

PAAVAI ENGINEERING COLLEGE

(Autonomous)

1.3.1 Institution integrates cross-cutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability, and Human Values into the curriculum

Academic Year: 2022-2023

S.No	Regulations	No. of Courses		
		Gender	Environment and Sustainability	Human Values and Professional ethics
1	2019,2020	2	58	50

1.3.1. Institution integrates cross cutting issues relevant to Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum 2019

S.NO	Name of the Programme & Department	No. of Courses		
		Gender	Environment and Sustainability	Human Values and Professional ethics
1	Common Courses	1	1	2
2	B.E Aeronautical Engineering	0	1	7
3	B.Tech Agricultural Engineering	0	3	0
4	B.E Biomedical Engineering	0	2	3
5	B.Tech.-Biotechnology	0	0	0
6	B.Tech Chemical Engineering	0	5	0
7	B.E Civil Engineering	0	11	9
8	B.E Computer Science and Engineering	0	0	0
9	B.E ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING	0	0	0
10	B.E INTERNET OF THINGS	0	0	0
11	B.E Cyber Security	0	0	1
12	B.E Electronics and Communication Engineering	0	5	1
13	B.E Electrical & Electronics Engineering	0	5	7
14	B.Tech Food Technology	0	3	5
15	B.Tech Information Technology	0	1	1
16	B.E Mechanical Engineering	0	5	0
17	B.E Mechatronics	0	1	2
18	B.E Medical Electronics	0	2	1
19	B.Tech Pharmaceutical Technology	0	1	3
20	B.E ROBOTICS & AUTOMATION	0	1	0
21	B.E Safety and Fire Engineering	0	1	0
22	Master of Business Administration	1	1	4
23	Master of Computer Applications	0	2	1
24	M.E Communication Systems	0	0	1
25	M.E Engineering Design	0	3	0
26	M.E Power Systems Engineering	0	4	1
Total		2	58	49

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COURSES – CROSS CUTTING ISSUES

Regulations 2019 and 2020 (for the candidates admitted from the academic year 2020-2021 onwards)

Department	Course name	Course code	Description	Gender, Environment and Sustainability, Human Values and Professional Ethics
Common Courses	Environmental Science and Engineering	MC20201	Explain the concepts of different types of water sources, water quality parameters and factors governing selection of a good water source and conventional water treatment. This course also explains the social issues with regard to the environment.	Environment and Sustainability
	Value Education	MC20301	This includes topics such as reading/writing/listening comprehension, note taking, summarizing, report writing, along with elements of grammar and vocabulary. It is used to express that knowledge in a clear, concise, and coherent manner.	Human Values and Professional Ethics
	Entrepreneurship Development	BA20151	Help the students to develop their skill and motivates them to become a successful entrepreneur	Human Values and Professional Ethics
	Heritage of Tamils	GE20201	Help the students appreciate the essential complementarities between values and skills to ensure sustained happiness which are the core appreciations of all Tamils. It create an awareness on Engineering for gender related course	Gender
AERONAUTICAL	Principles of Unmanned Aerial Vehicle	AE19903	Unmanned Aerial Vehicles (UAVs), commonly known as drones, have emerged as transformative technologies with vast applications ranging from surveillance and mapping to delivery services and disaster response. As UAVs become integral to various industries, the ethical dimensions of their deployment are gaining prominence. This description explores the guiding principles that underpin UAV operations, emphasizing the intersection of human values and professional ethics in navigating the evolving landscape of unmanned aviation.	Human Values and Professional Ethics
	Aircraft Rules and Regulations	AE19353	Navigating the skies involves not just the mastery of flight mechanics but also a steadfast commitment to human values and professional ethics within the framework of aircraft rules and regulations. As aviation continues to be a critical component of global transportation, ensuring the safety, security, and well-being of passengers and crew demands adherence to a comprehensive set of guidelines.	Human Values and Professional Ethics

