POORNIMA

INSTITUTE OF ENGINEERING & TECHNOLOGY

Research & Development Policy

INDEX

Chapter-1

Research & Development at Poornima Institute of Engineering and Technology

PIET is a hub of academic excellence, where cutting-edge research is the driving force behind our mission to advance knowledge and create a positive impact on society. Our institute is dedicated to fostering an environment that encourages curiosity, exploration, and innovation.

At PIET research is the bedrock of our existence. Our commitment to academic research is deeply rooted in the belief that rigorous inquiry is the key to addressing complex challenges and understanding the world we live in. Our researchers are driven by the desire to make ground breaking discoveries, contribute to the pool of human knowledge, and improve the lives of individuals and societies. PIET provides different policies like CRISP, SP5, TIS..etc

To encourage research and development PIET provides following Facilities

- Research Labs: State-of-the-art research laboratories equipped with advanced tools and equipment specific to various engineering disciplines, allowing students and faculty to conduct cutting-edge research.
- Funding Support: Establishing grants, scholarships, and funding opportunities for students and faculty to pursue research projects. Financial support encourages individuals to take up research and invest time and effort into exploring innovative ideas.
- Collaboration Spaces: Creating collaborative spaces where students, researchers, and faculty can interact, share ideas, and work together on interdisciplinary projects. These spaces foster a culture of collaboration and creativity.
- Access to Journals and Databases: Providing access to a wide range of academic journals, research papers, and databases to facilitate literature review and keep researchers updated on the latest advancements in their fields.
- Research Conferences and Seminars: Organizing regular research conferences, seminars, and workshops that allow researchers to present their work, network with peers, and gain insights from industry experts.
- Industry Partnerships: Establishing strong ties with industries to facilitate research collaborations, internships, and real-world problem-solving opportunities. Industry involvement can also lead to sponsored research projects.
- Intellectual Property Protection: Ensuring that the intellectual property rights of researchers are protected, encouraging them to share their ideas without fear of theft or misuse.
- Research Ethics and Compliance: Implementing guidelines and training on research ethics and compliance to maintain integrity and ensure adherence to ethical standards during research activities.
- Dedicated Research Staff: Employing experienced research personnel who can assist students and faculty in their research endeavours, providing guidance on methodologies, data analysis, and research design.
- Technology Transfer Office: Establishing a technology transfer office that helps researchers in patenting their innovations, licensing their technologies, and transforming research outcomes into commercial products or services.
- Research Publications Support: Offering support and resources for researchers to publish their findings in reputable journals and conferences, enhancing the institute's research reputation.

- Interdisciplinary Research Centers: Creating interdisciplinary research centers that encourage collaboration between different engineering fields and foster a holistic approach to solving complex problems.
- Innovation Incubators: Setting up innovation incubators or accelerators that support entrepreneurship and help transform research outcomes into viable startups
- Research Mentorship Programs: Establishing mentorship programs where experienced researchers guide and support students and junior faculty in their research journey.
- High-Performance Computing Facilities: Providing access to high-performance computing resources to enable computationally-intensive research projects.

Chapter-2

Policy for quality publication & Incentives

Establishing a policy for quality publication and providing incentives is crucial for promoting high-quality research and rewarding researchers' efforts. Below are some key components to consider when formulating such a policy:-

- **Publication Quality Criteria**: Define clear and specific criteria for what constitutes a high-quality publication. This could include factors such as originality, scientific rigor, methodology, data analysis, and relevance to the field.
- **Peer Review Process**: Implement a robust peer review process that involves subject matter experts reviewing submissions. Peer review helps ensure the quality and validity of research before publication.
- **Open Access and Transparency**: Encourage or mandate open-access publication whenever possible, allowing broader access to research findings. Transparent reporting of methods and data helps maintain credibility.
- **Incentives for Quality Publications**: Offer incentives to researchers who publish high-quality work. This could include financial bonuses, awards, recognition, or eligibility for grants and promotions.
- **Publication Frequency**: Encourage regular publication while maintaining the focus on quality. It's essential to strike a balance between productivity and maintaining rigorous standards.
- **Training and Development**: Provide training and workshops for researchers on effective scientific writing, data analysis, and research methods to improve the overall quality of publications.
- **Collaboration and Interdisciplinary Research**: Encourage collaboration and interdisciplinary research, as it often leads to innovative and impactful publications.
- **Quality Metrics**: Develop appropriate metrics for assessing publication quality beyond just the number of publications. Consider using citation metrics, impact factor, or Altmetrics to measure the impact and reach of publications.
- **Ethical Standards:** Emphasize adherence to ethical standards, including proper citation practices, avoiding plagiarism, and transparent reporting of conflicts of interest.
- **Diverse Perspectives**: Encourage researchers from diverse backgrounds and institutions to publish their work to promote inclusivity and broaden the scope of research contributions.
- **Supportive Research Environment:** Foster a supportive research environment that values quality over quantity, where researchers are encouraged to take the time needed to produce high-quality publications.
- **Recognition for Reviewers**: Acknowledge and reward the efforts of peer reviewers who contribute to maintaining publication quality. By implementing these policies and providing appropriate incentives, institutions and organizations can encourage researchers to prioritize quality in their publications, leading to advancements in various fields and greater trust in the scientific community's work.

TECHNICAL PUBLICATION INCENTIVE SCHEME (Refer form E20)

The Management of Poornima Institute of Engineering and Technology is pleased to revise and declare the "Technical Publications Incentive Scheme (TPIS)" for faculty members for the session 2023-24 and onward. Under this scheme the publications must be related to broad academic disciplines relevant to subjects being dealt with by the faculty member & must include the name of PIET with the author's name. The details are given below:

1. **Author Category:** It is the category where the faculty of PIET has effectively contributed in the research work resulting in the said publication as an author or supervisor or guide. They are further divided into following three categories:
    a. As Supervisor or guide: The faculty applying as Supervisor or guide must ensure that the student they are guiding must be from PIET.
    b. As Student or research scholar: It must be mentioned in the affiliation of the paper that the author is a student or research scholar at PIET.
    c. As Author: The publications must be related with broad academic disciplines related to respective qualification or specialization and must include the name of PIET in the publication.

2. **Publication Category**

<table>
<tr><td colspan="2">2.1 - Full Book [ISSN No. / ISBN No.]</td><td rowspan="7">Please Note:

There is 100% incentive for writing 1st edition and full book & 30% for further Editions [To be equally divided amongst all authors]

There has to be a significant contribution in the revised edition and proof of such modification needs to be submitted.

Claims without an ISBN will not be considered under categories 2.1 (d)</td></tr>
<tr><td>Category</td><td>Incentive</td></tr>
<tr><td>a) Book published with SCI/ Scopus Indexing</td><td>INR 40,000</td></tr>
<tr><td>b) Conference proceedings/ edited book with Scopus indexing</td><td>INR 20,000</td></tr>
<tr><td>c) Published in Int'l reputed publishers like McGraw Hill, Prentice Hall, Oxford University Press, Wiley, Taylor & Francis and all other non-SCI/ Scopus International Publishers</td><td>INR 15,000</td></tr>
<tr><td>d) Published in Nationally reputed publishers like Tata-McGraw Hill, Prentice Hall of India, MacMillan India, Sage etc.</td><td>INR 10,000</td></tr>
<tr><td>e) Published in Int'l reputed publishers not covered in categories 2.1 (a, b &c)</td><td>INR 8,000</td></tr>
</table>

2.2 Chapters in Book [ISSN No. / ISBN No.]		
Category	**Incentive**	**Please Note:**
a) Published with SCI/ Scopus Indexing	INR 15,000	
b) Published in Int'l reputed publishers like McGraw Hill, Prentice Hall, Oxford University Press, Wiley, Taylor & Francis and all other non-SCI/ Scopus International Publishers	INR 10,000	The incentive amount will be distributed in a 60:40 ratio amongst the 1st Author & corresponding authors.
c) Published in Nationally reputed publishers like Tata-McGraw Hill, Prentice Hall of India, MacMillan India, Sage etc.	INR 8,000	Claims without an ISBN will not be considered under categories 2.2 (d)
d) Published in Int'l reputed publishers & not covered in categories 2.2(a) and 2.2(b)	INR 4,000	

