



New Prince Shri Bhavani College of Engineering and Technology

(An Autonomous Institution, Affiliated to Anna University, Chennai)
Santhosapuram, Medavakkam, Chennai, Tamil Nadu 600126.

Policy Document

Research and Development

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The Research Advisory Committee (RAC) of New Prince Shri Bhavani College of Engineering and Technology (NPSBCET) is constituted to inculcate the culture of research and innovation among the faculty and students. NPSBCET is dedicated to serve society through cutting-edge research that aligns with national and international standards. The commitment to research is supported by the principles of quality and ethics. NPSBCET also ensures compliance with Anna University's research policy.

Scope of the Policy

Research and Development is a systematic activity to discover a solution to the problems faced by society and for creating new knowledge and products. It may result to produce patents, research publications and copyright etc. Research is the foundation of knowledge that brings new energy, builds state of the art facilities, promotes research publications, develops collaborations and becomes part of active community. The college shall ensure that research in all disciplines grows following the ethical norms and research standards. The college is committed to provide required monetary and infrastructural support to the faculty members and students for the promotion of research and building a strong research ecosystem.

Objectives of the Policy

- To create an enabling research culture within the institution.
- To provide efficient support systems for faculty and researchers.
- To promote research awareness and opportunities among students, scholars and faculty of the institution.

- To engage in research activities and projects from various funding agencies.
- To promote publications in quality journals, indexed in UGC Care, Scopus and Web of Science with good impact factor.
- To motivate faculty and researchers to develop innovative products and file Intellectual Property Rights (IPR).
- To assist faculty in applying for research funding and organizing seminars/workshops/conferences.
- To foster interdisciplinary research collaborations and partnerships nationally and globally.

Constitution of Research Advisory Committee (RAC)

The RAC oversees the smooth and efficient co-ordination of research and development activities within the Institution, thus fostering overall growth.

The board members appointed by the Principal, clusters with the members of various disciplines from the Institution, reputed Industries and members from other reputed academic Institutions. The term of appointment of members shall be for five years from the date of appointment as Committee member in RAC. The RAC meeting shall be convened twice a year.

Responsibilities of RAC

- To propose the research and development strategies and to monitor the research outcomes.
- To propose the overall guidelines for seed money, publications and IPR.
- To review the progress of the funded projects and the consultancy activities.

- To ensure the utilization of the allocated resources for the research projects.
- To promote peer networks through conference, workshops, seminars and mentoring programmes.
- To initiate and promote MoUs with industries and R&D organizations for consultancy, collaborative research, sponsored projects and Industry Institute interactions.
- Suggest peer reviewed national and international journals for subscription in central library.

Policy Guidelines

Promotion of Research

- Registration of Faculty Members for PhD
 - The faculty members without Ph.D degree are encouraged to register for Doctoral Program.
- Sponsored Research Projects:
 - The Institution encourages sponsored research projects to be undertaken by the faculty. Principal Investigators (PIs) of such projects are supported and encouraged through following measures and facilities:
- Allocation of laboratory space to carry out the research work.
 - More flexibility given to PIs regarding equipment procurement, selection of project staff, and utilization of contingency and overhead funds.
 - Easy auditing of project accounts and issuance of utilization certificates.
 - Travel Assistance for field work and testing.

- Interdisciplinary Research:
 - NPSBCET promotes interdisciplinary research that approaches an issue from a range of disciplinary perspectives, where the contributions from the various disciplines are acknowledged and integrated to provide a holistic or systemic outcome. The Institution organizes national and international conferences in various disciplines where the knowledge transfer of eminent scientists and scholars take place.
- Research related On Duty Leave:
 - The Institution provides five days on duty leave per year to each faculty member for attending workshops, conferences and other research related events.
- Visit of eminent Researchers:
 - In order to sensitize faculty and research scholars towards the need for individual, group, interdisciplinary and sponsored research, national and international workshops/ seminars, visits of experts from premier institutions of India and abroad are organized from time to time. Experts are invited to deliver lectures, and conduct workshops for scholars and faculty.
- Financial assistance:
 - NPSBCET is extending financial support for the teaching faculty of the college to encourage them to pursue research and publish papers and to mould themselves into erudite scholars. The budget provisions are made in the following heads:
 - Purchase of equipment's, software and consumables.
 - Subscription to research journals.
 - Sponsorship for attending conferences / seminars / workshops.
 - Seed money to undertake basic research.

- Filing of Patents:
 - NPSBCET create awareness about intellectual property rights for faculty and students of the institution and impart training on future endeavors regarding the procedure of IPR, patent drafting, filing and publication.
- Research Credentials in API score:
 - NPSBCET has a policy for the internal promotions of the faculty by evaluating their research contributions through the various avenues of publication and presentation, the objectives are to establish the high-quality work. It is a measure of the faculty's potential to make continuing contributions in pure and/or applied research.
- Recognition and awards:
 - Recognition and awards play a pivotal role in acknowledging and celebrating exceptional achievements across various domains. Faculty member shall have an annual assessment based on contribution in academic and research spheres. In essence, recognition and awards are integral components of a vibrant and aspirational educational arena, driving individuals and entities to reach new heights and leave a lasting impact on their respective fields.

