



## STRATEGIC PLAN (2019-2024)



Anil Neerukonda Institute of Technology and Sciences  
Sangivalasa - 531162  
Bhimili Mandal, AP  
Web: <http://www.anits.edu.in>  
08933-225083, 225084

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The above graphic is a Kalamkari painting, the world famous fabric painting of AP which comes in 2 distinctive styles Kalahasti&Machilipatnam styles.

## Preamble:

The institute has prepared the strategic plan based on the inputs from various stake holders and was initiated in the month of January 2019. The core committee for strategic development which consists of all Heads of the Departments discussed various items and finalized in July 2019 and was put up to Governing Body. The Institute Strategy document has a plan for the nine identified goals for five years, action items and metrics. The Strategy document process has created a participatory process for involving stakeholders in the visioning and planning process of the Institute for meeting future challenges.

Some of the notable outcomes the institute witnessed based on the perspective plan which was initiated in 2014 for 5 years are

- The first batch of students under autonomous scheme leaving the institute successfully fulfilling the demands and aspirations of all stakeholders
- All UG programmes i.e., 5 got NBA accredited and for 2 process completed
- Got NAAC accreditation with A grade for 5 years extended for 1 more year till December 2020.
- Recognition as Skill Excellence centre by Govt of AP
- Recognised as Research centre by Andhra University
- New curriculum R19 based on the aspirations of industry and society.
- New PG course 'Soil Mechanics' in Civil Dept
- Enhanced usage e-learning resources such as MOODLE, NPTEL etc., by the faculty for continuous engagement of students
- Establishment of Institute's Innovation council.
- Full-fledged Gym and Solar power system
- Adopting a village under Unnat Bharat Abhiyan Scheme
- Increased internships and placements in top notch companies.
- The academic performance, winning prizes in national level contests conducted by organizations of international repute such as TCS, Virtusa, Infosys etc.,
- Innovations by students
- Winning prizes in national level events in sports.

## Progress indicators:

	2014-15	2015-16	2016-17	2017-18	2018-19
Students in take	840	1020	1020	1020	1080
Students admitted	745	995	967	1054	969
Degrees conferred (%) in 4years	69	74	73	71	81
Female students	275	297	306	312	356
Placements	342	432	444	321	535

Faculty	211	224	246	275	270
Number of PhDs	35	37	47	50	68
Publications(Journals & Conf.)	171	188	174	293	328
Research / sponsored Projects in Lakhs	13.70	12.39	13.5	21.24	36.14

### The SWOT Analysis:

<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>• Robust Teaching- Learning Processes</li> <li>• Percentage of seats filled</li> <li>• Public Perception</li> <li>• Talented Students</li> <li>• Placements</li> <li>• Faculty Publications</li> <li>• Dedicated faculty</li> <li>• Faculty retention</li> <li>• Academic freedom to staff</li> <li>• Library</li> <li>• Financial aspects</li> <li>• Supportive management</li> </ul>	<p><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>• Cadre ratio&amp; PhDs</li> <li>• Sponsored research</li> <li>• Infrastructure for R &amp; D</li> <li>• Industry interaction</li> <li>• Entrepreneurship activities</li> <li>• Placements in core branches / Higher studies</li> <li>• Alumni activities / interaction</li> <li>• Competencies up-gradation</li> <li>• Delegation of financial powers</li> <li>• Innovations in teaching techniques</li> <li>• Professors of eminence</li> </ul>
<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>• Demand for Quality Engineering education</li> <li>• Curriculum changes under autonomous</li> <li>• New programmes based on demand.</li> <li>• Skill development Certified courses</li> <li>• Visakhapatnam as industrial hub</li> <li>• Make -in India programme</li> </ul>	<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>• Decline in quality of student in-take</li> <li>• New Deemed universities attracting good students and faculty</li> <li>• Maintain Student faculty ratio and faculty retention.</li> <li>• Placements are volatile due to US /global policies and competition .</li> <li>• Student / faculty lack of motivation</li> <li>• Fees structure – AFRC.</li> <li>• Government policies</li> <li>• Mercurial changes in Technology and Industry demand for student readiness</li> </ul>

### Strategic Plan 2019-24:

Growth in vibrant economies of the world has been fuelled by innovation, disruptive technology, and product development, which have roots in state of the art research and education in academic institutions. The Fourth Industrial Revolution (4IR) which is a fusion of advances in artificial intelligence (AI), robotics, Internet of Things (IoT)

3D printing, genetic engineering, quantum computing etc., and is blurring of boundaries between the physical, digital, and biological worlds. As a result of this perfect storm of technologies, the Fourth Industrial Revolution is paving the way for transformative changes in the way we live and radically disrupting almost every business sector and changing the dimensions of engineering education. It is recognized that technology has a major role in transforming lives. Creating an enabling ecosystem meet such challenges, the strategic plan was prepared by the core committee of ANITS. In addition to broad range of activities the institute carries out in the pursuit of its mission, the following goals are identified to be given special emphasis in the strategic plan.

