BEHARA
COLLEGE OF ENGINEERING AND TECHNOLOGY
Approved by AICTE NEW DELHI & Affiliated to JNTU-GV, Vizianagaram
88th Division, Narava, GVMC, Visakhapatnam, Andhra Pradesh 530027, India
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RESEARCH & DEVELOPMENT (R&D) CELL

The establishment of a separate Research and Development (R&D) cell within the institutes is crucial for fostering academic growth and enhancing the quality of education. By integrating faculty members from diverse departments, the R&D cell can effectively coordinate research activities and ensure that the institution remains at the forefront of technological advancements.

A key aspect of this initiative is the role of faculty members as active researchers in their respective fields. With the constant evolution of technology, it is essential for teachers to stay updated with the latest developments in their subject areas. Engaging in research enables them to not only enhance their knowledge but also contribute to the broader scientific community. This alignment between research and teaching is a well-recognized model in top universities and institutions worldwide, where a strong correlation exists between active research and high-quality teaching.

For instance, leading institutions like MIT, Stanford, and IITs are renowned for their high standards of research and education. They have demonstrated that faculty involvement in research significantly impacts the quality of education and the overall reputation of the institution. In India, institutions such as IITs, IISc, and NITs stand as prime examples of how research excellence can lead to academic and industrial advancements.

VISION

To inspire individuals and foster a culture of multi-disciplinary research and innovative thinking, while encouraging collaboration with industry to address real-world challenges.

MISSION

To raise awareness of emerging technologies and industrial standards for product development, enhance industry-academia collaboration, provide students with opportunities to engage in research and industrial projects, and foster the generation of innovative solutions for societal challenges.

OBJECTIVES

Key objectives of an R&D Cell are:

1. **Foster Innovation and Creativity:** Encourage students and faculty to think creatively, generate innovative ideas, and explore novel solutions to contemporary challenges in engineering and technology.

2. **Promote Industry-Academia Collaboration:** Strengthen partnerships with industries to bridge the gap between academic research and real-world applications, facilitating collaborative research, internships, and projects.
3. **Encourage Multi-Disciplinary Research:** Support and promote cross-disciplinary research that combines knowledge and expertise from various engineering disciplines to address complex global challenges.
4. **Enhance Research Quality and Impact:** Provide a platform for high-quality, impactful research that contributes to technological advancements, scientific knowledge, and societal development.
5. **Support Faculty and Student Research:** Facilitate and support faculty and students in pursuing research by providing funding, resources, and mentorship, and creating opportunities for presenting and publishing research.
6. **Organize Workshops, Seminars, and Conferences:** Conduct academic and industry-oriented events to disseminate knowledge on emerging technologies, foster collaboration, and promote knowledge exchange.
7. **Generate Solutions for Societal Challenges:** Focus on solving real-world societal problems through research that addresses local, national, or global issues, such as sustainability, healthcare, and infrastructure.
8. **Strengthen Research Publications and Patents:** Encourage faculty and students to publish their research findings in renowned journals, conferences, and patent new technologies, ensuring their work reaches a global audience.
9. **Create Research Funding Opportunities:** Identify and provide information about external funding sources, such as grants and research awards, to support research projects and initiatives.
10. **Improve Academic and Professional Development:** Provide continuous learning and professional development opportunities for faculty and students through exposure to new research methodologies, technologies, and industry trends.
11. **Develop Strong Research Infrastructure:** Ensure the availability of state-of-the-art research facilities, laboratories, and equipment to support high-quality research activities across various engineering domains.

TEAM: RESEARCH & DEVELOPMENT CELL

The following team members from various departments have been appointed to elevate the research activities of the institution to new heights

Members:

S.No	Name & Details	Dept.	Designation	Qualification	Roles	Signature
1	Dr. V Sridhar Patnaik	MECH	Principal	M.Tech ,,Ph.D	Chairperson	
2	Mrs K S P Keerthi	CSE	Assistant Professor	M.Tech	Coordinator	K.S.P.Keerthi

3	Mr. Ch Narayana Rao	CSE	Associate Professor	M.Tech .,(Ph.D)	Member	
4	Mr G Srikanth	ECE	Assistant Professor	M.Tech	Member	
5	Mr Ch GovindaRaju	EEE	Assistant Professor	M.Tech	Member	
6	Mr V Anil Kumar	ECE	Assistant Professor	M.Tech	Member	