	Intellectual Property Rights	BA19253	Intellectual Property Rights (IPR) form the legal backbone of innovation, providing creators and inventors with the necessary protection for their intellectual endeavors. In this dynamic landscape, the intersection of IPR, human values, and professional ethics is pivotal, shaping the responsible and ethical conduct of individuals and organizations involved in the creation, dissemination, and protection of intellectual property.	Human Values and Professional Ethics
	Airframe Maintenance and Repair	AE19553	Help the students appreciate the essential complementarities between values and skills to ensure sustained happiness which are the core appreciations of all human beings. It create an awareness on Engineering Ethics and Human Values	Human Values and Professional Ethics
	Disaster Management	BA19252	Intellectual Property Rights (IPR) form the legal backbone of innovation, providing creators and inventors with the necessary protection for their intellectual endeavors. In this dynamic landscape, the intersection of IPR, human values, and professional ethics is pivotal, shaping the responsible and ethical conduct of individuals and organizations involved in the creation, dissemination, and protection of intellectual property.	Environment and Sustainability
	Aviation Management and Air Safety Engineering	AE19652	Help the students appreciate the essential complementarities between values and skills to ensure sustained happiness which are the core appreciations of all human beings. It create an awareness on Engineering Ethics and Human Values	Human Values and Professional Ethics
	Helicopter Maintenance	AE20153	Explain the concepts of Regular Inspections, Preventive Maintenance, Corrective Maintenance, Component Overhaul, Compliance with Regulations and Record Keeping. Both flight and maintenance principles play integral roles in the safe and efficient operation of helicopters, and understanding these concepts is fundamental for pilots and maintenance personnel alike.	Human Values and Professional Ethics
	Aero Engine Maintenance and Repair	AE20251	Help the students appreciate the essential complementarities between values and skills to ensure sustained happiness which are the core appreciations of all human beings. It create an awareness on Engineering Ethics and Human Values	Human Values and Professional Ethics
Agriculture engineering	Organic Farming Technologies	AI20654	Help the students to develop their skill on the organic farming technologies and different crop production practices and will be exposed to post harvest technologies ,exports and market avenues.	Environment and Sustainability

	Refrigeration and Cold Storage	AI20453	This course includes the storage of food and dairy products from deterioration due to bacterial activity and preserves the food to improve shelf life.	Environment and Sustainability
	Landscape Design and Site Planning	AI20901	Help the students to develop their skill on landscape and site planning in various areas.	Environment and Sustainability
Biomedical Engineering	Biomedical Waste Management	BM19902	Helps the students to know about the sources of different types of medical waste and to classify hazardous medical waste and healthcare waste, learn to recycle the waste and how to dispose hazardous waste.	Environment and Sustainability
	Healthcare and Hospital Management	BM19702	Helps the students to know about the basic concepts in Hospital Management, Customer orientation and retention, facilitate hospital planning activities and learn equipment maintenance skills.	Environment and Sustainability
	Medical Ethics standards and Safety	BM19452	This apply ethical principles and commit to professional ethics and responsibilities and norms of the hospital safety standards.	Human Values and Professional Ethics
	Medical Radiation Safety	BM19654	Helps students to understand the importance of radiation levels, aware of nuclear medicines and precautions, learn about the safety measures by using LASER and ultraviolet radiations.	Human Values and Professional Ethics
	Patient and Device Safety	BM19904	Helps students to understand the importance of electrical and fire safety, risk management, aware of medicines and precautions and regulation standards.	Human Values and Professional Ethics
Chemical Engineering	Solid waste Management	CM20901	The curriculum for solid waste management typically covers a range of topics such as waste handling, disposal, and sustainable practices.. Waste treatment and disposal techniques are explored, along with the associated regulations and policies governing waste management.	Environment and Sustainability

