Research & Development Policy
(2017-18)

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC Autonomous)
Kandlakoya, Medchal Road, Hyderabad, Telangana, INDIA 501401

Research & Development Policy
(2017-18)

Principal

CMRCET/R&D Policy/2017   27/04/2017

Revised Institutional Research Policy

The Institution has adopted a Research Policy that establishes a research environment that supports high standards of research integrity, research excellence, and professional conduct. The Institution serves the community by transmitting knowledge through teaching and with a strong determination of sharing knowledge through research. The Institution provides superintend dissemination and reports the research that is practiced competently, safely, ethically and accountably while evincing respect for the wider community and the environment. The Institution is committed to supereminence in research based on the national and international standards, and to energetically encourage the important role research plays in teaching. This policy provides the research environment within which academic faculty and postgraduate research students carry out their research. It directly contributes to the economic development, culture, health, social well-being and the advancement of society. It also aims at obtaining that the activities of the research in the Institute obey all the significant rules and guidelines of the UGC, AICTE and affiliating University as well as to the accustomed norms and standards relating to the safe and ethical conduct of research. The Research Policy of the Institute provides a wide sub-structure to the activities of research along with the Vision and Mission of the Institute.

Vision

- To remain a premier academic Institution striving continuously for excellence in technical education, research and render technological services to the nation.

Mission

- To create and sustain a community of learning in which students acquire knowledge and learn to apply it professionally with a concern for society.

- Pursue and disseminate research findings and offer knowledge-based technological services to satisfy the needs of society and the industry.

- Promote Professional Ethics, Leadership Qualities, and Social Responsibilities.

Objectives of the Research Policy:

Technical education paves the way for innovation and creativity. A strong base for research and development is very important to achieve this. Realizing the importance of research and development (R&D), the R&D Centre was established in CMR College of Engineering & Technology with the following prime objectives:

- To provide proper coordination of all the activities of research of the Institute and aligning these to the Vision and Mission of the Institution and national sustainable development goals through Research & Innovation Centre.

- To identify and inform the faculty and students about the suitable funded/sponsored research opportunities notified by different research, academic, industry or government & non-government organizations.

- To provide support to all the research efforts of the faculty members and to encourage student research as part of the curriculum.

- To promote multidisciplinary research and set up methodologies for undertaking and preparing collaborative research projects covering the various domains of knowledge as well as policies or by involving external experts/agencies in such research projects.

- Through consultancy projects, the Institution also provides scope for the faculties and students to work on the recent trends in technology and the evolving technologies with industry standards.

- To identify and establish Industry-Institute interaction through MOUs/MOAs for long relationships with the national and international academic institutions of higher learning and research institutions for widening the scope of research options and funding opportunities for the faculties and students.

- To create awareness about Intellectual Property Rights and Patents, encourage Innovation and motivate them to apply for IPR/Patents.

- To encourage and promote the faculty & student research publication of their research work/projects in ostensible academic Scopus Indexed Journals (National/International).

- To improve the quality of research publications, the Institution has introduced a scheme of reimbursement of publication charges/registration fees and rewards for various categories of Journals as well as for Research Project Grants.

- To create an ecosystem for innovations, foster & encourage entrepreneurship including incubation center, and other initiatives for creation and transfer of knowledge.

- To motivate & drive the faculty & student research work through R&I events such as Conferences/Workshops/Seminars/Faculty Development Programmes/Student Development Programmes and also encourage the faculty members to pursue higher education in the organizations of repute.

- To facilitate community-oriented research initiatives and transfer the research findings for the social innovation and economic development of the community.

- To promote advanced research and to improve their skills on the upcoming technologies, the Institution has taken an initiative to grant duty leaves, sabbatical leaves, study leaves, incentives/seed money and reduce the workload, etc., for the faculty members involved in the research.

Researchers follow the following Ethical Norms:

To safeguard the quality of all research activities of the Institution and to perceive the highest standards of ethics and integrity in the conduct of their research, all the researchers must follow the following Code of ethics.

- The data should not be falsified as manipulation of the research process or experimental setup is not allowed. All research records are to be properly maintained.

- The research output results should be faithfully reported and the data should not be fabricated.