2.3 Paper Publications [ISSN No. / ISBN No.]			
Category	**Incentive**	**Authored Publications**	**Guided Publications**
a) SCI-E (Q1- Category)/ Scopus equivalent indexed Journal (Q1- Category)/ ABDC Indexed Journal (A star Category)	INR 40,000	The incentive amount will be distributed in a 60:40 ratio amongst the 1st Author & corresponding authors.	The incentive amount will be distributed in a 50:50 ratio amongst the Scholar (if the scholar is working at PIET) & the guide.
b) SSCI/ AHCI/ Scopus indexed Journal (Q2 & Q3 Category)/ IEEE Transaction/ ABDC Indexed Journal (B Category) Not Covered in category (2.3 a).	INR 30,000		
c) ESCI/ Web of Science/ ABDC Indexed journals not covered in 2.3 (a & b)	INR 20,000		
d) Scopus (Q4 Category)/ IEEE/ ACM/ ELSEVIER/ SPRINGER/ EMERALD/ EBSCO JOURNALS not covered in category 2.3 (a, b & c)	INR 15,000		
e) SCOPUS indexed Conference Proceedings/ IEEE/ ACM/ Elsevier/ Springer/ AIP/ IOP & Others)	INR 10,000		

1. Criteria for Award of Technical Incentive:

- **a.** For Publications under category 2.1 & 2.2, Maximum incentive per annum = INR 50000
- **b.** For High Quality Publication under category 2.3a to 2.3e, Maximum incentive per annum = INR 1,50,000
- **c.** For Single Authored publication of any kind above, 100% incentive shall be given
- **d.** TPI will be given only to eligible faculty members (except protocol holders/ management personnel), who have completed minimum 1 Year or 260 WD till July 31 of the corresponding year at PIET and continue to work with PIET as on date of award of incentive. In case the paper/ chapter/ book is published in less than a year/ 260 WD, the incentive will be approved but paid when a faculty/ staff completes 1 year/ 260 WD at PIET.
- **e.** Teachers, Guides, Research fellows/ scholars, Research assistants who are not on the payrolls/ empaneled visiting faculties of PIET are not eligible for incentive under this scheme.
- **f.** The TPI will be calculated by dividing the total incentive among all the authors as per above table (irrespective of the institutions of the authors) but the incentive will be given to faculty working in PIET only.
- **g.** Paper published by more than six authors will not be considered under this scheme.
- **h.** For Single Authored publication of any kind above, 100% incentive shall be given
- **i.** Paper guided by more than 2 supervisors or guides will not be considered under TPIS.
- **j.** Applications under this scheme will be entertained through format E-20 only. (Each application would be examined separately; hence E 20 format should be unique for each claim).
- **k.** Applications with all relevant information shall be entertained in July every year for publications during the previous session / year.
- **l.** Incomplete or not properly filled E-20 formats will not be considered for incentives.
- **m.** In all matters related with this "Technical Publication Incentive Scheme", the decision of Management of PIET would be final.

2. In order to claim the Incentives, the following documents must be submitted to the Office of Registrar along with completely filled format E20:

- **a.** Copy of proof of the publication category i.e., 2.3 (a), 2.3 (b), 2.3 (c) etc.
- **b.** Copy of notification of conference / seminar
- **c.** Copy of e-mail communication submitting the draft copy of the paper
- **d.** Copy of the acceptance mail communication
- **e.** Copy of the reviewer's remarks (in case of reviewed journals) ISSN Number; Impact Factor (Thompson); Editorial Board; Name of Publisher & age of Journal (in case of journals); Evidence of participation (in case of conference / seminar)
- **f.** Copy of Paper published in the proceedings of the journals/ conference / seminar
- **g.** Copy of Index page of journals/ conference / seminar proceedings.
- **h.** Copy of certificate of presentation in conference wherever applicable.

Each year, the application needs to be submitted to the Office of Registrar in the 1st week of August for the previous academic session. On receiving applications, the Head of Institute will constitute an expert committee within a fortnight for consideration of all applications for incentive for publications. The committee will submit a report with its comments on each application and recommendations for giving incentive strictly in accordance with directives laid down above. The Registrar will compile

these reports recommendations and place them before the Head of Institution for approval. The Registrar will then send the finalized list to the Finance Department for release of incentive amounts to be presented to concerned faculty members in the faculty incentive program on the occasion of teachers' day on 5th September every year. In all matters related with this "Technical Publication Incentive Scheme", the decision of Management of PIET would be final.

Chapter-3
Research Policy for Seed Money

Introduction:

Seed Money Scheme (SMS), sponsored by Poornima Institute of Engineering and Technology, Jaipur, will support different areas of research for regular faculty/ principal investigator(s). Seed funding under this scheme is to be used to initiate/continue the research work of the faculty.

Research and Development is a systematic process of basic and applied research to discover a solution for problems faced by society or creating new knowledge and products. It may result in the form of patents, research publications and copyright etc.

Seed Money Scheme (SMS) has been initiated by the Institute with the approval of Board of Management (BOM) & Financial Committee (FC) to provide minor research grant in different areas to motivate faculty members and enhance their research interests, which may lead to major research proposals for submission to National / International funding agencies.

Objective:

- Seed Money Minor Research Projects/Research Grant shall be allocated for creating specialized research resources in the area of expertise of the faculty member.
- To develop innovative or inter disciplinary approaches or methodologies.
- Technological/Software, developments, translation into prototypes/patents/copyrights/publications.
- The scheme is to accelerate the possibility to receive the financial support from external agencies in future.
- To explore unexplored frontiers our research project seeks to explore uncharted territories in our field, delving into areas where knowledge gaps exist. With the freedom to pursue novel ideas and concepts, we aim to expand the boundaries of existing knowledge and contribute to the academic and scientific community.
- To Support Early-Career Researchers, seed funding will provide opportunities for early-career researchers to actively participate in the research project, fostering their growth and development as scholars. It will encourage a new generation of researchers to engage in cutting-edge research and pursue impactful academic careers.
- To Create Positive Societal Impact, Our ultimate objective is to create a positive societal impact through our research findings. Whether it's developing sustainable solutions, advancing healthcare, or addressing social challenges, we strive to contribute to the betterment of society.

Preference will be given to proposals that:

- Have a high potential for external funding
- Have significant scientific merit
- Represent an redirection for the Principal Investigator(PI)
- Build or strengthen inter-disciplinary research partnerships
- Feasibility and Clear Objectives
- Potential for Attracting Larger Funding
- Sound Ethical Practices

Grant Amount: Normally, the Seed Money Minor Research Projects/Research Grant shall be limited to Rs.2.00 lac, however, in exceptional cases; it may go up to Rs. 10.0 lacs with the approval of Planning and Monitoring Board.

Applicant Eligibility:

- Regular faculty members are eligible to apply under the scheme.
- Principal Investigator (PI) must have Ph.D.degree/PG degree with 02 years of experience and minimum designation will be Assistant Professor.
- Those who have submitted their Ph.D thesis will also be eligible as PI.
- To encourage research, Assistant Professor with PG degree may also apply as Co-PI under seed money scheme.
- Co-PI(s) satisfying the criteria of PI, can submit a separate proposal as PI under SMS.
- The age of the PI/Co-PI should not be more than 60years.
- At a time, one PI will be eligible for one project under SMS but he/she may be associated with
- Any number of projects under SMS as Co-PI.
- Only those projects, which were earlier applied to Government./outside funding agencies and have not been approved for funding will be considered for seed money funding.

**The SMS will be discontinued in case where the PI will resign or remains absent for more than 90 days with sanctioned or unsanctioned leave. Prior to leaving the Institute, PI has to deliver a formal presentation in the respective department before the committee duly constituted by Dean Research regarding the progress of the project and PI needs to submit utilization certificate as per the format. No dues must be taken from Dean Research regarding the project under SMS. In case where Co-PI is applicable, he/she can continue the project with proper approval.

- Alignment with Institute's Mission: The research proposal should align with the institute's overall mission, vision, and research priorities. It should contribute to the institute's reputation as a hub for engineering excellence and innovation.
- Track Record: Applicants with a proven track record of research excellence and relevant expertise in their field are more likely to be considered for seed funding.