	Disaster Management	CM19554	Disaster Management curriculum equips students with strategies to mitigate risks and crises, from understanding hazards to response plans, preparedness, resilience, in every circumstance.	Environment and Sustainability
	Water conservation and Management	CM20152	Explain the concepts of different types of water sources, water quality parameters and factors governing selection of a good water source and water management. This course also explains water audit and water conservation in agriculture, process industry, construction industry and in service industry.	Environment and Sustainability
	Alternative Energy Engineering	CM19801	Explain the fundamentals of energy conversion in applications, sources, conversion technologies of nuclear and fossil fuels, principles of power generation, application of biomass, conservation and audit.	Environment and Sustainability
	Environmental pollution and control	CM20902	It gives introduction to types of pollution, such as water pollution, air pollution and solid waste management and their preventive and control methods.	Environment and Sustainability
CIVIL ENGINEERING	Highway Engineering	CE20402	It involves the planning, design, construction, operation, and maintenance of roads, highways, streets, bridges, and tunnels to ensure safe and effective transportation of people and goods.	Human Values and Professional Ethics
	Water Supply Engineering	CE20404	The course includes the analysis of PH value, turbidity, alkalinity, optimum coagulation dosage and chloride contents etc.,	Environment and Sustainability
	Waste Water Engineering	CE20504	Wastewater treatment is a process which removes and eliminates contaminants from wastewater and converts this into an effluent that can be returned to the water cycle.	Environment and Sustainability
	Railways, Airports and Harbour Engineering	CE20603	It is a multi-faceted engineering discipline dealing with the design, construction and operation of all types of rail transport systems. It encompasses a wide range of engineering disciplines, including civil engineering	Human Values and Professional Ethics

Pavement Engineering	CE20153	This course describes design of rigid and flexible pavements as per IRC, testing of materials used for pavement construction, bearing value of soil, etc, to enrich Human safety while Driving vehicles on pavement.	Human Values and Professional Ethics
Green Building	CE20153	It refers to saving resources to the maximum extent, including energy saving, land saving, water saving, material saving, etc., during the whole life cycle of the building, protecting the environment and reducing pollution, providing people with healthy, comfortable and efficient use of space, and being in harmony with nature Buildings that live in harmony.	Environment and Sustainability
Environmental and Social Impact Assessment	CE20254	Help the students appreciate the essential complementarities between values and skills to ensure sustained happiness which are the core appreciations of all human beings. It creates an awareness on Engineering Ethics and Human Values	Environment and Sustainability
Structural Dynamics and Earthquake Engineering	CE20351	This course outlines the dynamic behaviour of structures, design of resistance structures for earthquake as per code, shear walls, etc	Human Values and Professional Ethics
Municipal Solid Waste Management	CE20353	solid waste management mainly refers to the complete process of collecting, treating and disposing of solid wastes. In the waste management process, the wastes are collected from different sources and are disposed of. This process includes collection, transportation, treatment, analysis and disposal of waste. It needs to be monitored so that strict regulations and guidelines are followed.	Environment and Sustainability
Traffic Engineering and Management	CE20354	It is a branch of civil engineering that uses engineering techniques to achieve the safe and efficient movement of people and goods on roadways. It focuses mainly on research for safe and efficient traffic flow, such as road geometry, sidewalks and crosswalks, cycling infrastructure, traffic signs, road surface markings and traffic lights.	Human Values and Professional Ethics
Building Services	CE20901	Building services is a <u>professional engineering</u> discipline that strives to achieve a safe and comfortable indoor environment whilst minimizing the environmental impact of a building.	Human Values and Professional Ethics
Estimation, Costing and Valuation Engineering	CE19701	This course describes Calculation of earthwork excavation, brick work and RCC works in arches, Estimating of septic tank, Aqueduct, Schedule of rates, Contracts, Calculation of Standard rent, Principles for report preparation, etc.	Environment and Sustainability

