

ANITS

VISION 2020

THE INSTITUTE

Anil Neerukonda Institute of Technology & Sciences, ANITS, was established in the year 2001 by Anil Neerukonda Educational Society (ANES). This society was founded by the NRI philanthropist Dr.N.B.R. Prasad, a practicing physician settled in Chicago, U.S.A, in memory of his son, Late Anil Neerukonda, with an aim of providing quality education on a sound basis and on non-commercial lines. The other institutions / establishments started by ANES are

- A 300 bed 'NRI General Hospital', started in the year 2006.
- College of Nursing offering a 3-year B.Sc. (Nursing) Course, started in the year 2007.
- NRI Institute of Medical Sciences offering courses in MBBS and BDS was started in the year 2012.

The management of Anil Neerukonda Institute of Technology & Sciences, is looked after by the Chairman of the Society, Dr.N.B.R. Prasad and the Secretary Sri V.Thapovardhan.

The college was started in the year 2001 with only four branches – ECE, EEE,CSE and IT with a moderate intake of 220. Over the years, the college has made great strides and grown by leaps and bounds with the development of infrastructure, addition of new courses at both UG and PG levels, induction of talented and experienced faculty and creating an ambience where academics take the top most priority. At present, it is offering 7 UG programs in ECE, EEE, CSE, IT, Chemical, Civil and Mechanical with a total intake of 840, and five PG programs in Communication Systems (ECE), Computer Science & Technology (CSE), Control Systems (EEE), Machine Design (Mech) and Biotechnology with an annual intake of 18 for each specialization. The institute has always strived to provide quality education and got accreditation for five UG Programmes. The college has also been granted **Permanent Affiliation** by Andhra University and was recently recognized as Research Center by Andhra University

The vision 2020 of ANITS is an attempt to document their future realistic goal of the Institute to emerge as a leading technical institute of the country and also to establish a unique identity for the development of high quality human & knowledge resources.

Vision

ANITS envisages to emerge as a world-class technical institution whose products represent a good blend of technological excellence and the best of human values.

Mission

To train young men and women into competent and confident engineers with excellent communicational skills, to face the challenges of future technology changes, and also to impart holistic technical education using the best of infrastructure, outstanding technical and teaching expertise and an exemplary work culture, besides moulding them into good citizens.

Quality policy

ANITS is engaged in imparting quality technical education. It constantly strives towards achieving high standards of teaching, training and development of human resources by encouraging its faculty and staff to work as a team and to update their knowledge and skills continually to match the needs of industry.

The Objectives

- To train the students to be competent and face the challenges in the industry and society .
- To provide graduates with a solid foundation in the principles of Engineering and Technology and to improve their analytical and creative problem-solving skills to enable them to work successfully on multidisciplinary technical areas and research.
- To transform our students into world class technical professionals with good communication skills.
- To provide a wonderful learning environment for the students and to make them responsible citizens with human touch.

The present document outlines roadmap to achieve Vision 2020 of the institute.

CURRICULAR ASPECTS:

Planning for new courses:

UG Courses:

The institute is presently offering under graduate program in 7 disciplines. To accomplish the needs of all stakeholders the following action plan is proposed:

- The upgrade the curriculum abreast with latest technologies and incorporate changes accordingly in the syllabus as the college is striving to attain Autonomous status by

2015.

- Compulsory review of under graduate academic studies is planned every four years. It will include revision of curriculum, introduction of new courses, review of evaluation system etc. This review will be on the basis of the feedback received from recruiters, alumni, students, industry and other stakeholders. While carrying out the review exercise, experts from leading institutions and also from local industry will be involved.
- Under graduate students will be taught professional ethics, soft skills and personality development courses.
- NCC/NSS/Sports is made compulsory for all under graduate students by assigning credits.

Postgraduate education :

In order to achieve the vision, the post graduate education should be re-engineered to provide quality manpower in the emerging areas of technology.