Content of the Proposal: As per the attached Format (Annexure-1) for Seed Money Minor Research Projects/Research Grant.

Process: Seed Money Minor Research Projects/Research Grant shall be allocated only in creating specialized research resources in their area of expertise uly recommended by Proposal Evaluation Committee under the Chairmanship President / Pro-President, all the selected projects will be finalize with the approval of the Planning and Monitoring Board.

Proposal Evaluation Committee:

- President/Pro-President (Chairman)
- Registrar
- Two subject experts Members (One should be outside of PIET)
- Dean of concerned School (Member)
- HOD of concerned Department (Member)
- Dean Research (Member Secretary)

Guidelines for Seed Money Minor Research Projects/Research Grant:

- Seed Money Minor Research Projects/Research Grant shall be sanctioned only for creating specialized research resources in their respective area of expertise.
- The project is limited for a maximum of two years or Seed money can be renewed after 2 years (depends on Project Progression)
- Progress report for every six months need to be submitted to Dean (Research) & Registrar in the form of budget utilization and achieving the objectives.
- The Research Proposals must be received in the office of (Research),PIET on or before the last date of submission decided with due approval of the Competent Authority, for seeking such proposals from all Faculty members as per the prescribed format.
- All such Research Proposals would be scrutinized by a Institute level Research Project Evaluation.
- Committee duly approved by President. The committee may adopt any suitable criteria before Recommending a given Research Proposal.
- No TA/DA/Registration-fee would be permitted for incurring expenses by Faculty Member for participation in any Workshop/Training Program/ Conferences/ meetings/ out of the Seed Money Minor Research Projects grant.
- All the Faculty Members after getting action order should work for timely execution of their Research projects by following institute procurement and payment norms. In case of any difficulty what so ever, the concerned Faculty Member should report the matter as per norms to respective Deans through HODs well in time. This would ensure timely completion of Research.
- The Project Evaluation Committee shall monitor the planned research outcome/performance in respect of each Seed Money Minor Research Project through annual review meeting.
- All purchase shave to be done as per Institute norms.
- All items procured under a given Research Projects hall remain within concerned Department for use by faculty/students after completion of the project.
- The Faculty Members may seek help of IPR cell for further support to enhance visibility of research findings by using institutional linkages, infrastructure, patent filings, copyright etc.
- These guidelines have been framed with a view to strengthen key information base related with utilization of Seed Money Minor Research Projects Grant. The Institute has right to add/withdraw or modify the guidelines at any time.
- A maximum of 50 research projects would be funded every year with the approval of Board of Management (BOM) & Financial Committee (FC)
- The Pl would submit half yearly report of the work done to Dean Research. The second year grant will be sanctioned only after the successful completion of the first year.
- After completion of the minor research project, a final report must be prepared and submitted to ASRC.
- The Pl will ensure that the project is completed within the stipulated time and the final report is submitted well in time. In case of failure to achieve the desired project outcome, the Pl will be liable to be debarred by the Institute for such seed money for next two years
- Society membership will not be reimbursed under this Scheme
- IPR rights of their search outcome will be shared amongst Institute &PI/Co-PI ,as per IPR

Policy of the Institute

Minimum Expected Outcome of Seed Money:

a) One SCI or Two Scopus Publications.

b) At least equal amount of funding to be obtained from Government funding Agencies/ Industry.

c) One patent/Copyright as outcome of the work.

PROPOSAL SUBMISSION

The proposal submission will be open throughout the year. The project proposal should be submitted as per format attached herewith.

Application format for Research Seed Money:-

1. Title of the Project:
2. Name, address & experience of Investigator(s):

(Cell No. And e-mail is mandatory)

3. Title of the Research Proposal (150 Ch.):
4. Broad Subject area/field of classification:
5. Project Type(s) (Basic Research/Applied Research/Developmental/Demonstration/Others:
6. Broad objectives of the project(300Ch.):
7. Precise objectives of the project:
8. Applications/Socio economic importance (The relevance, if any, to the utilization and management of the natural resources of the State):
9. Abstract(500Ch.):
10. Details of state of the art in the researcher and literature review done by the investigator:
11. Details of any preliminary work done by the investigator:
12. Particulars of equipment required (only to govt./govt. supported institutions):
13. Particulars of any other facilities required:
14. Particulars of the facilities that will be provided by the institution where this project will be implemented:
15. Whether the project was submitted to any other organization for financial support, If so, the names of the institutions and their decisions may be indicated:
16. Whether at present receiving support from any other organization other than your present department. If so, full particulars of these may be given:
17. Budget estimate for the project:

S.No.	Items	Amount(Rs.)
1.	Details of Equipment	
2.	Travel Expenditure	
3.	Research Literature	
4.	Contingency	
5.	Other(specify)	

18. The sources of funding the project including funds from other agencies from which financial assistance is obtained/expected to be obtained, and the quantum of assistance from each agency.

Name & Signature of PI

Name & Signature of Co-PI

Chapter-4

Consultancy & Research Incentive Scheme of PIET (CRISP)

1. **Preamble:** In the light of changing economic scenario, government policies and priorities of PIET, the institute considers sponsored research and industrial consultancy projects as an important means for extending benefit of scientific research work at the institute to the sponsoring agencies broadening the experience base of the Institute community and as a tool for contributing to the country's and economic growth. Therefore, as a matter of policy, the institute encourages its faculty members to undertake research and consultancy work as a measure of scientific/ technical collaboration with outside agencies. Appropriate research and consultancy projects, in addition to providing much needed service to the government and industry, also benefit the concerned faculty members and the institute in several ways. They enrich the professional experience and knowledge of faculty members and thus make them better educators. Research and consultancy projects provide first-hand knowledge of the current problems of industry and the emerging area which is very helpful in tuning the curriculum the national needs. The faculty members get an opportunity to apply their ideas for finding out the solutions to the problems in emerging areas. Furthermore, the consultancy work also provides incentives for their contribution to all categories of staff.

2. **Categorization of Grants/ Projects**

   Category A: Government funded research projects – This type of research based project work that does not require existing institutional infrastructure but helps in creation of assets through government funded research projects and are based on the expertise of the consultant. The assignments under this category are of highly specialized nature and must be handled with utmost sincerity as they may have far reaching impact on academia as well as society. Thus, any compromise in the execution of such assignments may tarnish the image of the institution. Keeping this in view, it is mandatory to ensure that the concerned consultant possess proper academic qualifications and well established credentials in the area of the project.

   Category B: Design, development & infrastructure based consultancy – This type of Consultancy will involve use of the institution's computational facilities / software / hardware, testing of sample/ component/ product against a standard and other technical, physical infrastructure by the client. The institution will undertake testing jobs provided testing facilities and expertise are available in the institution itself. The consultant must undertake any consultancy assignment under this category only after ensuring that the machine/ equipment used for testing is duly calibrated and provide accurate results against a reference / standard. It is understood that the testing equipment will be used only by the consultant(s) and not by the client.

   Category C: Skill & knowledge based consultancy – This type of consultancy will NOT involve use of the institution's computational facilities / software / hardware but is based on the expertise of the consultant. Keeping this in view, it is mandatory to ensure that the concerned consultant possess proper academic qualifications and well established credentials in the area of consultancy

Category	Incentive to the consultant/Princip al investigator Lie the principal faculty)	Incentive to the supporting team members (faculty & staff)	Date of grant of incentive
A	8 % of the total grant amount, but limited to a maximum of half of annual gross salary of consultant (to be given from resources of institution)	2% of the total grant amount(On sole discretion of the consultant/ principal faculty& to be given from resources of institution)	After the completion of Project & obtaining NOC from grant Disbursing agency auditing firm(s)
B	40% of the total project grant received (this also includes all types of taxes Which are applied on	On sole discretion of the consultant / principal faculty	As & when grant is received
C	80% of the total project grant received (this also includes all types of taxes which areapplied on	On sole discretion of the consultant / principal faculty	As & when grant is received

4. Important Points

4.1. Individuals or Departments shall take up projects after obtaining NOC from the Director, PIET.

4.2. All funds in connection with above mentioned consultancy/ projects hould be received in the name of the Institute only. The account will be maintained & controlled by the office of Director (Admin & Finance).