Irrigation Engineering	CE19702	this course intends consumptive use of crops, Irrigation methods, Diversion Head works - Weirs and Barrages, Canal drop, Modernization techniques, etc.	Environment and Sustainability
Prestressed Concrete Structures	CE19451	This course describes Basic principles of prestressing, strength concept and load balancing concept, Design for shear based on I.S. 1343 Code, Design of anchorage zone reinforcement, Analysis for secondary moments, Partial prestressing, etc.	Human Values and Professional Ethics
Construction Management	CE19801	Construction management involves planning, budgeting, coordinating, and supervising construction projects from start to finish. Construction managers review proposals for projects to estimate timelines and milestones, cash flow requirements, project protocols, resourcing needs, and requirements for human resources, equipment, and resources at different stages of the project.	Human Values and Professional Ethics
Hydrology	CE19454	Hydrology is a branch of civil engineering concerned with water resources. It includes the study of water quality, quantity, flow, and distribution (hydrogeology) but most commonly refers to flood safety and prevention.	Environment and Sustainability
Air Pollution and Control Engineering	CE19552	This describes the Substances introduced into the air, natural or manmade, in concentrations detrimental to human, plant or animal life, or to property.	Environment and Sustainability
Geo Environmental Engineering	CE19654	Geoenvironmental Engineering is a scientific field that involves rock and soil mechanics, environmental engineering, groundwater hydrology, and their impact on human health and the environment. Geoenvironmental Engineering addresses issues related to complex problems, such as containment systems (such as landfills), contaminant transport, remediation of contaminated sites, and material reuse.	Environment and Sustainability
Disaster Management	CE19904	This course describes Do's and Don'ts during various types of Disasters, Processes and Framework at State and Central Level, Factors affecting Vulnerabilities, Hazard and Vulnerability profile of India, Disaster Damage Assessment, Landslide Hazard Zonation, etc.	Environment and Sustainability
Maintenance, Repair and Rehabilitation of Structures	CE19652	This course includes Assessment procedure for evaluating a damaged structure, Quality assurance for concrete, Concrete made with industrial wastes, Non-destructive Testing Techniques, Strengthening of Structural elements, Engineered demolition methods.	Human Values and Professional Ethics

Cyber Security	Cyber Laws and Ethics	CY20401	Help the students appreciate the essential complementarities between values and skills to ensure sustained happiness which are the core appreciations of all human beings. It create an awareness on Engineering Ethics and Human Values	Human Values and Professional Ethics
Electronics and Communication Engineering	Antennas and Wave Propagation	EC19701	Emissions from the antenna of telecommunication (telecom) masts erected near dwellings cause a myriad of health challenges, there is a growing fear of such radiations. some health effects of the environmental pollution by the electromagnetic radiations from the antenna of telecom masts located close to residential and basic educational facilities. suffered memory loss, dizziness and nose bleeding, while the adults (staff and parents/guardians) suffered fatigue, stress, muscles pains and aches, eye symptoms such as burning sensations, digestive disorders, sleep disturbance, facial pricking, rashes and ear/nose/throat symptoms. It was recommended that telecom masts should be kept sufficiently away from residential and basic school premises.	Environment and Sustainability
	Optical and Microwave Communication	EC19702	The biological effects of MW radiation fall into two types: thermal and non-thermal effects. Both are present, with thermal effects prominent in the case of high-power and high-frequency MW radiation and non-thermal effects predominant in the case of low-power MW radiation MW radiation has multi-faceted effects on many systems within an organism, including the nervous, endocrine, cardiovascular, immune, reproductive and hematopoietic systems	Environment and Sustainability
	Professional Readiness for Innovation, Employability and Entrepreneurship	EC19454	Help the students appreciate the essential complementarities between values and skills to ensure sustained happiness which are the core appreciations of all human beings. It create an awareness on Engineering Ethics and Human Values	Human Values and Professional Ethics
	RF Transmission Lines	EC20502	Help the students appreciate the essential complementarities between values and skills to ensure sustained happiness which are the core appreciations of all human beings. It create an awareness on Engineering Ethics and Human Values	Environment and Sustainability
	Network Security	EC20352	Intellectual Property Rights (IPR) form the legal backbone of innovation, providing creators and inventors with the necessary protection for their intellectual endeavors. In this dynamic landscape, the intersection of IPR, human values, and professional ethics is pivotal, shaping the responsible and ethical conduct of individuals and organizations involved in the creation, dissemination, and protection of intellectual property.	Environment and Sustainability

