

RESEARCH POLICY



SREE VIDYANIKETHAN ENGINEERING COLLEGE (AUTONOMOUS)

(Approved by AICTE, Accredited by NBA, New Delhi and NAAC, Bengaluru
Affiliated to JNTUA, Anantapuramu)

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Research Policy

1. INTRODUCTION:

Academic institutions have been the bedrock for research for a very long time. At these places the good teaching-learning and research go hand-in-hand. They are the two sides of the same coin. It is evident that for effective teaching, research is essential. The learning outcomes of the students who undergo research based teaching are better and leading to high rate of progression to higher education, research and career. The institution though predominantly a teaching-learning institution has been considering research as one of its prime growth verticals. Thus a conscious effort is made to prepare an objective policy to promote, monitor and evaluate research in the institution.

2. PURPOSE

The envisaged policy shall serve as a guiding philosophy to organize research activities at the Institution. Also this helps to integrate and streamline the activities of research across the departments and units of the institution.

3. SCOPE

It serves as guideline for all research related activities undertaken across all the departments and units of the Institution.

4. OBJECTIVES

- To provide an ecosystem for research through framework and guidelines
- To create systems for career opportunities for pioneers in research from industry and academia
- To facilitate faculty and researchers through established systems, processes and facilities



- To ensure quality of research by producing publications in peer reviewed and refereed journals and intellectual property rights.
- To promote applied research with potential for commercialization.
- To facilitate Establishment of Research Centers with potential for Excellence in collaboration with premiere institutions and Industry.
- To create avenues for entering into interdisciplinary collaborations and partnerships nationally and internationally.

5. IMPLEMENTATION OF POLICY

The implementation and updating of Research Policy shall be carried out by the Principal and research Committee of the college upon seeking approval by the governing Body.

6. POLICY AND GUIDELINES

➤ **Conduct of Research:**

Faculty members of the Departments and research centers are expected to undertake research, leading to quality publications, presentations in National/International conferences of repute, generation of Intellectual property with potential for commercialization, socially useful outcome and other similar research activity.

➤ **Research contributions**

Research output of the members of the faculty shall be considered as one of the core performance indicators for faculty recruitment and promotion besides their other academic accomplishments.



➤ **Recruitment and Promotion**

Faculty members and researchers who made significant contributions to research shall have large scope for promotion. The quality of research may be assessed on the metrics devised for research and which will be revised from time-to-time as appropriate.

➤ **Research Management**

The research activities of the Institution shall be planned, monitored and evaluated by Dean, Research. Research Mentoring Committee and shall be responsible for overall functioning of research activities within the Institution. Each department/centre's research activities shall be coordinated by HOD from each Department/Unit and report to the Dean, Research.

➤ **Research Ethics:**

The members of faculty, research scholars /students shall adhere to highest ethical standards of conduct given from time to time, for carrying out research. Disciplinary action may be initiated, if found guilty, against such individual/group.

➤ **Resources for research support**

The institution shall provide best research facilities such as physical infrastructure, equipment, software, computing facilities, internet and support staff for conducting quality research by students and faculty.

➤ **Student Research**

To enhance the research attributes among the students and to provide better progression in career and higher education, undergraduate/postgraduate students are required to pursue



research activities through curricular projects and extracurricular research assignments. Also their research outcomes are encouraged to be published in peer reviewed journals.

7. QUALITY OF PUBLICATIONS

The research undertaken by the institution shall be beneficial to the society and contribute to the growth of the nation through scientific advancement and economic development. Hence the research outcomes as publications shall be of good standard which shall be helpful for the other scientific community besides value addition for the individual and institution.

8. ETHICS IN RESEARCH

The Significance of Research Ethics

- To promote the aims of research, such as expanding knowledge.
- To support the values required for collaborative work, such as mutual respect and fairness which is essential because scientific research depends on collaboration between researchers and groups.
- To make researchers accountable for their actions as many researchers are supported by public money, and regulations on conflicts of interest, misconduct, and research involving humans or animals are necessary to ensure that money is spent appropriately.
- To ensure that the public can trust research to support and fund research.
- To support important social and moral values.



