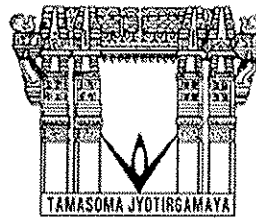


VALLURUPALLI NAGESWARA RAO VIGNANA JYOTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY

Research Policy (Revised Version) Dated: 20-10-2017



VALLURUPALLI NAGESWARA RAO VIGNANA JYOTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY

An Autonomous Institute, NAAC Accredited with 'A' Grade
NBA Accredited for CE, EEE, ME, ECE, CSE, EIE, IT B.Tech Courses

Approved by AICTE, New Delhi, Affiliated to JNTUH

Recognized as "College with Potential for Excellence" by UGC

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Reference Documents:

- i) Research and Consultancy Policy- v1 dated 01-12-2012

Research Policy (Revised Version- v2)

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1. Introduction

VIGNANA JYOTHI SOCIETY was established in the year 1990 as a non-profit organization, which is funded by educationalists, industrialists, businessmen and individuals. Education determines a society's growth and development. Therefore VIGNANA JYOTHI decided to make utmost contribution to the society through Education. The members, being eminent personalities and philanthropists, who have been successful in their endeavours, set out with a common desire to serve the community through value based education. Vallurupalli Nageswara Rao Vignana Jyothi Institute of Engineering and Technology was established by the Vignana Jyothi Society as a non-profit organization in the year 1995-96.

The Philosophy of Vignana Jyothi unravels education as a process of "Presenting" that provides, both individually and collectively, to one's deepest capacity to sense and experience the knowledge and activities to shape the future. Based on a synthesis of direct experience, leading edge thinking and ancient wisdom, it taps into 'deeper levels of LEARNING for discovering new possibilities'.

Today, with this philosophy, Vignana Jyothi has created an edifice that is strong in its foundations, which can only rise higher and higher. Quality and integrity is the essence for achieving EXCELLENCE at Vignana Jyothi Institutions. This and quest for EXCELLENCE reflects in the vision and mission. Their passion reflects in the enterprise of education.

VNRVJIET being a premier Institute declared as the College with Potential for Excellence contributes in all dimensions of education namely Teaching, Research and Extension. The Institute embarks on such activities which lead to creation of new knowledge and/or the use of existing knowledge in a unique, novel and creative way, so that new concepts, methodologies and understandings are generated. The institute undertakes also such activities which widen the horizon of knowledge including the knowledge of humanity, culture and society, with a view to make use of the knowledge to devise applications.

With this aim, VNR VJIET established a Research and Consultancy Centre (RCC), in the year 2006 for Research and Development in Multidisciplinary Engineering and Sciences. The RCC will enable the faculty and students to pursue research and participate in knowledge construction and knowledge sharing. The RCC also focuses on consultancy works. In this endeavor, this document states the Research policy so that individuals involved in research activities will abide by certain rules and regulations pertinent to research.

VNR VJIET Research policy includes all the diverse disciplines of engineering and basic sciences. The Institute encourages its researchers to involve and collaborate with a wide range of national,

international and industrial research and National CSIR Laboratories. VNR VJiet has created unique opportunities for conducting and supporting Research in Cross-Domain & multi-disciplinary areas.

The following are the objectives of Research and Consultancy Centre (RCC):

1. Provide strategic support for research across this institute for acquisition of new knowledge.
2. Create specialized product development and testing laboratories with leading edge technologies.
3. Work skillfully on the leading edge technologies to conceive and develop innovative products and services beneficial to the Society.
4. Facilitate consultation & testing services utilizing the intellectual capabilities of the faculty. This is possible because of the institute's excellent physical infrastructure.
5. Provide exposure and participation of faculty & students in research activities in the institute enable them to teach & learn from a higher platform.

The Institute has initiated the concept of In-house research funding to faculty. This is to encourage the faculty to actively involve in research and consultancy work beside their regular academic activities.

Vision

To be acclaimed as a Global Research Center in Technological Innovations and Collaborate with reputed Industries to serve the Society.

Mission

1. To develop products to Industrial Standards and Military grade standards.
2. Generate Enthusiasm among Students and Faculty and encourage them to translate their creative ideas into useful industrial products.
3. Provide consultancy to young entrepreneurs and small industries to generate funds for the institute.
4. Bridge the gap between Industry & Institute.
5. To provide exposure to latest developments and create a spectrum of contemporary technologies for students.

