

ANITS
Compliance report
on
Vision 2020
(Perspective Plan-2014-19)

ANITS has envisaged to move towards its vision statement by having a Perspective Plan for the 5 years from 2014 to 19 and named it as vision 2020.

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 one more year till December 2020.
- Recognition as Skill Excellence centre by Govt of AP
- Recognition Research Centre by Andhra University
- New curriculum 2019 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 Innovation and Incubation cell
- 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 ofPhDs	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

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.

Compliance status:

Got autonomous status and first batch successfully completed the course.

- 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.

Compliance status:

Syllabus revised in 2019 incorporating subjects on latest technological developments and industry needs.

- Under graduate students will be taught professional ethics, soft skills and personality development courses.

Compliance status:

Incorporated in the curriculum.

- NCC/NSS/Sports is made compulsory for all under graduate students by assigning credits.

Compliance:

Incorporated in the curriculum in 2015 as non credit courses and part of regular activities in 2019.

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.

Compliance status:

Unable to have good number of admissions in PG in view of local factors.

- At present, the Institute is offering five 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 and Biomedical Engineering.

Compliance status:

M Tech in Soil Mechanics was started PG in view of local factors.

- M.B.A. Program in collaboration with foreign institutions.

Compliance status:

MBA could not be started due to financial uncertainty in view of the reimbursement policy of government.

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.

Compliance status:

Complied

- More emphasis should be given to field training and laboratory teaching.

Compliance status:

Complied with more number of projects with real time situations

- To nurture the hidden creativity of students, every department is having professional student association. The activities of the association should be further enhanced.

Compliance:

Complied

- Planning for permanently fixed LCD projectors in all class rooms by 2017-18.

Compliance:

Complied only for 50% of class rooms with fixed LCD projectors

- Conversion of all class room into E-class room by 2020.

Compliance:

Complied partially

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.

Compliance:

Number of PhD as percentage of faculty increased from 16% to 25%.

- 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, IICChE, IE, ASME, ISHARE etc., by 2016-17.

Compliance:

Almost 80% of the faculty complied

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
		Network Securities

9	Physics	Material Science
		Dynamic Properties Using Electrical Analogy
		Semiconductor Devices
		Integrated Circuits
		Biophysics
10	Interdisciplinary Technology	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.

Compliance:

One international conference organized in CSE department.

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.

Compliance Status:

	2014-15	2015-16	2016-17	2017-18	2018-19
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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.

Compliance:

Rs. 4 lakhs of consultancy projects received in Civil Department

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.

Compliance:

Not complied

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.

Compliance status:

Complied

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

Compliance status:

Gym established in college, Boys hostel, Girls hostel

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.

Compliance:

Fees payment system, examination system, attendance system were computerized.

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.

Compliance:

Guest lectures, workshops and conferences were organized in all departments where experts from industry and academia delivered lectures /talks

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 centre for higher studies.

Compliance status:

Dr Rajya Lakshmi -ECE, Dr Chaitanya ECE, Dr Suresh IT Dept have completed their PhDs under OIP

Mr S. R. Misra- CSE, Mr. PremDheeraj are under OIP pursuing PhD

About 10 members were given study leave for long period for pursuing PhDs

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.

Compliance:

2 villages were adopted

Entrepreneurship activities enhanced and Innovation and Incubation cell was established and activities were being taken up.

PRINCIPAL