R&D Cell Policy

1. Roles and Responsibilities

- **Faculty Members:**
  Participate actively in research projects, contribute to interdisciplinary collaborations, mentor students in research, and ensure high standards of research integrity and ethics.
- **Students:**
  Engage in research projects, collaborate with faculty and industry partners, and contribute to the generation of new knowledge and innovations. Graduate students should aim to publish research findings and contribute to ongoing projects.
- **Research Coordinators:**
  Oversee day-to-day activities related to research projects, coordinate inter-departmental efforts, and ensure that research is progressing as per the set goals and timelines.

2. Research Focus Areas

- **Emerging Technologies:**
  Focus on current and future technologies such as AI, machine learning, robotics, IoT, renewable energy, biotechnology, and advanced materials.
- **Industry-Specific Solutions:**
  Conduct research to address challenges faced by industries, contributing solutions that have practical applications.
- **Sustainable Engineering:**
  Promote research that supports sustainability, including renewable energy, energy efficiency, and eco-friendly manufacturing processes.
- **Socially Relevant Research:**
  Focus on research that addresses societal challenges, such as healthcare, water management, transportation, and environmental protection.

3. Research Ethics and Integrity

- **Ethical Conduct:**
  All research activities must adhere to ethical standards, including integrity in data collection, analysis, and presentation. Plagiarism and other unethical practices will not be tolerated.
- **Confidentiality and Intellectual Property:**

Ensure that all confidential information shared by industry partners is protected. Research outcomes that lead to innovations should be considered for patents, with proper documentation and ownership agreements in place.

- **Compliance with Regulations:**
  All research projects must comply with relevant laws, institutional guidelines, and safety protocols. This includes compliance with environmental and safety regulations when conducting experimental or laboratory-based research.

4. **Research Funding and Resource Allocation**
   - **Internal Funding:**
     The R&D Cell will allocate a portion of the institutional budget to support faculty and student research activities, including seed funding for new projects, equipment, and travel grants for conferences.
   - **External Funding:**
     The R&D Cell will actively pursue funding from government agencies, industry partners, and research organizations. This includes grants, research awards, and sponsorships.
   - **Grant Management:**
     A transparent process will be followed to manage and allocate research grants. This includes regular reporting and monitoring to ensure funds are utilized effectively and in alignment with research objectives.

5. **Collaboration with Industry and Academia**
   - **Industry Partnerships:**
     Establish strong ties with leading industries, creating opportunities for joint research, internships, and knowledge exchange. Collaborative research should focus on addressing industry challenges and enhancing technological innovation.
   - **Academic Collaborations:**
     Foster partnerships with reputed national and international academic institutions. Joint research projects, exchange programs, and collaborative conferences will be encouraged to enhance the research profile of the college.
   - **Technology Transfer:**
     The R&D Cell will promote the transfer of research outcomes into tangible products, patents, or services that benefit society and industry. Establish procedures for technology commercialization and entrepreneurial activities.

6. **Monitoring and Evaluation**
   - **Performance Tracking:**
     Regular assessments of research activities will be conducted to ensure they align with institutional goals. This includes tracking research outputs such as publications, patents, and collaborative projects.
   - **Periodic Reviews:**
     Annual reviews of R&D activities, funding utilization, and faculty/student participation will be carried out to evaluate progress and make necessary adjustments.
   - **Quality Assurance:**

The R&D Cell will ensure that research meets high academic and ethical standards. Peer reviews, internal audits, and external assessments will be conducted to uphold the quality of research.

7. Research Dissemination

- **Publications:**
  Encourage faculty and students to publish their research in high-impact journals and present findings at national and international conferences.
- **Conferences and Workshops:**
  Organize and participate in research conferences, seminars, and workshops to share knowledge, discuss emerging trends, and facilitate networking with industry experts and researchers.
- **Outreach Programs:**
  Promote research outcomes to the broader community through public lectures, workshops, and social media, highlighting the impact of research on society and industry.

8. Meeting

- The R&D Cell will meet at least twice per year as per the committee requirements.

Code of Conduct for R&D Activities

1. Professional Responsibility

- Faculty and students shall maintain professionalism, accountability, and transparency in all research-related activities.
- Institutional policies and funding agency guidelines must be strictly followed.