	Electromagnetic Fields and Waves	EC20303	Some health effects of the environmental pollution by the electromagnetic Emissions and radiations from the antenna of telecom masts located close to residential areas	Environment and Sustainability
M.E(Communication Systems)Research Methodology and IPR	Research Methodology and IPR	PEN19101	identifying the Research problems and collect the suitable data for Research. Write research proposals and Reports and apply their research work for patent through IPR	Human Values and Professional Ethics
B.E Electrical & Electronics Engineering	Energy Auditing	EE19452	Energy Audit is a vital link in the entire management chain. The energy manager, while proposing various courses of action and evaluating their consequences, requires a detailed information base to work from energy audit attempts to balance the total energy inputs with its use and serves to identify all the energy streams in the system and quantifies energy usages according to its discrete function.	Human Values and Professional Ethics
	Electrical Safety	EE19903	a system of organizational measures and technical means to prevent harmful and dangerous effects on workers from electric current, arcing, electromagnetic fields and static electricity.	Human Values and Professional Ethics
	SMPS and UPS	EE19904	A good and proper capacity power supply is required for providing sufficient power to all your computer components so that they function properly even at full load.	Environment and Sustainability/ Local Needs
	Total Quality Management	EE19654	TQM can have an important and beneficial effect on employee and organizational development.	Human Values and Professional Ethics
	Environmental Science and Engineering	MC20201	multidisciplinary field of engineering science that combines the biological, chemical and physical sciences with the field of engineering.	Environment and Sustainability
	Electric Vehicle Technology	EE20504	The electric vehicle controller is the electronics package that operates between the batteries and the motor to control the electric vehicle's speed and acceleration	Environment and Sustainability

	Wind and Solar Energy Systems	EE20604	Wind and Solar energy resources impact in electrical power generation, Generation method of electrical power. Waste management of the solar panels.	Environment and Sustainability
	Entrepreneurship Development	BA20151	enhancing the knowledge and skill of entrepreneurs through several classroom coaching and programs, and training	Human Values and Professional Ethics
	Energy Auditing	EE20452	Energy Audit is a vital link in the entire management chain. The energy manager, while proposing various courses of action and evaluating their consequences, requires a detailed information base to work from energy audit attempts to balance the total energy inputs with its use and serves to identify all the energy streams in the system and quantifies energy usages according to its discrete function.	Human Values and Professional Ethics
	Electrical Safety	EE20903	a system of organizational measures and technical means to prevent harmful and dangerous effects on workers from electric current, arcing, electromagnetic fields and static electricity.	Human Values and Professional Ethics
	SMPS and UPS	EE20904	A good and proper capacity power supply is required for providing sufficient power to all your computer components so that they function properly even at full load.	Environment and Sustainability/ Local Needs
	Total Quality Management	EE20654	TQM can have an important and beneficial effect on employee and organizational development.	Human Values and Professional Ethics
M.E Power Systems Engineering	Power Electronics for Renewable Energy Systems	PPS19151	The PE plays crucial role of conversion and control electrical power. Therefore, PE based power converters are also widely used in renewable energy systems.	Environment and Sustainability
	Wind and Solar Systems	PPS19154	Wind and Solar energy resources impact in electrical power generation, Generation method of electrical power. Waste management of the solar panels.	Environment and Sustainability

	Electric and Hybrid Vehicles	PPS19253	vehicle is considered to have better performance and fuel economy compared to a conventional one.	Environment and Sustainability
	Solar and Energy Storage Systems	PPS19354	stored electricity is consumed after sundown, during energy demand peaks, or during a power outage.	Environment and Sustainability
	Energy Management and Auditing	PPS19654	Energy Audit is a vital link in the entire management chain. The energy manager, while proposing various courses of action and evaluating their consequences, requires a detailed information base to work from energy audit attempts to balance the total energy inputs with its use and serves to identify all the energy streams in the system and quantifies energy usages according to its discrete function.	Human Values and Professional Ethics
FOOD TECHNOLOGY	Food Safety, Quality and Regulations	FT19701	To provide students with a solid foundation in the fundamental principles of food safety and to maintain the safety and quality of food products.As, the food industry becomes increasingly globalized these course provide students with a global perspective. Understanding international standards and practice prepares students to work in diverse environments and contribute to the global conversation on food safety.	Human Values and Professional Ethics
	Genetically modified foods	FT19702	Students explore the ethical dimensions of genetically modified foods, including considerations related to environmental impact, biodiversity and social equity. This ethical awareness helps students approach the subject with a boarder prepective, considering the implications beyond scientific advancements.	Environmental Sustainability
	Creativity, Innovation and New Product Development	FT19354	To recognize opportunities , take calculated risk and turn ideas into viable products. As, students engage in real - world projects, they develop leardership skills necessary for guiding teams through the innovation and product development process. This include decision - making, communication and project management skills.	Human Values and Professional Ethics
	Management of Food Waste	FT19454	Helps the students to know about the basic concepts in food waste management and to unerstanding the principles of this courses.	Environmental Sustainability
	Emerging Trends in food Processing Technology	FT19551	Students gain a deep understanding of the latest technologies shaping the food processing Industry.This includes energy efficiency processes, waste reduction startegies and eco-friendly packaging, aligning with industry trends towards more sustainable practices.	Environmental Sustainability

