Research & Development Center

Research & Development

And

Consultancy Policy Document

2024-25

AVN INSTITUTE OF ENGINEERING AND TECHNOLOGY
Koheda Road, M.P.Patelguda Post
Ibrahimpatnam (M),
Ranga Reddy Dist– 501 510.
Hyderabad

About the Institution

AVN Institute of Engineering and Technology, Ibrahimpatnam (M), Ranga Reddy, Dist– 501 510, Hyderabad was established in 2009, affiliated to Jawaharlal Nehru Technological University (JNTU), Hyderabad, and is approved by the All India Council for Technical Education (AICTE), New Delhi. AVNIET is destined to offer comprehensive curriculum in the field of Technological education. Our students have a perfect place to learn and excel by striking a balance between academics and contemporary engineering practices.

AVNIET, a premier institution offering engineering education in the streams of Cyber Security, AI&ML, Data Science, IoT, CSE, ECE, CIVIL and Mechanical. AVNIET comes from the able management of Dilsukhnagar Public Schools having 36 years of academic excellence, under the leadership of chairman Mr.AVN Reddy. Established in 2009, affiliated to Jawaharlal Nehru Technological University (JNTU), Hyderabad, and is approved by the All India Council for Technical Education (AICTE), New Delhi. AVNIET is destined to offer comprehensive curriculum in the field of Technological education. Our students have a perfect place to learn and excel by striking a balance between academics and contemporary engineering practices.

Our primary objective is to produce high quality enterprising students with excellent technical skills by which they can contribute for the society development. AVNIET is dedicated for transforming the students into highly competent engineers with high level of motivation, professional skills and self-confidence to achieve excellence in the field of professional education.

We inculcate in them Effective Communication Skills, Excellent Team Management Skills to work and lead a team for achieving excellent results in their professional pursuits.

Vision, Mission, Quality Policy & Core Values of the Institute:

Vision:

"To be a Centre of Excellence in Technical Education and to become an Epic centre of Research for Creative solutions"

Mission:

"To address the Emerging needs through Quality Technical Education with an Emphasis on Practical Skills and Advanced Research with Social Relevance"

Quality Policy:

We strive to be recognized as a center of excellence and committed to continuously improve the quality of technical education by producing outstanding engineers willing to work to the spirit of challenge and innovation with high ethical and professional standards.

Core Values:

Core values deliver the basis for all the academic, student and social programs and activities. The stated core values support the mission of AVN Institute of Engineering and Technology.

- Enhance professionalism with good human values.
- Encouraging students to become productive, participating citizens.
- Support the mission and vision of the Institute.
- Focus on student and stakeholder needs.
- Continuously evaluate and improve programs, services, systems, andpolicies
- Promote creativity and innovation in all activities.
- Recognize and support staff and student contributions.
- Create healthy atmosphere for effective teaching–learning process.
- Encourage interdepartmental collaboration.
- Recognize, appreciate, and celebrate the strength of diversity.
- Encouraging students to become productive, participating citizens.
- Sharing of experience, knowledge and skills.

2. Research & Development Policy

Introduction:

Research & development is the knowledge foundation that generates new energy, constructs cutting-edge facilities, promotes research publications, and fosters collaborations. Research and consulting efforts generate and distribute new information while also encouraging innovation, which drives improved learning and teaching among AVNIET faculty and students. The AVNIET Research & Consultancy Policy is designed to foster a research culture among teachers and students. The policy promotes scientific temper and research aptitudes in all learners while ensuring professional competence. AVNIET developed a Research and Development Center with this goal in mind during the 2024-25 academic year. In this endeavours, this document states the Research & Consultancy policy so that individuals involved in these activities will abide by certain rules and regulations pertinent to research and consultancy.

Vision

To motivate individuals and inculcate multi-disciplinary research and innovative thinking to work in collaborating industry.

Mission

1. To create awareness on evolving technologies and industrial standards for products.
2. Improve industry-institute interaction.
3. Provide students with opportunity to work on research and industrial initiatives.
4. Generate innovative ideas on societal problems.

