



**PROSPECTUS
ON
TRAINING PROGRAMS IN
CENTRE OF EXCELLENCE**



MALLA REDDY ENGINEERING COLLEGE

(Autonomous)

**Maisammaguda, Gundlapochampally Village, Medchal Mandal,
Medchal-Malkajgiri District, Telangana State – 500100**





Vision

- To create an outstanding ambience of support for researchers and to enable Excellence through Innovation, Creativity and Uniqueness.

Mission

- To promote shared responsibility, the ethical conduct of research, and compliance.
- To create integrated services, transparent research administration, infrastructure, and streamlined processes to promote interdisciplinary research.
- To partner with the research community so as to promote a culture of high achievement in the society.

Objectives

- To attract and retain researchers and highly qualified personnel so as to prepare the future workforce.
- To provide technological resources to support the research community.
- To establish a competency Centre for academia.
- To produce future entrepreneurs who could sustain industry demands.
- To provide interdisciplinary exchange and shared facilities and resources.

Roles and Responsibilities

- Centre of excellence (COE) is a team of skilled knowledge workers whose mission is to provide the organization they work for with best practices around a particular area of interest.
- An important goal of a Centre of excellence is to eliminate inefficiency and help move the organization to the next level of a maturity model.
- The COE (or COE) is a team, shared facility or entity that provides leadership, best practices, research, support and/or training for a focus area.



About Us

A center of excellence (CoE) brings together people from different disciplines and provides shared facilities/resources. It is sometimes called a “competency center” or “capability center” in academia. It concentrates on existing expertise and resources in a discipline or capability to attain and sustain world-class performance and value.

The CoE focus on providing trainings, best practices, and resources for all of these different teams, while also gathering the data and learning’s from all of the teams to create a positive feedback loop.

CoE has **Cross-discipline team members, Shared resources, Consistency and Governance**

Here are four steps to rolling out a COE:

- **Identify the team members**
- **Regular meetings**
- **Set goals and timelines**
- **Create your resource hub**

Facilities provided by MREC-CoE

MREC-CoE provides technical services that include R&D activities, Product development, Re-engineering, Calibration and testing facilities, Quality assurance and Market Research to the entrepreneurs. The entrepreneurs utilize the Centre of Excellence of MREC

The services provided by MREC-CoE include:

- **Infrastructure Support**
- **Prototype Development**
- **Hardware & Software Support**
- **Mentoring**
- **Networking**
- **Connectivity**
- **Learning Resources**



Products

- **Green Screen Techniques for Video and Photography**
- **Dubbing Course**
- **Animation Courses**
- **Editing**
- **Software Courses**
- **Robotics and Automation**
- **Additive Manufacturing Technics**
- **Lab View**

MultiMedia:

Multimedia is the use of a computer to present and combine text, graphics, audio, and video with links and tools that let the user navigate, interact, create, and communicate. This definition contains four components essential to multimedia.

Dubbing:

Dubbing is a post-production process in which sounds such as dialogue or other sound effects from a motion picture are perfected or added. The aim: to offer the audience an exceptional audiovisual illusion.

Dubbing Room of the Documentation Unit is fully equipped for making copies of audio and video recordings from various formats like quarter inch spool tapes, audio cassettes, digital audio tapes, VHS tapes, SVHS tapes U-Matic Low Band, U-Matic High Band, Beta SP and DVCAM, DVD, VCD.



Animation:

Animation is a method in which figures are manipulated to appear as moving images. In traditional animation, images are drawn or painted by hand on transparent celluloid sheets to be photographed and exhibited on film. Today, most animations are made with computer-generated imagery (CGI).

The editor is more involved in animation than they would be in live-action. Traditionally video is shot then cut, but the animation is first cut then shot. With live-action, you must make it work after shooting is complete.

Animation Types:

There are 5 Forms of Animation

- Traditional Animation.
- 2D Animation.
- 3D Animation.
- Motion Graphics.
- Stop Motion.

Green Matte Studio:

Green Matte Studio facilitates the technique for combining two images in which the colored background from one image is removed to reveal backdrop behind it.

Equipment is available in the studio, including flashlights, background paper, a makeup area, changing area, and other important facilities.



