



Research & Development Cell

NRIIT (Autonomous), Agiripalli



Research & Development Policy Document : P-21

This policy document was approved at R & D meeting dated 28.01.2021.

1.0 Profile of NRI Institute of Technology, Agiripalli

The NRI Institute of Technology, Pothavarappadu (NRIIT) is established in the state of Andhra Pradesh in the year 2008 under the patronage of **Sri Durga Malleswari Educational society, Vijayawada**, to provide quality technical education and to promote research and development activities in Science, Engineering and Management fields.

The institute is built in a calm and serene atmosphere, surrounded by lush greenery and is well connected by public transportation. Ideally located on sprawling 20 acre Mango groves, on Vijayawada – Nuziveedu State Highway, the campus is about 23 KM away from Vijayawada and 22 KM away from Gannavaram Airport.

The institute is recognized by AICTE, Government of India, affiliated to JNTUK, Kakinada, Andhra Pradesh, NAAC accredited with “A” Grade, recognized by the UGC under 2(f) and 12(B) and certified by IAO & ISO 9001-2015. The UGC awarded Autonomous status to the institute in the year 2018. Three Undergraduate programmes viz., Electrical and Electronics Engineering, Computer Science and Engineering and Electronics and Communication Engineering were accredited by National Board of Accreditation (NBA).

NRIIT offers nine B.Tech Programmes in Engineering viz., CSE, CSE (AI & ML), CSE (DS), AI & ML, IT, ECE, EEE, MECH, CSE-REGIONAL LANGUAGE, CIVIL Engineering and six Post Graduate programmes viz., M.Tech with five specializations viz., Computer Science and Engineering, Digital Electronics and Communication Engineering, Power Electronics and Drives, Structural Engineering, Thermal Engineering and Master of Business Administration (MBA).

All departments are well-equipped with the state-of-the-art equipment, sophisticated laboratories, Computer Centers, with the most contemporary facilities backed by advanced computer systems and the latest software.

The institute has a brilliant team of well- qualified faculty members with vast experience in teaching and research. The faculty members have varied academic background in the fields of Engineering, Technology, Humanities and Sciences. The faculty members are actively engaged in research and consultancy works and regularly publish their research findings in standard national and international journals. Some of the faculty members have received awards for academic excellence from JNTU and other governmental bodies.

NRI Institute of Technology is a premier technological institute fostering excellence in Engineering education, research and values towards inspiring and developing future Engineers to the nation. The total staff and student strength at campus is nearly 4000.

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Principal, Chairman R&D Cell

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The College has Academic MoUs with various National, International Universities and also has collaborations with leading Corporate and Industries.

2.0 Research & Development Cell

The purpose of the research policy is to create a vibrant research atmosphere among faculty, students and researchers of **NRI Institute of Technology**. The research environment include laboratories, infrastructure and equipment. Faculty are required to participate in research, publish their work and participate in national and international conferences to acquire required knowledge and research data in the emerging areas, and the possibility of collaborating with other national and foreign universities. Research experiences enrich an intuition in many ways.

Research and Development activities create and disseminate new knowledge in various fields, promote innovation and motivate better learning and teaching among faculty and students. R&D provides a way for the creation of innovative institute mechanism and development centers of excellence in the areas of expertise. R&D activities will be encouraged to develop tools, equipment for industries. Research brings new energy; state-of-the-art facilities promote research activities, develop collaborations and become an act of community. Doing this can attract support from the government and private sectors.

Research activity of faculty is considered for the career growth and is mandatory requirement by the statutory bodies. The research policy aims at providing faculty with the right to conduct research, encouragement to publish their findings and supports their rights in seeking funds. Establishing department specific research center with the potential for excellence in guiding scholars, ensuring publications in quality journals and creating the environment, if under taking socially useful research with a potential edge for commercialization. Research enhances the reputation of institute, attracting meritorious students and faculty.


Research program opens up possibility for collaborations locally, regionally and globally. These connections raise the profile of institute and create opportunities of many kinds including association with industry, higher educational institutes. NRIIT believes in a judicious combination of teaching and research for the benefit of the student community.

The institute envisages innovation and technological development through its R & D cell. It has plans to cultivate academic and research collaborations with national and international universities, government agencies and industries to meet the immediate needs of society and the industry. The institute also remains committed to long-term research as the foundation for future development.

3.0 VISION

To be the promising institute to conduct research, to satisfy the technical challenges of the human need, to develop advanced technology, to enhance the entrepreneurship skill and to contribute the economic growth by collaborating with the industries and research organizations.


