMESTER VII

S. No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	PM8082	Water Treatment and Management	PE	3	3	0	0	3
2.	CH8072	Fluidization Engineering	PE	3	3	0	0	3
3.	PM8071	Chemical Process Design	PE	3	3	0	0	3
4.	PE8073	Enhanced Oil Recovery	PE	3	3	0	0	3
5.	GE8074	Human Rights	PE	3	3	0	0	3
6.	CH8077	Process Modeling and Simulation	PE	3	3	0	0	3



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PROFESSIONAL ELECTIVE IV, SEMESTER VII

S. No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	PM8079	Petroleum Process Equipment Auxiliaries	PE	3	3	0	0	3
2.	PE 8074	Multicomponent Distillation	PE	3	3	0	0	3
3.	PE 8075	Petroleum Corrosion Technology	PE	3	3	0	0	3
4.	PM8081	Refinery Process Design	PE	3	3	0	0	3
5.	GE 8072	Foundation Skills in Integrated Product Development	PE	3	3	0	0	3

PROFESSIONAL ELECTIVE V, SEMESTER VII

S. No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	PE8079	Storage Transportation of Crude Oil and Natural gas	PE	3	3	0	0	3
2.	PE8078	Reservoir Characterization and Modeling	PE	3	3	0	0	3
3.	PM8077	Petrochemical Derivatives	PE	3	3	0	0	3
4.	GE8077	Total Quality Management	PE	3	3	0	0	3

PROFESSIONAL ELECTIVE VI, SEMESTER VIII

S. No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	PE8076	Petroleum Economics	PE	3	3	0	0	3
2.	PM8072	Design of Heat Exchangers	PE	3	3	0	0	3
3.	PE8093	Plant Safety and Risk Analysis	PE	3	3	0	0	3
4.	PC8071	Safety in Chemical Industries	PE	3	3	0	0	3

5.	GE8073	Fundamentals of Nano Science	PE	3	3	0	0	3
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DEPARTMENT OF PETROLEUM ENGINEERING

PROFESSIONAL ELECTIVE I, SEMESTER V

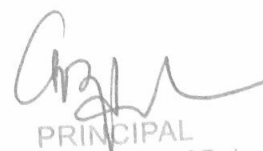
S. No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	PE8001	Chemical Reaction Engineering	PE	3	3	0	0	3
2.	CH8075	Petroleum Refining and Petrochemicals	PE	3	3	0	0	3
3.	PE8092	Natural Gas Engineering	PE	3	3	0	0	3
4.	PE8001	Principles of Geochemistry	PE	3	3	0	0	3
5.	GE8071	Disaster Management	PE	3	3	0	0	3

PROFESSIONAL ELECTIVE II, SEMESTER VI

S. No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	PE8071	Advanced Separation Techniques	PE	3	3	0	0	3
2.	PE8002	Well Completion Testing and Work Over	PE	3	3	0	0	3
3.	PE8072	Catalytic Reaction Engineering	PE	3	3	0	0	3
4.	PE8003	Numerical Reservoir Simulation	PE	3	3	0	0	3
5.	GE8075	Intellectual Property Rights	PE	3	3	0	0	3

PROFESSIONAL ELECTIVE III, SEMESTER VII

S. No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	PE8004	Onshore and Offshore Engineering and Technology	PE	3	3	0	0	3
2.	PE8005	Petroleum Equipment Design	PE	3	3	0	0	3
3.	PE8073	Enhanced Oil Recovery	PE	3	3	0	0	3
4.	GE8074	Human Rights	PE	3	3	0	0	3


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PROFESSIONAL ELECTIVE IV, SEMESTER VII

S. No.	COURSE CODE	COURSE TITLE	CATE GORY	CONTACT PERIODS	L	T	P	C
1	PE8006	Water Flooding and Enhanced Oil Recovery	PE	3	3	0	0	3
2	PE8093	Plant Safety and Risk Analysis	PE	3	3	0	0	3
3	PE8074	Multicomponent Distillation	PE	3	3	0	0	3
4	CH8076	Piping and Instrumentation	PE	3	3	0	0	3
5	GE8077	Total Quality Management	PE	3	3	0	0	3
6	PE8007	Petroleum Transportation and Design	PE	3	3	0	0	3