- Plagiarism refers to the appropriation of another person's ideas, processes, results, or words without giving proper credit. While publishing research papers, plagiarism should be totally avoided.

- Ethical principles as specified by the professional societies like the Institution of Engineers (India), IEEE, ASME, ASCE, AICTE, and UGC are scrupulously followed.

Research & Development Centre (R&D Centre):

The Institute has a number of high-end research centers to strengthen the research activities, teaching-learning facilities, and employability for UG and PG students. The R&D Centre of the Institute is recognized by the Scientific and Industrial Research Organizations (SIRO) and centers shown below amplify the learning outcomes of the UG and PG students. The establishment of new centers also enhances the research among faculty members and students on various recent technology domains and improves the Industry-Institute interaction.

Centers of Excellence & Research Laboratories:

The R&D Centre of the Institute is recognized by the Scientific and Industrial Research Organizations (SIRO) and the Department of CSE is recognized as a Research Centre by JNTU Hyderabad and established several Centers of Excellence in association with industries of repute.

The following centers of excellence and research laboratories are established in the Institution to enhance the cognitive skills among students and faculties in advanced technologies to carry out their research work.

1. Centre for NI Academy:

A research-oriented development lab was established and funded by the 'Fund for Improvement of S&T Infrastructure' (FIST) of the Department of Science & Technology (DST), Government of India. This lab is equipped with high-end workstations and software & hardware modules with which complex applications can be developed. Specialized application developers from NI academy train the students and faculty members to enhance their practical knowledge.

2. Centre for Artificial Intelligence & Deep Learning under leadingindia.ai:

Institute of Excellence - Making Deep Learning and AI skills mainstream in India to fulfill:

- o Trilateral needs of entrepreneurship, Industry-Academia partnership, and application-inspired.
- o Engineering Research in partnership with Bennett University, New Delhi, University College, London, Brunel University, London, NVIDIA, AWS Educate, Videoken, and Edvantis.
- o The center of excellence of AI & DL powered with Hp Z820 With Dual Xeon E5 2660/64GB RAM/2X600GB SAS 10K HDD/Quadro K6000 12GB Graphic Card. This is an efficient deep learning server to handle large datasets for training and testing.

3. Data Science & Big Data Analytics in association with DELL, EMC & ICT Academy:

- Data Science & Big Data Analytics is a learning program to understand business intelligence and business, and data analytics.
- To understand the business data analysis through the powerful tools of data application.
- Learn how to apply Hadoop, HDFS, and Map reduce and get introduced to R Language.
- Understand the methods of data mining and the creation of a decision tree.
- Explore different aspects of Big Data Technologies.

4. Full Stack with Virtusa:

Virtusa announced the Center of Excellence (COE) status for CMRCET and also mentioned that the COE will cater to the following benefits:

- Lean, mean and full-stack development
- Student Level Certification
- Live Projects
- Direct Employment Opportunities
- Faculty Certifications
- Technology Conferences

5. National Cyber Defense Security Resource Center:

National Cyber Safety and Security Standards have been started with a great vision to safeguard the Nation from the current threats in Cyberspace. National Cyber Safety and Security Standards have done extensive research in the Cyber domain to understand the nature of cyber threats and Cyber Crimes. We have understood that the multi-faceted cyber technology cannot be handled by common standards and security policies. We came to know that it needs different strategies for different sectors of the cyber domain.

6. Centre for Innovation and Entrepreneurship (CIE)

The Centre for Innovation and Entrepreneurship (CIE) was established at CMR College of Engineering & Technology to foster and encourage entrepreneurship, commercialize technology-based innovations and develop an eco-system for sustainable holistic growth. CIE's mission is to promote technology entrepreneurship and support start-up incubation by utilizing the knowledge, resources, and the expertise of CMRCET and its partners. CIE's vision is to consistently churn out successful technology start-ups, creating new generation entrepreneurs and employment, through the world-class incubation center. CIE will involve in activities around building start-up ecosystems like identifying the areas of focus and market relevance, building investor relations, business partnerships, leveraging government programs and accelerating initiatives.

