BEST PRACTICE 1: Innovation and Creativity

1. **Title of the Practice:** Innovation and Creativity

2. **Objectives of the Practice:**
   - To encourage continuous learning, creative thinking and innovation among Faculty and students.
   - To promote implementation of innovative ideas through various platforms such as Entrepreneurship Development Cell, Institution Innovation Council and Unnat Bharat Abhiyan etc.
   - To recognize and reward new ideas.
   - To facilitate translating the creative works into Intellectual Property (IP).

3. **The Context:**

   Institute mission is to foster innovation and research by providing a stimulating learning environment and to be responsive to changes in technology, socio economic and environmental conditions. For this the institute has Innovation cell, IPR cell and Entrepreneurship Development cell. The Institute has defined policies and procedures for promoting research activities among students and faculty members.

4. **The Practice:**

   Along with Innovation cell, ED cell and IPR cell, the Institute has established an Institutional Innovation Council under MHRD, Govt. of India.

   - **Innovation Cell**: Institute Innovation cell has established Project and Innovation laboratories at each department. The cell encourages students and faculty members to undertake projects in multidisciplinary fields in collaboration with Industry or in association with other organizations or funding agencies. Systematically defined Research Funding Scheme is available for students and faculty members to encourage them to undertake innovative / research based/ product development/ Need based projects by providing in-house funding. The cell also encourages faculty members to submit funding proposals to different government and nongovernment agencies like BCUD - Savitribai Phule Pune University, AICTE etc. Funding Schemes are also

available for students and faculty members for publication of research papers in conferences and journals.

- **Entrepreneurship Development (ED) Cell: ED cell** was established at PES Modern College of Engineering in the year 2014 to encourage students to consider self-employment as a career option. The Cell organizes following activities and events to train and motivate the students on entrepreneurship:

  - **Pro-Start:** Pro-Start aims to promote and upraise ideas of students (budding engineers) towards their start-ups.

  - **Vicharghan:** Entrepreneurs and experts in different areas are invited to share their knowledge on different subjects.

  - **Unnat Bharat Abhiyaan (UBA)**: A flagship programme of the Ministry of Human Resource Development (MHRD) Government of India is an opportunity to enable faculty and students of higher educational institutions to work with the people of rural India in identifying development challenges and evolving appropriate solutions for accelerating sustainable growth. Our institute has been selected as a Participating Institution (PI) under UBA 2.0.

  - **Ignited Innovators of India (i2i):** Students participate actively in social entrepreneurship development activity in collaboration with the incubation center at COE, Pune.

  - **Smart India Hackathon:** Students have participated and won prizes in Smart India Hackathon.

- **Intellectual Property Rights (IPR) Cell:** IPR cell provides guidelines and funding for filing copyrights and patents.

- **M-Pulse** (A Techno-Management Event) is arranged every year to provide a platform for students to showcase their Technical/Non-technical skills. The event includes State and National level project competitions and Hackathons.

- **Institution Innovation Council (IIC)** has been established in the Institute as per the norms of Innovation Cell, Ministry of HRD, Govt. of India to create a vibrant local innovation ecosystem.

5. **Evidence of Success:**

   o Received CII Gold rank for consecutive three years.

   o Recognized in the band "Promising Institutes" in ARIIA 2021.

   o Center of excellence and Innovation Labs at the different departments.

   o The institute has also promoted and funded students and faculty members to file patents and copyrights. So far 67 copyrights and 34 patents have been filed.

   o Secured Second Position in I2I competition for Best Project in Entrepreneurship Section organized by BHAU institute of innovation, entrepreneurship and leadership in association with COEP Pune.

   o Received Best Prototype Award for the project titled "Solar powered autonomous weeding Robot (Kaastkar)" at e-Yantra Innovation Challenge (eYIC 2021-22) organized by IIT Bombay.

   o Team "**BINARIE**" from the Institution won the Smart India Hackathon (SIH) 2022 in Software Category.

   o Team 'Vulcans' of PES MCOE got shortlisted for the final stage of DD Robocon 2022 organized at IIT Delhi after scoring 100/100 in stage1.

   o Students have won prizes in various categories in State Level drama Competitions for their cultural creativity.

   o Students received certificates in 'Aavishkar 2022' research festival organized by Savitribai Phule Pune University for their innovative projects.