Software Courses

- Full Stack Web Development.
- Artificial Intelligence
- Machine Learning
- Deep Learning
- Data Science Analytics
- Block chain Technology
- Internet of Things
- Cyber Security

Robotics:

It is a branch of engineering which include computer science, mechanical and electrical and electronics engineering. These technique are used to develop machines which contribute to human work.

The concept of creating machine is they can work automatically.

Types of Robots

- Pre-Programmed Robots. Pre-programmed robots operate in a controlled environment where they do simple, monotonous tasks.
- Talking Robots. Talking robots are robots that look like and/or mimic human behavior.
- Autonomous Robots.
- Tele-operated Robots
- Augmenting Robots.
- Motion Controlled Robots



There are five fields of expertise in robotics:

- Operator Interface: The interface is the mechanism of communication between the person and the robot
- Mobility or Locomotion: Mobility can be achieved with wheels, legs, fins, propellers, and much more.
- Manipulators and Effectors
- Programming
- Sensing and Perception

Additive Manufacturing Technics

The term “additive manufacturing” references technologies that grow three-dimensional objects one superfine layer at a time.

Each successive layer bonds to the preceding layer of melted or partially melted material.

Objects are digitally defined by computer-aided-design (CAD) software that is used to create .stl files that essentially "slice" the object into ultra-thin layers.

This information guides the path of a nozzle or print head as it precisely deposits material upon the preceding layer. Or, a laser or electron beam selectively melts or partially melts in a bed of powdered material.

As materials cool or are cured, they fuse together to form a three-dimensional object.



