

# M.E. MULTIMEDIA TECHNOLOGY

(Affiliated to Anna University, Chennai)

## PROGRAM BROCHURE



Offered by  
**Department of Educational Media and Technology**  
**National Institute of Technical Teachers Training and Research**  
(Ministry of Education, Government of India)  
Taramani, Chennai- 600 113.  
[www.nitttrc.ac.in](http://www.nitttrc.ac.in)



## VISION

- ◆ To serve as a “One-Stop Institute of Excellence” and create an indelible mark in the fields of Multidisciplinary Education, Training, Research and Innovation at the Global Level

## MISSION

- ◆ To address the current challenges in the field of Technical Education and fulfill the evolving needs and expectations of the changing world by renewing the principles of the Teaching Learning process
- ◆ To anchor teaching in the quality culture of the Technical Institutions and articulate pedagogical competence to satisfy the demand for “Lifelong Learning”
- ◆ To transform the traditional “One Size Fits All” Model to “Skills over Degrees” Model



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National Institute of Technical Teachers Training and Research (NITTTR), Chennai was established in 1964 by the Government of India under the Ministry of Human Resource Development (MHRD) as a key catalyst institution for ensuring quality in technical education in South India comprising the States of Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Telangana and the Union Territory of Pondicherry. This Institute being a Resource Institute offers educational services in Curriculum Development, Instructional Methods/ Media/ Materials Development, Examination Reforms, Institutional Development, Continuing Education, Distance Learning, Training and Development, Educational Psychology and Educational Management and Research. The Institute strives continuously and vigorously to further enhance its sensitivity to environmental changes and greater heights of excellence by actively collaborating with National and through International agencies on projects and programmes aimed at quality improvement of technical education systems.



**“Innovate  
to Educate  
and  
Educate to  
Innovate”**

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## DEPARTMENT OF EDUCATIONAL MEDIA AND TECHNOLOGY

Educational Media Centre (EMC) was established during the inception of the Institute. EMC is involved in developing video programs for Polytechnics, Engineering Colleges, Govt. organizations and Industries. In the year 1986, ETV Studio was established with a state-of-the-art experience in many different aspects of educational media and television production. The studio is used to learn multi-camera production as well as film-style production.

As the technology evolved in the field of Educational Technology, Department of Educational Technology and Multimedia was founded in the year 2003. In the year 2017, the advancement of Information and Communication technologies encouraged the amalgamation of the Educational Media Centre (EMC) and Department of Educational Technology and Multimedia (DoETMM) was merged and renamed as Department of Educational Media and Technology (DEMT). This Department is involved in design and development of Instructional Media and Learning Resources for more than 4 decades.

### Vision

*Towards Excellence in Promoting Need Based Training Programs and Research in Learning Technologies and E-Content Development*



Conventional teaching aids such as charts, transparencies and variety of models are being designed and developed in different engineering disciplines. In the last 12 years the department got reoriented and transformed to develop digital teaching aids such as graphics, animations and simulations involving audio.

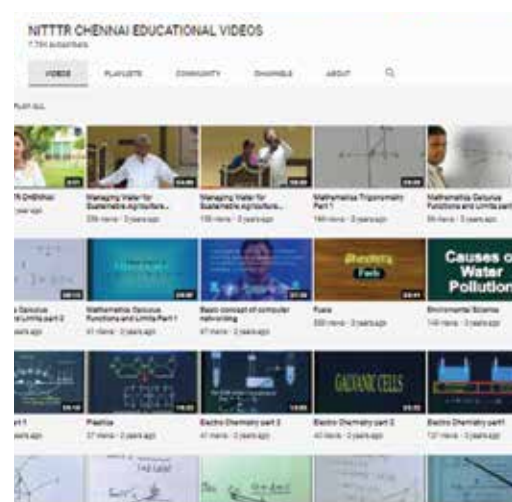


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The Department is involved in developing video programs for Polytechnics, Engineering Colleges, Govt. organizations and Industries. The developed video programs are being broadcasted through Gyandarshan, leading national educational television channel sponsored by MHRD Govt. of India.



The Department has identified the Learning Materials Development Project, in which the developed video programs are being sent to various educational Institutions in simple VCD format to make the teaching – learning process effective. During the year 2018, these videos are made available in the YouTube channel “NITTTR Chennai Educational videos”.



Offered Courses on 'Educational Television Production for HRD', 'Computer Applications and Information Technology for HRD', 'Development of Online Training Programmes', 'Courseware Development for HRD Program' for Long term programmes – Diploma / Post Diploma / Post graduate programmes.