- Each department will undertake a promotional plan for faculty members to travel to neighbouring institutions and deliver lecture to motivate the students for pursuing M.Tech. in different disciplines at ANITS.
- At present, the Institute is offering four engineering post graduate programs. New post graduate programs in following disciplines will be started in a phased manner before 2020:
 - **M.Tech.:** Structural engineering, Thermal Engineering, Industrial Engineering and Management, Nanotechnology, Microelectronics & VLSI Design, Communication System and Networks, Biotechnology and Biomedical Engineering.
 - M.B.A. Program in collaboration with foreign institutions.

TEACHING - LEARNING PROCESSES:

Teaching Methodology:

- Improving teaching learning process by adopting novel techniques like e-classes, improving the present demo through models by simulation, explaining the concepts through demos using ICT in the classrooms and there by expanding the horizons of classrooms.
- More emphasis should be given to field training and laboratory teaching.

- To nurture the hidden creativity of students, every department is having professional student association. The activities of the association should be further enhanced.
- Planning for permanently fixed LCDs in all class rooms by 2017-18.
- Conversion of all class room into E-class room by 2020.

Teacher Quality:

Faculty play a vital role in moulding the careers of the students. Hence it is imperative to train them continuously to upgrade their teaching and technical skills.

- All the faculty of ANITS will be encouraged to do higher studies so that they can improve their qualification and also carry out further research work in their chosen domain.
- It is planned to make it mandatory that from 2014-15 onwards, each faculty has to attend seminars and workshops and such other programmes once in 2 years for a duration not less than 3 days.

The faculty should abreast with latest developments in the technology and should share their knowledge. They will be encouraged to opt for membership of professional societies like CSI, IETE, IEEE, IE, ASME, ISHARE etc., by 2016-17.

RESEARCH AND DEVELOPMENT

ANITS as a blossoming institute of regional importance, has to contribute in the advancement of knowledge in emerging areas. Research culture needs to be fostered in the minds of faculty and young students. Following are the identified thrust areas for research for the next decade:-

S.No.	Name of the Discipline	Thrust Areas for Research
1	Chemical Engineering	Behavior and structure of polymers and ceramics
		Design of Membranes
		Novel Reactors Design & Modeling
		Supercritical Fluid Extraction
		Coal Chemicals
2	Chemistry	Engineering Chemistry
		Nuclear Chemistry
		Nanotechnology
		Chromatography HPLC
3	Civil Engineering	Earthquake resistant structures
		Cost effective construction of infrastructure

		Disaster Management
		Mass housing
		Technology in Urban Development
4	Computer Science Engineering	Computer Networks
		Algorithms
		Data Mining & Data Warehousing
		Image Processing
		Parallel Programming
5	Electrical And Electronics Engineering	Power Electronics
		System analysis & Simulation
		Management Information System
		Computer Application in Operational Research
		Optimization of Transmission Losses
		Superconductivity
6	Electronics & Communication Engg.	Power distribution systems
		Signal Processing and Computer Vision
		Communication Systems and Networks
		Microelectronics & VLSI Design
7	Mechanical Engg.	Electronics and Embedded System
		CAD-CAM & Robotics
		Bio-Fuels
		Alternative Energy sources (Using Solar Radiations)
		Nanotechnology
8	Information Technology	Energy Conservation and management
		Computer Switching & Networks
		Services over Internet Protocol
		Information System
		Data Mining & Data Warehousing
		Multimedia Technologies
9	Physics	Network Securities
		Material Science
		Dynamic Properties Using Electrical Analogy
		Semiconductor Devices
		Integrated Circuits
10	Interdisciplinary Technology	Biophysics
		Smart sensors and intelligent processing
		Simulation Studies
		Environment Sciences, Engg. And Planning
		Technology for small scale industry
		Robotics

Seminars and workshops :

In order to enhance the knowledge levels of students and faculty, make them aware of latest technological developments and having interaction with the experts, it has been planned to organize workshops and seminars in the individual department at regular intervals. It is proposed to organize an international conference one in core departments like EEE/ Mechanical/ Civil by 2017 and one in CSE / IT /ECE departments by 2020.