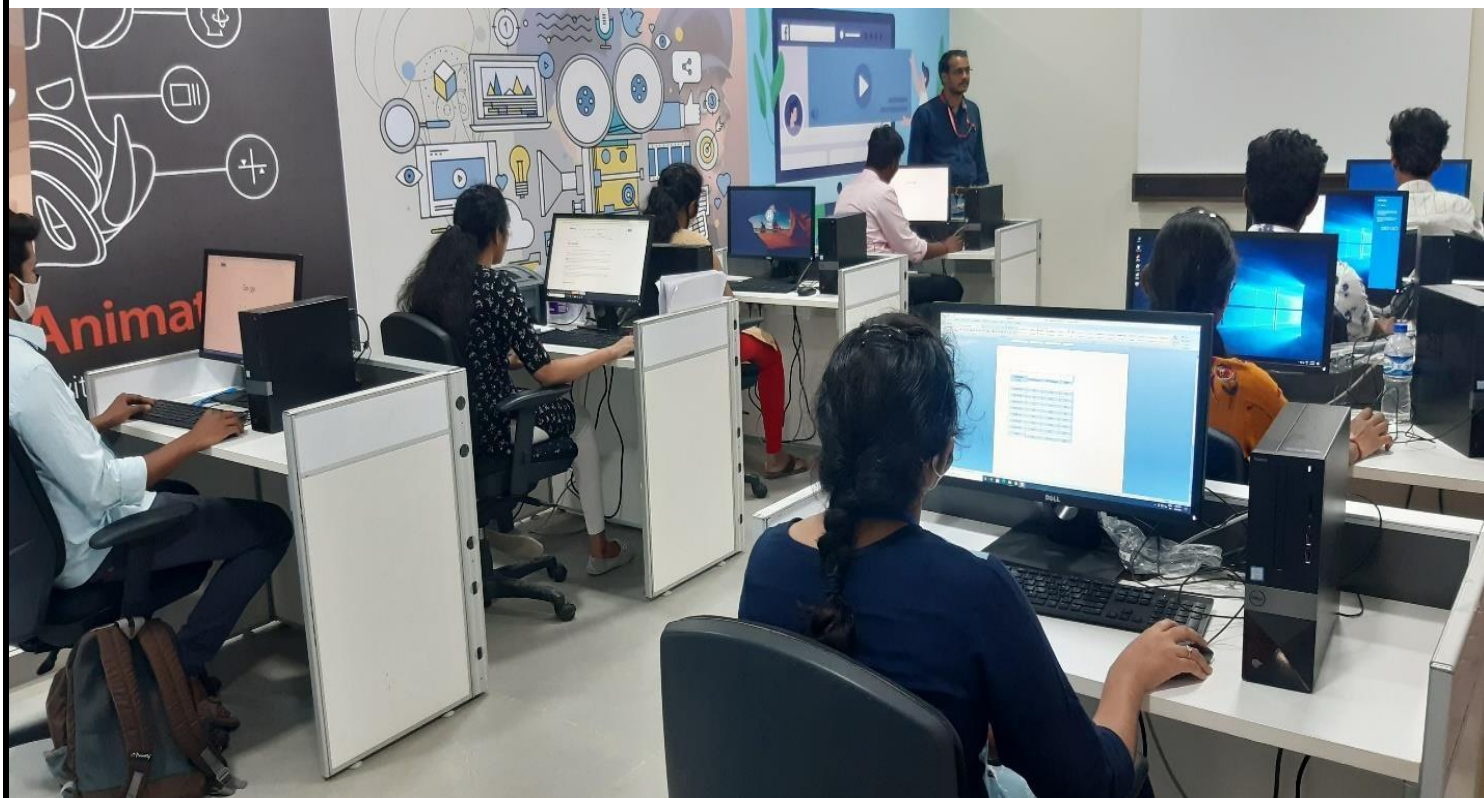
ROBOTICS RESEARCH CENTRE



<u>S.No</u>	<u>NAME OF THE COURSE</u>	<u>DURATION</u>	<u>QUALIFICATION</u>
1	Robotic Process Automation-I	14 Weeks	B.Tech 1 st Year
2	Robotic Process Automation-II	14 Weeks	B.Tech 1 st Year
3	Autonomous Robotics -I	13 Weeks	B.Tech 2 nd Year
4	Autonomous Robotics -II	13 Weeks	B.Tech 2 nd Year
5	Industrial Robotics	12 Weeks	B.Tech 2 nd Year
6	Remote Controlled Robotics -I	13 Weeks	B.Tech 3 rd Year
7	Remote Controlled Robotics -II	13 Weeks	B.Tech 3 rd Year
8	Motion Control Robots	12 Weeks	B.Tech 3 rd Year
9	IOT Robots	12 Weeks	B.Tech 3 rd Year
10	Automation	12 Weeks	B.Tech 3 rd Year