2. Research Policy

2.1 Preamble

Research and innovation is the essence of excellence of any educational institution. The accomplishments of an educational institution lie in academics, placements, quality of research publications, ongoing research projects, number of patents, innovative product developed and number of incubations. Thus the success of an institute in attaining its objectives greatly depends on the orientation of the faculty towards research and incubation initiatives taken by the institute. Therefore, the present research policy of VNR VJIET aims at achieving excellence in research and contributing to the society at large.

2.2 Objectives & Principles

The research policy provides a broad framework to guide research, consultancy and innovation. It also guides the faculty and students towards ethical practices while conducting research and consultancy in the Institute. The objectives of the policy are as follows:

- i) To accelerate world class research, consultancy, innovation and intellectual property.
- ii) To ensure integrity, quality and ethics in research,
- iii) To integrate teaching and research through translational and instructional research and
- iv) To promote the generation of intellectual capital.

The broad Research policy principles of VNRVJIET are as given herein under:

- i. It will respect for research participants be it animal or human and the environment.
- ii. Careful handling of public resources to conduct research will be insisted.
- iii. The institute will appropriately acknowledge the work of authors and participants in the Research.
- iv. Appropriate standard of record keeping and data storage are required in Research
- v. Responsible communication of results of the research carried out will always be expected.

The Institute will,

- i. Adhere to all legislation and guidelines of the statutory bodies in the conduct of Research.
- ii. Establish clear policies and procedures based on ethical standards.
- iii. Will encourage mutual cooperation between peers and respect for the freedom of expansion.
- iv. The institute insists on integrity, safety and proper conduct by the Researchers.
- v. Collaborative research will be taken on the basis of guidelines consistent with the policy of the institute and that of the statutory bodies.
- vi. All the publications and commercialization of the research findings will be based on the institute policy and the institute will deal with such cases of research misconduct using the guidelines of the institute framed from time to time.

2.3 Promotion of Research

The Institute provides all the necessary infrastructural facilities and a conducive environment to promote research, consultancy, innovation and intellectual capital. Due to limited resources the institute may not be able to fund all the research activities taken up by the faculty and students. It is the responsibility of the faculty to apply for various funding agencies and pursue their research. However, the institute is ready to provide seed funding or partial funding based on the merit of proposals submitted by faculty or student. The faculty and students are encouraged to present their ideas/project proposals before the committee of the society for getting the sanction of seed funding in accordance with institute guidelines. The faculty and students are given freedom to choose the research area of their choice and guidance is given to seek funding from various funding agencies and industries. The institute encourages the faculty by providing incentives for peer reviewed publications, consultancy works, writing books and filing patents. The institute takes care of complete patent filing process, which is governed by IP Policy of the institute.

The Institute gives a freehand to report research results and findings. However, a thorough review is done for all research proposals seeking funding from various funding agencies by constituting a project review committee comprising the Dean, R&D, Dean-Incubation, Entrepreneurship and Globalization, Head- RCC, Head of the respective Department and subject experts of the respective department to get a constructive criticism of peers. The research committee also sees that the impact of research and consultancy does not violate research & consultancy ethics, professional ethics, privacy of the people, human rights, causing problems to health & safety of human beings and damage of the property.

2.4 Identification of Thrust Areas

The Institute shall finalize the thrust areas in research in consultation with Research Advisory Board, Dean -R&D and HODs and the research shall be planned and conducted in the approved research areas. The list of Research Thrust areas will be modified each year depending on the resources, facilities available in the Institute. Although the researchers have the freedom to choose their own topics of research, it is highly desirable to make research socially relevant. The Institute expects the different departments to prepare a list of research topics, and focus on these in their efforts. Under each department, there is a list of project ideas or research topics, which can be called a project compendium of thrust areas. It shall be utilized for the following research activities and topics shall be chosen from this Bank:

- i) The project compendium can be made available to the research scholars/ students who may refer to it for their B.Tech/ M.Tech/ doctoral thesis.
- ii) Similarly, the faculty shall also avail the project compendium for identifying the subject for their minor research projects and even for major research projects.
- iii) The project compendium shall also be utilized for industry sponsored projects or for collaboration with other institutions.