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4.0 MISSION

- i. Inculcate the basic and applied research skills to the students to arrive solution to the engineering problem.
- ii. Imparting the creative and innovative skills to the students to solve the technical problems faced by the mankind.
- iii. Sealing the gap between academia and industry and making the students suit to the industry needs.
- iv. Providing of entrepreneurship skills to the students to make them from the job seekers to job providers.
- v. Promote the students and faculty members to put the research effort and thereby to minimize the cost of imports for nation's economic growth.

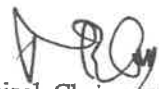
5.0 Objectives

- i. To enhance the research awareness among faculty by organizing discussions with eminent researchers and conducting national and international conferences, seminars, symposia, faculty development programmes and workshops on research methodology, IPR and patenting.
- ii. To pursue doctoral and post-doctoral assignments at various national and international universities and organizations of repute.
- iii. To undertake research projects in thrust areas in science and engineering funded by various national and international agencies.
- iv. To explore new horizons of knowledge and ensure its practical implementation through collective efforts and quality research work.
- v. To provide a creative atmosphere, complemented by adequate facilities and resources in which higher studies and research thrive amongst the faculty and students.
- vi. To establish Centers of Excellence in thrust areas.
- vii. To set up the Incubation Centers in the departments to motivate innovations and startups.
- viii. To adopt Collaborative Research with IIT, NIT, premier research laboratories and industries.
- ix. To publish the research works in renowned journals.
- x. To mentor students to participate in various Hackathons and International contests.
- xi. To develop products and file IPR.

6.0 Research Plans of the R & D Cell for The Next 5 Years

- i. To encourage the students and faculty members to take up research activities in their field of interest.
- ii. To provide good relation between the students and faculty members to take up the useful research problem in their project works and to find innovative solution in the projects.
- iii. To establish research environment by providing basic infrastructure and enabling facilities for promoting R&D activities in new and emerging areas.
- iv. To endorse the industry institute interaction through industry visit and implant training.
- v. To impart entrepreneurship skills by interacting with eminent entrepreneurs and other financial institutes.
- vi. To encourage the faculty members and students to publish the research articles in conference proceedings and journals.


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- vii. To educate and inspire faculty members to apply funded research project and carry out the consultancy work.
- viii. To organize continuous professional activities in the college by maintaining the good relations with Professional bodies.
- ix. To arrange the expert lectures by inviting the experts from reputed institute, R&D center and industry.

7.0 Short term plans

- i. To engage the students and faculty members to carry out the research activities
- ii. To provide knowledge about various funding agencies and their thrust areas to the faculty to apply grants.
- iii. To arrange the industry visits to the students and faculty members to recognize the technical challenges faced by the industrial community.
- iv. To conduct workshops to the faculty member on "Guidelines to sponsored research"


8.0 Long term plans

- i. To acquire the funded projects from industry and funding agencies
- ii. To establish Research centers in all departments by collaborating with the affiliated university to carry out research through the Ph.D scholars
- iii. To motivate the students and faculty members to publish more number of articles in conference proceedings and journals
- iv. To launch a student's forum "Students Innovators Club" and conduct national level project exhibition.
- v. To improve the brand name of the institute in the field of research and engineering education in the nation.
- vi. To improve the students employability skills to secure maximum placements

9.0 Responsibility of the R & D Cell

- i. To encourage and motivate faculty for submitting proposals to externally funded research and development projects.
- ii. To support interdisciplinary and multidisciplinary research, product design and development, publications in national and international journals of high standing.
- iii. To facilitate collaborations with researchers from premier institutes and to encourage joint research in various thrust areas of national and international importance.
- iv. To initiate and promote MoU with industries and R & D organizations for consultancy and collaborative research.
- iv. To conduct seminars, workshops, conferences and training programmes for inculcating research culture among faculty.
- v. To encourage faculty to deliver talks and be resource person for various events like seminars, workshops, conferences and training programmes.
- vi. To visit R&D organizations and disseminate information regarding the effective implementation of research projects.
- vii. To suggest peer reviewed national and international journals for subscription in central library.
- viii. To keep everyone abreast of all announcements by various funding agencies like Department of Science and Technology, Department of Atomic Energy (DAE), Defense Research & Development Organization (DRDO), Indian Space Research Organization (ISRO), Council of


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Scientific and Industrial Research (CSIR), All India Council for Technical Education (AICTE) and University Grants Commission (UGC).