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## (Affiliated to Anna University, Chennai)

Offers short term training programmes for Polytechnic and Engineering college teachers in various topics under the areas of Educational Technology, Instructional Media, E-content Development, Technology enabled Teaching and Learning, E-learning, Open Educational Resources, Video Production and Script writing.

Conducts Overseas Training Course in Advanced Certificate Course on Educational Media Production for E-learning sponsored by ITEC and SCAAP. The Centre is also involved in offering modules on Educational Video Production, E-content development and E-learning for other OTC programmes offered by the Institute



Develops e-content materials like videos and multimedia packages for SWAYAM MOOC under NMEICT, MHRD.

Conducts National / International Seminars and Workshops related to Educational Media, E-learning and Educational Technology.



COURSE OFFERED BY NITTR, CHENNAI  
Enroll Visit: [www.swayam.gov.in](http://www.swayam.gov.in)



GUIDANCE AND  
COUNSELLING



LMS - MOODLE ESSENTIAL  
TRAINING



STUDENT ASSESSMENT



E-CONTENT DEVELOPMENT



STUDENT PSYCHOLOGY



QUALITY ASSURANCE  
THROUGH NAAC  
ACCREDITATION PROCESS



OER & OPEN  
EDUCATION  
PRACTICES



QUESTION PAPER  
AUTHORING AND STUDENT  
EVALUATION



QUALITY ASSURANCE  
IN ENGINEERING  
EDUCATION



INTEGRATING EDUCATIONAL  
TECHNOLOGY  
INTO TEACHING



REDEFINING LABORATORY  
INSTRUCTION THROUGH  
VIRTUAL LABORATORY

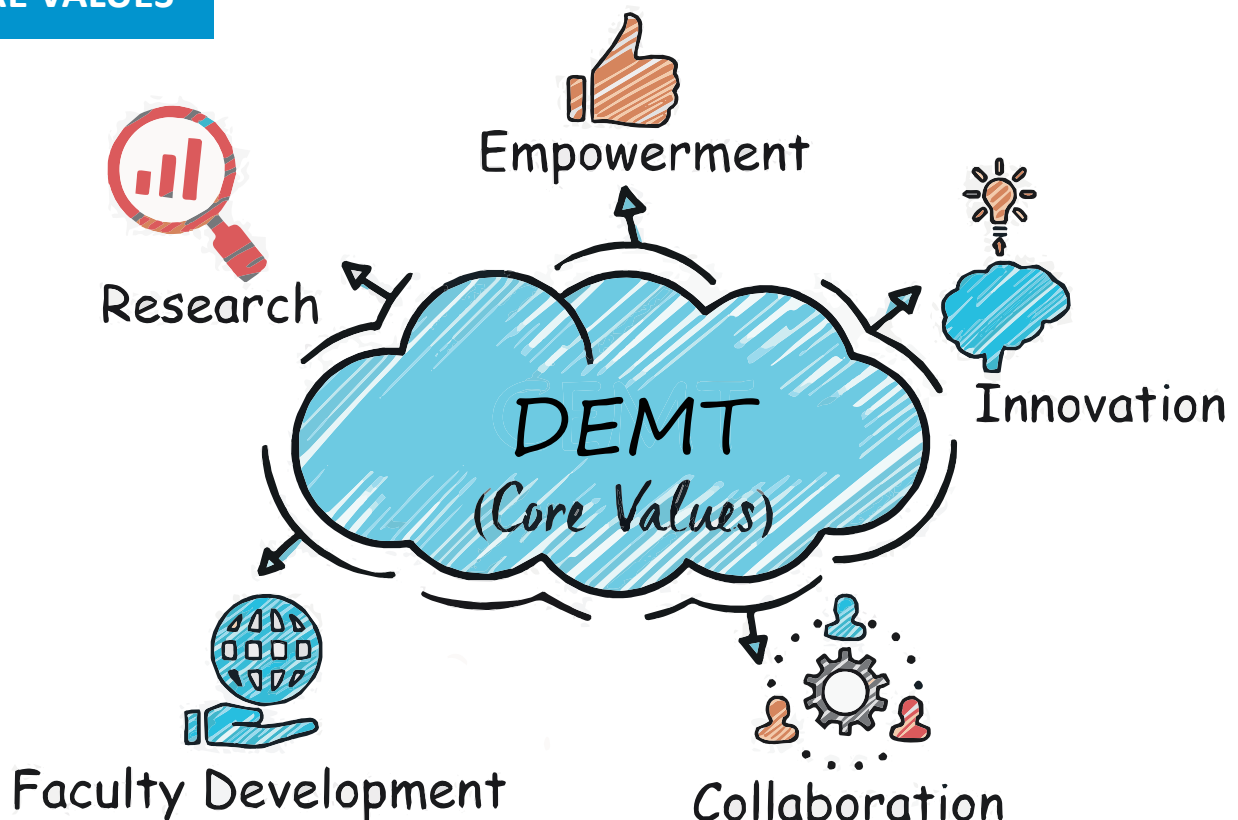
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## MISSION

