

G PULLAIAH COLLEGE OF ENGINEERING & TECHNOLOGY (Autonomous)

(Approved by AICTE | NAAC Accreditation with 'A' Grade |
Accredited by NBA (CIV, CSE, ECE & EEE) | Affiliated to JNTUA)
Nandikotkur Road, Venkayapalli (V), Kurnool - 518452, Andhra Pradesh

3.3.1 Institution has created an ecosystem for innovations, Indian Knowledge System (IKS), including awareness about IPR, establishment of IPR cell, Incubation centre and other initiatives for the creation and transfer of knowledge/technology and the outcomes of the same are evident

The institution instils, promotes and inculcates the spirit of innovation and unquenchable thirst for knowledge in the young minds through academic, research and extension activities. The main objective of the Eco-System for innovation is to promote creativity and innovation among students, Faculty members and facilitate development of innovative systems, processes, products, technologies and services for the benefit of the society. It serves to connect all the stakeholders of innovation including students, researchers, faculty members, entrepreneurs, business development and other technical service providers, providers of skills training and professional development and IPR support. The ecosystem enables stakeholders to interact effectively to maximize the economic impact and potential of their research and innovation. It is dynamic and flexible, allowing new entrants to become part of the ecosystem with minimal entry barriers.

The Innovation Eco System works through the following facilities.

- Ideation and Innovation Centre
- Institution Innovation Council approved by MHRD
- Centre of Excellence
- Entrepreneur Development Cell

Ideation and Innovation Centre:

The Centre was started in 2018 with the objective of motivating students and teachers on innovation and improvement of quality research and publications. The Ideation & Innovation center conducts idea contests regularly to showcase and recognize innovative ideas. The main functions are to nurture and promote innovative thinking among students, providing a healthy competitive environment to develop innovative solutions, providing financial support for building prototypes and encouraging IP protection and entrepreneurship for deserving solutions. Motivational lectures are arranged for this purpose. The following incentives are given every year.

- Incentive to faculty for best project with maximum grant.
- Incentive to faculty for high quality publication with maximum impact factor.
- Incentive for faculty filing patent by reimbursing cost of filing and publishing.
- Students' Project Exhibition and award of certificates and cash prizes for best projects.

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Institution Innovation Council:

The Institution Innovation Council was started in 2019 at the initiative of the Innovation Cell of the Ministry of Human Resource Development, Government of India. The Council includes members from students, teachers, industry and Patent expert. The activities of the council are carried out on a programmed schedule to promote innovative thinking among the students. IIC activities are managed through various units within the institution to handle and promote innovative thinking. A number of activities are conducted through this Council to motivate and promote creativity and innovation among students and faculty members.

- Webinars by Industry Leaders
- Workshops on IPR and entrepreneurship and innovation
- Hackathons for students • Innovation challenge and business plan competition
- Field visit to incubation centre

The Council has been awarded 3.5 stars by MHRD IC for performance during 2022-23. Faculty members have been trained as ambassadors in product design, product development, IPR and entrepreneurship. All these have helped in promoting innovation and ideas for technology development for commercialization.



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Centre of Excellence

G. Pullaiah College of Engineering and Technology, has established Centers of Excellences in the areas of VLSI design, Internet of Things, MATLAB to promote research projects, Incubation and Innovation. It has also been identified as Centre of Excellence by Virtusa.

Entrepreneur Development Cell (EDC)

Entrepreneurship Development Cell at G. Pullaiah College of Engineering and Technology believes that entrepreneurship is not just about starting companies, but a pathway towards India's socio-economic development. Our vision is to make students and faculty 'entrepreneurial' in every work that they do. We hope to enable them to solve global challenges, as we see students as the greatest capital and intend to nurture them and provide them with opportunities for excellence. G. Pullaiah College of Engineering and Technology is not only the Institute pioneering with blossoming innovations, but also the swarm of ventures and the impact it has created and it will be creating the innovation and entrepreneurship ecosystem as a whole. Our Alumni have emerged as entrepreneurs, providing their hand in development of the society, economy and employment. To promoting An Entrepreneurial Mindset, and to encourage forging a relationship between the industry and the institution, Individual department interacts with industry to ascertain its needs to fill the gap in curriculum. The gap is filled by arranging workshops addressed by industry personals. Industry institution relationship works in the following areas:

- Industrial visits for students and faculties.
- Field and site visits of students. • Consultancy and sponsored projects.
- Faculty members regularly interact with the industry to understand functional challenges through applied research or student projects. Project conceived by the students are used as case study in few industry.
- Expert lectures by industry personals for students.
- Conducting joint technical programs & events with industry

Inter-disciplinary collaboration

An interdisciplinary collaboration between various department of G. Pullaiah College of Engineering and Technology are working towards development of innovative projects of students and Faculty in the latest technology of Internet of Things, Computer Science, Robotics, Renewable Energy, Automation, Civil Engineering, Alternate sources, Embedded Technologies.

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R&D Unit:

The R&D unit comprises of faculty members from various departments of the institute. This committee oversees the smooth and efficient coordination of research and development activities in the institute, thus fostering overall growth. A senior faculty heads this cell in the capacity of Dean/Director (R&D), with the Principal presiding over.

Aims and Objectives of R&D Unit

Following Aims and Objectives have been set by the institute for itself with regard to R&D activities.

Aim

- To inculcate the spirit and culture of research amongst faculty and students.
- To enhance interaction and cooperation between researchers for interdisciplinary and multidisciplinary work.
- To forge academic and research collaborations with national and international universities, government agencies and industries.
- To establish links with various R&D organizations and funding agencies for sponsored and contract research.
- To take up problems faced by local industry and provide solutions to them.