	Food Supply and Chain Management	FT19651	The courses explore the integration of technology, Such as data analytics, RFID and automation into supply chain managemnt. Students gain skills in leveraging technology to improve visibilitiy, tracebility and decision making in the food supply chain.	Human Values and Professional Ethics
	IPR in Food Industries	FT20601	Students gain a comprehensive understanding of intellectual property laws and regulations specific to the food industry.This includes patents, trademarks copyrights and trade secrets relevant to food products, processes and branding.	Human Values and Professional Ethics
	Operational Research	FT20254	Operational research courses equips students with advanced problem solvig techniques. They learn how to analyze complex situtation, identify key issues and develop effective startegies to optimize processes and decision making. To evaluate current processes, identify areas for rnhancement and implement changes to ensure ongoing organizational efficiency and effectiveness.	Human Values and Professional Ethics
Information Technology	Digital and Social Media Marketing	BA19354	Help the students to develop their skill and values related to education and motivates them to become a successful learner	Human Values and Professional Ethics
	Green Computing	IT20902	learn about pollution of natural resources by socio economic activities of human, acquire scientific knowledge on environment and its impact on eco systems, learn about pollution of natural resources by socio economic activities of human, understand the natural resources and its exploitation, know the role of human population, information technology on environment protection	Environment and Sustainability
Mechanical	Safety Engineering and Environmental Systems	ME19904	Explain the concepts of different types of water sources, water quality parameters and factors governing selection of a good water source and conventional water treatment. This course also explains the social issues with regard to the environment.	Environment and Sustainability
	Renewable Sources of Energy	ME19901	Expalin the concepts of various forms of energy producing in nature sources like sunlight, water and air. By this sources of energy producing techniques not affect the environment system. Students may aware that they may changed their life style by utilized the sourcces.	Environment and Sustainability
	Environmental Science and Engineering	MC20201	Explain the concepts of different types of water sources, water quality parameters and factors governing selection of a good water source and conventional water treatment. This course also explains the social issues with regard to the environment.	Environment and Sustainability

	Renewable Sources of Energy	ME20901	Expalin the concepts of various forms of energy producing in nature sources like sunlight, water and air. By this sources of energy producing techniques not affect the environment system. Students may aware that they may changed their life style by utilized the sourcces.	Environment and Sustainability
	Safety Engineering and Environmental Systems	ME20904	Explain the concepts of different types of water sources, water quality parameters and factors governing selection of a good water source and conventional water treatment. This course also explains the social issues with regard to the environment.	Environment and Sustainability
M.E Engineering Design	Industrial Safety	PED19901	Demaonstrate the concept of safety precautions and utilization personal protective equipments (PPE) under the different stages of product manufacturing with the consideration of environmental impacts.	Environment and Sustainability
	Waste to Energy	PED19903	Describe the various concepts to convert the waste elements from industry into useful things. And also provide the detail about effect of industrial waste.	Environment and Sustainability
	Energy Conservation in Industrial Utilities	PMR1904	Expalin the concepts of various forms of energy producing in nature sources like sunlight, water and air. By this sources of energy producing techniques not affect the environment system. Students may aware that they may changed their life style by utilized the sourcces.	Environment and Sustainability
Robotics and Automation	Environmental Science and Engineering	MC20201	Explain the concepts of different types of water sources, water quality parameters and factors governing selection of a good water source and conventional water treatment. This course also explains the social issues with regard to the environment.	Environment and Sustainability
Safety and Fire Engineering	Environmental Science and Engineering	MC20201	Explain the concepts of different types of water sources, water quality parameters and factors governing selection of a good water source and conventional water treatment. This course also explains the social issues with regard to the environment.	Environment and Sustainability
B.E Mechatronics	Intellectual Property Rights	MT19552	Intellectual Property Rights (IPR) form the legal backbone of innovation, providing creators and inventors with the necessary protection for their intellectual endeavors. In this dynamic landscape, the intersection of IPR, human values, and professional ethics is pivotal, shaping the responsible and ethical conduct of individuals and organizations involved in the creation, dissemination, and protection of intellectual property.	Human Values and Professional Ethics