4.3. The time spent by a faculty/ consultant on such projects should not exceed one day per working week plus one day during weekends, thus a total of 52 man days during the calendar year.

4.4. Report(s) and data collected/ originated out of project will be the joint intellectual property of the sponsor, consultant & PIET which can be used by the sponsor, consultant & institution for its own use only and cannot be disclosed to any other party without obtaining the NOC of sponsor, consultant & institution

4.5. The report of the project / consultancy will be kept by the consultant for a period of 03 years from the date of closure of the project and for routine testing from the date of issue of report.

4.6. If a prima-facie case of malpractice and/or misconduct is established by a fact finding committee against a staff member in connection with project(s), the Director (Admin & Finance), on the recommendation of Head of Institution may prohibit the concerned faculty / staff member to take part in any new project as consultant till such time that a final decision is taken by the appropriate authority in the matter. However, in such cases the

concerned faculty/ staff member will be expected to complete his/her obligations in the on-going project(s) with which he/she is connected, in order that the on-going projects and obligations to the sponsor do not suffer.

4.7. All purchases under projects shall be made through the Purchase Manager, PIET. In case of equipment which is to be carried outside, the same should be insured before they are taken out.

4.8. The faculty may engage student(s) of PIET as student assistants for the project work

4.9. The most expeditious and convenient mode of travel should be used to minimize periods of absence from the Institute. Admissible DA or actual boarding & lodging expenses and expenses on local travel by taxi will be reimbursed against receipt.

Chapter-5

Promotional Policy for Patents & Copyrights

The Management of PIET is pleased to declare the "PROMOTIONAL SCHEME FOR PATENTS & COPYRIGHTS" for faculty & staff members. This scheme will cover the registration/ filing as well as award/ grant of copyrights and patents (including design registration, Silicon Chip Design etc). Following terms and conditions must be kept in mind by respective applicant/ patentee while filing the applications:

- The principal applicant/ principal patentee must ensure that his/ her respective PIET Institution is the joint applicant/ partner in the complete process.
- A separate agreement must be jointly signed between the applicant/ patentee, other inventors & respective PIET institution before initiating the application process for each application.
- 50% of the registration/ application fee (including all fees like government, consultancy, legal etc) will be borne by PIET and the rest 50% by the applicant(s)/ patentee(s).
- Upon award / grant of copyright or patent the applicant/ patentee is eligible for an incentive as per following table:

Category	**Amount**
Successful registration / application for Copyright/ Patent	INR 3000
Grant of Copyright	INR 3000
Publishing of Patent	INR 5000
Grant of Patent (Non-Commercial)	INR 30000
Grant of Patent (Commercial)	INR 50000

- Incentive will be given to the applicant/ patentee who has served PIET for minimum 1 year. In case of more than 1 applicant/ patentee, the amount will be equally divided.
- The incentive will be given to the principal applicant/ patentee only.
- The incentive will not be awarded for provisional copyrights / patents.
- In order to claim the Incentive the copy of proof of award/ grant of Copyright / patent must be submitted to the Office of Registrar.
- On receiving relevant documents, the Registrar will constitute an expert committee including a representative from the office of Chairman, PIET Group within a fortnight for consideration of all applications for such incentives
- The committee will submit a report with its comments on each application and recommendations for giving incentive strictly in accordance with directives laid down above.
- The Registrar will then send the finalized list to the Office of Chairman, PIET Group for final approval & disbursement of incentive.
- **In all matters related with this "PROMOTIONAL SCHEME FOR PATENTS & COPYRIGHTS", the decision of Management of PIET would be final.**

Chapter-6

Scheme of Pursuing Ph.D. For Professional Progression at PIET

Management is delighted to announce the scheme for pursuing PhD for professional progression at PIET. This scheme is introduced in light of a recent circular released by UGC stating that Ph.D. Degree shall be a mandatory qualification for the post of Assistant Professor with effect from session 2022-23.

Objectives:

- To enhance the number of PhD faculty members working in PIET Group by 2025
- Give thrust to R&D, create an innovative ecosystem and enhance PIET's competitiveness amongst competitors

Eligibility:

- All faculty & staff who have joined/ who will join PIET Group on or before 31.12.2025

Terms & Conditions:

- The scheme has come into effect from session 2022-23
- The scheme is applicable only if faculty/ staff members take admission in Doctoral program of PIET University
- The continuation of scheme for an individual is subject to performance review after every 6 months by office of Dean (Research & Development), PU
- After completion of PhD, re-fixation of salary will be done by management on the basis of prevailing remuneration provided in other private self-financed institutions (it will be fixed with effect from the date of provisional certificate or degree whichever is dated earlier)
- In case any faculty/ staff member leaves the organization (in any circumstances) during the tenure of PhD, the scholarship given under this scheme will be discontinued from the date of reliving.
- After completion of PhD, faculty / staff members have to stay at PIET for an ongoing academic semester (if PhD is completed during the running of semester) or have to stay at PIET for upcoming semester (if PhD is completed during the semester breaks). The semester break will be counted as the duration between the beginning of new semester & last teaching day of current semester

Salient Features:

- Flat 25% Scholarship in Tuition fee.
- Flexibility to pay fees in monthly installments by deduction of a certain amount from monthly salary.

Relaxation in working hours/ teaching load as per following:-

Post	No of Sections	Reduced Load per week (in hours)	No of Sections	Reduced Load per week (in hours)	No of Sections	Reduced Load per week (in hours)
HOD or equivalent	0-3	8-10	4-6	4-6	=> 7	0-2
Dy. HOD or equivalent	0-3	12-14	4-6	10-12	=> 7	8-10

Faculty	16-18(against existing 22)
Teaching Assistant	24-26(against existing 30)
Non-Teaching Staff (For Officers, Executives etc.)	Action of 1 hour per day

How to apply:-

- Write to Dr. Sunil Kumar Gupta, Dean (R&D), PU at dean.research@PIET.edu.in expressing your interest to pursue PhD from PU under this scheme along with area of interest & details of past academic credentials.
- As the management has to keep a balance between ongoing teaching as well as admissions in PhD programs, all applications will be subject to final approval of Management (due to the ascertained number of applications per department/ institution).
- After admitting shortlisted applicants in PU, a list of such faculty & staff members will be sent to the Head of Institutions (PIET) and copied to the Office of Director (Admin & Finance), PIET Group for further processing.

Chapter-7

Research Resource Mobilization Policy

Objectives of the Scheme:-

- To encourage and enhance the flow of resources / participation coming from the society for institute development.
- To encourage faculty members to provide consultancy.
- To encourage active research, provide incentives to the faculty members, students and scholars involved in society and its development activities.
- To provide adequate infrastructure in terms of space and equipment and support facilities for research.
- To encourage institute to collaborate with other agencies, research institutions and bodies for sharing research facilities.
- To divers if y and expanders resource base in supporting the achievement of the strategic plans, goals overall growth of this institute.
- To identify and analyze the resources available for program priorities, policies, and efficient budget allocation.
- To maximize the use of internally & externally generated fund so as to enhance & strengthen deep relation with stake holders.

Introduction

The PIET Group operates student centric policies with focus on skill-based research driven quality education which should be accessible and afford able by youth of rural and urban areas. The cardinal principle of management in the Institute is to provide best resources to the students &faculty to meet the above requirement and run the Institute for realizing the vision and mission of the Institute.

Resources

The Institute acquires three types of resources i.e. Human Resources, Equipment & Material Resources and Infrastructural Resources.

1. Human Resources

The Institute ensures the contribution of qualified manpower and research scholars to run the research mobilization.

Appointment of Teachers

The posts of Assistant Professors, Associate Professor and Professors are laid down by the PIET Institute norms in coherence with AICTE norms.

Appointment of Non-Technical Staff

The number of officers/supervisors required for non-technical are laid down by the Institute norms.

2. Equipment & Material Resources

Based on the Strategic Plan, the requirement of equipment & material resources is taken care of by respective departments in Board of Studies and consolidated at institute level by Academic Council, Board of Management & Financial Committee.

3. Infrastructural Resources

It's a part of academics where all facilities are provided with updated technologies and equipment.
The significance of R&D can be highlighted as:

- To promote research and development activities in the Institute.