Code of Ethics in Research

Code of ethics in research outlines the fundamental principles of ethical conduct that guide scholarly research at NPSBCET. These principles reflect the values and mission of our institution, which upholds standards aimed at directing researchers toward ethical practices.

The faculty and staff members of the Institution are dedicated to the pursuit of truth and a sustained focus on mentoring students and fellow researchers. NPSBCET upholds the Institution's vision-mission and maintain the precepts of scholarly integrity and academic freedom. NPSBCET hereby commit to the highest standards of integrity and deserves the trust of the public.

The members of ethics committee are appointed by the Principal. The term of appointment of members shall be for five years from the date of appointment as Committee member in ethics committee. The nomination of faculty members of the committee should endeavor to cover all the disciplines of NPSBCET. In case of conflict of interests, members of the ethics committee shall be temporarily replaced by the Principal. Meeting shall be convened once a year. NPSBCET is committed to honesty and credibility in research conduct by actively disseminating knowledge and enhancing its validity through active discussion and execution.

All the faculty and students will adhere to the following ethical principles and responsibilities to uphold the integrity of research and maintain the trust of the academic and broader communities:

- Conduct all research activities in accordance with the established code of conduct and ethical standards.
- Verify the accuracy of all data collected and used in research, maintaining transparency with collaborators.
- Ensure that only accurate data and research findings are published in journals, conferences, and reports.
- Avoid making misleading statements, vague assertions, or declarations leading to misinterpretation.
- Refrain from plagiarism and properly cite all sources of information and data used in research.

- Proper acknowledgment and credit to the sources of funding and resources utilized in the research should be noted.
- Transparency in the use and allocation of resources for research should be maintained.
- Ensure that research results are made accessible to the public once the research is completed or within a reasonable timeframe.
- Respect the confidentiality of sources by safeguarding data and information shared in confidence.
- Exercise responsible care in handling equipment's and material resources.
- Engage in discussions with stakeholders, including funding sources, regarding the equitable distribution of legal ownership of research or its outcomes.
- Use, distribute, or share material resources and equipment in compliance with the conditions set by the Institution.
- Adhere to safety practices in all research activities.
- Ensure proper disposal or treatment of laboratory waste to prevent environmental degradation resulting from research activities.
- Report any ethical code violations to the ethical committee which is responsible for evaluating and addressing possible research misconduct issues.

Academic Research Norms for Ph.D Candidates

- Candidates must enroll and renew their registration with NPSBCET in line with Anna University guidelines. Full-time scholars are encouraged to maintain regular attendance.
- Candidates / Scholars must ensure the submission of half yearly review reports on the progress of the particular period.
- Faculty members are encouraged to become research supervisors.

- Supervisors endorse and oversee the publication of research work in reputed conferences and journals, subject to plagiarism check.
- Ph.D. thesis shall be submitted to the NPSBCET Central Library upon successful completion of the Viva-Voce.
- Reference link of Anna University regulation for Ph.D: <https://cfr.annauniv.edu/research/regulation/Ph.D-Regulation.pdf>

Plagiarism Check

- NPSBCET adheres to the guidelines of Anna University pertaining to plagiarism. It is the institutional commitment to promote original research work that is devoid of plagiarized content and within the permissible limits as specified by Anna University. Thus, the Institutional focus for all the UG/ PG/ Ph.D. level programs for any research related academic submissions, it shall initially trace the plagiarized content (in-house) as per the university guidelines through Turnitin software, failing which no permission is granted to the research scholars to take their work forward.
- Reference steps in checking plagiarism using Turnitin software by Centre for Research, Anna University Chennai: <https://cfr.annauniv.edu/research/announcements/Plagiarism-Policy.pdf>

Policy Procedures

Sponsored/Collaborative Research Projects:

Faculty members are encouraged to seek funding support from government bodies and industries to conduct sponsored or collaborative research in response to call for proposals from relevant agencies.

- To facilitate this process, research advisory committee comprising of the Principal Investigator, Subject Expert, Deans, and Heads of the Departments, shall be established for proposal assessment.
- Once reviewed by the Review Committee, proposals shall be forwarded to the Principal for approval before submission to the respective funding agencies.
- Following the approval, the Principal Investigator shall submit the application, accompanied by the required supporting documents, through portal of the designated funding agencies.
- Additional Co-PIs (Upon request by PIs) can be appointed by the Principal to ensure successful execution of the project.
- Appointment of Project fellows should be in line with the guidelines given by the respective agencies.
- PIs shall present their progress before attending the PAC meeting as mandated by the funding agencies.
- PIs shall prepare and submit a Utilization Certificate (UC) at the end of the financial year / whenever required as per the project deadlines.
- Upon successful completion of the project, PIs shall submit the Project Completion Report, Utilization Certificate, and a list of publications and patents to the sponsoring agency through the Dean and the Principal and the copy of the same to be submitted to the respective department.
- Consultancy Projects:
 - Objective: The primary objective of the Consultancy Projects Policy is to facilitate and regulate the provision of expert consulting services by the faculty members and experts associated with the Institution to external organizations and clients.