2. Academic Integrity

- All research outputs must be original and free from fabrication, falsification, and plagiarism.
- Authorship should be assigned based on genuine contribution to the research work.

3. Responsible Use of Resources

- Institutional research facilities, equipment, and funds must be used solely for approved academic and research purposes.
- Misuse of research infrastructure or financial resources will attract disciplinary action.

4. Conflict of Interest

- Researchers must disclose any personal, financial, or professional interests that may influence research outcomes.
- Any potential conflict must be reported to the R&D Cell for appropriate resolution.

5. Research Safety and Compliance

- Safety protocols must be followed while conducting laboratory and field-based research.

- All statutory and regulatory requirements must be complied with during project execution.

6. Knowledge Sharing and Reporting

- Faculty members must submit periodic progress reports and final project completion reports to the R&D Cell.
- Research outcomes should be disseminated through seminars, workshops, and institutional platforms.

7. Disciplinary Measures

- Violation of research ethics or institutional regulations will result in appropriate disciplinary action as per institutional norms.
- The R&D Cell reserves the right to recommend suspension of research privileges in case of serious misconduct.

8. Timely Compliance and Documentation

- All research-related documents must be submitted within prescribed deadlines.
- Utilization certificates, reimbursement claims, and progress updates must follow institutional timelines.
- Delays or non-compliance may lead to suspension of research benefits.

9. Responsible Representation of the Institution

- Faculty members shall uphold the reputation and values of the institution during external engagements.
- Institutional affiliation must be clearly indicated in publications and presentations.
- Official communication and public representation must follow approved institutional guidelines.

PRINCIPAL
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Research & Development Cell

CIR.No.: BCET/R&D/CIR/2024-2025/002 **29/08/2024**

CIRCULAR

All the R &D Committee members are hereby informed that a meeting of R&D Cell is scheduled on 02/09/2024. The concerned committee members are requested to attend the meeting in the Principal Chamber, Academic Block-1 at 2.30p.m.

Agenda: Discussion on Initiation of R&D Activities and Finization of Research Enhancement Framework

K.S.P. Kaeth

R&D Cell Coordinator

Principal

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2. Principal Office

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Research & Development Cell

Minutes of R&D Cell Meeting (AY 2024–25)

Type of Meeting: R&D Cell Research Enhancement Framework
Date: 02/09/2024
Time: 2:30 PM
Venue: Principal Chamber, Academic Block-1

Members Present: All Concerned R&D Cell Committee Members

1. Dr. V Sridhar Patnaik M.Tech.,Ph.D, Principal
2. Mrs K S P Keerthi M.Tech., Assistant Professor, CSE , Coordinator
3. Mr. Ch Narayana Rao M.Tech.,(Ph.D) , Associate Professor CSE, Member
4. Mr G Srikanth M.Tech., Assistant Professor ECE, Member
5. Mr Ch Govinda Raju M.Tech., Assistant Professor EEE, Member
6. Mr V Anil Kumar M.Tech., Assistant Professor ECE, Member

Background:
The R&D Cell was recently established to promote research culture and innovation activities in the institution. This meeting was conducted to finalize institute Research Enhancement Framework.

Agenda of the Meeting:

1. Guidelines for Faculty Participation in Conferences, Workshops, FDPs, and Training Programs.
2. Leave Provisions, Financial Support and Reimbursement Policy for Publications

Discussion Details:
Agenda Item 1: Guidelines for Faculty Participation in Conferences, Workshops, FDPs, and Training Programs.

Faculty members are actively encouraged to participate in national and international conferences, workshops, Faculty Development Programs (FDPs), and training programs organized by recognized institutions and professional bodies.