Objectives of the Research & Development :

- To enhance the industry - institute relationship and aid the better product development in quality at reduced cost.
- To pave the way for the utilization of new corners of science to invent new or alternate technology and healthy solutions to the society at large, particularly to protect the public health and environment.
- To facilitate and encourage the quality publications of the research work and share the results to the entire research community.
- To build relationships through of MOUs for long term relationships with national and international research organizations and industries for widening the scope of research options and funding opportunities for faculty and students.

- To develop, prescribe and administer rules and regulations to ensure the compliance of all researchers to the research quality assurance framework and the research code.

Research and Development (R&D) Center

The Research and Development (R&D) Center was established in the year of 2018 as per the directions issued based on the minutes of the meeting of Governing Body.

Composition of R&D Center:

- (i) Principal-Chairman
- (ii) Convener
- (iii) Heads of all Academic Departments
- (iv) Nominee-Senior Faculties in each department (**nominated by thePrincipal)

Responsibilities of R&D Committee:

- To prepare annual research activity plan for all the departments.
- To establish liaison with near and far industry and identify the technological challenges being faced by them. Strengthen industry institute interaction through MOUs for long term relationships with national and international research organizations for widening the scope of research options and funding opportunities for faculty and students.
- Take up appropriate problems of the industry for finding solutions through R&D projects assigned to faculty and students.
- Explore technological developmental opportunities in common application areas such as transport, traffic regulation, security, healthcare etc. and assign them to faculty and students.
- To initiate and promote MoU with industries and R&D organizations for consultancy, collaborative research, sponsored projects, industry andInstitute interactions etc.
- To arrange brainstorming sessions through talks by eminent personalities from industry, R& D organizations and institutions of repute for the better understanding of research methodology and practices currently followed.
- To support faculty for delivering talks at different events and conducting workshops, training programs, seminars, conferences, symposia and faculty development programs.

- To keep everyone informed about announcements by various funding agencies like DST, DAE, DRDO, ISRO, CSIR, AICTE, UGC and University etc.
- To motivate students for presenting papers in National and International conferences and projects in competitions and exhibitions at university level. Interdepartmental / collaborative work to be encouraged.
- To monitor progress of the research and development activity.

Policy framework:

R&D Center policy is to create good infrastructural facilities and conducive environment to inculcate research culture.

Policy framework as follows:

- Incentives are provided for publications.
- Facilities such as flexibility in timings, use of laboratories etc. are extendedto faculty as per requirement.
- Implementing a policy for distribution of testing and consultancy charges to motivate faculty for providing consultancy.
- Faculty with an aptitude for research is identified.
- An initiative is taken by Library to help researchers in understanding recent updates of their publications in terms of citation index, h-index, etc.
- In house Project development.
- The institute encourages the formation of various student chapters of professional bodies. The institute will bear the membership fees for the same.

A. Financial Assistance to Students for Research:

- Students will get reimbursement towards paying registration fees for presenting the paper in the conference. Also, students participating in various events such as technical quiz competition, technical fest, and technical poster presentation competitions at state level as well as at national level will be reimbursed by the institute.
- Institute motivates the students for undertaking the interdisciplinary projects and provides required financial support.
- Final year students will be given reimbursement for performing tests on the samples in the outside laboratory if required for their project work. Students must seek prior approval from concerned project guide and HOD.

- Students are informed about R&D initiatives by the respective department R&D coordinator.
- Students willing to publish research papers/participate in any technical activities shall approach the department R&D coordinator.
- Students need to submit applications signed by the concerned HOD and their department R&D coordinator to the Head-R&D.
- On approval, the student registers for the conference.
- Students attend the conference.
- For reimbursement purpose, students must enclose receipt of registration fees, first page of paper and conference certificate along with application and submit it to department R&D coordinator. The Institute Head- R&D approves the request.
- Students submit the above approved documents to the principal for approval.
- Principal finally approves the application for reimbursement.
- Students needs to submit bills of expenditure to the head of department for approval and then to the accounts department for reimbursement. Students submit the above approved documents to the accounts for reimbursement.

B. Financial Assistance to Faculty for Research:

- The college provides financial support by reimbursing registration fees only for presenting papers in reputed National/International conferences held within India and for attending FDP/STTP/workshop/Seminar in other organizations in India.
- Faculty would also look for an alternate source of funding for participation in a conference viz., AICTE/UGC etc.
- The faculty can avail OD for attending the conference/FDP/STTP/workshop/Seminar. The faculty should fill the required forms, get the approval and submit the same to the office before proceeding for the same.
- The total cost of organizing any technical event for student and faculty will be borne by the institute.