- Eligibility: Faculty members and experts with relevant expertise and experience are eligible to engage in consultancy projects. Consultancy services may include technical advice, research, testing, or specialized project support.
- Proposal Submission: Interested faculty members or experts shall submit a detailed proposal outlining the scope of work, objectives, deliverables, timeline, estimated costs, and any potential conflicts of interest. Proposals should align with the Institution's expertise and capabilities.
- Funding and Compensation: Compensation for consultancy services, including honoraria or fees, should be negotiated and documented in the project contract. The Institution may retain a portion of the revenue generated from consultancy projects to support administrative and overhead costs.
- Ethical Considerations: Faculty members and experts engaged in consultancy projects should uphold the highest ethical standards, avoid conflicts of interest, and ensure that the Institution's reputation is maintained. Confidentiality agreements and intellectual property rights shall be appropriately managed.
- Reporting and Accountability: Faculty members and experts involved in consultancy projects should provide periodic progress reports and a final report summarizing the project's outcomes to the Institution. The Institution may maintain oversight to ensure compliance with policies and ethical standards.
- This Consultancy Projects Policy aims to streamline the process of engaging in consultancy work while upholding the Institution's reputation for excellence and ethical conduct in serving external clients and organizations.

- PIs of short-listed applications shall be asked to submit a full proposal in prescribed format.
- The PI will be invited to make a presentation and the full proposal will be reviewed by selection committee.
- Final decision on the Grant shall be announced.
- Criteria of Evaluation:
 - Innovative interdisciplinary research.
 - Criteria such as feasibility, novelty and relevance of theme if any
 - Promise of sustainable research and development attracting external funds.
 - Budget matches to claimed outcomes.
 - Potential to generate intellectual property (Including product and process development).
- Funding Allocation:
 - Faculty members receive seed money grant of maximum Rs. 2 Lakhs to initiate research with the goal of obtaining further funding. Seed money will be allocated based on the project's potential for impact, innovation, and alignment with institutional goals. Funding may cover research expenses, equipment, materials, and limited personnel costs.
- Project Duration:
 - Seed-funded projects typically have a limited duration, often ranging from 6 to 12 months, to encourage prompt execution and results.
- Reporting and Accountability:
 - Recipients of seed funding are required to provide periodic progress reports and a final report summarizing the project's outcomes. Successful projects may be considered for additional funding or collaboration opportunities.



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RESEARCH & DEVELOPMENT CELL

The Research & Development (R & D) Cell of NPSBCET facilitates and encourages research culture among the faculty and students. Its prime role is to create contacts with the real world and promote research through a range of publications. It enables a congenial environment for technological development and monitors the research activities of the college. The R&D Cell takes upon the responsibility of creating a work place to attract the best talent and strives continuously in pooling of skills and internal resources, creating strategy, overcoming limitations, and makes the College proud to be amongst the best institutions around the Globe.

RESEARCH OBJECTIVES:

- To create zeal amongst faculty and students towards research and innovation.
- To create centres of Excellence in niche areas of research.
- To work closely with the industrial needs that eventually will result in new or improved products, processes, systems or services that can increase productivity of the industry.
- To foster collaborations for mutual benefits and to maximize Industry – Institute connectivity.
- To establish collaboration with other universities, public and private sectors and identify R&D projects including consultancy services which could be undertaken at the institution.
- To promote research in various departments of the Institute.
- To ensure smooth functioning and effective Management of R&D at the institution.
- To organize and promote skill development trainings in emerging areas to enhance the employability skills of the students.
- To promote self-employability skills by conducting various activities.



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Functions of R&D Cell

- Identification of thrust areas of research in each department
- Advise and encourage the faculty to carry out research in-house and in collaboration with other organizations
- Visit various departments and meet the faculty to encourage and motivate them to undertake research projects and to scrutinize the proposals before submitting to funding agencies
- Identification of physical and human resources to carryout research
- Identify the budgetary requirements and resources for funding the research
- Review the progress of research and offer necessary guidance whenever required
- Monitor and propose the funding from college budget for promotion of research activities
- Identify different organizations/ industries to undertake collaborative research on current topics of mutual interest.

Additional Duties of R&D Cell

- Scrutinize minor and major research project proposals for submission to funding organizations such as UGC, AICTE, DST, DRDO etc.
- Monitor and assess the progress of sponsored research projects.
- Advise and arrange Seminars / Conferences / Workshops.
- Promote and encourage interdisciplinary research.
- Establish technology incubation centres/ Research centres/ Centres of excellence.
- Advise the faculty and find the suitability of research results for journal publication/ patenting/ product generation/ solve societal problems.
- Encourage young faculty members to register for Ph. D. at various reputed academic institutes.

The online plagiarism checking tools are

<http://smallseotools.com/plagiarism-checker/>

<http://plagiarisma.net/>

<https://turnitin.com/gateway/index.html>

S. L. S.
R&D CELL



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