Resource Mobilization for Research:

A highly intensive research is possible only if research facilities are available in the campus or in the university and industries nearby. Basing on meager support by the above said two agencies, it is planned to create facilities within the department through external funding agencies like UGC, AICTE, CSIR etc., well supported by the college internal resources.

All the departments will be advised to send proposals for major and minor research projects every year from 2014 to 2020. A target of Rs 1 crore has been set to get funding from various resources.

Research Publications and Awards:

The faculty have published quite a good number of papers in the past 3 years. The college now plans to enhance the same both quantitatively and qualitatively in all departments. With AU recognizing ANITS as research centre and with a good number of M Tech students and research scholars, the target can be achieved. The faculty are advised to publish papers in indexed journals like Scopus etc., with DOI and also having citation index. They will be encouraged to take up inter-disciplinary research in association with other departments.

Consultancy:

The potential departments identified for consultancy are Civil, Electrical, Mechanical and Chemical departments. A target of 10 Lakhs is fixed for consultancy in these departments over a period of 5 years.

Collaborations:

As a part of industry-Institute interaction, the college is looking forward for collaborations with premium agencies / institutes like Tata Technologies, TVS Harita, TCS, Qualcomm on the design and technological side and with IREDA for non-conventional sources of energy. It is

envisaged to have a MOUs with 2 such agencies before 2020 and it is estimated financial requirements will be about 25 lakhs.

INSTITUTE INFRASTRUCTURE AND FINANCIAL MANAGEMENT

In the process of achieving Excellency, state of the art laboratories needs to be established. The existing labs are to be upgraded and new labs will have to be established with internal and external financial resources.

Development of class rooms with all modern facilities to improve the efficacy of teaching learning processes.

Student activity center having a multipurpose hall, reading room, indoor game facility, music room etc., has to be developed

Sports center with a swimming pool and gymnasium is being proposed and to be completed by 2020.

Financial Management and resources:

The funds generation is proposed to be both from external funding agencies like AICTE, UGC etc., and internal resources.

GOVERNANCE

Effective and transparent governing system is essential for growth of the institute. The institute is committed to provide complete transparency in all its admission and academic process for effective and transparent governance. Management Information System (MIS) is implemented in functional areas namely academic and financial management and will be further extended and implemented in all functional area of the institute.

An e-grievance cell will be constituted to address the grievances of the stakeholders.

HUMAN RESOURCE RECRUITMENT & DEVELOPMENT

ANITS will make sincere efforts to bring elite faculty to all departments. The institute also needs technically trained manpower for the laboratories to do good consultancy work. The institute will also take care of professional development of faculty and non faculty members of

the institute.

Provisions will be made for appointing visiting faculty and distinguished honorary faculty.

Industry experts will be invited to deliver on their fields of expertise and experience and have interactions with faculty and students.

Faculty members will be sponsored for improvement of their qualification and skills wherever necessary.

Efforts will be made to make QIP activities more knowledge centric and develop ANITS as a center for higher studies.

Supporting technical and administrative staff will be periodically sponsored for continual training in new technology and modern working methods.

THE SOCIAL RESPONSIBILITY/ GOOD PRACTICES:

The institute always understands its responsibility towards the society. In order to satisfy the needs of the society, the college plans to adopt a village nearby in 2015-16 and propose to organize the following events in the coming years.

- Facilitating and educating the villagers in usage of Non-conventional, green and low-cost energies.
- Adopting a needy school and enhancing life skills and scientific temperament in the young minds.
- Develop it as a model village.
- Organizing vocational courses to the un-employed youth.
- Organizing entrepreneurship development activities to the students through seminars and workshops every year from 2014-15 to 2019-20.