Financial assistance to faculty for Research (Conference/FDP/STTP/workshop/Seminar) Process:

- All requests for grant have to be made prior to the conference. Faculty members will submit the application for grant when they receive the letter of acceptance from the conference committee.
- The recommendation of Head of Department, Department R&D coordinator & subject expert is required for availing the conference sponsorship.
- On approval, the faculty registers for the conference and Faculty attends the conference/FDP/STTP/workshop etc.
- For reimbursement purpose, faculty must enclose receipt of registration fees, first page of paper and conference/workshop certificate along with application and submit it to department R&D coordinator.
- Faculty submits the above approved documents to the principal for approval within 15 days of attending the conference.
- Principal finally approves the application for reimbursement.
- Faculty submits the above approved documents to the accounts and gets reimbursement.

Seed Funding for Faculty:

1. The Institute shall provide SEED grants to faculty and students for Research Projects with the prior approval of Governing Body. The following are the rules for sanctioning the Research Projects from the Institute:
2. Project proposals from a single faculty member or a team of faculty members that results in product or technology development are normally for a period of two years and can be extended for one more year if required. These projects will be supported to an extent of 10 lakhs for each department.
3. On completion of the project, 2 copies of the final project report on the work done should be sent to the R&D Center along with the utilization certificate (UC) and statement of expenditure (SE).
4. SEED grant will be released to the principal investigator of the project through the Head of the institution.
5. SEED grant may be utilized for procuring basic infrastructure required for experimenting or pilot study with the approval of Governing Council.

6. SEED fund may be utilized for travel to places within country (not exceeding 10% of total grant) to acquire domain knowledge or to invite experts in the domain for knowledge sharing, training to gain expertise and preparation of DPR (not exceeding 25% of total grant).

7. Investigators must acknowledge the institute in reports and technical/scientific papers publishing based on the research work done under the project. Investigators are requested to publish some of the research papers emerging out of the project work in leading National / International Journals.
8. All the equipment purchased, fabricated prototypes shall be the property of the Institute.
9. If the PI to whom the project has been sanctioned wishes to leave the Institution where the project is based on SEED grant, the Co-PI will be the PI for the completion of remaining project.

Sponsored Research Projects:

The faculty can submit Research Project proposals to various funding agencies like AICTE, UGC and DST. The proposals to be submitted are scrutinized at the department level by the Head and senior faculty of the department before submitting the same to funding agency.

The Institute provides all kinds of infrastructure facilities required for conducting a preliminary Research for Project. The funding must be obtained from the organization for which the project is sanctioned. This 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 Principal is obtained before such an effort is undertaken.

Every department faculty may associate with the Industry for collaborative research, which lead to publications and patents in collaborative with industry. Students, either from UG or PG programs can be involved in the sponsored research projects and can be paid research assistant allowance from sponsored research funding.

4. CONSULTANCY POLICY

Introduction:

Considering the needs of the industry to get the products testing in terms of product design, quality and improvement of standards, Engineering Colleges have come to fore front to cater the needs of the industry through consultancy. This is one great opportunity to exhibiting the skills, talent, technical know-how and expertise of the Institution to meet the latest trends in the technical world. It is a latest trend set that Engineering Institution through their consultancy policy inviting the industry in the markets to utilize their services for the best results. The engineering colleges have adapted methods with modern tools of technology through continuous Research and Development in this areas.

Hence needs has occurred to frame the policies, procedures for effective functioning of consultancy in the Institution. As AVN Institute of Engineering and Technology is a leading institution in imparting engineering education, now to render service through consultancy, emphasis is given to establish a Consultancy Cell in the college. Salient features of consultancy cell are as below:

Guidelines:

To identify the nature of the consultancy service as detailed below:

To do consultancy within the college premises i.e., in the labs, Research & Development centre and makers space exclusively established for the purpose.

