

1.1 List of courses offered across all programs during last five years

Program code	Program Name	Course code	Course Name	Course Outcome
705	M.Tech(TC)	MCE101	Advanced Communication Networks	Course Outcomes:
				Understand advanced concepts in Communication Networking.
				Design and develop protocols for Communication Networks.
				Understand the mechanisms in Quality of Service in networking.
				optimise the Network Design
705	M.Tech(TC)	MCE 102	Wireless and Mobile Communication	Course Outcomes:
				Design appropriate mobile communication systems.
				Apply frequency-reuse concept in mobile communications, and to analyze its effects on interference, system capacity, handoff techniques
				Distinguish various multiple-access techniques for mobile communications e.g. FDMA,TDMA, CDMA, and their advantages and disadvantages.
				Analyze path loss and interference for wireless telephony and their influences on a mobilecommunication system's performance.
				Analyze and design CDMA system functioning with knowledge of forward and reverse channel details, advantages and disadvantages of using the technology
				Understanding upcoming technologies like 3G, 4G etc.
705	M.Tech(TC)	MCE 103A	Program Elective-I Wireless Sensor Networks	Course Outcomes:
				Design wireless sensor network system for different applications under consideration.

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Program code	Program Name	Course code	Course Name	Course Outcome
				Understand the hardware details of different types of sensors and select right type of sensor for various applications.
				Understand radio standards and communication protocols to be used for wireless sensor network based systems and application.
				Use operating systems and programming languages for wireless sensor nodes, performance of wireless sensor networks systems and platforms.
				Handle special issues related to sensors like energy conservation and security challenges.
705	M.Tech(TC)	MCE 103B	Program Elective-I- Optical Networks	Course Outcomes:
				Contribute in the areas of optical network and WDM network design.
				Implement simple optical network and understand further technology developments for future enhanced network.
705	M.Tech(TC)	MCE 103C	Program Elective-I- Statistical Information Processing	Course Outcomes:
				Characterize and apply probabilistic techniques in modern decision systems, such as information systems, receivers, filtering and statistical operations.
				Demonstrate mathematical modelling and problem solving using such models.
				Comparatively evolve key results developed in this course for applications to signal processing, communications systems.

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				Develop frameworks based in probabilistic and stochastic themes for modelling and analysis of various systems involving functionalities in decision making, statistical inference, estimation and detection.
705	M.Tech(TC)	MCE 104A	Program Elective - II-Cognitive Radio	Course Outcomes:
				Understand the fundamental concepts of cognitive radio networks.
				Develop the cognitive radio, as well as techniques for spectrum holes detection that cognitive radio takes advantages in order to exploit it.
				Understand technologies to allow an efficient use of TVWS for radio communications based on two spectrum sharing business models/policies.
				Understand fundamental issues regarding dynamic spectrum access, the radio-resource management and trading, as well as a number of optimisation techniques for better spectrum exploitation.
705	M.Tech(TC)	MCE 104B	Program Elective - II-RF and Microwave Circuit Design	Course Outcomes:
				Understand the behaviour of RF passive components and model active components.
				Perform transmission line analysis.
				Demonstrate use of Smith Chart for high frequency circuit design.
				Justify the choice/selection of components from the design aspects.
				Contribute in the areas of RF circuit design.
705	M.Tech(TC)	MCE 104C	Program Elective - II-DSP Architecture	Course Outcomes:

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				Identify and formalize architectural level characterization of P-DSP hardware
				Ability to design, programming (assembly and C), and testing code using Code Composer Studio environment
				Deployment of DSP hardware for Control, Audio and Video Signal processing applications
				Understanding of major areas and challenges in DSP based embedded systems
705	M.Tech(TC)	MCE 191	Advanced Communication Networks Lab	Course Outcomes:
				Identify the different types of network devices and their functions within a network.
				Understand and build the skills of sub-netting and routing mechanisms.
				Understand basic protocols of computer networks, and how they can be used to assist in network design and implementation.
705	M.Tech(TC)	MCE 192	Wireless and Mobile Communication Lab	Course Outcomes:
				Understanding Cellular concepts, GSM and CDMA networks
				To study GSM handset by experimentation and fault insertion techniques
				Understating of 3G communication system by means of various AT commands usage in GSM
				Understanding CDMA concept using DSSS kit
				To learn, understand and develop concepts of Software Radio in real time environment
705	M.Tech(TC)	MCE105	Research Methodology and IPR	Course Outcomes:
				Understand research problem formulation.
				Analyze research related information