- To equip the student and the faculty members with latest advancement in the technological areas.
- To provide consultancy and research in innovative areas.
- To enhance the education with research orientation fulfilling the technical needs of industries.

In-House Support

In house support is provided by the Institute to teachers for research purposes like:

- Seed money for research projects
- Granting study leave for research field work
- Undertaking appraisals of institutional functioning and documentation
- Facilitating research by providing organizational supports
- Organizing research circle/internal seminar/interactive session on research

Also PIET Institution has created an eco-system for innovations and other initiatives for creation and transfer of knowledge:

PIET Institution's efforts to create an innovative eco-system include:-

- Participative efforts (brain storming, think tank,etc.) to identify possible and needed innovations
- Encouragement to novel ideas
- Official approval and support for innovative entry-outs
- Material and procedural supports

Chapter-8

Policy for Participation in Conference/Seminar/Workshop/ Trainings / Symposia

Management of PIET Group is pleased to introduce the revised guidelines for participation in conference/ seminar/ workshop/ training/ symposia (to be termed as activity) etc. by faculty & staff of constituent institutions of PIET Group. The guidelines are aimed to provide opportunity to all Faculty & Staff members to interact at international and national level.

Criteria for participation –

- Each Faculty & Staff member will normally be allowed to attend one activity from either of the categories in a session excluding those internally hosted by PIET Group (Institutions) itself by filling complete format: E-18A & E-18B available on website under download section.
- All faculty & staff who have not completed 260 working days / one year at PIET Group will be considered new faculty members under this scheme.
- Under category B, for any paper having more than one author from PIET Group (Institutions) only the first author would be allowed to attend the activity.
- For any exceptional situations, participation in more activities over & above what is stated in the guidelines may be allowed but subject to the approval of the Head of the Institution

<table>
<tr><th colspan="6">Category A – Skill & Knowledge Enhancement</th></tr>
<tr><th>Category & Designation</th><th>Suggestive List of Programs (PS: the list is a brief suggestive list, other programs related to job role may be considered)</th><th>Grades</th><th>Maximum Exposure</th><th>Maximum Grant (in INR)</th><th>Max. OD Leaves</th></tr>
<tr><td rowspan="2">A.1
Protocol Holders</td><td rowspan="2">Enhancing Performance of Staff Managerial Skills for Principals Effective Curriculum Implementation Developing Healthy Work Culture in Technical Institutions Developing Values, Attitudes and Managerial Skills in Teachers</td><td>AA/ A+</td><td>International</td><td>50000</td><td>10</td></tr>
<tr><td>A</td><td>International</td><td>40000</td><td>7</td></tr>
<tr><td rowspan="7">A.2
Professors/ Dean / HODs /Associate Professor</td><td>Effective Curriculum Implementation</td><td rowspan="7">AA/ A+</td><td rowspan="7">International</td><td rowspan="7">30000</td><td rowspan="7">10</td></tr>
<tr><td>Tools for Engineering Research</td></tr>
<tr><td>Personality Development</td></tr>
<tr><td>Enhancing Performance of Staff</td></tr>
<tr><td>Developing Values, Attitudes and Managerial Skills in Teachers</td></tr>
<tr><td>Intellectual Property Rights and</td></tr>
</table>

	Patenting				
	Project Planning, Execution & Evaluation				
	Academic support for weak Students				
	Strengthening Institutions to produce high quality engineers for better employability	A	International	25000	10
	Training on Management Capacity Enhancement	B	National	10000	5
	Enhancement of R&D and institutional Consultancy activity	New	National	5000	3
A.3 Assistant Professor /Research Associate/ Lecturer	Tools for Engineering Research. Effective Curriculum Implementation. Mentoring Coaching and Counseling Preparing Students for Job Interview Academic support for weak Students Training of faculty for effective	AA/ A+	National	10000	6
		A	National	10000	6
		B	Regional	7000	3
	Teaching Enhancement of R&D and Institutional consultancy activity	New	National	4000	3
A.4 Technical Officers /Technical Assistants	Laboratory Practices.	AA/ A+	National	8000	5
		A	Regional	6000	3
		B	Regional	4000	3
		New	Regional	2000	3
A.5 Registrar /Proctor /Officers	Training Program to enhance the administrative skills Effective Office Administration & Management. Developing Healthy Work Culture in Technical Institutions. Organizing Student Centered Activities. Mentoring Coaching and Counseling. Preparing Students for Job Interview Personality Development	AA/ A+	International	30000	10
		A	National	20000	8
		New	National	5000	4
A.6 Dy. HOD	Placement Preparatory Program. Preparing Students for Job Interview Career Guidance and	AA/ A+	National	10000	6
		A	National	10000	6
		B	Regional	7000	3

/Tutor /Dy. Tutor /Warden	Counseling Academic support for weak Students	New	Regional	5000	3
A.7 Executives /Office Executives	Office Executives Training Program Effective Listening Skills Effective Communication Skills (oral and written) Telephone Handling Skills (making and receiving calls, leaving message on voicemail) Database Management Report Preparation Standard Office Procedure Customer service interpersonal relations	AA/ A+	National	10000	5
		A	National	8000	5
		B	Regional	4000	3
		New	Regional	2000	1
A.8 Library Staff	Digital Library Management Cloud Computing and Libraries Digital Library with KOHA and GSDL	AA/ A+	National	8000	5
		A	National	6000	3
		B	Regional	4000	3
		New	Regional	2000	1
A.9 Attendants / Drivers /Security Guards	Report Preparation Effective Listening Skills Telephone Handling Skills Defensive Driving Safety Training Driver Training and Development Program Security Guards Training Program	AA/ A+	Regional	2000	3
		A	Regional	1000	3
		B	Regional	500	3
		New	Regional	500	1
Category B – Technical (for all teaching staff)					
B.1	Participation, Full paper published & presented in an SCI/ IEEE or equivalent Activity with proceeding available online	All	International	10000	5
B.2	Participation & Full paper published & presented in an International activity with publication in reputed journal with impact factor >.75	All	National	7000	5
B.3	Participation & Full paper published in an Activity with publication available online	All	National	5000	5

In order to claim the grant / scholarship, the following documents must be submitted along with a completely filled form E-18 to the office of Registrar at respective campuses.

- A copy of notification of conference / seminar
- Copy of e-mail communication submitting the draft copy of the paper
- Copy of e-mail as the acceptance of the invitation/ paper
- Original receipt towards payment of registration fee
- Copy of certificate (if provided) of participation and presentation of paper. Otherwise a declaration (in specified format) will have to be provided.
- Original Travel Tickets (when claiming TA/DA)

Chapter-9

Incentive policy for teachers who receive state / national and international recognitions / awards

PIET Institute of Engineering & Technology works on the policy of providing incentives to teachers who receive state, national and international recognitions/awards as Incentives for learning can be defined as an inducement or supplemental reward that serves as a motivational device for intended learning. Commendation and monetary incentive is a measure of influencing individual's drive to act towards desired direction. Monetary rewards comprised all rewards that have a monetary value and add up to total remuneration such as base pay, pay contingent on performance, contribution, competency or skill, pay related to service and financial recognition schemes. Various findings prove people work so that they can satisfy their various needs and wants from the reward they get. Therefore, a good monetary reward package attracts not only competent workers and retain them, but also determine their commitments and attitudes towards work, and teachers in PIET are not exception.

Key Points:

- Research suggests that incentive programs are most effective when implemented as part of a broader, holistic retention strategy, rather than as standalone initiatives.
- Individual pay-for-performance models have been shown to positively impact student performance. Several studies have shown that when teachers' pay is linked to students' academic outcomes, achievement increases. However, some researchers have noted that individual merit pay has negative consequences for teacher collaboration and commitment. In addition, financial incentives must be carefully gauged, so that they are neither too easy nor too difficult to attain.
- Research indicates that mentoring and induction programs are promising workplace incentives that may help to improve teacher retention. Though little conclusive research exists on the topic, early indicators suggest that these programs can work to reduce teacher turnover and attrition. Similarly, career ladders present an under-researched opportunity to increase teacher engagement and, in turn, improve retention rates.

