7.2 Best Practices

The Two of the Best Practices are

1. Fostering a Dynamic Research Ecosystem
2. Placement and Training

Best Practice 1:

1. ***Title****:*

   Development of Dynamic Research Ecosystem

2. ***Objectives of the Practice:***

   - To encourage faculty and students to explore new avenues within their fields, sparking innovation and intellectual growth.
   - To create an ecosystem for inter-disciplinary collaboration and idea-sharing, to work on complex problems.
   - To ensure that all faculty and students have access to essential resources, funding, and infrastructure, for diverse research activities.
   - To establish mentorship networks that offer guidance and support to emerging researchers, nurturing talent and developing a culture of mentorship and collaboration.
   - To recognize outstanding research achievements, inspiring a culture of excellence and motivating researchers.
   - To inculcate experiential learning into academic programs, empowering students to engage actively in research.
   - To encourage the faculty and student to the dissemination of research findings through publications in reputed journals and conference presentations.
   - To motivate the faculty to submit research proposals in various funding schemes of Government, AICTE,DST, DRDO, etc.,
   - To motivate the faculty to pursue higher studies such as Ph.D. & post Ph.D.
   - To create the awareness about patent/innovating intellectual rights.
   - To encourage the consultancy projects in related areas.

3. The Context:

The need of the society today is to develop budding engineers, having research mindset, ethical values and entrepreneurship skill. VCET has involved the Faculty and students, who are the major stakeholders in research, for the development of solutions to societal related problems. With the involvement of more and more faculty in research activity will benefit in the overall professional development of students. Encouraging Faculty to do research will improve the technical skill of students in classrooms and awareness among the students about recent technological development in society, which in turn will make the students one of the best entrepreneurs. By inculcating a research culture among faculty and students, Teaching-Learning process is improved; there is a better conceptual understanding of the subject among the students. Faculties are motivated to pursue higher studies.

4. The Practice:

It is massive task to inculcate research culture among faculty and student so as to develop a high quality engineers of global standards, however still below mentioned practices are followed by VCET.

- The institute has developed a system for students & parents' awareness, about the mission and vision of the institute.
- Eminent persons from related area guide the faculty to write good research proposals.
- The institute sponsors & deputes the faculty for summer & winter programmes, workshops, symposium, conference etc.
- The institute organizes industry and research organization visits.
- The institute has arranged the training to enhance the soft skills of the faculty and student.
- The experts from research organization like IISc, CABS, ISRO, DRDO and NAL have visited the institute & interacted with the faculty & students and made them aware about the various possibilities available to do good research.
- The eminent personalities from industries have delivered lectures and shared their experiences with Faculty & students as the part of our MOU with them.
- The institute organizes paper presentation, project exhibition, mathematical quiz, poster competition, and gaming and Robotics competitions for student to get acquainted with the state of art technology.
- The institute has developed research lab by purchasing higher end equipment and softwares according to the requirements of Principal investigators.
- Students are also motivated to participate in inter Institutes / university level technical competitions.
- The institute provides financial support to the student in their research projects.

5. Evidence of Success:

- Publication: 126 Scopus indexed publication during 2022-2023.
- Patents: 16 patents published, 9 design patents granted.
- Proposal Submission: 27 research proposals have been submitted to various funding organizations/schemes like SERB (CRG, SRG, MATRICS.TARE), DST, CMRG etc.
- Proposals sanctioned: Around 9 projects worth Rs.178 L has been sanctioned during the year from MSME, DST, AICTE, etc.
- Students are involved in building prototype with faculty mentors that nurture the R&D competency.