- 1. Course Programmes: Broaden the educational areas**
- 2. Teaching and learning experiences**
- 3. Human Resources**
- 4. Research and development**
- 5. Enhance engagement with industry and society**
- 6. Innovation and Incubation eco system**
- 7. Infrastructure**
- 8. Placements**
- 9. Enhance Alumni engagement**

### **1. Course Programmes: Broaden the educational areas**

The existing well-established 7 UG and 5 PG programs provide a foundation for further expansion. One coordinate of expansion is starting new undergraduate programs and the other is starting new programs in disciplines that are currently not present in the Institute. Both these forms of expansion will make the student body more diverse in their interests and the educational offerings. This expansion will enrich the student experience and make the Institute more capable of addressing complex engineering and societal problems. The Institute would also benefit by developing expertise in areas related to the needs of the local industry and business. The Institute is keen to encourage inter-disciplinary education. Design thinking will be integrated into the departmental curriculum.

### ***Action points***

- Create a mechanism (expertcommittee) for identification of new programmes/areas and realignment of existing programmes based on special needs of the society regional challenges, and facultyexpertise.
- Initiate new undergraduate programmes in existing academic entities
- Initiate major curricular revision to broaden education and enhance skill basedcourses
- Progress from CBCS to flexible curriculum system / Major-Minor system

### ***Metrics and Targets:***

- New programmes to start: UG programmes: 4  
PG programmes: 3
- Review of the curriculum: Every 4 years  
Enhance the choice of electives from present 20% to 40%.
- Certificate/ value added course: Based on the local needs at least 4 courses

## **2. Teaching and learning experiences:**

The major challenge today is continuous engagement of students and make them life-long learners. A good blend of class room teaching with online support systems and group learning are the need of the hour.

### ***Action points:***

- Create a class room environment of international standards
- Another technological initiative is the provision of a course management platform for managing multiple pedagogical approaches such as conventional teaching, online courses and group learning.

### ***Metrics and Targets***

- All class rooms to be completely ICT facilitated.
- Smart class rooms in each department.
- Development of full-fledged online resources for all courses by faculty for continuous engagement on and off campus.
- Ensuring the students to attain non-domain skills i.e., 7 graduate attributes as mentioned in Washington Accord within the framework and set the evaluation process be incorporated in all courses in each semester in each programme

### **3. Human Resources:**

ANITS recognises human resources as the most important among the assets needed to realise its aspirations. This importance is particularly accentuated in the present context of steep growth in take. Thus human resource management is a vital institutional function. The Human capital consists of students, faculty and staff. ANITS is endowed with highly dedicated faculty but in the journey towards the vision of the institute there is need to improve the quality of human resources.

#### ***Action points:***

- Need-identification, recruitment, training and development, personnel administration, evaluation of performance and encouragement to faculty.
- Revamp the organization structure with senior most Professor head different verticals of activities such as R & D, Academics, projects etc., to cater the need of enhanced in-take, activities and to have target oriented approach on all issues.
- To promote skills and personality development of all students for smooth assimilation into a professional work force.

#### ***Metrics and Targets:***

- To recruit at least 10 top class faculty having educational qualification and also work experience and research contributions from highly reputed institute like IITs and NITs during the period 2019-24.
- Reward high achieving faculty every 3 -5 years.
- Improve the intake students with ranks less than 10000 from present 15 % to 25%

### **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. The overall strategy for developing sponsored research and industrial consulting activities at ANITS during 2019-24 is to vigorously identify new research projects of relevance to the nation and of interest to industry and to build relationships.

### ***Action points***

- A Sponsored Research Development committee /team is to be additionally created that will identify and assist with the definition of research projects and creation of centres of excellence by the faculty in a manner that meets the objectives of sponsors of research.
- Collaboration with institutions of excellence for exchange of knowledge and ideas.

### ***Metrics and targets:***

- Expand the labs and equipment to carry out research agenda and enhance interdisciplinary research.
- Establishment of research labs in 3 areas for inter-disciplinary research.
- A target of Rs 2 crores has been set to get funding from various resources during the plan period.
- A target of 20 Lakhs is fixed for consultancy in these departments over a period of 5 years.
- Ph.D enrollment for guidance under ANITS faculty to be enhanced to 100.
- Doctorates in the college to raise from present 28% to 50%.

### **Enhance engagement with industry and society:**

ANITS needs to engage with the outside world to effectively execute its stated mission as well as its activities. Through such an engagement the Institute hopes to understand needs and issues as well as to inform, educate and share best practices. This also helps to build perspective and awareness among faculty and students and is a source of creativity and innovation. The engagement makes research and teaching more relevant and often results in direct benefits to society.

### ***Action points:***

- Provision of informed technical opinion to public.
- Providing technical solutions to pressing issues of public importance
- Providing technical expertise to individuals and organizations involved in socially relevant projects
- Playing vital roles during emergencies and after disasters.

### ***Metrics and Targets:***

- As a part of industry-Institute interaction, collaborations with premium agencies / institutes (at least 2) with firms like Tata Technologies, TVS Harita, TCS,

Qualcomm on the design and technological side and with IREDA for non-conventional sources of energy.