MULTIMEDIA COURSE

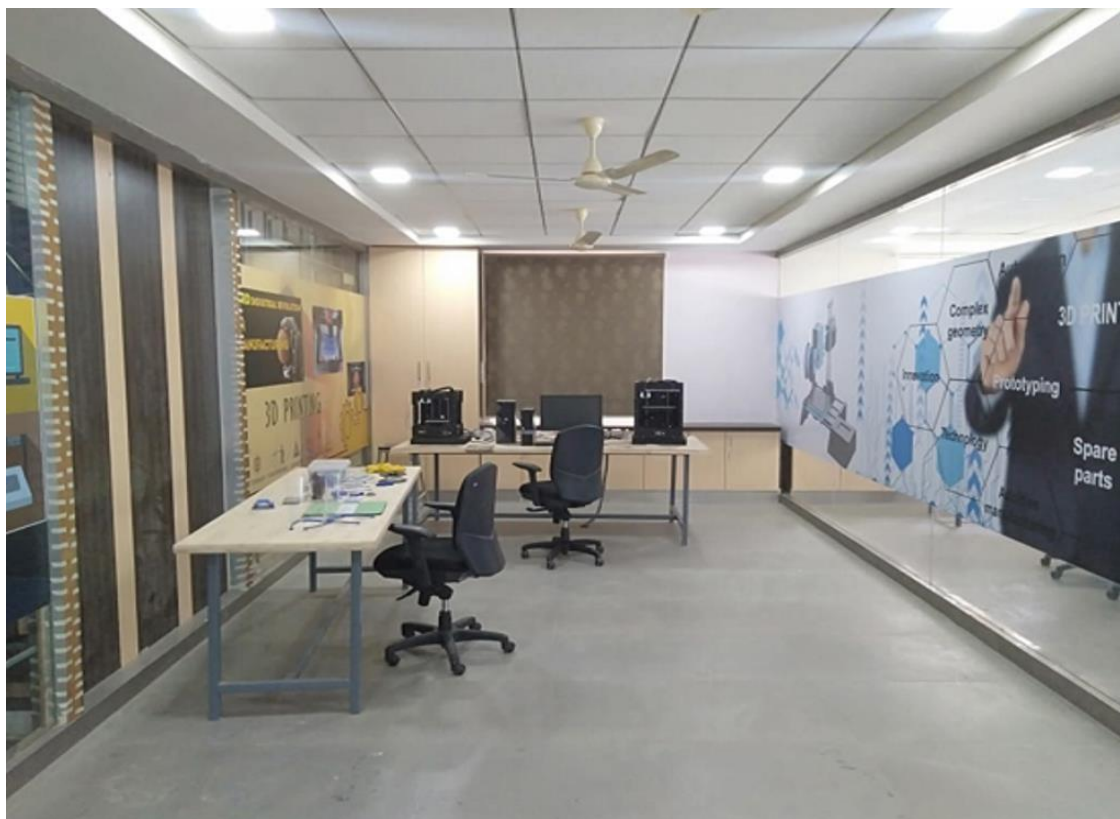


<u>S.No</u>	<u>NAME OF THE COURSE</u>	<u>DURATION</u>	<u>QUALIFICATION</u>
1	Graphic Designing - I (Photoshop & Illustrator)	14 Weeks	B.Tech 1 st Year
2	Graphic Designing - II (Corel draw & Indesign)	14 Weeks	B.Tech 1 st Year
3	Graphic Designing - I & II	13 Weeks	B.Tech 2 nd Year
4	Multimedia - 2D Concepts	12 Weeks	B.Tech 2 nd Year
5	Multimedia - 2D Animations	12 Weeks	B.Tech 2 nd Year
6	Multimedia - 3D Concepts	12 Weeks	B.Tech 3 rd Year
7	Multimedia - 3D Animations	12 Weeks	B.Tech 3 rd Year
8	Multimedia - VFX	12 Weeks	B.Tech 3 rd Year



<u>S.No</u>	<u>NAME OF THE COURSE</u>	<u>DURATION</u>	<u>QUALIFICATION</u>
1	Green Matte Studio - Audio Editing Basics	1 Week	B.Tech 1 st Year
2	Green Matte Studio - Audio Effects	1 Week	B.Tech 1 st Year
3	Green Matte Studio - Audio Transitions	1 Week	B.Tech 1 st Year
4	Green Matte Studio - Audio Editing	1 Week	B.Tech 2 nd Year
5	Green Matte Studio - Video Effects	1 Week	B.Tech 2 nd Year
6	Green Matte Studio - Video Transitions	1 Week	B.Tech 3 rd Year
7	Green Matte Studio - Video Editing	1 Week	B.Tech 3 rd Year

ADDITIVE MANUFACTURING



<u>S.No</u>	<u>NAME OF THE COURSE</u>	<u>DURATION</u>	<u>QUALIFICATION</u>
1	Design for Additive Manufacturing (Introduction to 3D Modeling)	6 Weeks	B.Tech 2 nd Year
2	Different Technologies of Additive Manufacturing	6 Weeks	B.Tech 2 nd Year
3	Software's related to 3D Printing (3D Model - Slicing, File type conversion & G-Code) Selection of proper 3D Printing materials for different Industrial applications Introduction to 3D Printing	6 Weeks	B.Tech 3 rd Year
4	Anatomy of a 3D Printer Live demo of 3D Printing - FDM/FFF Hands-on 3D printing (Real time design by students) 3D Scanner	6 Weeks	B.Tech 3 rd Year