Resolutions:

1. **Eligibility and Approval Process**
   - Teaching staff of all departments are encouraged to participate in seminars, workshops, conferences, orientation programs, refresher courses, and faculty development programs, subject to screening and approval of the Research & Development Committee.
   - Offline Participation is generally encouraged during non-instructional days.
   - Participation during instructional days is permitted only for paper presentations, with appropriate academic workload adjustments.
   - FDPs extending beyond seven days are adjusted against the summer vacation period.
   - No compensatory leave or additional benefits are provided for training programs attended during vacation periods.
2. **Frequency of Participation**
   Each faculty member may avail this facility once per semester to ensure Equal opportunities across all departments for participation in academic and research development programs. Unused opportunities will not be carried forward.
3. **Faculty Engagement Academic Contributors**
   Faculty members are motivated to serve as judges, examiners, session chairs, PhD evaluators, and invited resource persons in reputed academic and research institutions.
4. **Knowledge Dissemination After Conference Participation**
   Faculty members presenting papers at conferences must give a presentation in their respective departments within one month of returning. Seminars shall be open to all interested, and the HoD shall notify all departments, IQAC, R&D and Principal.
5. **Record Maintenance**
   A record shall be maintained in the R&D Cell to document faculty participation in conferences, workshops, and publication of papers in abstracted journals. These records will be considered during faculty evaluation and appraisal.
6. **Submission of Event Reports**
   Faculty members shall submit detailed reports on seminars, conferences, and workshops attended to the R&D Cell within one month.
7. **Presentations on Latest Research**
   Faculty members interested in sharing recent publications or advancements in science and technology may make presentations with prior intimation to the Coordinator, R&D.
8. **Projects, Consultancy, and Seed Funding**
   Faculty are encouraged to submit research projects and engage in consultancy activities to enhance institutional visibility. The R&D Cell will provide assistance to faculty showing interest.

Agenda Item 2: Finalization of Research Promotional Strategies like Leave Provisions, Financial Support and Reimbursement Policy for Publications

The committee deliberated on strategies to promote research culture and enhance institutional research output.

Resolutions:

1. **On-Duty Application Procedure**
   Applications for on-duty leave to attend research activities, including paper presentations, should be submitted in the prescribed format through the HoD to the R&D Coordinator.
2. **On-Duty Leave limit**
   A maximum of four on-duty leaves per semester shall be sanctioned per faculty member for attending seminars, conferences, and related activities, with prior workload adjustment. Leaves for paper presentations or project presentations to funding agencies will be decided by the R&D Cell based on relevance and importance.
3. **Registration Fees and Travel Support**
   - **National events:** Registration fees up to INR 3,000/- and train fare (to and fro) reimbursed upon submission of relevant documents.
   - **International events within India:** Registration fees up to INR 3,000/- and train fare reimbursed.
   - **International events abroad:** 50% of registration fees (up to INR 6,000/- per year) reimbursed.

   Faculty are encouraged to also apply for TA/DA support from funding agencies like CSIR, DST, etc.
4. **Publication Incentives**
   Journal Publications:
   - Indexed journals: SCI, SJR, Scopus, SSCI, UGC CARE list, AHCI;
   - Maximum two publications considered per academic year.
   - Only first/principal authors eligible; multi-authored papers' incentive shared equally.
   - Faculty-student joint papers: only faculty receive incentive.
   - Incentive claimed once: at acceptance or publication.
   - Required submission: copy of paper, copyright form, acceptance proof.
   - Incentive based on Impact Factor (Thomson Reuters List):

Sl. No	Impact Factor	Incentive (INR)
1	0 – 0.5	1,000
2	0.5 – 1.5	1,500
3	1.5 – 2.5	2,000
4	2.5 – 3.5	2,500
5	3.5 – 5	3,000
6	>5	5,000

Book Publications:

Sl. No	Type	Published By	Incentive (INR)
1	Full Book	Renowned International Publisher	5,000
2	Full Book	Renowned National Publisher	5,000
3	Edited Volume (Chapters/Articles with ISSN/ISBN)	International/National Publisher	2,500
4	Monographs	National/International Level	1,500–2,000

Book authors are instructed to contribute one hard copy to the college library.

Outcome of the Meeting:

The meeting successfully formulated a structured framework to strengthen the newly established R&D Cell. It established clear guidelines for faculty participation in research, academic programs, and external collaborations, thereby promoting a sustainable and vibrant research culture within the institution.

Conclusion:

The meeting concluded with a formal vote of thanks to the Principal sir for his guidance and support. All members expressed their commitment to actively implement the approved policies and initiatives, ensuring effective functioning and growth of the R&D ecosystem.

SIGNATURES

S. No	Name & Details	Branch	Designation	Qualification	Roles	Signature
1	Dr. V Sridhar Patnaik	MECH	Principal	M.Tech.,Ph.D	Chairperson	
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