- ix. To motivate students to present technical papers in National and International conferences and display projects in competitions and exhibitions.
- x. To depute faculty for seminars, workshops, FDPs and conferences in order to upgrade their knowledge.

10.0 Policy of encouragement

Teaching and Research are the main functions assigned to the faculty of the institute. Teaching is a primary function that needs to be performed at the highest level of competence and this is possible only when the faculty is involved in the research activities. Research essentially nourishes the academic program and updates the faculty about the advances in their field of expertise. Importantly, it helps the institute to stand at the global level.

11.0 Funded Projects and Consultancy Work

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

11.1. Basic Guidelines

- i. Every research proposal shall pass through a multi-tier review, where the proposal shall be reviewed by Department Research Committee (DRC) and forwarded to the Institute Research and Development Cell.
- ii. All applications related to R&D shall be routed through the principal along with one hard copy for R&D records. A soft copy shall also be emailed to the R&D coordinator, department R&D cell and also to the Head of the Department.
- iii. Separate stock registers shall be maintained for the entire R&D for the externally funded projects in every department.
- iv. Purchase of equipment, software and submission of the audit report thereof shall follow the Finance Officer guidelines.
- v. Principal Investigator and Co-Investigator shall ensure that the equipment and software purchased are maintained in the laboratory/ department and shall be entered in the stock register.
- vi. The entire sanctioned amount shall be utilized as per the guidelines of the funding agency.
- vii. In case the Principal Investigator leaves the institute, the Co-Investigator takes the responsibility as per norms.
- viii. All Heads of the Department must regularly and diligently update the R&D information on the institute website and give reports to R&D team.


11.2. Progress Report submissions

The faculty members eligible for R&D incentives shall submit the report with supporting documents to the DRC every year. The DRC carries out a rigorous scrutiny at the Department level and sends recommendations to R&D cell.

11.3. Intellectual Property & Patents

The R&D cell recommends Intellectual Property Policy guidelines to the administration. In case of any innovation NRIIT encourages the researcher to patent it; the R&D cell creates awareness about intellectual property rights among faculty, researchers and scholars from time to time.


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Receiving patent for one's research work is one of the most important factors denoting the quality of research. Full 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 NRIIT with the researcher's name prominently featuring as the inventor. The commercial aspects shall be mutually worked out between the institute and the researcher. If patent is filed by the individual(s), then institute may be borne 50% of expenses upon the recommendations of R&D Cell.

11.4. Research & Development Budget

The Heads of the Department shall include R&D component in the yearly department budget proposal. The same is forwarded to the Principal.

11.5 Academic Research Policy

- Faculty publication in either IEEE or WEB OF SCIENCE or SCOPUS indexed journals are appreciated with appropriate incentives. The publication target has been set as one IEEE/web science/ Scopus publication for faculty having more than five years of experience.
- 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.
- Term papers of B.Tech and M.Tech / MBA projects shall be research focused. Every project shall lead to at least one research publication in indexed journal.


11.6. Sponsored and Internal research related policies

- Faculty shall apply for a minimum of one government funded project.
- All departments shall strive for recognition by National/International agencies through schemes/funding from agencies such as AICTE, DST, UGC, ICMR and DRDO.
- Faculty are 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.
- The university shall create special research groups to concentrate on research in government listed areas.
- All innovative projects of faculty are earmarked for filing patents on successful completion. Suitable recognition and incentives are given to those faculty members with patents.
- Norms are fixed to pay expenses towards procurement of equipment to those faculty members working on funded projects.
- Consultancy assignments must have a letter from the organization, clearly mentioning the work to be carried out, period and value of consultancy and the benefit of the consultancy to the institute - both intellectually as well as financially. Proof of expenditure must be maintained by the consultancy incharge.
- Meritorious research work/consultancy by faculty is awarded with monetary incentives. The management will suitably reward the recommended projects during the college day and through the incentive scheme. Based on the cells recommendation, financial incentives upto one month salary is given for deserving cases.

11.7. Principal Investigator (PI)

Principal Investigator (PI) of a sanctioned project is considered to be the prime interface between the funding agency 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


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his/her absence, the PI may request any of the Co-PI to take-over the responsibility of running the project.

11.8. Publication of Papers in Conferences and Journals

The faculty of NRIIT encouraged to publish papers in quality journals. 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 a research papers in referred national and international journals 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 research cell of the institute.