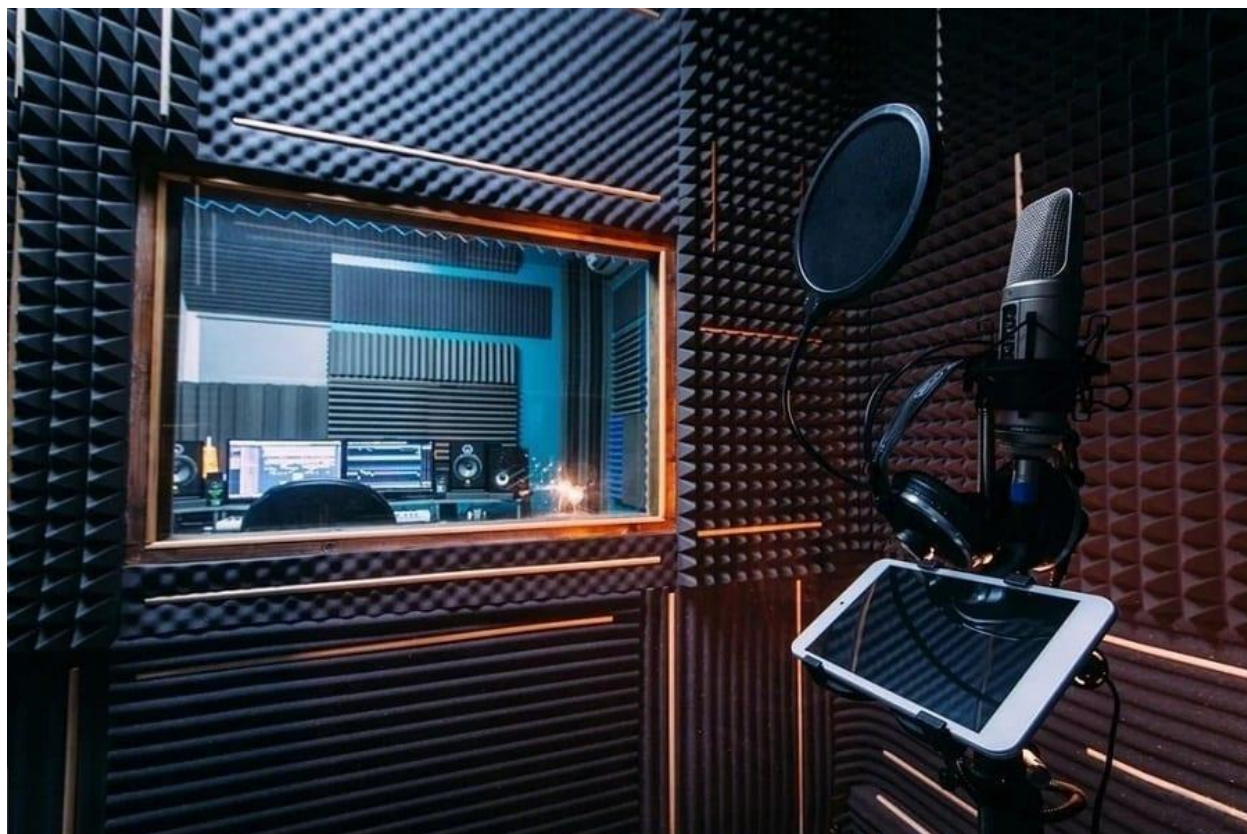


COMPUTER SOFTWARES



<u>S.No</u>	<u>NAME OF THE COURSE</u>	<u>DURATION</u>	<u>QUALIFICATION</u>
1	SCRACH PROGRAMMING	8 Weeks	B.Tech 1 st Year
2	HTML	9 Weeks	B.Tech 1 st Year
3	BASIC PYTHON I	8 Weeks	B.Tech 1 st Year
4	MATLAB	9 Weeks	B.Tech 1 st Year
5	Data Science With R Programming	7 Weeks	B.Tech 2 nd Year
6	Foundations Of JAVA	7 Weeks	B.Tech 2 nd Year
7	PYTHON With DJANGO	7 Weeks	B.Tech 2 nd Year
8	Foundations Of BOCKCHAIN	8 Weeks	B.Tech 2 nd Year
9	LABVIEW	9 Weeks	B.Tech 2 nd Year
10	Advanced MATLAB(MATLB PRO)	7 Weeks	B.Tech 3 rd Year
11	ADVANCED JAVA	7 Weeks	B.Tech 3 rd Year
12	Advanced PYTHON	7 Weeks	B.Tech 3 rd Year
13	Blockchain Revolution	7 Weeks	B.Tech 3 rd Year

DUBBING STUDIO



<u>S.No</u>	<u>NAME OF THE COURSE</u>	<u>DURATION</u>	<u>QUALIFICATION</u>
1	Voice Quality and Voice Projection	1 Week	B.Tech 1 st Year
2	Diction and Memory techniques	1 Week	B.Tech 1 st Year
3	Voice Modulation	1 Week	B.Tech 2 nd Year
4	Improvisation and character study	1 Week	B.Tech 2 nd Year
5	Voice Improvement exercises of rejected voices like shivering voices, dry voice, stammer, overlap voice, trembling voice, noisy and weak voice.	1 Week	B.Tech 3 rd Year



CONTACT US

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