Table.2 Details of ongoing and completed projects and grants received (Academic Year2022-23)

Name of the Principal Investigator/ Co-Investigator (if applicable)	**Department of the Principal Investigator/ Co-Investigator**	**Name of the Funding Agency**	**Type (Government/Non-Government)**	**Funds provided (INR in lakhs)**	**Month and Year of receving the grant**	**Duration of the Project**
Mr. M. Karuppiah Rajkumar	Mechanical	MSME Incuabtion scheme	Government	15	Aug-23	1 year (2023-2024)
Mr.A.Gobinath(Investigator)	Information Technology	MSME	Government	8.67	2022-23	2 years
Dr.R.NarmathaBanu	EEE	MSME	Government	1.25	2022-23	1year
Dr.R.NarmathaBanu	EEE	DIC	Government	0.35	2022-23	1year
Dr.A.Radhika	EEE	TNSCST	Government	0.075	2022-23	Ongoing
Dr. S.Senthilrani	EEE	TNSCST	Government	0.075	2022-23	Ongoing
Dr.A.Radhika	EEE	MSME	Government	7.5	2022-23	Ongoing
Dr.P.Suveetha Dhanaselvam	ECE	DST-SHRI	Government	23	June 2022	3 years
Dr.P.Rajeswari	ECE	MSME	Government	7.65	June 2022	2 years
Dr. P. Alli,	CSE	AICTE	Government	115	08.02.2023	2

6. Problems Encountered and Resources Required:

- Getting Fund for R&D projects from Government/Non-Government organizations is a common challenge, particularly for resource-constrained organizations. Adequate financial resources are essential for conducting R&D activities.
- Requirement of specialized expertise for solving complex scientific concepts, experimental design, data analysis , etc. Recruiting and retaining talented personnel through competitive salaries, professional development opportunities etc is essential.

- R&D projects aimed at developing innovative products.

Best Practice 2:

1. ***Title**:*

   Placement & Training

2. ***Objectives of the Practice:***

- To set up the Training Infrastructure for conducting value added training programs and enhance the employability of students.
- To offer comprehensive skill development programs that cover technical, soft, and transferable skills relevant to the job market.
- To provide hands-on training, workshops, and practical experiences to enhance employability and job readiness.
- To facilitate internships and apprenticeship programs with industry partners to provide real-world work experience and hands-on learning opportunities.

3. ***The Context:***

VCET has an independent Training & Placement Cell devoted to cater the needs of the organizations in conducting campus interviews for placements. The Placement Officer, Staff and Student Placement coordinators meet periodically and whenever necessary to carry out the placement work of respective departments. The Training & Placement Cell plays a very important and key role in counseling and guiding the students for their successful career, placement which is a crucial interface between the stages of completion of academic program of the students and their entry into the Corporate. The cell also coordinates various activities to the cater to the needs of the students along with the industrial training. Students from different levels & backgrounds need training to improve their technical as well as employability skills. Considering these requirements, TPO cell is providing excellent facilities for the students to improve their skillsand to achieve their career goals.

4. ***The Practice:***

For the career growth of students, TPO cell arranges pre-placement training periodically by conducting

- Mock Interview by VCET Alumni
- Soft Skills Training(trained by PAC Training Academy, Learn Well, Chennai)
- Aptitude Training Class(trained by Mr.Eldo Ranjith Program, T.I.M.E, FACE, SMART, SixPhrase)
- Technical training is provided by SixPhrase and Company Specific Training also provided.
- WIPRO Certified Trainer handled classes for improving coding skill.
- Placement Training hours are prepared in the Academic Time Table of every semesters (handled by faculty of respective department) and the classes are handled by Final Year placed students and the students are trained in both Aptitude and Technical Skills.
- he Institute offers Spoken English classes for the students. These classes are being handled by the

faculty of English to strengthen the communication skills.

- Online placement test is periodically conducted to enhance aptitude, mental abilityand reasoning skill of the students to make them successful in getting employment.

5. ***Evidence of Success:***

VCET has achieved a placement of more than 90% eligible students in the Academic Year 2022-23.

https://vcet.ac.in/vcetit/placestats.html
https://vcet.ac.in/vcetit/pdfs/NAAC/AQAR5/2022-23/Criteria-5/5.2.1-2022-2023.pdf

6. Problems Encountered and Resources Required:

- Lack of necessary skills or qualifications required by employers, leading to difficulties in securing suitable placements. Comprehensive training programs catering to industry needs can help individuals acquire relevant skills and competencies to enhance their employability.
- Providing hands-on learning experiences through internships, apprenticeships, or on-the-job training programs allows individuals to gain practical experience and develop industry-relevant skills.