

G. Pulla Reddy Engineering College (Autonomous)

Kurnool – 518007



Process Manual for Research & Development Cell (RDC)

**Affiliated to Jawaharlal Nehru Technological University Anantapur
Ananthapuramu
Accredited by NBA of AICTE & NAAC of UGC**

Research & Development Cell (RDC)

1. Chronological Perspective:

G Pulla Reddy Engineering College (GPREC) is established in 1985 with a vision to become the choicest institute of technology and a hub to academic, industrial research and development. The main motto of GPREC is to serve the global engineering community through dissemination of knowledge on recent advances in different fields of engineering, in association with basic science experts, through its several departments. In the early years GPREC saw an emphasis on undergraduate teaching. After the establishment of Post Graduate (PG) programmes in the year 2003, the college focuses on research activities along with the teaching & learning activities. To enhance the research activities, the college has established Research & Development Cell (RDC) in the year 2008. In the early years of establishment of RDC several papers were published in various international journals and conferences. Also, the college is recognized as Research Center in the year 2013 by JNTUA Ananthapuramu to offer regular PhD programme in all engineering departments.

In order to nurture the research culture, the college has established excellent laboratory facilities for PG and PhD students. The college encourages the innovative ideas of students and faculty by providing required infrastructure and financial support, if any. To encourage the UG, PG and Research scholars, the college is providing grant for their project works. In addition to this the college provides seed grant for faculty members to take up In-House Projects.

Also, the college encourages faculty to undertake sponsored research projects with a commitment to serve the society. Initially, the research proposals were sent to AICTE and UGC only for the sponsored projects. Later on the college sent proposals to DST, SERB, ISRO, etc for sponsored projects. In this connection, various funded projects were sanctioned to the college including CPE of UGC and FIST of DST.

2. Framework of R&D Cell:

The Research & Development Cell (RDC) is constituted by the following members:

1. Dr. T. Brahmananda Reddy, Professor of EEE	Convener
2. Dr. M. Sreenivasula Reddy, Assoc. Professor of CE	Member
3. Dr. S. Sailaja, Asst. Professor of HBS	Member
4. Dr. G. Venkata Subba Reddy, Assoc. Professor of EEE	Member
5. Dr. Shaik Saheb Basha, Professor of ECE	Member
6. Dr. H. Raghavendra Rao, Assoc. Professor of ME	Member
7. Sri. K. Sudhakar, Asst. Professor of CSE	Member
8. Sri. K. Ashfaq Ahmed, Asst. Professor of ECS	Member

3. Objectives:

- To create research awareness among the faculty and students by promoting research in newly emerging, challenging and frontier areas of Engineering, Technology, Science and Humanities.
- To enhance team work between researchers for multidisciplinary research across the departments.
- To create the awareness among the faculty members about various funding agencies such as Government, Private, NGOs, etc and how to send the proposals for the same.
- To establish strategic partnerships and developing funding solutions with industries/research laboratories (centers) / funding agencies for progressive and collaborative research activities.
- To promote the projects and research activities to cater the needs of local community and local industries.
- To enhance the research awareness by conducting various national level and international level workshops, conferences, guest lectures, panel discussions and field trips.
- To improve the quality of publications, research proposals and patents in order to establish the college as an R&D institution.

- To protect and commercialize the Institute's intellectual property rights (IPR) by following the IPR norms and regulations.
- To improve the internships, innovative technologies, startups and entrepreneurship activities by collaborating with various reputed academic institutions and industries across the globe.
- To enhance the student/faculty exchange programs and joint research by collaborating with foreign universities.
- To monitor the status of research scholars, mobilization of research funds, performance of individual researcher and departments by conducting regular review meetings.