- ◆ To design and develop need based training programs for the faculty of Polytechnic & Engineering Colleges and working Professionals of Industry and Govt. Organizations.
- ◆ To offer International Training Programs on emerging areas of Educational Media and Technology for the Teachers and working professionals of various Countries under ITEC/SCAAP schemes.
- ◆ To develop new innovative short term and long term programs by collaborating with Universities and Institutes of Higher Learning for developing Polytechnic and Engineering Teachers to meet the requirements of Engineering Educational Institutions.
- ◆ To provide support services to the Government of India schemes related to the technical education system and as entrusted by Ministry of Education, Government of India, from time to time.
- ◆ To offer research, testing services and consultancy for Industries and Government Organizations
- ◆ To establish partnership with Industries for offering Skill based Training Programs and Industrial Training for the faculty of Polytechnic and Engineering Colleges
- ◆ To design new instructional systems and strategies for the production of multimedia learning resources and transfer through the latest technologies including broadcasting, webcasting/multicasting.

## CORE VALUES

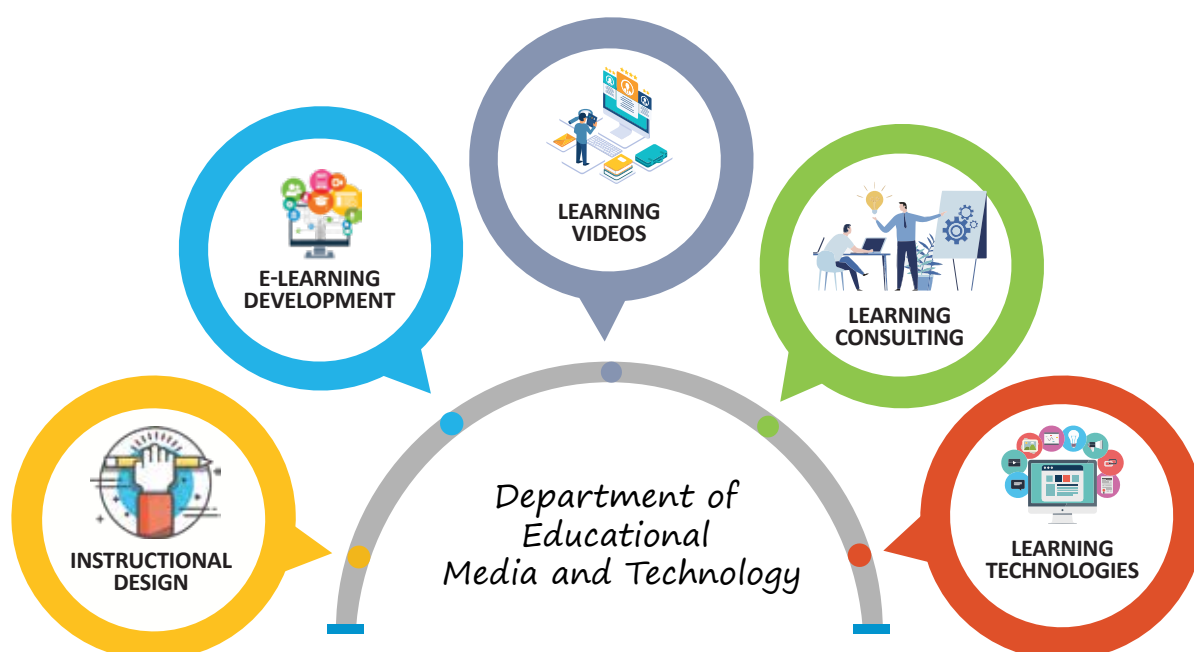


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## AREAS OF SHORT-TERM COURSES

- ◆ Instructional Design for E-learning
- ◆ Evolving Trends in E-Learning
- ◆ Digital Marketing
- ◆ Desktop Publishing
- ◆ Python for Data Science
- ◆ Learning Management Systems
- ◆ Interactive Multimedia in Classroom Teaching
- ◆ E-Resources
- ◆ Educational Video Production Workshop
- ◆ Free Software for Education
- ◆ OER and MOOC
- ◆ Statistics for Data Science
- ◆ Management Information System
- ◆ E-content Development
- ◆ 3D Modeling & Animation
- ◆ Technology Enabled Learning and Teaching



## M.E. MULTIMEDIA TECHNOLOGY

The Masters in Multimedia Technology prepares postgraduates to excel in the diverse and pervasive field of Multimedia Information Technology to emerge as a skilled exponent of their field. Recent advances in computer graphics, sensors and screen technology give us unprecedented possibilities to completely immerse humans in virtual environment or augment real environments. Virtual Reality (VR) and Augmented Reality (AR) constitute a completely new computing paradigm finding its way into applications for industry, health care, education, entertainment, content development, advertising, marketing, etc. This program approaches technology with a critical eye, understanding the ever-present impact that computational technologies have on our lives.