2.5 Research at UG and PG Level

Teaching and research are equally important in an Institute. At the time of establishment of the institute, the idea was to promote creativity among the undergraduate and post-graduate students. Therefore the necessity to include some research component in the curricula was evident, especially in the final or pre-final year of the bachelors program and in the final year of master's program. In the third year second semester and final year, UG students shall choose a few projects from the project compendium (research projects listed by respective department faculty) as part of their mini project and major project, respectively. In a similar fashion, the PG students shall choose a few projects from the project compendium as part of their mini project and major project.

The UG and PG students are encouraged to take up a specific task in the research projects funded by various funding agencies under the guidance of faculty investigators. The Institute disburses the internship amounts to UG/PG students if there is a provision in the corresponding projects. The students who are participating in such funded projects should undertake the task of technology transfer to undergraduate and postgraduate students for further continuation of the research projects.

2.6 Research Centre

Various departments are in the process of recognizing as Research Centers by JNTUH. Through this research center it is proposed to have PhD scholars admission in to the institute through JNTUH PhD scholars admission process. The Institute shall further boost doctoral research and earmark appropriate budget for scholarship and research facilities. It shall also recognize the worthy R&D organizations for doctoral research and build bridges with them. The Institute encourages and guides faculty and PhD research scholars to obtain funding from external agencies for attending International conferences. It also encourages and supports its PhD scholars in publishing high quality research papers and patent of their research work.

2.7 Seed Funding for Faculty - Minor Research Projects

From the very beginning, the Institute has encouraged young faculty to conduct research. Thus, it has developed a scheme for providing financial assistance to Minor Research Projects.

- a) Student projects supported under this category are normally projects of one semester duration and depending upon the situation can be extended up to one year. Each can have a financial support in the range of Rs.5,000/- to 10,000/-
- b) The faculty may utilize the facilities & infrastructure available and human resources from faculty or students

2.8 Seed Funding for Faculty - Major Research Projects

The Institute shall provide funding on its own to certain important Major Research Projects with the prior approval from the management. The following are the rules and regulations for sanctioning the Major Research Projects from the Institute:

- a) A major project is sanctioned to a faculty member or a team of faculty members of the Institute based on merit of the project.

- b) Periodical progress reports, normally once in three months must be submitted for review.
- c) All the equipment purchased, fabricated prototypes shall be the property of the Institute.
- d) Wherever possible, student projects have to be generated from Major Projects and given to students.

2.9 Sponsored Research Projects

The RCC has identified a list of funding agencies & Schemes. The Faculty can submit Major Research Project proposals to these agencies. These proposals are scrutinized before submitting the same to a funding agency. The Institute provides all kinds of infrastructure facilities required for conducting a Major Research Project.

The Institute formed a project review committee comprising Dean- R&D, Dean- Incubation, Entrepreneurship and Globalization, Head- RCC and Head of the respective Department through which it shall monitor the progress of Major Research Projects funded by an external agency, maintain its accounts and submit the utilization certificate in time to the funding agency as per the requirement of the funding agency.

Every department should have at least one sponsored research project obtained either from the Government or private or R&D institutions. Complete funding to conduct sponsored research projects must be obtained from the organization for which the project is conducted. The funding must cover all aspects which include equipment, testing facilities, specialized manpower resources etc. The system to be adopted for conducting the research will be discussed and approval of the management and the Organization is obtained before such an effort is undertaken.

All the sponsored projects must lead to Publications and patents. Every department should have a Tie-up with the Industry to work on a Research Project which should lead to publications and patents of collaborative Nature. Students, either from UG or PG programs can be involved in the sponsored research projects and can be paid Research assistant allowance out of the funding for the sponsored research projects.

2.10 Collaborative Research Projects

The Institute-Industry Interaction is the demand of the day. If we want to contribute to the society at large, they need to work closely with industries and different organizations. Industries and business organizations are facing different kind of problems and many of them appreciate help from academic institutions to find the solutions to their problems. In view of this, the Institute has come up with certain strategies:

(i) **Industry Sponsored Research Project:** An organization can sponsor a project and the experts of the institution concerned can conduct research on this project for which the financial support will come from the organization. As a result, if any patent is registered, then there shall be a sharing of income generated from patenting among the industry, researcher and Institute. This will lead to three kinds of benefit:

- a) The researcher will get an exposure to the concerned area of research.