Ethics to be followed by the researchers:

- **Honesty and Integrity:** To conduct and report research honestly
- **Objectivity:** To avoid bias in any aspect of research, including design, data analysis, interpretation, and peer review
- **Carefulness:** Review work carefully and critically to ensure that your results are credible
- **Openness:** Prepared to share data results, any new tools that are developed, to further knowledge and advance science. Be open to criticism and new ideas.
- **Respect for Intellectual Property:** Shall never plagiarize, or copy, other people's work and try to pass it off as own; respect copyrights and patents, together with other forms of intellectual property, and always acknowledge contributions to one's own research
- **Confidentiality:** Shall respect anything that has been provided in confidence and follow guidelines on protection of sensitive information such as patient records.
- **Responsibility in Publishing:** Shall publish to advance to state of research and knowledge, and not just to advance your career and shall not publish anything that is not new, or that duplicates someone else's work.
- **Legal Issues:** shall always be aware of laws and regulations that govern the work, and be sure to conform to them
- **Animal Care:** Shall show respect for the animals in use and make sure that they are properly cared for
- **Protection to Humans:** Shall make sure to reduce any possible harm to the minimum number of humans and maximize the benefits both to participants and other people.



9. Formation of Research Mentoring Committee:

To augment the existing research and developmental activities in the college, experts from various fields were appointed to monitor the progress of the institution

Activities

- To conduct orientation programs for faculty towards Research, Consultancy and Innovation.
- To apprise faculty on areas of research in various areas of Engineering & Technology.
- To identify various funding agencies for applying research projects (both public & private)
- To create models and mechanisms for joint R & D with industry.
- To design modern facilities for Research, Consultancy and Innovation.
- To plan and procure Equipment, Software, Journals for Research.
- To create Department Research Centers and Technology Incubation Centers to conduct Doctoral Programs.
- To encourage graduate & post-graduate students to undertake quality projects.
- To enter into MoUs with national Research Labs and other Institutions.

10. Institutional Strategies for research:

- Recruit teachers with a flair and competence in research.
- Equip laboratories with relevant modern equipment, software and library resources to suit research demands.
- Forge into alliances with prominent research groups for collaborative work.
- Apply for external research funding from private and public agencies in focused frontier areas.
- Create inter-disciplinary research groups for prospective applied research.
- Approach industry for setting-up of research laboratories on campus for the benefit of faculty and students.



11. RESEARCH ADVISORY COMMITTEES:

Department	Thrust area of research
EEE	Power Quality enhancement, Integration of renewable energy, Power System Control and stability
ECE	Communication Systems, Antennas, VLSI, Atmospheric Signal Processing, MEMS
CSE	Big data, Information Security, Computer Networks
EIE	Industry Automation, Biomedical Signal Processing
CSSE	Dataware Housing and Data Mining
Civil	Water Management, Retro fitting and Stability of soil
MECH	CAD/CAM, MEMS

New thrust areas can be established as and when needed

12. RESEARCH CLUSTERS:

To augment Research culture, Research Clusters shall be formed among all the departments by involving UG and PG students to participate in the clusters. (Present Clusters)

S. No.	Name of the Cluster	Focus Areas	Department
1.	MEMS	<ul style="list-style-type: none"> • Micro Cantilevers • Bio Sensors • Energy Harvesting • Carbon Nanotubes • Gas Sensors • RF MEMS 	ECE (Inter-disciplinary)
2.	VLSI & Embedded Systems	<ul style="list-style-type: none"> • System-on-chip Design • Reconfigurable Computing • Intelligence Systems for on board Data Processing & Control • Automotive Systems • Smart Cities, Medical & Military Applications 	ECE
3.	Signal Processing	<ul style="list-style-type: none"> • Digital Image Processing • Radar and Lidar Signal Processing • Bio-signal Processing • Speech Signal Processing 	ECE



S. No.	Name of the Cluster	Focus Areas	Department
4.	Communications	<ul style="list-style-type: none"> • Cognitive radio, Network protocol • 5G communication, Big data • OFDM and 4G communication • Efficient communication for telemedicine 	ECE
5.	Energy Systems	<ul style="list-style-type: none"> • Solar, Wind & PV Integration. • Energy storage and management systems. • Energy Harvesting; • Renewable / Alternate energy • Solar Thermal Energy Technology and Energy Material Development 	EEE
6.	Power Systems	<ul style="list-style-type: none"> • Power Quality • Voltage stability, SVC compensation and Soft Computing techniques applied to power systems • Contingency analysis, state estimation and optimal operation. • Power Electronics applied to power systems • Smart Grid and Micro Grid 	EEE
7.	Computer Vision	<ul style="list-style-type: none"> • Video Analytics • Image and Video retrieval Process 	Computer Science
8.	Software Development	<ul style="list-style-type: none"> • Software Engineering • Software Testing • Optimization Techniques • Software Application 	Computer Science
9.	Network Security	<ul style="list-style-type: none"> • Improvement of Quality of Service (QoS) • Analysis of cyber security issues • Protection method of Cyber security • Forensics analysis on Cyber attacks 	Computer Science
10.	Data Mining	<ul style="list-style-type: none"> • Data Analytics • Machine Learning • Opinion Mining • Web Mining 	Computer Science
11.	Manufacturing	<ul style="list-style-type: none"> • Micromachining • Tool Design • Additive Manufacturing • Development of Metal Matrix composites • Optimization Techniques • Industrial automation • Mechatronics • Robotics 	ME