7. Centre for Engineering Education Research (CEER)

The Centre for Engineering Education Research (CEER) was established at CMR College of Engineering & Technology to train the students to meet the dynamic needs of the society. CEER provides a platform for students to learn various engineering concepts through service-based learning, experiential learning, and project-based learning. Through service and project-based learning's the staff and students are directly involved in the community engagement, thereby closely working with the community and various community partners.

8. Industry Institute Interaction Centre (IIIC)

The Industry Institute Interaction Centre of CMRCET was established in 2016 under the Industry Institute Interaction Scheme of the Ministry of Human Resources Development, Govt. of India with the sole aim of understanding the industrial requirements of the region and act as a bridge between Academia and Industry. It looks into the following matters:

- To give industrial exposure to the faculty members and students, thus enabling them to tune their knowledge to cope with the industrial culture.

- To coordinate/identify industrial partners for proposing a 'Centre for Excellence'.

- To assist the departments in organizing workshops, conferences, and symposia with the joint participation of the faculty and the industries. B.Tech. and M.Tech. Projects/dissertation work in industries under the joint guidance of the faculty and experts from the industry.

- To encourage the faculty members to use their expertise in solving the problems faced by the industries, thus creating an opportunity for consultancy.

- To organize in-plant training for the students.

Seed Funding for Faculty and Students:

Minor Research Projects:

Since inception, the Institute has motivated young faculty members to conduct research and provides financial assistance for Minor Research Projects.

- The faculty and student projects supported under this category are normally projects of one-semester duration and can be extended up to one year if required. Each can have financial support in the range of Rs.5,000/- to 15,000/-
- The faculty and student may utilize the facilities, infrastructure, and human resources.

Major Research Projects:

The Institute shall provide funding to certain important Major Research Projects with the prior approval from the IQAC and Board of Governors. The following are the rules for sanctioning the Major Research Projects from the Institute:

- A major project is sanctioned to a faculty member or a team of faculty members of the Institute based on the data provided in the prescribed format and the merit of the project.
- Periodical progress reports, normally once in three months must be submitted for review.
- All the equipment purchased, fabricated prototypes shall be the property of the Institute.
- Student projects may be generated from Major Projects.

Composition of Research & Development Centre (R&D Centre)

The Research & Development Centre (R&D Centre) has the following composition:

R&D Chairperson	: Principal
Advisory Board Members	: Deans & HODs
Convener	: Head (R&D)
Department R&D Coordinators	: One Senior Faculty from Each Department

C M R COLLEGE OF ENGINEERING & TECHNOLOGY

CMRCET/R&D/2017/   Date: 27/04/2017

Office Order

In order to strengthen the activities undertaken under **Research & Development Centre** it has been decided to revise the **Institutional Research Policy** along with the following updated members. The senior faculty members of the department will act as coordinators and they will monitor the research and development works. The Institute Governing Body has approved the committee members to implement the same from the academic year 2017-18 onwards. R & D centre will receive applications seeking research proposals from the interested faculty and students. The received applications will be scrutinized by the committee and suitable proposals will be granted the seed money.

List of Research Advisory Committee Members are as follows:

S. No	Name of the Faculty	Designation	Role
1	Major Dr. V. A. Narayana	Principal	Chairman
2	Dr. M. S. R. Murthy	Dean-R & D	Co-Chair
3	Dr. N. Satyanarayana	Director	Member
4	Dr. M. Sudhakar	Dean-P & D	Member
5	Dr. K. Suresh	HOD – CE	Member
6	Dr. K. Vijaya Kumar	HOD - CSE	Member
7	Prof. G. Devadasu	HOD - EEE	Member
8	Dr. B. Lokeswara Rao	HOD - ECE	Member
9	Dr. P. Ravi Kumar	HOD - ME	Member
10	Dr. A. Kotishwar Rao	HOD - MBA	Member
11	Dr. M. Chandra Shekar Reddy	HOD – H&S	Member
12	Dr. M. Suresh	Head-R & D	Convener

Principal

Copy: 1. Secretary & Correspondent
        2. Deans
        3. IQAC
        4. All Heads and Members

Date: 27/04/2017

Signature of the Committee Members:

S. No	Name of the Faculty	Designation	Role	Signature
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