

## Research promotion Scheme

### R & D

#### OUR VISION :

- ❖ Shall be responsible to encourage research, consultancy and development activities by faculty of all departments.
- ❖ All R&D proposals for sponsored research are to be routed through R&D who processes and recommends to Principal, VCET consideration.
- ❖ HODs have to submit their departmental respective research proposals through Department of R&D who forward them to Principal, VCET for consideration.
- ❖ The R&D committee shall monitor the progress on their relevant activities and submit reports to Principal, VCET for taking appropriate action.

#### AIM:

- ❖ Initiating the strategic research plan for the College and strive for its implementation.
- ❖ Nurture a research-friendly environment that encourages faculty and Ph.D scholars to achieve their research goals.
- ❖ Administer the internal and external funding of research projects.
- ❖ Facilitate relations between researchers and administration.

### Innovation at VCET

We at Visvesvaraya College of Engineering educate students on how innovation will enable them to take advantage of the tremendous opportunities.

Engineering is one such field which allows great scope for innovation.

Visvesvaraya College of Engineering and Technology has research centers like “center for excellence, cloud computing, cyber security, SAP. These centers help students to improve on emerging technologies which can even be patented.

Department of ECE has filed 2 patents along with students in “BIG DATA ANALYTICS DESIGN MODEL FOR CUSTOMER ANALYSIS” at VCET, students do lots of learning and research.

Our students initiated to start start-ups.

Expert’s lectures, Workshops, and conferences are organized to help students master in emerging technologies.

Research center at Our College help students in providing innovative solutions to existing challenges;

transform innovative ideas into a successful business, and to become creative thought leaders.

## **JOURNAL METRICS**

Indexation of a journal is considered a reflection of its quality.

Indexed journals are considered to be of higher scientific quality as compared to non-indexed journals.

### **Scopus indexing**

Scopus is a bibliographic database containing abstracts and citations for academic journal articles.

It covers nearly 22,000 titles from over 5,000 publishers, of which 20,000 are peer-reviewed journals in the scientific, technical, medical, and social sciences.

### **Science Citation Index (SCI)**

It is a citation index originally produced by the Institute for Scientific Information (ISI) and created by Eugene Garfield.

The larger version (Science Citation Index Expanded) covers more than 8,500 notable and significant journals, across 150 disciplines, from 1900 to the present.

The SCI and SCIE indexed journals are very reported journals.

According to Thomson Reuters, the basic difference is saving pattern means SCI journals are specifically saved in form of CD/DVD, but also they are the sub-set of SCIE journals.

### **H-index and i10-index**

The i10-index was created by Google Scholar and used in Google's my citations feature.

The indexing measure for any journal is the number of publications it has with at least 10 citations. The h-index on the other hand is a factor determining both the quantity and the quality of a scientist's research output.

The index is based on a list of publications ranked in descending order by the number of citations these publications received.

### **Web of Science**

It is an online subscription-based scientific citation indexing service originally produced by the Institute for Scientific Information (ISI), now maintained by Clarivate Analytics (previously the Intellectual Property and Science business of Thomson Reuters) which is also very popular.

### **Fast-tracking Research at VCET**

At Visvesvaraya College of Engineering and Technology (VCET), fast-tracking research is a strategic initiative aimed at fostering innovation, encouraging academic exploration, and addressing real-world challenges. This involves accelerating the pace of research activities through robust frameworks, infrastructure, and support systems.

1. **State-of-the-Art Infrastructure:**  
VCET provides cutting-edge laboratories, research centers, and access to advanced equipment, ensuring students and faculty have the tools needed to conduct high-quality research.
2. **Industry Collaboration:**  
The institution partners with leading industries to align research with practical applications, ensuring relevance to current market demands.
3. **Interdisciplinary Approach:**  
Research at VCET spans multiple domains, encouraging collaboration across engineering, technology, and science disciplines.
4. **Funding and Grants:**  
VCET actively supports researchers by securing funding through government bodies like AICTE, DST, and DRDO, as well as private organizations, enabling ambitious projects to be undertaken.
5. **Skill Development Programs:**  
Workshops, seminars, and training sessions equip researchers with the latest methodologies and technical skills, enhancing their productivity and innovation capabilities.
6. **Publication Support:**  
The college emphasizes publishing findings in reputed national and international journals, boosting the visibility and impact of research outcomes.
7. **Entrepreneurial Ecosystem:**  
Through incubation centers, VCET transforms research ideas into startups, bridging the gap between academia and entrepreneurship.
8. **Mentorship and Guidance:**  
Expert faculty members guide research projects, ensuring alignment with global trends and standards.
9. **Digital Resources:**  
Access to digital libraries, journals, and databases accelerates the literature review process and supports in-depth studies.
10. **Encouraging Student Involvement:**  
Undergraduate and postgraduate students are actively engaged in research projects, fostering a culture of inquiry and discovery.

Global scientific and industrial research is dominated by Academic institutions, except for a fraction of research by industry owned research establishments.

The dominance is attributed to abundant availability scientists and research infrastructure (in the form of laboratories) at most academic institutions.