	Diagnostic Techniques	MT20153	Explain the concepts of Regular Inspections, Preventive Maintenance, Corrective Maintenance, Component Overhaul, Compliance with Regulations and Record Keeping. Both machines and maintenance principles play integral roles in the safe and efficient operation of machines, and understanding these concepts.	Human Values and Professional Ethics
	Renewable Energy Sources	MT19452	Learn about the availability of renewable energy sources. Know the solar energy and the current solar energy cells. Can gather wind energy resources and techniques to utilize them effectively. Categorize the availability and the conversion method of bioenergy and biofuels. Summarize the significance of hydrogen and fuel cells principles, storage and uses.	Environment and Sustainability
B.E Medical Electronics	Medical Ethics and Safety	MD19553	This apply ethical principles and commit to professional ethics and responsibilities and norms of the hospital safety standards.	Environment and Sustainability
	Medical Ethics and Safety	MD16354	This apply ethical principles and commit to professional ethics and responsibilities and norms of the hospital safety standards.	Human Values and Professional Ethics
	Electrical Safety and Quality Assurance in Healthcare	MD19904	Helps students to understand the importance of electrical and fire safety, aware of medicines and precautions, learn about the safety measures by using LASER and ultraviolet radiations.	Environment and Sustainability
Pharmaceutical Technology	IPR in Pharmaceutical Industry	PT20501	This includes topics such as reading/writing/listening comprehension, note taking, summarizing, report writing, along with elements of grammar and vocabulary. It is used to express that knowledge in a clear, concise, and coherent manner for pharma industry	Human Values and Professional ethics
	Regulatory Requirements in Pharmaceutical Industry	PT19554	Process validation of a process will ensure production of drug of reproducible quality. In pharmaceutical industry, Process Validation performs this task to build the quality into the product because according to ISO 9000:2000, it had proven to be an important tool for quality management of pharmaceuticals	Human Values and Professional ethics
	Pharmacotherapeutics	PT19354	Its very much helpful for the students to know about the Hospital management in a computer system that helps manage the information related to health care and aids in the job completion of health care providers effectively. They manage the data related to all departments of healthcare such as, Clinical, Financial, Laboratory etc.,.	Human Values and Professional ethics

	Chemical Engineering Thermodynamics	PT20502	Students will learn the different types mode of heat transfer and its importance. Students will learn to proper techniques of utilization of thermal effects with minimum impact on environment.	Environment and Sustainability
Master of Business Administration	Business Ethics	BA19101	learn the role of ethics in Corporate Governance.	Professional Ethics
	Organizational Behavior	BA19103	Understand the outcomes of individual behaviour and its impact on work Describe the dynamics in group behaviour and means of developing effective team	Human Values and Professional Ethics
	Social Development Laboratory	BA19107	Know social issues and generate feasible solutions.	Sustainability
	Indian Ethos in Modern Management	BA19G01	Understand the ethical dimensions in managing employees at work place.	Human Values and Professional Ethics
	Entrepreneurship Development	BA19G04	This course speaks about the Entrepreneurship and sustainability	Human Values and Professional Ethics
	Gender and Society	21BAVC301	To enable the students to introspect on the Gendered experiences across the spectrum of daily life and understand power relationship through gender lens	Gender
Master of Computer Applications	Software Project Management	CA20252	This includes topics such as importance of software evolution costing, estimation techniques	Environment and Sustainability

	Organizational Behaviour	CA20254	This includes topics such as understanding the HR & OB Research foundation, TQM and Organizational Structure	Human Values and Professional Ethics
	Enterprise Resource Planning	CA20354	This includes topics such as importance of enterprise systems, integration and case study.	Environment and Sustainability