This program is designed for students to become professionals who can design, develop and evaluate animation movies, new media, apply media security for multimedia applications, innovate ideas and smart solutions for game development, AR and VR applications and video production. This degree is versatile and opens up a plethora of professional opportunities in the media rich-digital world.

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## PROGRAM EDUCATIONAL OBJECTIVES(PEOS)

- ◆ Use their foundational expertise in multimedia technology to adapt to the rapid advances in the media-oriented fields.
- ◆ Analyze and gather new information on modern tool usage, and investigate complex problems.
- ◆ Apply their mathematical and analytical fundamentals with a research aptitude to solve real world technical problems.
- ◆ Function effectively and work collaboratively on multidisciplinary projects and exhibit high levels of professional and ethical values in organizations and society at large.
- ◆ Pursue entrepreneurship showcasing their leadership and innovative technical skills.

## CORE COURSES

- ◆ Applied Probability and Statistics for Computer Science Engineers
- ◆ Research Methodology and IPR
- ◆ Advanced Data Structures and Algorithms
- ◆ Advanced Graphics and Animation
- ◆ Multimedia Communication
- ◆ Advanced Data Structures and Algorithms Laboratory
- ◆ Multimedia Authoring Tools Laboratory
- ◆ Digital Image Processing
- ◆ Media Security
- ◆ Mixed Reality
- ◆ Multimedia Databases
- ◆ Digital Image Processing Laboratory
- ◆ Video and Audio Processing

## ELECTIVE COURSES

- ◆ Sound Engineering
- ◆ Multimedia Compression Techniques
- ◆ 3D Game Modeling and Rendering
- ◆ Artificial Intelligence
- ◆ Big Data Mining and Analytics
- ◆ Multimedia Information Storage and Retrieval
- ◆ Computer Vision
- ◆ GPU computing
- ◆ Social Network Analysis
- ◆ Cloud Computing Technologies
- ◆ Non Linear Editing
- ◆ User Interface Design
- ◆ Voice Technologies
- ◆ Human Computer Interaction
- ◆ Web design and Management
- ◆ Video Processing and Analytics
- ◆ Short film Development
- ◆ Medical Image Processing
- ◆ Machine Learning
- ◆ Internet of Things
- ◆ Biometric Systems
- ◆ Full Stack Web Application Development
- ◆ Deep Learning

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## CAREER OPTIONS FOR M.E. MULTIMEDIA TECHNOLOGY

Animation Specialist | Game Designer | Web Developer | Software Development Engineer | Technology Manager | Mixed Reality Artist | Content Lead | Immersive Media Designer | Rigger | VR Sound Effect Specialist | Social Media Analyst | Multimedia Processing Engineer

## LEARNING TECHNOLOGIES



Live Video Streaming



Podcasting



Mobile and Wearable Devices



Video Games & Simulations



Interactive WhiteBoards



Augmented & Virtual Reality



Learning Management System



Online Collaboration Space



Spatial Computing



Adaptive Learning Algorithms



Recommendation Engines



Haptic Responses



Smart Learning Apps



Language Translation Tools



AI - Generated Applications



Deep Neural Networks



Smart Bots



Internet of Things



## PROGRAMME COORDINATORS



### Dr. P. MALLIGA

Professor & Head

Department of Educational Media and Technology

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Databases - NLP (Natural Language Processing) - Text Mining - Cloud Computing - E-Learning Design and Development - Instructional Design - OER - MOOC - Open Educational Practices - LMS - Instructional Media Development



### Shri. A.P. FELIX AROKIYA RAJ

Assistant Professor

Department of Educational Media and Technology

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Educational Technology – OER (Open Educational resources) - E- Learning Design - Digital Marketing – Statistics - Learning Analytics - Machine Learning – MOOCs - Research Methodology - Open Pedagogy

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## INDUSTRIAL COLLABORATIONS



## World Class Facilities



Exposure to Emerging Areas



Seminar Halls



Industrial Training



Auditorium



Laboratory Facilities



Wifi Campus



Smart Classrooms



Sport Facilities



Resource Centre



Gym Facilities



Hostel Facilities



Medical Facilities



**CONTACT**

## **THE DIRECTOR**

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