b) The industry will get solutions to their problem.

c) The researcher, Institute and Industry can earn money and at the end, the society will be ultimately benefited.

ii) **Interdisciplinary Research:** Interdisciplinary research is the order of the day. No department, institution, researcher or scholar can address a research problem in which more than one discipline is involved. It is only when they interact with each other that interdisciplinary research is possible and yields results. Therefore, the Institute has decided to conduct interdisciplinary research activities for which the following actions will be taken:

a) Identify the interdisciplinary area.

b) Identify the different experts from concerned disciplines who can work together.

c) Study the requirement of the infrastructure to conduct the concerned interdisciplinary research.

d) Explore possibilities to find resources for such interdisciplinary research.

(iii) **Inter-institutional Research:** Inter-institutional collaboration is the order of the day. The funding agencies are also giving a high priority for inter-institutional research proposals. The faculty is encouraged to prepare the proposals in collaboration with well-established research institutes such as IIT's, IIIT's, Central Universities and other engineering colleges having research interest. The faculty should be a Principal Investigator if the major contribution is from the Institute. Faculty can be a Co-Principal Investigator if the major contribution is from the collaborating Institute.

2.11 Collaborative International Research

We live in a global village. Knowledge is produced in different parts of the world. Collaborative international research is essential to facilitate mutual learning and expertise sharing. The Institute plans to have the MoUs with prominent research institutions abroad for conducting research jointly in the areas of common interest. For this purpose, a Task Force shall be constituted that will constantly explore the possibilities of having such collaborative or joint research in terms of thrust areas, decide the modus operandi of conducting such research and attend the other relevant aspects.

2.12 Training for Research and Publications

Generally, the faculty is interested in conducting research, but because of lack of expertise to write a research proposal or having insufficient research skills, they are unable to channelize their efforts effectively. Due to this reason, in many cases, a research proposal is rejected by a funding agency. In the case of many faculty, lack of knowledge about the method of writing paper or the format in which it should be submitted becomes an impediment for paper publication. Therefore, the Institute shall organize rigorous training programs for developing such skill in the faculty and promote research in the identified areas.

2.13 Publication of Papers in conferences and Journals

Publication of papers is critical for the effectiveness of the Institute. The Faculty must publish in quality journals. Therefore, the Institute plans to encourage the publication of papers by the

faculty with a targeted aim. A faculty member will be expected to publish a certain number of research papers in refereed journals at national and international levels. These journals shall be identified by respective departments.

Research papers to be published in identified journals and to be presented at national and international conferences shall be scrutinized and guided by a committee of senior professors.

Institute encourages faculty to publish in quality journals and organize research conference from time to time to boost research activities in the Institute and to contribute to the existing body of knowledge. The authors should use the Institute affiliation as follows:

- a) VNRVJIET or
- b) VNR Vignana Jyothi Institute of Engineering and Technology

2.14 Intellectual Property

The Institute would like to strengthen research, leading to filing of patents for which the guidelines are already available. In case of any innovation, the institute shall encourage the researcher/scholar to patent it. However, when a scholar files for a patent, a thorough scrutiny will be carried out for which a mechanism is evolved at three levels, namely :

- a) Department at the institution level.
- b) Experts at the committee level,
- c) a patent attorney associated to the concerned field at the institute level

The institute also bears all expenditure for filing application for patent. If the patent is commercialized, the sharing of earning is to be done between the researcher and the Institute as per the guideline mentioned in IP Policy of the Institute.

The host institute shall create awareness about intellectual property rights among faculty, researchers and scholars from time to time.

2.15 Incentives for Outstanding Research

The Institute would like to encourage quality research in different thrust areas. For this purpose, outstanding research contributions done by faculty, researcher, and research scholar shall be recognized. Therefore, the Institute prepared a scheme for providing incentive to researchers and scholars. The incentives are identified as under:

- a) Incentive in terms of money
- b) Incentive in terms of awards/prizes
- c) Incentive in terms of more funding for the ongoing research projects
- d) Incentive in terms of giving an appreciation certificate or giving more weightage for the career advancement scheme, etc.

