

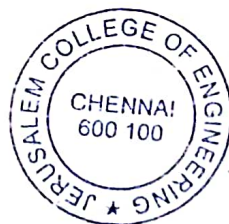
# Jerusalem College of Engineering

(An Autonomous Institution affiliated to Anna University, Chennai)  
NBA and NAAC Accredited Institution  
Velachery Main Road, Narayanapuram, Pallikaranai, Chennai-600 100



## RESEARCH AND CONSULTANCY POLICY

**Dr. S. ARUN**  
Dean R & D. Professor-ECE  
Jerusalem College of Engineering  
Pallikaranai, Chennai-600 100.



**Dr. RAMESH S**  
Principal  
Jerusalem College of Engineering (Autonomous)  
Velachery Main Road, Narayanapuram,  
Pallikaranai, Chennai-600 100.

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## **ABOUT THE INSTITUTION**

Jerusalem College of Engineering (JCE) was established in the year 1995 under the umbrella of Jerusalem Educational Trust to impart Quality Engineering Education. Over the period of 29 years it has made a mark for itself and got established as an Institution which offers excellent Engineering Education. The institution was granted Autonomous status by University Grants Commission in 2019. It is one of the very rare Institutions which is situated in close proximity to premier educational institutions and also the IT Hub of Chennai. The faculty of the college have a nice blend of both academic and industrial experience. The alumni of the college holding key positions in various National/International organizations and Academic Institutions have brought laurels to the institution. The Institution is accredited by NAAC and NBA accreditation is obtained for B.E.- BME and B.E.- CSE programs.

The Institution offers the following nine Undergraduate programmes in Engineering, four postgraduate programmes in Engineering and two Management programmes. The departments of Civil Engineering, Electrical and Electronics Engineering, Electronics and Communication Engineering and Chemistry are recognized research centres under Anna University

### **Undergraduate Programmes**

- B.E. Biomedical Engineering
- B.E. Civil Engineering
- B.E. Computer Science and Engineering
- B.E. Computer Science and Engineering (Artificial Intelligence and Machine Learning)
- B.E. Computer Science and Engineering (Cyber Security)
- B.E. Electrical and Electronics Engineering
- B.E. Electronics and Communication Engineering
- B.Tech. Artificial Intelligence and Data Science
- B. Tech. Computer Science and Business Systems
- B.Tech. Information Technology

### **Postgraduate Programmes**

- M.E. Applied Electronics
- M.E. Computer Science and Engineering
- M.E. Construction Engineering and Management
- M.E. Power Electronics and Drives
- Master of Business Administration
- Master of Business Administration (Hospital Administration)

## **VISION**

Jerusalem College of Engineering is committed in emerging as an International Institution of Excellence in imparting the finest quality Engineering, Technology and Management Education rooted in ethical and societal values through various academic programmes, multi-disciplinary research, consultancy and entrepreneurship activities, and hence in contributing towards social transformation and nation building.

## **MISSION**

- Generating abundant resources and making conducive policies, the management led by the Chairperson strives towards promoting globally competitive academic programmes augmented with value added courses, in-plant training, co-curricular activities and ambience that support intellectual growth and skill acquisition.
- Promoting collaborative trans-border research programmes, continuing education in synergy with academia, industries and research organizations leading to real time solutions and lifelong learning.
- Transforming young men and women into competent professionals and entrepreneurs motivated by a passion for professional excellence, driven by human values and proactively engaging in the betterment of the society through innovative practices and academic excellence.
- Facilitating effective interaction among faculty and students, and fostering network of alumni, industries, institutions and other stakeholders for successful career gain and placement.

## **QUALITY POLICY**

Qualitative Education and sense of high discipline are promises, we at the Jerusalem College of Engineering make to posterity and accordingly shall adopt and adhere to Quality policies, constantly monitor accountability and assure all stake holders that

“WE SHALL KEEP OUR PROMISE”

# RESEARCH AND CONSULTANCY POLICIES

## 1. Introduction

Jerusalem College of Engineering has marched into the Bi-decennial year. The seeds of the mission were sown in the year 1995 with the vision of emerging as an international institution of excellence in imparting the finest quality education. Since its inception, the institute has grown beyond leaps and bounds to become a premier institute in academic pursuits and higher standards of excellence. The College campus is vibrant with academic, co-curricular, extracurricular and sports activities all around the year and is accredited with NAAC and NBA accreditations.

“Excellence is not a destination; It’s a continuous journey that never ends”,

The College thrives to focus on excellence in research and aims to stay ahead in the Science and Technology sector. Our commitment towards research yields long term technical impacts over interdisciplinary areas. The R&D cell serves as a wide platform for all research enthusiasts who have a constant thirst for innovation and development. Besides promoting research and disseminating knowledge gained the institution helps to develop co-operation between the academic and industrial communities

## 2. Objectives

Objectives of the R&D policy have a focus on social, industrial and environment challenges through extensive core and multi-disciplinary research

- To encourage and support faculty members to conduct research in all fields and disciplines of Engineering and Applied Science.
- To establish consultancy projects for the benefit of the end users
- To utilize existing facilities effectively and to establish new facilities
- To file more number of patents
- To Integrate research and education
- To develop core group of faculty with increased potential of research
- To establish Centers of Excellence in thrust areas.
- To set up the Incubation Centers to motivate innovations and startups.