S. No.	Name of the Cluster	Focus Areas	Department
12.	Water and Environment	<ul style="list-style-type: none"> Water Resources Engineering & Management Environmental Engineering Water Treatment Remote sensing and GIS 	CE
13.	Geotechnical and Transportation	<ul style="list-style-type: none"> Geotechnical Engineering Transportation Engineering 	CE
14.	Biomedical Instrumentation	<ul style="list-style-type: none"> Image Processing Signal Processing Bio-Signal/Image Processing Rehabilitation Engineering 	EIE

13. INCENTIVES FOR RESEARCH

Incentives for Research Projects

- For Projects with provision for Institutional overhead charges
Research Projects where there is a provision for institutional overhead charges, the Principal Investigator of the Project will be given an incentive equivalent to 50% of overhead charges by the Management.
- For Projects without provision for Institutional overhead charges
Research Projects where there is no provision for institutional overhead charges, the Principal Investigator of the Project will be given one time incentive at the rate of 2% of Project amount sanctioned.

Incentives for Research Publication in Journals:

1. The journals published by the faculty must be indexed at least in any one of the following

- Web of Science (Engineering and Science)
- Thomson Reuters (Engg. and Science)
- Scopus (covers all journals except Medical)
- EMBASE (covers biomedical journals)
- EBSCO (Management database)
- DOAJ (directory of open access journals)



- Expanded Academic ASAP (cengage)
- Index Copernicus (publishers of scientific journals)
- Open J Gate (covers all journals)
- Pro Quest (covers all journals)
- Wiley International (Engineering and sciences)
- PubMed (Medical journals database)

2. The papers shall be selected based on the following criteria

- Popularity of the Publisher
 - Quality of Members of Review committee
 - Impact Factor
 - Citation index of the journal
3. The selection of the paper is purely based on the merit and the final decision lies with the selection committee.
 4. Papers published between 1st July to 30th June of each academic year will be considered for incentive
 5. The committee shall take suggestions from Professors of national premiere institutions before finalizing the papers for grant of incentives.
 6. The incentive may be presented on Teachers day/Science day/Engineers day every year.
 7. The first and second authors only shall be considered for incentive. The first author will get Rs. 6000 and second author will get Rs. 4000 for each paper.
 8. If any faculty publishes more than one paper, the incentive for every paper will be considered as mentioned above.
 9. If the first author(s) is a student (research scholar/PG student/UG student belonging to SVEI), the student shall be given Rs. 2000 and the supervisor shall get Rs. 4000.
 10. If faculty (single author) publishes two papers in an academic year, the incentive will be Rs. 12000, for 3 papers, it is Rs. 18000, for 4



papers, it is Rs. 24000 and 5 and more papers, Rupees one lakh or one month salary shall be given as incentive, whichever is higher.

11. If any faculty is awarded with a patent, he/she will be given Rs. 50,000 as an incentive.

14. RESEARCH SCHOLARS:


The regular scholars of SVEC will be given a stipend of Rs. 10,000 per month subject to the following conditions.

1. The student should sign every day in the attendance register. He/she should report to institution on or before 9AM on all working days
2. On Duty leave will be sanctioned on the recommendations of the research supervisor.
3. The research scholar should take a minimum work load of 8 hours per week.
4. The stipend will be sanctioned based on the recommendation of the supervisor every month.
5. The stipend will be given for a period of maximum 3 years.
6. It is advised that the supervisor should apply for a project and get it sanctioned so that he /she can utilize project money as stipend if there is provision for JRF/project associate in the project.
7. The research scholar should submit the details of PAN, bank a/c and Aadhaar to the institution.

15. PERIODIC REVIEW OF RESEARCH OUTPUT

Periodic review of research output shall be carried out by each department and provide such information to the principal periodically for assessment and required corrective actions, if any.




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