PROFESSIONAL ELECTIVE V, SEMESTER VII

S. No.	COURSE CODE	COURSE TITLE	CATE GORY	CONTACT PERIODS	L	T	P	C
1	PE8075	Petroleum Corrosion Technology	PE	3	3	0	0	3
2	PE8008	Well Completion and Simulation	PE	3	3	0	0	3
3	PE8079	Storage Transportation of Crude Oil and Natural Gas	PE	3	3	0	0	3
4	PE8078	Reservoir Characterization and Modeling	PE	3	3	0	0	3

PROFESSIONAL ELECTIVE VI, SEMESTER VIII

S. No.	COURSE CODE	COURSE TITLE	CATE GORY	CONTACT PERIODS	L	T	P	C
1	PE8009	Oil Field Equipment Design and Drawing	PE	3	3	0	0	3
2	PE8077	Process Economics	PE	3	3	0	0	3
3	PE8076	Petroleum Economics	PE	3	3	0	0	3
4	PE8010	Integrated Oil/Gas Field Evaluation	PE	3	3	0	0	3
5	GE8073	Fundamentals of Nano Science	PE	3	3	0	0	3



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ME STRUCTURAL ENGINEERING

SEMESTER I ELECTIVE I & II

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	ST5001	Maintenance and Rehabilitation of Structures	PE	3	3	0	0	3
2.	ST5002	Prefabricated Structures	PE	3	3	0	0	3
3.	ST5003	Offshore Structures	PE	3	3	0	0	3
4.	ST5004	Matrix Methods for Structural Analysis	PE	3	3	0	0	3

SEMESTER II ELECTIVE III & IV

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	ST5005	Theory of Plates	PE	3	3	0	0	3
2.	ST5006	Mechanics of Composite Materials	PE	3	3	0	0	3
3.	ST5007	Analysis and Design of Tall Buildings	PE	3	3	0	0	3
4.	ST5008	Industrial Structures	PE	3	3	0	0	3
5.	ST5009	Prestressed Concrete	PE	3	3	0	0	3
6.	ST5010	Wind and Cyclone Effects on Structures	PE	3	3	0	0	3

SEMESTER III ELECTIVE V & VI

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	ST5011	Nonlinear Analysis of Structures	PE	3	3	0	0	3
2.	ST5012	Design of Sub Structures	PE	3	3	0	0	3
3.	ST5013	Optimization of Structures	PE	3	3	0	0	3
4.	ST5014	Design of Steel Concrete Composite Structures	PE	3	3	0	0	3
5.	ST5015	Design of Bridges	PE	3	3	0	0	3
6.	ST5016	Design of Shell and Spatial Structures	PE	3	3	0	0	3
7.	ST5017	Computer Aided Analysis and Design	PE	4	2	0	2	3


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ME ENGINEERING DESIGN

LIST OF ELECTIVES FOR M.E. ENGINEERING DESIGN

SEMESTER I (Elective I)

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	ED5071	Optimization Techniques in Design	PE	3	3	0	0	3
2.	ED5072	Design of Pressure Vessel and Piping	PE	3	3	0	0	3
3.	ED5091	Design of Material Handling Equipments	PE	3	3	0	0	3
4.	CC5292	Additive Manufacturing and Tooling	PE	3	3	0	0	3
5.	ED5073	Information Analytics	PE	3	3	0	0	3

SEMESTER II (Elective II & III)

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	ED5001	Plates and Shells	PE	3	3	0	0	3
2.	ED5002	Modal Analysis of Mechanical Systems	PE	3	3	0	0	3
3.	ED5003	Advanced Metal Forming Techniques	PE	3	3	0	0	3
4.	ED5074	Tribology in Design	PE	3	3	0	0	3
5.	ED5004	Surface Engineering	PE	3	3	0	0	3
6.	ED5092	Advanced Mechanics of Materials	PE	3	3	0	0	3