- To adopt Collaborative Research with IIT, NIT, Hospitals, Research centers and industries.
- To mentor the academic and industry based research projects.
- To publish the research works in renowned journals.
- To motivate and mentor students to participate in various national and International contests.

### **3. Scope**

The research activities shall include supervision, execution of latest research, Interdisciplinary and multi-disciplinary research, academic and research collaborations with other institutions or Universities, Government/private industry, consultancy assignments, Government Funded / Private Funded projects that might result in development of new or existing products, processes publications and Intellectual Property Rights.

### **4. Research and Development Cell**

The R & D cell comprises of faculty members from various departments in the Institution. This committee oversees the smooth and efficient co-ordination of research and development activities in the Institution and overall growth. The members will contribute towards enhancing research and development at Jerusalem College of Engineering. The R&D cell measures the attainment of achievements and recommends the performer for appreciation and incentives.

Research and Development Cell facilitates creation and transfer of knowledge by conducting technical workshops, seminars, industrial visits, Training programs, National and International Conferences, Technical presentations by faculty members and also provides mechanism for submission of research proposals for funding by Institute/University and other funding agencies.

R&D Cell has the responsibility of regulating the research activities of faculty members, scholars and students of the Institution. It also initiates research components in the curriculum of UG and PG Programs.

- Development of Research infrastructure
- Monitoring the progress of Ph.D scholars

- Promotion of research in emerging areas
- Inseminating inter-disciplinary research activities across all the departments
- Providing support to all department faculty to pursue research in their area of expertise
- Monitoring the utilization of research facilities
- Monitoring the quality of publications and other research activities
- Promotion of consultancy activities
- Organizing various seminars, workshops, National / International conferences and other events related to R&D
- Affirm policies for sponsored research and consultancies.
- Encourage the development of strategic research priorities, objectives and monitor research performance within the framework of planning process.

**The constitution of R&D cell is as follows.**

**Chairman:** Dean-Research

**Members:**

- Head of Departments from every department.
- Research Coordinator from every department. (Each department has the Research Coordinator who will monitor the R& D activities of the department.)

**Member-Secretary:** Research Coordinator

## **5. Responsibility of R&D cell**

- To conduct seminars, workshops, conferences and training programmes for inculcating research interest among faculty.
- To encourage and motivate faculty for submitting proposals to externally funded research and development projects.
- To support interdisciplinary and multidisciplinary research, product design and development, publications in national and international journals of high standard.
- To facilitate collaborations with researchers from premier Institutions and to encourage joint research venture in the latest technology.

- To initiate and promote MoU with industries and R & D organizations for consultancy and collaborative research.
- To suggest peer reviewed national and international journals for subscription in central library
- To motivate students to present technical papers in National and International conferences and display projects in various competitions.
- To allow faculty to participate for seminars, workshops, FDPs and conferences in order to upgrade their knowledge.
- To instruct research scholars and faculty members to apply for projects.
- Discussion and review on department research activities, funded projects and consultancy activities.
- Conducting seminars and workshops on various research avenues.
- Encouraging submission of Journal Paper.
- Measures to motivate students to carry out innovative and socially relevant projects.
- Organizing the international and national conferences.

## **6. Funded Projects and Consultancy Work**

The general guidelines for faculty engaging in research, development and consultancy are as follows:

### **A. Basic Guidelines:**

- The entire sanctioned amount shall be utilized as per the guidelines of the funding agency
- In case the Principal Investigator leaves the Institution, all the items purchased shall remain as an asset of the Institution. In case of on going projects , the responsibility will be delegated to other competent staff members as per the norms of the sponsoring agency.
- All Heads of the Department must regularly and diligently update the R&D information on the Institution website for department and submit the reports to R&D team.



**B. Academic Research Policy:**

- Faculty of each department shall conduct research in recent areas.
- Faculty publication in either WEB OF SCIENCE or SCOPUS indexed and UGC listed journals are appreciated with appropriate incentives.
- Individual Citation Score needs to be improved by publishing in reputed journals.
- All publications and research papers of faculty have to go through plagiarism check.
- Every UG and PG project shall lead to at least one research publication in a journal indexed in SCOPUS or WEB of SCIENCE.
- Research scholars of Jerusalem College of Engineering and other neighboring institutions are permitted to register the Ph.D coursework in the respective departments as per the norms of JCE.

**C. Patents:**

Receiving patent for one's research work is one of the most important factors denoting the quality of research. Financial and legal assistance shall be provided to those who are interested in registering for the patent. The patent shall irrevocably be registered in the name of JCE with the researcher's name prominently featuring as the inventor. The commercial aspects shall be mutually worked out between the Institution and the researcher. For patent drafting, 100% of official money will be given by the institute to faculty.