4. Functioning of R&D Cell:

- The R & D cell committee shall meet at least twice a semester and the quorum for the meetings shall be the whole number above 50% of the team members. The convener may decide for any additional meetings, whenever it is necessary.
- The R&D cell submit the progress of research scholars and research activities of the college to the affiliating university periodically or as and when called for by the university.
- The R&D cell shall submit the report on various activities of the cell to the Governing Council and IQAC annually.
- To facilitate timely auditing and submission of utilization certificates to the various sponsored bodies/research organizations.
- To undertake sponsored research projects activities offered by various Government agencies such as AICTE, UGC, DST, DRDO, ISRO, etc and industries.
- To assist for applying and getting funds for conducting International conferences/seminars/Workshops/FDPs from various funding agencies.
- To assist the faculty and students for applying and getting travel grants to attend various events across the globe.
- To conduct workshops/guest lectures/outreach programs/webinars on regular basis to promote industry-institute interaction, research activities, industrial internships, faculty and student exchange activities, etc.
- To encourage the faculty members in publishing more number of research papers in reputed journals, which improves the research profile of the institution.

- To get more MoUs with Institutes of National importance and industries for collaborative research activities, strengthening the curriculum, visiting professors and consultancy works. This will strengthen the research profile of individual faculty members, departments and the institution.

5. Incentives:

a) Incentives to the Faculty:

Faculty members will be offered a cash incentive of 2.5% of the sanctioned grant for the externally funded project which can be claimed after successful completion of the project. This cash incentive will be paid from the management funds but not from the funds sanctioned to the project. If more than one faculty member is involved in carrying out the project, the incentive amount shall be shared equally among them.

The details of the incentives for publishing papers in various journals / conference/ book chapters, etc are given below:

S.No	Type of Indexing	Details of Incentives
1	Science Citation Index (SCI)/ Science Citation Index Expanded (SCIE) Journals (First or Second or Third Author eligible)	Rs. 25000/-
2	Scopus /Emerging Sources Citation Index (ESCI) Journals with reviewer comments or Q1, Q2 and Q3 Journal categories (First or Second or Third Author eligible)	Rs. 15000/-
3	Web of Science or Scopus /Emerging Sources Citation Index (ESCI) Journals without reviewer comments or below Q1 Journal category (First or Second Author eligible)	Rs. 10000/-
4	Proceedings in IEEE / ASME / ASCE / Springer / Elsevier / Scopus Indexed Conference or Book Chapters and organized by reputed institutions / organizations (IISc/IIT/NIT, etc.) (First or Second Author eligible)	Rs. 8000/-
5	International level Conferences / Seminars /Workshops/FDPs organized by reputed institutions / organizations (IISc/IIT/NIT, etc.)	Up to a maximum of Rs.5000/- towards Registration fee and maximum of Rs.4000/- towards TA/DA.
6	International level Conference / Workshop organized at outside India	a. No financial support for the mere participation. b. For presenting a paper, the financial support will be given to cover TA, DA & Registration Fee limited to Rs.50000/-. c. For presenting a paper in online mode, the financial

		support will be given to cover Registration Fee only and is limited to Rs.10000/-.
7	Faculty with more than 100 citations (cumulative of all the papers) in a year. The citations shall be considered for those publications with author affiliation belonging to G Pulla Reddy Engineering College.	Rs. 10000/-
8	Publication of work in books or book chapters (minimum of 4 pages)	Rs. 2000/-
9	Publication of Patents (should be on the name of the college, i.e. G. Pulla Reddy Engineering College) The applicants should be either first or second inventor position only.	Rs. 5000/- for International Rs. 3000/- for National

General Information:

1. Only those papers, where the author's affiliation belongs to the college i.e. "G. Pulla Reddy Engineering College" will be eligible for incentive. The authors should mention the name of the college clearly as "G. Pulla Reddy Engineering College" instead of GPREC or G.P.R. Engineering College, etc. Otherwise the incentive amount will not be sanctioned.
2. The faculty members, who are pursuing their PhD here after should submit their Research papers to the conferences/Journals with the following affiliations:
Research Scholar ^{a, b}, Supervisor ^c, Supervisor from JNTUA constituent college ^d
 - a. Research Scholar, Jawaharlal Nehru Technological University Anantapur, Ananthapuramu
 - b. G. Pulla Reddy Engineering College, Kurnool, Affiliated to Jawaharlal Nehru Technological University Anantapur, Ananthapuramu
3. Any claim for monetary incentive for publishing a research paper must be accompanied by two hard copies of the published paper along with the indexing proof and reviewer comments if available.
4. Any claim for attending a workshop/conference/FDP must be accompanied by two hard copies of proofs of registration fee, travel expenditure and any other expenditure.
5. If the first author is from GPREC, then the author will be entitled for full cash incentive.
6. If the second author is from GPREC, then the author will be eligible for only 50% of cash incentive.

7. If the third author is from GPREC, then the author will be eligible for only 25% of cash incentive.

b) Incentives to the Students:

The college is giving one way travelling fare for the students, who won the prizes in various conferences/workshops/symposiums. In order to encourage the students towards the research activities, the college is providing the funding for the fabrication/hardware projects.

6. In-House Project Scheme:

The college encourages the faculty members to get involved in Research and Development activities by providing initial funding for research projects under In-House Project Scheme. The interested faculty members of GPREC can avail this initial funding facility. By availing this scheme, the faculty members publish good number of research papers in peer reviewed National and International Journals and Conference Proceedings. Also, faculty members are encouraged to attend trainings, FDPs in thrust areas to be abreast with the latest developments.

Guidelines:

- In-house project scheme is initiated by inviting proposals from the faculty of all departments. In this regard, a circular from the Principal is issued every on-behalf of R&D cell of the college.
- Faculty members can apply individually or as a team, with a maximum of three members including the Principal Investigator.
- R&D cell provides in-house project proposal format on the website of the college.
- All the proposals received are scrutinized by Research Review Committee constituted by the R&D Cell and Principal of the college.
- Based on the merits of the proposals, the committee recommends for provisional acceptance of the proposals.
- The Principal and R&D Cell committee members will select the final in-house project proposals based on the recommendations of the Research Review Committee.
- Maximum duration of the In-House Project is for TWO years from the sanctioned date of project.
- At least one full length publication in SCI/SCIE/Scopus/ESCI indexed Journal, related to the sanctioned in-house project is mandatory. The team members can also opt for patent(s) filing depending on the feasibility and applicability of the work, if they wish in place of journal publication(s).
- R & D Cell monitors the progress of in-house projects through periodic reviews.
- After completion of the project, the R&D Cell provides necessary help and motivates the faculty to submit research proposals to the major funding agencies,

like, AICTE, DST, UGC and other funding agencies for further analysis and deeper/advanced research extension activities.

7. Code of Ethics for Research:

G. Pulla Reddy Engineering College (Autonomous), Kurnool, is a symbol for "Trust, Moral Values and Ethics". GPREC follows these moral values and ethics everywhere be it in the functioning of the college, academics, service to the society, support to the budding entrepreneurs, and most importantly in scientific research. Every individual i.e. faculty, research scholars, project staff, students, strictly follows the code of ethics of research, set by GPREC. The following are the ethical principles that are made to follow by every individual of the college, while undertaking the research:

Duty to the society: Researcher and his/her research must contribute to the welfare of society.

Beneficence: Researchers should have the welfare of the research participant in mind as a goal and make every effort for the benefits of the research to prevail over the risks.

Conflict of Interest: Researchers should minimize financial and other influences on their research and on research participants that could bias research results. Conflict of interest is more frequently directed at the researcher, but it may also involve the research participants if they are provided with a monetary or non-monetary encouragement to take part.

Informed Consent: All researchers must voluntarily agree to participate in research, without persuasion from financial gain or other intimidation, and their agreement must include an understanding of the research and the underlying risks in it. When participants are unable to consent or when vulnerable groups are involved in research, specific actions must be taken by researchers and their institutions to protect the partakers.