11.9. Facilities available on Campus

- i. The research facilities available on campus are:
- ii. A well-equipped library with more than 500000 Books, and e-journals by IEEE ASPP, Springer link, J-Gate, ASME, McGraw Hill access and ASTM digital Library access with 80 plus printed national and international journals.
- iii. NRIIT has an institute membership with CSI, IEEE, ACM.
- iv. Access to high quality technical content is available for reference through DELNET facility in the library. iv. Softwares like Python, MATLAB, Tanner, Xilinx, Lab View, Solid Works, ANSYS, Multi Sim, Oracle and DB2 are available.

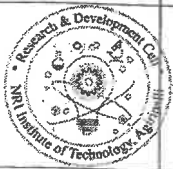
11.10. Code of Ethics for Research

- i. **Academic Honesty:** The institute holds high respect for honesty in all scientific communication honesty in reporting data, results, methods and procedures and publication status. The institute does not entertain fabrication, falsification, misrepresentation of data, deceiving colleagues of funding agencies or public is considered misconduct in the part if the researchers.
- ii. **Integrity:** The institute gives high regard for keeping up promises and agreements, sincerity and consistency of thought and action.
- iii. **Carefulness:** The principals 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 record of research activities such as data collection, research design and correspondence with agencies of journals.
- iv. **Respect for Intellectual property:** Another most important thing is to honor 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 due . Research contributions must be given proper acknowledgment.
- v. **Confidentiality:** It is on the ethical part is any researcher to protect confidential communications such as papers or grants submitted for publication and personal records.
- vi. **Social Responsibility:** Another principle is, to strive to promote social good and utilization of funds for technology enhancement through research publish education , and advocacy
- vii. **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
- viii. **Legality:** A researcher must know and obey government policies relevant laws and institutueal rules and regulations.

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- ix. **Rules for preventing plagiarism:** All projects/Seminar reports, Dissertations/Thesis, research papers, case studies and any such documents need to be checked with the standard plagiarism software tools. In case of project/seminar reports, the concerned student needs to submit a plagiarism report generated by software. 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.

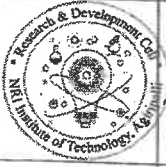
12.0 Incentives

All faculty members/students are requested to build good Research ambience in the campus and carry out Research and Developmental activities. The management is pleased to announce the following incentives to its faculty members/students:

S.No	Description	Incentive	Eligible
CERTIFICATIONS - SWAYAM/NPTEL			
1.	Highest number of Certifications to a mentor/coordinator	RC + Rs. 5,000/- per Department	Faculty
2.	Certification score above 95% for each member	RC + Rs. 5,000/-	Faculty/Students
3.	Highest number of certifications by an individual	RC + Rs. 5,000/-	Faculty/Students
4.	TOP 100 Zone	RC + Cash Prize	Faculty/Students
PUBLICATIONS			
5.	a) SCI Publications 1 st Author	Rs. 10,000/- paper	Faculty/Students
	b) SCI Publications 2 nd Author (Max authors 4 per paper) - for any No. of papers	Rs. 3,000/- paper	Faculty/Students
	c) For 4 or more papers	1 special attractive increment	Faculty/Students
6.	Scopus publications 1 st Author – Max 2 papers/year / IEEE Conference proceedings	Rs. 8,000/-	Faculty/Students
7.	Conference paper in proceedings	Rs. 1,000/- (Max. 2 papers)	Faculty/Students
8.	Ph.D., award	Rs.5000/-	Faculty
RESEARCH AND DEVELOPMENTAL ACTIVITIES			
9.	Sponsored Research and Development Projects	5% Incentive to the PI & COPI.	Faculty/Students
10.	Consultancy work	Institute : 60% Department : 15% Investigator : 25%	Faculty
11.	Patents Registration and Publication	Registration Fee will be reimbursed	Faculty/Students
12.	Book Publication (Reputed International Publications)	1 st Author Rs. 10,000/- 2 nd Author Rs. 5,000/-	Faculty

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13.	Registration Fee, TA & DA to attend a Conference (National/ International)	Reimbursed	Faculty
14.	Prize at inter-Institute technical competitions : 1 st Prize/Working Models	Rs. 1,000/-	Students

Approved by :

1. Dr C Naga Bhaskar, Principal
2. Dr K V Sambasivarao, Dean, CSE Department
3. Dr D Suneetha, HOD, CSE
4. Dr N Sambasivarao, HOD, EEE
5. Dr M Chaitanya Kishore Reddi, HOD, IT
6. Dr K.Krishnamurthy, HOD, ECE
7. Dr K Prasada Rao , HOD,ME
8. Prof P Narendra Babu, HOD, CE
9. Dr M Babu Prasad, HOD, FED
10. Dr N V Surendra Babu,HOD, T &P


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