6. **Problems Encountered and Resources**

   Problems encountered

   - Team building, maintaining team spirit, changing nature of competitions, time management, advanced tools and technology, specific faculty/student competencies

   Resources Required

   - Dedicated work place, finance, advance tools and technology, faculty expertise and research literature

   - Collaboration with industries, government agencies and renowned research Institutions

BEST PRACTICE 2: Institution's Publications

1. **Title of the Practice:** Institution's Publications

2. **Objectives of the Practice:**
   - To provide a platform to publish technical and non-technical literature by staff members and students.
   - To disseminate Vision, Mission, POs, PSOs, PEOs, the important activities and initiatives of the Institution/individual programs to the stakeholders.
   - To provide a medium to showcase students' ideas, art work , writing skills and literary skills
   - To provide collective information about courses through E-curriculum booklet

3. **The Context:**

To promote research and innovation, the Institution has taken a number of initiatives and one of them is publication of magazines and peer reviewed research journals. In every academic year, various curricular and extracurricular activities, seminars and workshops are conducted in various departments of the Institution. There are many noteworthy achievements/ activities of students and staff members at Institution level as well as at university/state/National level. To disseminate this information to all the stakeholders, magazine and program level newsletters are published.

4. **The Practice:**

The editor faculty members form a students' committee for the magazine and newsletters at the commencement of the semester. The objectives, theme and layout of the forthcoming issue of the publications are discussed with the committee and are finalized. Theme based articles are invited and are published after scrutiny.

There are following publications released every year at Institution/Department level:

- **Research Journals 'Dnyanmaya' and 'Chaitanya':**
  The Progressive Education society publishes a tri-annual research journal 'Dnyanmaya', meaning 'full of knowledge'. At the Institution level, a research journal named 'Chaitanya' is

published annually. These journals provide a platform for students and faculty members to publish their research work.

- **Institution Magazine 'Karmanya':**

  The main objective of the magazine is to encourage & motivate students for creative and innovative technical, nontechnical articles and writings with special emphasis to provide a platform for multilingual literary work. Karmanya is published annually and e-copies are made available to all stakeholders.

- **Departmental Magazine:**

  To disseminate the information related to various activities and initiatives taken by the department for all the stakeholders, an annual e-Magazine is published every year. Theme based technical articles; interviews with the best outgoing student and entrepreneur are also an integral part of the magazine.

  The magazines published by departments are The Electronics Herald, Yugandhar, Darpan, Technominatus etc.

- **Departmental E-Newsletter:**

  The Newsletters are published biannually by the departments. It gives information about the activities conducted in the semester, brief introduction of renowned authors, articles on state of art technical inventions and students' achievements.

  The e-newsletters published by the departments are E-Buzz, The Current Post, Cognizance, The Royal Mechanical, Tech News, Nivedana, The Computer Express, etc.

- **Project Annual:**

  Project Annual containing one-page information of all final year projects is published by the departments.

- **E-Curriculum Booklet:**

  A Curriculum booklet is prepared for each course and is given to the students at the commencement of the semester. It contains information regarding course structure, syllabus, teaching plan, text books and reference books, course objectives, course outcomes, questions for theory and tutorials mapped with respective COs, multiple choice questions (MCQs), reference web links/ research paper/ reference books other than those prescribed in the syllabus. It acts as a ready reference for the academic activities and assessment tools to be followed for the respective courses.

5. Evidence of Success:

Students get in-house platform to showcase their project/research work

- The publications help to gather the institutional information at one place and dissemination of the same to the stakeholders.
- Testimonials and success stories of passed out students inspire the budding engineers to follow their footsteps.
- Students showcase their talents and skills by expressing their thoughts and ideas in the e-newsletters and magazines.
- Project Annual helps students as a reference to get the idea of final year projects carried out in the department, based on which they can decide their own problem statement.
- Curriculum booklets help students to get a concise course material.

6. Problems Encountered and Resources Required

Problems encountered

- Shortlisting of articles received from large number of students is usually time consuming and challenging

Resources Required

- Review committee for selecting quality articles
- Team to ensure aesthetic look of the documents
- Software tools to process and publish the documents online