Incentive Policy:

PIET provides incentives to the teachers who receive state, national and international recognitions/ awards through various ways:

- Commendation and monetary incentive at a University function: The academicians get recognition on the occasion of Independence Day and Republic Day i.e. 15th August and 26th January respectively.
- Commendation and medal at a University function: The teachers receive medals for their outstanding achievements at national or international level on the occasion of Teachers' Day.
- Certificate of honor: PIET
- Honours its intellectual academicians with the certificates in every Faculty Development Program and Department day.
- Announcement in the Newsletter / website: The achievers get recognition and appreciation in the Quarterly Newsletters and Annual Magazine Spectrum

Chapter-10

Research and Publication Ethics Policy

PIET Institute of Engineering and Technology gives utmost importance in encouraging the scholars & faculty members for the conduct of research by adopting specific codes, rules, and policies relating to research ethics which are as follows:

Honesty:

There should be honesty and fairness in proposing, performing and reporting research work. One is required to honestly report data, results, methods and procedures, and publication status. Fabrication, falsification and misrepresentation of data won't be considered as ethical.

Objectivity:

Objectivity conveys the idea of distancing oneself from whatever has been studied and so findings depend on the nature of what was studied rather than on the personality, beliefs and values of the researcher. Moreover, one should try to avoid bias ness in designing the experiments, analysis and interpretation of the data, peer review, taking decisions related to personnel, writing grant, preparing expert testimony and dealing with other aspects of research.

Integrity:

It characterizes both the institution and individual researchers belonging to that institution. As far as the individual is concerned, it is a feature of moral character and experience and the institution is required to create an environment that endorses responsible conduct by implementing standards of assured quality, reliability, and legitimacy.

Carefulness:

It indicated taking care while carrying out a research to avoid careless mistakes. One should keep reviewing the research work carefully and ensure that the outcomes are reliable & credible. While playing the role of a peer reviewer too, one is expected to do the job effectively. Altogether, there shouldn't be any avoidance or negligence while eliminating the errors.

Openness:

One should always be prepared to share data and results, along with any new tools that have been developed while publishing one's findings as it will help to enhance the knowledge. One should always be open to criticism and innovative ideas**.**

Respect for Intellectual Property:

One should avoid copying others' work. There can be negative repercussions for this act of plagiarism, hence, one should ask for permission before using others' tools or methods, unpublished data or results. One should learn to respect the provisions of copyright & patents and develop understanding towards intellectual property rights.

Confidentiality:

One should give absolute importance to the information provided in confidence. Following set guidelines in order to protect the sensitive data, is very much mandatory. One is expected to protect the confidential communications such as documents submitted for publication and grants, trade & military secrets etc.

Responsible Publication:

One should publish to enrich the research quality and knowledge, not only to strengthen the career. This indicates that one's contribution towards the research field has to be beneficial for the society as well.

Responsible Mentoring:

It helps to educate, mentor, and advise students. Promote their welfare and allow them to make their own decisions. The mentors should act responsibly and execute research in a proficient manner which can assist in imparting valuable lessons to aspiring researchers. It is also the responsibility of the mentor to clearly assert the expected results and create an environment where smooth communication is encouraged. In fact, Mentors are expected to develop with their scholars or trainees a proper schedule for completing specific objectives.

Respect for Colleagues:

Giving respect to the colleagues in the workplace creates healthy and productive working dynamic. There are various ways to inculcate a respectful attitude in an organization like clear professional communication, sharing credits of success, balanced division of workloads etc.

Social Responsibility:

Social responsibility indicates that one should be accountable for fulfilling the civic duty which means actions of an individual must benefit the whole of society. It is also about balancing between the economic growth and the welfare of society and the environment. If one attains this equilibrium, then it can be said that the social responsibility is accomplished.

Non-Discrimination:

One should avoid discrimination against colleagues or students on the basis of sex, race, ethnicity, or other factors that are not related to their scientific competence and integrity.

Competence:

The focus should be on maintaining and improving one's own professional competence and getting expertise through lifelong education and learning. One is required to take careful steps while promoting the work of specific research field.

Legality:

Know and obey relevant laws and institutional and governmental policies.

Plagiarism Check

Plagiarism check is another important focus that the Institute insists for all the UG/ PG. level before submission must be checked by plagiarism as per UGC guideline. Plagiarism software turnitin has been provided to all the Deans and HoDs for checking their schools and departments research articles, research proposals, review research proposals, innovations, ideas, and institutional publications and research project reports besides using plagiarism check to regulate the student assignments.

Institute encourages various departments to conduct workshops in research methodology where ethics in research is an integral part of the workshops. Awareness is also created to faculty members by invited talks in ethics in research.

Constitution of Research Ethics Committee

The task of a Research Ethics Committee (also known as an Institutional Review Board or Ethics Review Board in some regions) is to ensure that any research involving human participants or animals is conducted in an ethical and responsible manner. These committees play a crucial role in safeguarding the rights, well- being, and privacy of the individuals involved in research studies.

The Research Ethics Committee shall consist of the following members, namely:

Director - (senior administrative officers): Concerning the Research Ethics Committee, typically holds a leadership role and has various tasks and responsibilities related to overseeing the ethical review and conduct of research within the institute also plays a pivotal role in promoting ethical research practices, protecting the Rights and well-being of research participants, and maintaining the institute's reputation for conducting research with integrity and responsibility. Their specific tasks may include:

- Committee leadership
- Ethical review coordination
- Policy and guideline implementation
- Training and education
- Communication and reporting
- Collaborations and networking
- Conflict resolution
- Compliance monitoring
- Continuous improvement
- Registrar - (Senior administrative officers): ensures that the research is conducted in accordance with ethical guidelines and applicable laws, and the specific tasks are:
- Reviewing Research Proposals
- Informed Consent
- Confidentiality and Privacy:
- Risk Assessment
- Continuing Oversight
- Reporting and Documentation
- All Head of Department (s): The head of a department of institute may play a significant role in the Research Ethics Committee (REC), depending on the organization's structure and the committee's composition, a senior faculty member or a person with administrative authority over the academic department where the research is being conducted and also ensures that ethical considerations are taken seriously at the departmental level and that research conducted within the department adheres to ethical guidelines and principles along with the specific tasks such as:
- Oversight and Accountability
- Resource Allocation
- Collaboration with the REC
- Liaison with Institutional Leadership
- Setting Departmental Ethical Standards
- Conflict Resolution
- Coordinator (R&D) - Member Secretary: Ensuring that research conducted within the institute adheres to ethical standards and guidelines typically plays a supportive and administrative role within the REC, assisting in the ethical review and oversight of research projects involving human participants. The specific responsibilities of a Research and Development Coordinator in a Research Ethics Committee may include:

- Administrative Support
- Research Protocol Review
- Preparing Meeting Agendas
- Meeting Coordination
- Communication with Researchers
- Monitoring Ongoing Research
- Record Keeping
- Collaboration with Institutional Authorities
- Continuous Improvement

Chapter-11

Plagiarism Policy

PIET is a hub of academic excellence, where cutting-edge research is the driving force behind our mission to advance knowledge and create a positive impact on society. Our institute is dedicated to fostering an environment that encourages curiosity, exploration, and innovation.

At PIET research is the bedrock of our existence. Our commitment to academic research is deeply rooted in the belief that rigorous inquiry is the key to addressing complex challenges and understanding the world we live in. Our researchers are driven by the desire to make ground breaking discoveries, contribute to the pool of human knowledge, and improve the lives of individuals and societies.

CODE OF ETHICS TO CHECK MALPRACTICES AND PLAGIARISM IN RESEARCH

Objective:

To promote novel research among faculty members and to prevent malpractices and plagiarism.

Policy:

All the academic documents of PIET faculty & students like research papers, project reports, and seminar reports shall be of high quality. The work is always divided in two parts, first one is the original contribution of the author i.e. the Core Work, which shall be based on original ideas and shall be covered by Zero Tolerance Policy on Plagiarism. Other one is the review work of the authors can be referred from other authors in same domain, shall be texted in the words of the author and should have minimum plagiarism.

In case Plagiarism is found, then it would be brought under Plagiarism Disciplinary Committee for necessary and maximum penalty.

The core work shall include abstract with keywords**,** introduction, objective, hypothesis, research methodology, analysis and interpretation, summary and observations, conclusions, recommendations and references.