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				Follow research ethics
				Understand that today's world is controlled by Computer, Information Technology, but tomorrow world will be ruled by ideas, concept, and creativity.
				Understanding that when IPR would take such important place in growth of individuals & nation, it is needless to emphasis the need of information about Intellectual Property Right to be promoted among students in general & engineering in particular.
				Understand that IPR protection provides an incentive to inventors for further research work and investment in R & D, which leads to creation of new and better products, and in turn brings about, economic growth and social benefits.
705	M.Tech(TC)	MCE 106	Audit Course 1	Course objectives:
			AUDIT 1 and 2: ENGLISH FOR RESEARCH PAPER WRITING	Understand that how to improve your writing skills and level of readability
				Learn about what to write in each section
				Understand the skills needed when writing a Title
				Ensure the good quality of paper at very first-time submission
705	M.Tech(TC)	MCE 106	AUDIT 1 and 2: DISASTER MANAGEMENT	Course objectives:
				learn to demonstrate a critical understanding of key concepts in disaster risk reduction and humanitarian response.
				critically evaluate disaster risk reduction and humanitarian response policy and practice from multiple perspectives.

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				develop an understanding of standards of humanitarian response and practical relevance in specific types of disasters and conflict situations.
				critically understand the strengths and weaknesses of disaster management approaches, planning and programming in different countries, particularly their home country or the countries they work in
705	M.Tech(TC)	MCE 106	AUDIT 1 and 2: SANSKRIT FOR TECHNICAL KNOWLEDGE	Course Outcomes:
				Understanding basic Sanskrit language
				Ancient Sanskrit literature about science & technology can be understood
				Being a logical language will help to develop logic in students
705	M.Tech(TC)	MCE 106	AUDIT 1 and 2: VALUE EDUCATION	Course Outcomes:
				Knowledge of self-development
				Learn the importance of Human values
				Developing the overall personality
705	M.Tech(TC)	MCE 106	AUDIT 1 and 2: CONSTITUTION OF INDIA	Course Outcomes:
				Discuss the growth of the demand for civil rights in India for the bulk of Indians before the arrival of Gandhi in Indian politics.
				Discuss the intellectual origins of the framework of argument that informed the conceptualization of social reforms leading to revolution in India.

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Program code	Program Name	Course code	Course Name	Course Outcome
				Discuss the circumstances surrounding the foundation of the Congress Socialist Party [CSP] under the leadership of Jawaharlal Nehru and the eventual failure of the proposal of direct elections through adult suffrage in the Indian Constitution.
				Discuss the passage of the Hindu Code Bill of 1956.
705	M.Tech(TC)	MCE 106	AUDIT 1 and 2: PEDAGOGY STUDIES	Course Outcomes:
				What pedagogical practices are being used by teachers in formal and informal classrooms in developing countries?
				What is the evidence on the effectiveness of these pedagogical practices, in what conditions, and with what population of learners?
				How can teacher education (curriculum and practicum) and the school curriculum and guidance materials best support effective pedagogy?
705	M.Tech(TC)	MCE 106	AUDIT 1 and 2: STRESS MANAGEMENT BY YOGA	Course Outcomes:
				Develop healthy mind in a healthy body thus improving social health also
				Improve efficiency
705	M.Tech(TC)	MCE 292	Advanced Digital Signal Processing Lab	Course Outcomes:
				1. Design different digital filters in software
				2. Apply various transforms in time and frequency
				3. Perform decimation and interpolation