The following are the Incentives for faculty:

I. Outstanding Performance

Activity	Remuneration/Reward
In any Technical area leading to patentable work or extraordinary publications in International Journals	Rs. 1,00,000/- lump sum + 30% revenues from patent, if any

II. Publications and Seminars

Activity	Remuneration/Reward
(A) Publication of papers in National Journals indexed by Web of Science, Scopus and	Rs. 5000/- per paper

UGC	
(B) Publication of papers in International Journals indexed by Web of Science, Scopus and UGC	Rs. 10000/- per paper
(C) Publication of books related to Engineering and Technology	Rs. 30000/- lump sum

III. Other Incentives

Activity	Remuneration/Reward
(A) National Award from any government agency	Rs. 10000/- lump sum
(B) International Award from any reputed organization and pre-approved by Management	Rs. 20000/- lump sum
(C) Best Researcher Award (Every Year) based on number research projects, citations, number of consultancy projects and number of IPR's	Rs. 10000/- lump sum
(D) Incentive for Faculty Incubatee in VJ-HUB	Rs. 10000/- lump sum
(E) Faculty who got gold certificate from NPTEL related to Engineering and Technology	Rs. 5000/- lump sum

2.16 Misconduct in Research

The Institute views misconduct in research as thwarting the very principles of research. Misconduct in research can manifest in plagiarism, fabrication or falsification in proposing, performing or reviewing research or in reporting research results.

An honest error or difference of opinion or authorship dispute that does not involve plagiarism is not deemed as misconduct. The distress caused by misconduct in research is damage to the integrity of the profession and loss of credibility of the researcher. Also, misconduct of research is against the values of the institute.

The institute shall not tolerate any contentions of misconduct and shall entrust the matter to investigation and inquiry for all parties involved.

2.17 Review of the Policy

The review of the policy will happen once in three years.

3. Code of Ethics for Research

3.1 Academic Honesty

The Institute holds high respect for Honesty in all scientific Communications-honesty in reporting data, results, methods and procedures, and publication status. The institute does not entertain fabrication, falsification, misrepresentation of data. Deceiving colleagues or funding agencies or public is considered misconduct on the part of the researcher.

3.2 Integrity

The Institute gives high regard for keeping up promises and agreements, sincerity and consistency of thought and action.

3.3. Carefulness

The principles of good research are to avoid careless errors and negligence. One must carefully and critically examine one's work and the work of peers and keep a record of research activities such as data collection, research design, and correspondence with agencies of journals.

3.4. Respect for Intellectual Property

Another most important thing is to honour patents, copyrights, and other forms of intellectual property. One must not use unpublished data, methods, or results without permission. Credit needs to be given where credit is due. Research contributions must be given proper acknowledgement/credit and plagiarize must be avoided at any cost.

3.5 Confidentiality

It is ethical on the part of any researcher to protect confidential communications such as papers or grants submitted for publication, personal records, trade or military secrets, and patient records.

3.6. Social Responsibility

Another principle is, to strive to promote social good and prevent or mitigate social harm through research, public education, and advocacy.

3.7. Competence

It is desirable to improve professional competence and expertise through lifelong education and learning. One must take steps to promote competence in engineering or science as a whole.

3.8 Legality

A researcher must know and obey government policies, relevant laws and institutional rules and regulations.

3.9 Protection of Human Subjects

It is advisable to minimize harm and risks to human subjects and take special precautions with vulnerable populations when conducting research. We need to respect human dignity, privacy, and autonomy. It is desirable to maximize the benefits from research and distribute the benefits and burdens of research fairly.

3.10 Rules for Preventing Plagiarism

All Project/Seminar Reports, Dissertations/ Thesis, Research Papers, Case Studies, and any such documents need to be checked with the Standard Plagiarism Software Tool. In case of Project/Seminar Reports, Dissertations/ Thesis, the concerned student needs to submit a plagiarism Report generated by a Software Tool to the department, with the signature of the concerned guide/ Supervisor. The students submitting any kind of research work in the form of Reports/Thesis must provide a 'Certificate of Originality of Work' with signature of the concerned supervisor/Guide. In order to avoid copying in course assignments, the faculty members are required to design assignments that encourage the students to analyze and evaluate rather than asking them to collect, describe or present information, data, etc. A training program on the use of Plagiarism Detection Software Tool should be organized for students, faculty, staff and research fellows.

References:

- 1) Nirma University Research Policy (http://www.nirmauni.ac.in/NU/Research_Policy).
- 2) Nirma University code of ethics for research (http://www.nirmauni.ac.in/NU/Research_Policy).