As in lieu of the ethics in higher education, fair conduct of research and prevention of misconduct, as per UGC (Promotion of Academic Integrity and Prevention of Plagiarism in Higher Educational Institutions) Regulations, 2017, students, researchers and faculty members should not perform any academic misconduct by the theft of intellectual property in any manner.

Therefore, the proper attribution, seeking permission of the author wherever necessary, acknowledgement of source compatible with the needs and specificities of disciplines and in accordance with rules and regulations governing the source is essentially required. In case of found guilty of plagiarizing, they shall be considered under following class of severity:

Level 1: Similarities above 10% to 40% - Shall be asked to withdraw manuscript submitted for publication and shall not be allowed to publish any work for a minimum period of one year.

Level 2: Similarities above 40% to 60% - shall be asked to withdraw manuscript submitted for publication and shall not be allowed to publish any work for a minimum period of 2 years and shall be denied a right to one annual increment in case of academician.

Level 3: Similarities above 60% - shall be asked to withdraw manuscript submitted for publication and shall not be allowed to publish any work for a minimum period of three years and in case of faculty, shall be denied a right to two successive annual increments for a period of three years.

Based on the severity and above penalty levels, in case of below 10 percent of the plagiarism is found, authors can/shall be immediately asked to correct the paper and revert.

Note: Authors are necessarily required to cite reference in case of any content adopted from anywhere other than internet open sites. It is also that, even in case of open site internet source the copied contents if found more than 20 percent in aggregate during plagiarism detection, the work shall not be considered for further proceedings.

Chapter-12

Research Centers at PIET

Research center is to enable proper communication between faculty, students, and industry to enhance **research** opportunities, academic excellence, real-world problem solving, and knowledge creation and distribution.

Objectives of Research Centre:

The purposes of establishing a Research Centre are to:

- **a.** Encourage and facilitate collaborative and/or interdisciplinary research and augmentation of research networking capacity and infrastructure.
- **b.** Increase and effectively manage the resources and research support for its members and widen institute community.
- **c.** Provide education and training in research and related skills, especially for graduate and undergraduate students and thereby improve the academic programs of their constituent academic units.
- **d.** Contribute to the institute's strategic educational and research missions and to support synergies between research, teaching and learning.
- **e.** Transfer and mobilize knowledge gained through research for the benefit of the society and welfare of the communities.
- **f.** Enhance the reputation of its members, the constituent academic units, and the institute through the quality of its work. Our research center tries to develop its own objectives and measurable goals to meet the purposes stated in this policy. We have dedicatedly been working with an approach to strengthen our foundation contributes towards its establishment.

Establishment of Research Centre

ASRC was established to facilitate research and education. The establishment of the research center leads to an intellectual environment that brings people together to solve societal problems. Center serves as a means of focusing resources to advance this goal. As there are two general criteria for the establishment of a Center or Institute:

A. Institute exists; faculty are working together on research problems requiring an inter disciplinary approach; they are serving on each other's graduate student committees; regular research meetings or seminars involving the group take place. Center designation is a formal recognition of a center of excellence resulting from that group and its activities.

B. A significant funding opportunity is available that requires a Center or other umbrella organization to exist in order to submit a proposal or to be competitive for an award. These funding opportunities must by nature be interdisciplinary and available for an extended period of time. Inter im approval of Center status may be given in order to expedite the response to a funding opportunity or to provide a mechanism for a group to organize. Interim approval shall require the approval of all administrators normally involved in the Center/Institute approval process.

Procedure to establish a Research Center

A written proposal must be developed and approved in order to establish a Center. The proposal must contain the following elements:

- Statement of Purpose
- Mission Statement

- Description of Proposed Activities
- Evaluation Criteria
- List of Participating Faculty
- Justification
- Structure
- Space and Facilities Requirements
- Funding
- Submission of Center/Institute proposal – All submissions requesting the creation of a Research Center must be submitted to BOM through Director for Research for approval.

1. Center of Excellence- Open Source Technology Introduction

The PIET Group has started the Center of Excellence- Open Source in the PIET Institute of Engineering & Technology in collaboration with Red Hat Academy and Oracle Academy. Red Hat® Academy is an academic training program designed to help institutions differentiate themselves by providing an enterprise-ready Linux and open-source curriculum. Member institutions receive no-cost instructor training and support, robust lab environments with flexible delivery options and comprehensive, printed, digital or online textbooks. Students will develop the in-demand skills employers' need and receive discounted certification exams. Students will also explore opportunities in Mobile Application development. Oracle Academy membership offers educational institutions and educators free computing education resources for the classroom to help increase knowledge, skills development, innovation, and diversity in technology fields. Oracle Academy offers institutions and their educator's access to world-class technology and software, expert curriculum, teaching and learning materials, professional development, Oracle professional certification resources, member recognition, and a wealth of classroom resources for their students. Educators are able to share with students many of these benefits, including study resources, Oracle certification learning materials, software licenses, Oracle Application Express (APEX) workspaces. Oracle Academy Cloud Program for hands-on practice learning and developing.

Objective and Purpose: The objective RTU center of excellence in open-source technology is aligned with National vision for 2035 of Atmanirbhar Bharat, Make in India, Skill Development. This center will contribute in achieving national Strategic Development goals for having Creative start-up ideas, approach towards product development, skill development and training to students. Open-source technology has become the practice and is being used by software industries. The objective of this center is to allow students to work and learn open-source technologies to upgrade skill. This centre will provide all open-source software to develop software applications. The relevance of open-source technology is that it is low-cost alternative for software development. Open-source technologies provide open access to the code to see what's going on internally. Open source refers to software that can be modified and/or shared by anyone, while the copyright holders grant users the rights to do the same. Open-source technology provides flexibility for speedy development and, the end product is a tool operates instantly. Open-source software developer use bleeding- edge technologies to create new solutions with the latest innovations. The software industry now-a-days moving towards artificial intelligence. In order to make a machine intelligent, Machine Learning has become necessary in every domain of engineering. Machine Learning need lot of domain expertise, human intervention only capable of what they are designed for. This is where we need deep learning for AI applications. Open Source. Technologies like Python, R and Cloud is being used in this area. High-end machines and

GPUs are required to execute Deep Learning algorithms compare to traditional Machine Learning algorithms. Most of the applied features need to be identified by domain expert in traditional Machine learning techniques. Deep Learning algorithms try to learn high-level features from data in an incremental manner. Requirements of domain expertise and hard-core feature extraction is eliminated with this. We have RTX Quadro 8000 GPU with 2x Intel Xeon Silver 4214 Processor, / 4x32GB RAM,(128 GB) / 1TB M.2 SSD Hard Disk + 2TB M.2 SSD, DP to HDMI Adapter, DOS, 92% 1000WPower Supply,Machine Translation between natural languages is one of the biggest challenges in Natural Language Processing or Computational Linguistics research. Some of faculty members and students are already involved in Machine Translation projects using Machine Learning. Based on the experience we gained, we would like to develop a working prototype MT system for English-Rajasthan using Neural Network.

1. Center of Excellence- High Performance Computing

Introduction:-

This COE will provide facility to use high performance computing through data centers, servers, GPU's and state of art infrastructure.