Objectives

- To organize research promotion events like conferences, seminars, workshops, invited lectures, webinars.
- To motivate faculty for doctoral and post doctoral research.
- To encourage faculty to undertake research projects in thrust areas in science and technology with funding from various national and international agencies.
- To promote research publications.

The Roles and Responsibilities of research monitoring committee are,

- To prepare annual research activity plan for all the departments.
- To establish liaison with near and far industry and identify the technological challenges being faced by them.
- Take up appropriate problems of the industry for finding solutions through R&D projects assigned to faculty and students.
- Explore technological developmental opportunities in common application areas such as transport, traffic regulation, security, healthcare etc. and assign them to faculty and students.
- To initiate and promote MoU with industries and R&D organizations for consultancy, collaborative research, sponsored projects, industry institute interactions etc.

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- To arrange brainstorming sessions through talks by eminent personalities from industry, R&D organizations and institutions of repute for the better understanding of research methodology and practices currently followed.
- To support faculty for delivering talks at different events and conducting workshops, training programs, seminars, conferences, symposia, faculty development programs.
- To keep everyone informed about announcements by various funding agencies like DST, DAE, DRDO, ISRO, CSIR, AICTE, UGC, University etc.
- To monitor progress of the research and development activity.

Initiatives taken to inculcate the spirit of research amongst faculty and students are as follows:

Following research policy was framed.

- Financial assistance is provided for publications.
- Facilities such as flexibility in timings, use of laboratories etc are extended to faculty as per requirement.
- Implementing a policy for distribution of Testing and Consultancy charges to motivate faculty for providing consultancy.
- Faculty with an aptitude for research are identified. Seed money is provided to young faculty to implement their research project. More experienced faculty are encouraged to apply and obtain research grants from various Government and non- Government,
- Generating awareness amongst the researchers and providing support related to various proposal formats of different funding agencies, budget, purchases of equipment and material under research schemes, account and audit of project expenditure, any additional infrastructure requirements of the researcher etc.
- Increasing faculty and student publications by providing financial assistance.
- Collaborative research partnerships with academic institutes and industry are encouraged and fostered. Collaborating/partnering with research institutes/ laboratories.
- Assistance is provided for filing patents.
- An Industry Institute Interaction Cell works in close coordination with the industries and the institute for encouraging both students and faculty to work on live projects. (To obtain industry sponsored projects).
- An initiative is taken by Library to help researchers in understanding recent updates of their publications in terms of citation index, h-index, etc.
- In-house development of both lab equipment and software

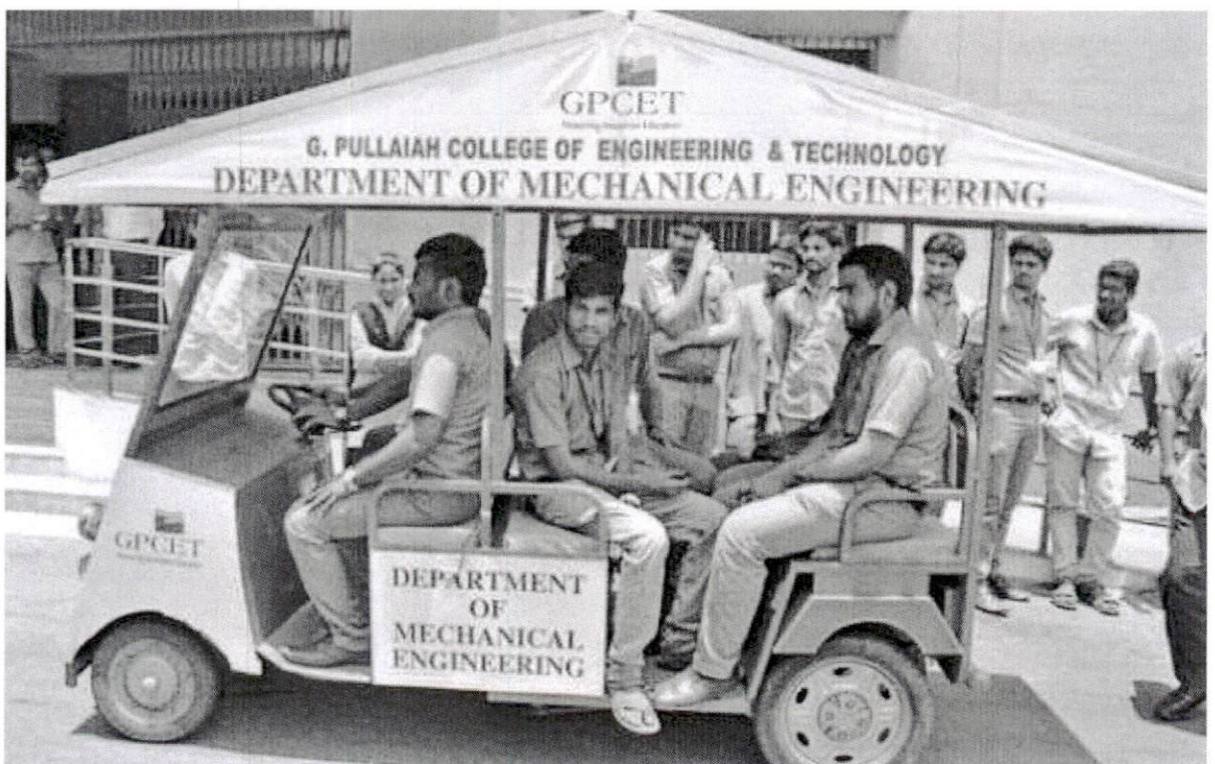
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The following are the few snapshots of innovation activities being carried out



Glimpses of Smart India Hackathon



Snapshot of Solar Vehicle