SEMESTER III (Elective IV & V)

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	ED5075	Design for Internet of Things	PE	3	3	0	0	3
2.	ED5005	Design of Hydraulic and Pneumatic Systems	PE	3	3	0	0	3
3.	ED5006	Bearing Design and Rotor Dynamics	PE	3	3	0	0	3
4.	ED5076	Product Design for Sustainability	PE	3	3	0	0	3
5.	ED5093	Computational Fluid Dynamics	PE	3	3	0	0	3
6.	CC5291	Design for Manufacture, Assembly and Environments	PE	3	3	0	0	3
7.	ED5077	Biomechanics	PE	3	3	0	0	3
8.	ED5078	Composite Materials and Mechanics	PE	3	3	0	0	3


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ME-VLSI

PROFESSIONAL ELECTIVES (PE) SEMESTER II ELECTIVE I

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	VL5001	Device Modeling - I	PE	3	3	0	0	3
2.	VL5002	RF IC Design	PE	3	3	0	0	3
3.	VL5003	Design of Analog Filters and Signal Conditioning Circuits	PE	3	3	0	0	3
4.	VL5004	Nano Scale Devices	PE	3	3	0	0	3

SEMESTER II ELECTIVE II

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	DS5191	DSP Processor Architecture and Programming	PE	3	3	0	0	3
2.	VL5005	Networks on Chip	PE	3	3	0	0	3
3.	AP5094	Signal Integrity for High Speed Design	PE	3	3	0	0	3
4.	AP5091	Digital Control Engineering	PE	3	3	0	0	3

SEMESTER II ELECTIVE III

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	AP5191	Embedded System Design	PE	3	3	0	0	3
2.	AP5251	Soft Computing and Optimization Techniques	PE	3	3	0	0	3
3.	VL5006	Reconfigurable Architectures	PE	3	3	0	0	3
4.	VL5007	Advanced Microprocessors and Architectures	PE	3	3	0	0	3


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ME -POWER ELECTRONICS AND DRIVES

Semester I Elective I								
S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1	INS091	Soft Computing Techniques	PE	3	3	0	0	3
2	PX5001	Electromagnetic Field Computation and Modeling	PE	3	3	0	0	3
3	PX5091	Control System Design for Power Electronics	PE	3	3	0	0	3
Semester II Elective II and III								
S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1	PX5002	Analog and Digital Controllers	PE	3	3	0	0	3

2	PX5003	Flexible AC Transmission Systems	PE	3	3	0	0	3
3	PX5004	Modern Rectifiers and Resonant Converters	PE	3	3	0	0	3
4	PX5092	Electromagnetic Interference and Compatibility	PE	3	3	0	0	3
5	ET5091	MEMS Technology	PE	3	3	0	0	3
6	PS5071	Distributed Generation and Microgrid	PE	3	3	0	0	3
Semester III Elective IV, V and VI								
S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1	PX5005	High Voltage Direct Current Transmission	PE	3	3	0	0	3
2	PS5092	Solar and Energy Storage Systems	PE	3	3	0	0	3
3	PX5071	Wind Energy Conversion Systems	PE	3	3	0	0	3
4	PS5072	Energy Management and Auditing	PE	3	3	0	0	3
5	PS5073	Electric Vehicles and Power Management	PE	3	3	0	0	3
6	PX5006	Non Linear Dynamics for Power Electronics Circuits	PE	3	3	0	0	3
7	PS5091	Smart Grid	PE	3	3	0	0	3
8	PX5072	Power Electronics for Renewable Energy Systems	PE	3	3	0	0	3
9	IN5079	Robotics and Control	PE	3	3	0	0	3
10	PX5007	Non Linear Control	PE	3	3	0	0	3


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