- Centre of excellence will become a hub for the Consultancies to the industries in HPC and it will serve as an Intelligent Systems Development Centre.
- Centre of excellence will integrate allopen-source technologies such as Redhat, Oracle, Python in IoT, Cloud Computing, web development, Sensors, Mobile Application, ML, DL, Computer Vision, simulation modeling Cyber security.
- Centre of excellence will work in tandem with existing AICTE MODROB Sponsored Deep Learning lab for collecting real-time data and Image data for analysis, classification, regression, and prediction.
- Centre of excellence will also be associated with Oracle Academy, RedHat Academy, Coding Ninjas, GitHub and Rapid OPS Pvt Limited for training, and Intelligent Application development using high performance computing systems

Objective and Purpose

The objective of RTU Centre of excellence in High Performance Computing for Intelligent systems is aligned with National vision for 2035 of 'Aatma Nirbhar Bharat Abhiyaan', Make in India & Skill Development. This Centre will contribute in achieving national Strategic Development goals for having Creative start-up ideas, approach towards product development, skill development and training to students. High performance computing has become the practice and is being used by industries. The HPC is used in medical profession to digitize complex processes like genome sequencing, drug testing, diagnosis of diseases like cancer and diabetes. It is also helpful in computer simulations to test the functionality of machines. ISI- 2, RIICO Institutional Area, Sitapura Jaipur- 302022 (Rajasthan) Phone: +91-141-2770790 E-mail: info@PIET.org Website: www.PIET.org As Covid 19 fuels threats in cyber security, HPC provides intelligent technical support as well as detection of frauds. The objective of this Centre is to allow students to work and learn how to use dataset and High performing computing to innovate and develop machine intelligent systems. This Centre will provide infrastructure, services, data Centre, for performing high computation. High performance computing and Intelligent Systems development services complement each other. Intelligent systems can gain the speed to become smarter, and High-performance computing can have smarter technology for better result. The relevance of High-Performance computing to develop intelligent system is that it is high

speed alternative for intelligent system development. High performance Computing provides more support in AI model training than traditional systems. AI can be used intelligently to queue and process workloads, maximizing the resources of HPC systems. HPC applications and interfaces that support AI tools, such as Python and MATLAB are being used. HPC systems can help in ingest, process, and transform big data in real-time. This prepares data for analysis, which frequently incorporates AI. The HPC technologies becoming commonplace in almost all the industries and the society is ready to take its benefits in number of ways like weather forecasting, information retrieval, decision support, financial support, and data mining. The industry now-a-days moving towards artificial intelligence. In order to make a machine intelligent, Machine Learning has become necessary in every domain of engineering. Machine Learning need lot of domain expertise, human intervention only capable of what they are designed for. This is where we need deep learning for AI applications. Open-Source Technologies like Python, R and Cloud is being used in this area. High-end machines, GPUs and HPC are required to execute Deep Learning algorithms compare to traditional Machine Learning algorithms. Most of the applied features need to be identified by domain expert in traditional Machine learning techniques. Deep Learning algorithms try to learn high-level features from data in an incremental manner. Requirements of domain expertise and hard- core feature extraction is eliminated with this. We have RTX Quadro 8000 GPU with 2x Intel Xeon Silver 4214 Processor, / 4x32GB RAM, (128 GB) / 1TB M.2 SSD Hard Disk + 2TB M.2 SSD, DP to HDMI
Adapter, DOS, 92% 1000WPower Supply. This Proposal is to make Centre of excellence to establish high performance computing which can be used to develop AI , ML, DL, computer Vision, Cyber security, Quantum computing, Computer Simulations Applications. In order to develop such application High End systems, Sophisticated Network Infrastructure to make clusters and server and data center required. Machine Translation between natural languages is one of the biggest challenges in Natural Language Processing or Computational Linguistics research. Faculty members and students are already involved in Machine Translation projects using Machine Learning. Based on the experience we gained, we would like to develop a working prototype MT system for English-Rajasthan using Neural Network.

2. Center of Excellence- Digital Manufacturing

Introduction:-

The proposed Centre of excellence focuses on Integrated Design and Innovations in Advanced Digital Manufacturing. Digitalization is changing our daily lives and revolutionizing the world economy. Successful companies are seizing the opportunities offered by digitalization for lower costs, improved quality, support for individualized production, and flexibility and faster response to customer and market demands and new business models. We are in the midst of the digital industrial revolution. Digital technologies have become ubiquitous in advanced manufacturing. Not only are most industrial processes digitally monitored today, most products from heavy engineering industries have built in telematics and other forms of digital monitoring capabilities. It is widely believed that digital interventions will transform the way that machines will be deployed, operated, monitored, and serviced in the future

Objective and Purpose

The Centre focuses to work for solving industrial problems bringing innovation in digital manufacturing. It also aims to facilitate the SMEs and Startups to its state-of-the-art infrastructure for their early prototyping. The center will bring together various industries in this area to work in a

synergistic way towards the common goals of infusing cutting edge technologies, and to come up with research and development for sustainable products having higher productivity with reduced cost. Centre also offers a unique platform for collaborative, consortium driven infusion of advanced technologies in the manufacturing area, which is in harmony with the 'Make-in-India' initiative of the Government of India. The Centre will initiate innovative and top-quality research focused to the industries on Design, automation, and advanced digital manufacturing. The Centre will boost innovative interventions in the advanced digital manufacturing domain by enabling an ecosystem among Institutes of higher repute, heavy industries, and the MSMEs and start-ups. The Centre looks for active participation in this ecosystem for collaborative research in the proposed areas. Skills and knowledge are the driving forces behind any country's economic and social development.

Countries with greater skill levels and standards adapt more successfully to internal and international job market problems and opportunities. The center aims to address the infusion of modern technologies in the integrated design and manufacturing of components, its fabrication and automation. The center aims to bring about transformational changes in the design of machines and industrial processes in some areas. The objective of the Centre of Excellence for Integrated Design and Innovations in Advanced Digital Manufacturing will be to provide a competency-based learning centre for empowering education to drive innovation. Industries are at the cusp of massive transformation due to digitalization and the use of exponential technologies and have entered the world of Industry 4.0. This is resulting in a gigantic change in the future job market and R & D requirements. The rapid pace of the emergence of Industry 4.0 requires that Education 4.0 also leapfrog from the existing education system in order to remain competitive and ahead of the curve. This is a significant initiative to close the enormous gap between industry and academia. For both traditional and non-traditional students, the Centre envisages experiential and competency-based learning. Competency-based learning includes Students will achieve learning outcomes such as application and knowledge creation, which are explicit, measurable, and transferable learning objectives that enable students to achieve learning outcomes along with the development of important skills and dispositions. The Centre offers industry-relevant and open ended courses in synchronization with technology trends, which up skill or re-skill learners to remain relevant in an era of constant industry transformation.

Chapter-13

Incentive Policy for Continual Learning (Online)

The Incentive Scheme for Continual Learning (Online) covers completing certification courses from NPTEL & SWAYAM only. Purpose of this scheme is to promote a culture of continuous learning among faculty & staff members as the technology and industry requirements are changing with time. Eligibility criteria is as follows:

For Faculty members:

- Applicable only for NPTEL & SWAYAM courses completed in online mode
- Incentive will be awarded only on those courses which are of three or more credits. Courses of less than 03 credits will not be considered for the award of incentive.
- For each course (of three or more credits), the incentive amount will be INR 4000.
- A faculty member can claim a maximum of INR 8000 in an academic session as incentive in this scheme

For technical & administrative staff members:

- Applicable only for NPTEL & SWAYAM courses completed in online mode
- Incentive will be awarded only on those courses which are of one or more credits. Courses with no credit will not be considered for the award of incentive.
- For each course (of one or two credits), the incentive amount will be INR 2000 and for more than 2 credit courses the incentive will be INR 4000
- A staff member can claim a maximum of INR 8000 in an academic session as incentive in this scheme.

Please note that - the faculty or staff members applying for this incentive should have completed at least 260 working days of service at PIET. The incentive will be awarded only after successful completion of the program and submission of the certificate. In case of any dispute, the decision of Management will be final & binding to everyone.

Chapter-14

Incentive Policy for Joining Confessional/Technical Organization outside PIET Relevant In the Field of Study

The incentive scheme for joining professional/ technical organizations will cover 50% of the membership fees paid by faculty members for joining professional/ technical organizations relevant in the field of study. Purpose of this scheme is to provide industry exposure to faculty and build their network/ connection for various academic purposes. Eligibility Criteria is as follows:

- All faculty & staff members are eligible for this scheme provided they have completed a service of at-least 6 months at PIET Group. 50% reimbursement of annual fee will be done by PIET and the rest 50% will have to be borne by the individual himself/ herself.
- Professional organizations such as CII, Yi, IIA, IIID, IEEE, IGBC, ASHRAE, ISHRAE, FSAI, ISLE, ISTE, GIS, IMS, IEI, HRD Network, IMA and equivalent can be considered under this incentive scheme.
- Faculty & Staff members may apply via head of department or dean to the respective registrar office for final approval from the society office.
- Maximum amount to be reimbursed or to be incentivized will not be more than INR 10000 per annum.
- In case of any dispute, the decision of Management will be final & binding to everyone.