Research is published with an important and Nobel objective of improving the global state of intellect with time.

Research work reported covers many field like; basic or fundamental research, digital simulation, process improvement (leading to better efficiencies) etc. Of several modes available for information dissemination, the preferred modes for reporting are conferences, journals, copy rights, patents etc.

Relevant research and its growth at any academic campus are controlled by two key parameters i.e. “Passion for research” and a “positive research environment”. Irrespective of research type (incremental or disruptive) complete immersion and association with subject is paramount for any researcher.

To claim research, individual or the team shall experimentally verify and record their findings and the process outputs. To fulfill this requirement, adequate research infrastructure (laboratories, equipment and instrumentation) at campus is second basic requirement for research. Availability of large academic base has never been a guarantee to quantum research output.

The growth of an institution and its research output multiplies multifold for availability of both. Availability of experienced guides and field expert enrich research environment and significantly accelerate pace of research. “Time for research” has always been hyped as a constraint, however one needs to introspect and explore the fact that a day for other outstanding national/ international researchers too has only 24 hours. An excellent researcher never complains about time, but manages his activities justifying individual’s passion for research. While it is important for institutions to allocate and invest a fixed percentage of their earnings towards research, it is also the wisdom of a researcher to establish his work specific environment by meticulous planning and adding specific equipment using in-hand grant-in-aids.

At our college , on one hand we have an appreciable base of scientists and engineers in the form of faculty, on other hand the Management is more than committed to improve both research infrastructure and laboratories to provide “positive research environment” (Specific research equipment /facility shall be identified and budget requirements, landed cost for best equipment and supplier, shall be submitted to R&D by june last every year for compilation and further procurement action).

### **Research Promotion Scheme (RPS):**

#### **Objectives and Eligibility**

The scheme provides research grant to interested faculty researchers to take-up research and development in frontier areas of Science, Engineering & Technology and Management Studies.

#### **Objectives of the Research Promotion Scheme (RPS):**

- 1. Promote Innovation and Problem-Solving:**  
Encourage faculty and students in engineering and technology institutions to undertake research in emerging areas and solve real-world problems.
- 2. Develop Research Culture:**  
Build a robust research culture in educational institutions by providing the necessary infrastructure and resources.
- 3. Enhance Industry-Academia Collaboration:**  
Facilitate partnerships between academic institutions and industries to align research activities with market needs.

4. **Support Interdisciplinary Research:**  
Encourage interdisciplinary projects that address complex problems requiring inputs from multiple fields.
  5. **Promote Publications and Patents:**  
Support the generation of research outcomes in the form of high-impact publications, patents, or technology transfer.
  6. **Boost Institutional Capacity:**  
Enhance the research capabilities of institutions to compete on a national and global level.
  7. **Encourage Faculty Development:**  
Provide funding to faculty members to explore innovative ideas and enhance their expertise in research.
  8. **Strengthen Regional and National Development:**  
Address key societal and developmental challenges through research-based solutions.
- 

**Eligibility Criteria for the Research Promotion Scheme (RPS):** Applicants shall be a faculty from any department, including humanities, and has completed probation at VCE with and exception to the faculty who have registered for PhD degree.

1. **Institution Eligibility:**
  - The applying institution must be AICTE-approved.
  - Institutions must have adequate infrastructure and a proven track record of research activities.
2. **Principal Investigator (PI) Eligibility:**
  - The Principal Investigator must be a full-time regular faculty member of the applying institution.
  - The PI should have prior research experience and preferably a record of publications in reputed journals.
  - Faculty with a doctoral degree or working toward one are usually preferred.
3. **Team Composition:**
  - A research team may include co-investigators, students, and collaborating faculty.
  - Partnerships with industries or other research institutions are encouraged.
4. **Nature of the Project:**
  - The project should focus on innovative, relevant, and impactful research areas.
  - Proposals involving interdisciplinary approaches or addressing national priority areas (e.g., renewable energy, AI, sustainability) are given preference.
5. **Funding Support:**
  - The scheme typically covers expenses such as equipment procurement, consumables, software, travel, and contingency.
6. **Duration of the Project:**
  - Research projects under RPS usually have a duration of 2–3 years.
7. **Submission Guidelines:**
  - Proposals must be submitted through the official portal (e.g., AICTE website) in the prescribed format.

- Institutions must comply with the deadlines for submission.

#### **Nature & Duration of Support:**

The scheme provides research support to an individual/team of faculty researchers .

The funding is provided normally for a period of one year and may extend for a further period of six months, based on its progress .

The research grant is provided to conduct experiments/consumables not exceeding two lakh rupees only .

#### **Selection Criterion:**

An applicant is eligible to apply only one proposal during a call . Any proposal technically rejected should not be resubmitted without any substantial revision .

Not more than one project is allowed at any given time for an individual faculty .

If a faculty has already availed and running a current grant shall not apply till the final report is submitted with a correct and verified utilization certificate .

Faculty registered for PhD and working in any thrust area of national significance are encouraged to apply .

The Call for applications will be notified through a circular or college web site