To select the team to conduct the consultancy:

Depends on the nature of consultancy service, forming a team from relevant engineering steams to carry out consultancy job work. They receive instructions from the Principal, Investigating person and HOD. They make a time schedule of starting and completing the consultancy job work and procedures and methods that to be adapted to execute the work. They will be in constant touch with the experts in the relevant areas to take advises to overcome hurdles arise in executing the consultancy activities. They always thrive to get best result to the entire satisfaction of industry/ firm/ persons for whom they are doing the consultancy service.

Ways and Means to Conduct the Consultancy:

Once it is defined the aim and objectives of consultancy, now the team will focus on selecting ways and means that require to conduct consultancy in the required field. For this purpose mainly they depend on,

- Testing tools in the labs
- Lab equipments
- Procuring additional materials for testing purpose
- Hiring heavy duty instruments and machinery
- Transportation of material to the site
- Specially designed tools to check the quality and detect defects if any software available in the college.

Cost Analysis of the Consultancy Project Work:

The investing person will prepare a cost estimation of the consultancy project taking into consideration of:

- Charges of college infrastructure utilized for the purpose on hourly basis or through some appropriated method of costing.
- Time devoted by the faculty and manpower to conduct the consultancy to calculate remunerations.
- Income to the college.
- Taxes payable to the Govt.
- Purchase of raw materials if required and hire charges of special equipments.

After preparing the estimation of the consultancy project work he will forward it for the approval of the Principal. The same will be communicated to the service receiver and once they agreed to financial terms and conditions, college and party will make a MoU. Once the MoU is signed by the both the parties, project work will be started by the executive team and complete as per time schedules.

Accounting of Proceeds of the Consultancy:

The Accounts Dept. of the college will open a separate account in the books of accounts in the name of the project work and record all the proceeds in terms of receipts and payments for each specific job work. On completion of the project work after recovery of all the expenses incurred for the project work, they arrive net surplus raised of project work.

This surplus amount will be distributed as per pre- determined ratios as detailed below after adjusting for recovery of the expenses incurred by the college remaining amount consists of college share of income, Department Development Fund & Staff Share.

Disbursement Module:

Type of Testing/Project	Particulars of Consultancy	Mode of Distribution of Consultancy Fee
A	Routine Testing: Testing of components or equipment involving extensive use of College equipment and personnel, followed by certification.	Net fee to be shared as 50:50 to College: Staff In the Dept. share, 5% is for HoD, 20% for Lab. Incharge (faculty) and 15% for Technician and 10% for Lab Attendant.
B	Work involving Expert advice on Design and Development- typically offering designs for building, equipment, electronicor electrical circuits, offering solution for processoptimization, new processes and / or participation in development etc.	Involving expert advice,development
C	Complete execution responsibility involving Estimation, Design, Material Procurement, Supervision, Accounting, and Billing	For complete execution of civil works - 6% of the estimated projectcost
D	Supervision of Civil works, including billing and quality Certification, when the total work is contracted to other contractors.	For Supervision of Civil works - 1.5 % of the estimated project cost If offered for certain functions only, the charges would be as –
E	Civil Designs and Analysis- in which design with analysis and drawings are given. Drawings costs to be extra.	For carrying out designs, -1.0% + Drawings charges For Types B, C, D and E, the College: Staff share is 25: 75. Of the staff share, Investigator(s) get 70%, and HoD gets 5%. Of the College share, the distribution is 10% to College, 10% to Dept. Development Fund (DDF),2% to Principal, 4% to DCC, 2% to Admin. Staff.

F	Preparation of estimates. The relevant basis for estimation is also to be provided to clients.	The charges for preparation of estimates will be Rs.1000/- for 2 - 10 lakhs project cost Rs.2000/- for 10 - 20 lakhs project cost Rs.3000/- for 20 - 50 lakhs project cost However, CC may quote different amounts depending upon the nature of the work. The distribution is 25:75 for College: Staff. Investigator gets 70% and HoD gets 5%. The college share is distributed as 12%, 10%, and 3% to College, DDF and Administration staff.
G	Visits to sites or offices for the purpose of Assessment or Evaluation. On-site testing: Jobs involving on-site testing are to be treated as Type A, except that conveyance, Transport of equipment, stay etc, would be charged extra.	Charges will be Rs.1, 000/- pervisit within the city. Fee distribution for College: Staff is 20:80. Of the staff share, 75% is to the investigator, 5% to HoD, and the College and DDF get 10% each.

Principal