- Offering short courses and workshops ( minimum 1 each year) for professionals, particularly in industry, to enable them to stay up-to-date and get qualified further
- Specific objectives and targets.
- An Industry Connect Programme wherein faculty spend a few weeks embedded in industry with a view to discovering research challenges of mutual interest.

### **Innovation and Incubation Eco System:**

ANITS has already set in motion the creation of an innovation and incubation ecosystem. The idea is to work with industry to support the development of new products and their commercialisation and to create *ab-initio* new companies for sunrise technologies and products through incubation and ANITS is at a nascent stage.

#### ***Action points:***

- Develop association with NRDC, AP innovation council etc., for support and develop a perfect environment for above activities.
- Provide seed money / infra for developing idea generation,

#### ***Metrics and targets:***

- Number of patents to be filed : 5
- To grow to a level where number of companies incubated : 5

### **Infrastructure**

ANITS looking forward to digitalize and create tech systems to create an environment to be considered as “Happening campus”. The institute is committed to grow sustainably and develop as a model clean, green campus. There is a need to have campus policies to promote sustainable practices and maintain the flora and fauna of the campus. Initiatives will include smarter buildings, energy efficient appliances, increased use of renewable energy, improved solid waste and waste water management systems, increased recycling. ANITS will move towards a reduced energy and carbon footprint (low carbon campus) and a zero discharge campus.

#### ***Action points:***

- Low carbon campus growth.



- Involve students in campus planning including green campus initiatives.
- Monitor metrics by creating a network of sensors and report sustainability metrics.

***Metrics and targets:***

- To upgrade all buildings and their surroundings to global standards in cleanliness and safety.
- Reduce the drudgery of data collection, retrieval and analysis by providing an ERP software.
- Setup a cell which will monitor, implement and enable policies and initiatives of the Green Campus Committee
- Establish Green Campus metrics and work towards reducing carbon footprint water footprint, energy footprint.

**Placements:**

Placement of undergraduate students, which has traditionally been good, will be fine-tuned to meet the aspirations of the students and expectations of employers.

***Action points:***

- Programmes will be flexible to enable customisation for seekers of jobs.
- Students will be trained to position their research or project work and to match their specialised knowledge with job opportunities

***Metrics and Targets:***

- Enhance the placements to 75% in diversified arenas such as core companies / product development companies / public sector by providing the requisite skills / expertise as per the industry needs.

**Enhance Alumni engagement**

Alumni have been key stakeholders in the Institute's evolution and growth. ANITS will continue to build mutually beneficial relations with its alumni during 2019-24 so that a range of modes of engagement can be explored.

***Action Points:***

- Create an Alumni Centre at the Institute to support alumni visits, activities and engagement.
- Increasing the presence of the Institute in social media to promote engagement between alumni, students and faculty members.

- Tele-calling and other personalised efforts to actively engage with alumni
- Increasing the number of face-to-face meetings
- Multiple interaction modes such as, interaction between alumni and students, mentoring, interaction between alumni and faculty, alumni inputs for curriculum development, alumni support for student placements and internships, alumni involvement in Department Advisory Committees and in enhancing the innovation ecosystem at ANITS

***Metrics and targets:***

- Number of alumni visitors to Alumni Centre and the Institute: 150 per year
- Number of courses/workshops/networking events for alumni: 2 per year

**Approach to achieve the identified goals:**

In order to achieve the identified goals for each category a task force is formed. The task force work organize the meetings regularly, plan the course of action, implement the decisions taken there upon, check the progress and act on the targets set. The IQAC cell closely associates with the teams and ensure quality aspects is all activities.

***Task force for various activities:***

**1. *Course Programmes: Broaden the educational areas***

Head : Principal  
 Members: Asst. Principal ( Admn)  
 HoDs of CSE, Mechanical, Civil

**2. *Teaching and learning experiences***

Head : Dean ( Academics)  
 Members: Asst. Principal ( Academics)  
 HoDs of all departments

**3. *Human Resources***

Head : Dean ( Admn.)  
 Members: Asst. Principal ( Admn.)  
 HoDs of all departments  
 Admn..officer

**4. *Research and development***

Head : Dean ( R & D.)

Members: Research committee Convener and all members

**5. Enhance engagement with industry and society**

Head : Principal

Members: HoDs of ECE, IT, EEE, Chemical  
Head (Placements)

**6. Innovation and Incubation eco system**

Head : Chef-coordinator ( Innovation Cell)

Members: All members of innovation & incubation cell

**7. Infrastructure**

Head : Convenor ( Amenities Committee)

Members: All members amenities committee  
Admn. Offcier

**8. Placements**

Head : Principal

Members: Head (Training), Head (Placements),  
Placement committee coordinator  
All members of placement committee

**9. Enhance Alumni engagement**

Head : Head (Placements)

Members: Placement committee coordinator  
All members of Alumni committee of various depts.

\*\* In the absence of any designated position in the task force, Principal will nominate suitable person else the next in order will be acting as Head of the task force .



**PRINCIPAL**

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