Integrity: Researchers should demonstrate honesty and truthfulness. They should not fabricate data, falsify results, or omit relevant data. They should report findings fully, minimize or eliminate bias in their methods, and disclose underlying assumptions.

Non-discrimination: Researchers should minimize attempts to reduce the benefits of research on specific groups and to deny benefits from other groups.

Non-exploitation: Researchers should not exploit or take unfair advantage of research participants. Academe's competitive "publish-or-perish" mindset can be a recipe for trouble when it comes to who gets credit for authorship. The best way to avoid disagreements about who should get credit and in what order is to talk about these issues at the beginning of a working relationship, even though many people often feel uncomfortable about such topics.

Privacy and Confidentiality:

Privacy: Research participants have the right to control access to their personal information. Participants may control how others obtain their information.

Confidentiality: Researchers will protect the private information provided by participants from release. Confidentiality is an extension of the concept of privacy; it refers to the participant's understanding of, and agreement to, the ways identifiable information will be stored and shared.

Professional Competence: Researchers should engage only in work that they are qualified to perform, while also participating in training and betterment programs with the intent of improving their skill sets. This concept includes how researchers choose research methods, statistical methods, and sample sizes that are appropriate and would not cause misleading results.

Professional Discipline: Researchers should engage in ethical research and help other researchers engage in ethical research by propagating ethical behaviors through practice, publishing and communicating, mentoring and teaching, and other activities.

Note: Research participant refers to someone with an active role participating in research.

8. Ethics Committee:

a) Composition:

The Ethics Committee is appointed by the Academic Council upon nomination by the Principal. The Committee shall be composed of the following members:

- Principal, Chairman
- In-charge of Research & Development Cell, Convener
- Heads of all Departments
- Convener of Institution Innovation Cell

- Two senior faculty members nominated by the Principal

In addition, the Legal advisor and the Chairman of GPREC will act as advisor(s) to the committee. The members' mandate is for three years – renewable. In case of conflict of interests, members of the Ethics Committee shall be temporarily replaced by substitutes nominated by the Principal.

b) Responsibilities:

- To provide advice and guidance to the GPREC faculty members, research scholars on all matters pertaining to academic research ethics.
- To advise the Academic Council on compliance with the 'Code of Ethics in academic research of the various academic activities at the GPREC.
- To provide guidance and academic support to students on ethical issues in respect of teaching, research and other academic activities. On an entirely voluntary basis, researchers may ask the Ethics Committee for consultation on ethical aspects of their research.
- To confirm to external parties on behalf of the GPREC compliance with ethical standards in respect of research projects undertaken.
- To advise the Academic Council of any policies that may be required in relation to accepting funds from particular funding agencies, both public and private.
- To act as an investigative/consultative body for any disputed matter concerning research ethics and conduct.

9. Research Advisory Committee:

There shall be a Research Advisory Committee (RAC) from every department to review the progress of research periodically. The RAC has been formed separately for each department. Principal and R&D Cell In-charge will be the part of the RAC in addition to the Head of the department, Dean of the department and a Senior Professor. The role of the RAC members is to periodically review and assist in progress of research work of the research scholar at the departmental level of GPREC.

Responsibilities of RAC:

- To guide the research scholar to develop the study design and methodology of research and identify the course(s) that he/she may have to do.

- To periodically review and assist in the progress of the research work of the research scholar.
- A research scholar shall appear before the Research Advisory Committee once in six months to make a presentation of the progress of his/her work for evaluation and further guidance.
- In case the progress of the research scholar is unsatisfactory, the Research Advisory Committee shall record the reasons for the same and suggest corrective measures. If the research scholar fails to implement these corrective measures, the Research Advisory Committee may recommend to the Research Centre with specific reasons for cancellation of the registration of the research scholar.