**D. Sponsored and Internal research related policies:**

- Faculty shall apply for a minimum of one government funded project per year.
- All departments shall strive for recognition by National/International agencies such as AICTE, DST,UGC, ICMR and DRDO through various schemes.
- Faculty is encouraged to identify inter-disciplinary research in their field of expertise.
- The faculty of all the departments shall tie-up with industries and undertakes funded research in emerging areas and industry relevant areas.
- All innovative projects of faculty are insisted for filing patents on successful completion. Suitable recognition and incentives are given to those faculty members with patents.

- Meritorious research work/consultancy by faculty is awarded with monetary incentives.

#### **E. Principal Investigator (PI)**

- Principal Investigator (PI) of a sanctioned project is considered to be the prime interface between the funding agencies and is the operational head of the project.
- The PI is advised to keep the whole project team aware about the progress of the project and involve the Co-PIs in all related project activities.
- In his/her absence, the PI may request any of the Co-PI to take-over the responsibility of running the project.

### **7. Planning the Research Activities**

The Research Committee will ensure all policies and procedures which are developed and implemented by the Research Institute, have institutional oversight. This document outlines the principles that should be taken into account while planning and conducting research.

- Economy in use of resources
- Assessment of the resources needed to ensure the study is viable within the available means
- Adherence to the current safety practices and ethical standards
- Securing all necessary ethical and regulatory approvals
- Regular review of the research progress is essential to identify new findings of research.

#### **Conducting the Research:**

- a) Orientation and guidelines for faculty
- b) Resources used for the research
- c) Supervision of students, postdoctoral fellows and other research personnel
- d) The results of research are recorded.

### **8. Promotion for Research**

The Dean- Research and the Research Committee will ensure that policies and procedures will be adhered to in order to ensure that high standards of scientific integrity are maintained. The Institute provides the following administrative and financial support and accounting facilities for carrying out the research projects. Faculty members those who have completed two years of service at Jerusalem College Of Engineering can avail the following benefits :

- Sponsored Research Projects are R & D projects sponsored by Government agencies, industries or other institutions with a view to generate new knowledge, to develop a new technological process or to create new products. The Principal Investigator is responsible for all actions required to manage and complete the scientific and programmatic aspects of the sponsored project. Overhead 5 % of the total cost of the project will be given to Coordinators and 5 % of the total cost of the project will be given to Department of the coordinators.
- Out of total consultancy amount , a share of 40 % of the consultancy amount will be paid to consultancy team , for minor expenditure 10% of the amount to the department and remaining 50 % has to be paid to the Institution.
- For patent drafting, 100% of official registration money will be given by the institute to faculty.
- The faculty members and students are encouraged to attend International and National conferences /seminars/workshops organized by the professional society and present their papers , for which
  - ❖ Registration fees will be sponsored by the college to present the peer reviewed technical papers in International conferences organized by the reputed professional society /body within India. (The facility can be used by the faculty member, once per each semester).
  - ❖ Registration fee or one way travel allowance will be sponsored by the college to present the peer reviewed technical papers in International conferences organized by the reputed professional society /body outside India. Faculty members can claim a maximum amount of Rs. 50,000/-. ( Once the facility is used by the faculty member, then he/she can claim the same benefits after 2 years with respect to the first beneficiary period).
  - ❖ The period of absence will be marked as “ON DUTY” and reimbursement will be given against actual by the institution after proper approval of the Research committee.
  - ❖ Faculty member has to handover the C.D. / proceedings and related material to the central library
- A cash incentive of Rs.2000/- may be paid for publishing papers in Annexure –I Journals prescribed by Anna University and Rs. 3500/- for IEEE and Scopus indexed Journals.

- The faculty members and the students present their research papers separately in National or International conference of Jerusalem College of Engineering every year and the best papers are awarded with cash prize. The selected papers are sent to the National/ International journals for publication.

## **9. Supervision**

- Faculty members with Ph.D are advised to get supervisorship.
- As per the University norms, maximum of 11 Scholars are permitted to pursue research under a supervisor.

## **10. Training**

- The R&D cell shall plan periodic courses to enable students and researchers to understand and adopt the best practices in research.
- Supervisors shall encourage students, Research scholars, Research fellows and colleagues to attend relevant courses offered as part of their overall career development.

## **11. Outcome of Research**

**The faculty and students are able to publish or implement the following categories:**

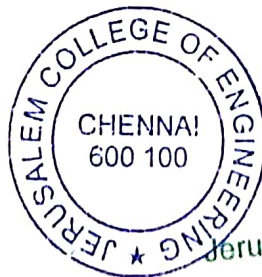
- Book chapters
- Books (authored research, edited)
- Journal articles
- Reviews
- Conference proceedings
- Edited volumes of conference proceedings
- Computer software
- Audio-visual recording
- Working models
- Research reports
- Patent
- Technical reports

- Legal cases
- Encyclopedia entries
- Maps
- Editing and translations of major works
- Case studies
- Proposal of new theories
- Database
- Technical drawings

## 12. Scope for Future Development

Jerusalem College of Engineering aims at nurturing research culture in the campus by further promoting research activities and make efforts to establish research partnerships and collaboration with more Government, Industry and other Universities. The institution encourages PG Scholars to pursue Doctoral programme and PhD holders to pursue Post-Doctoral research in reputed foreign universities.

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