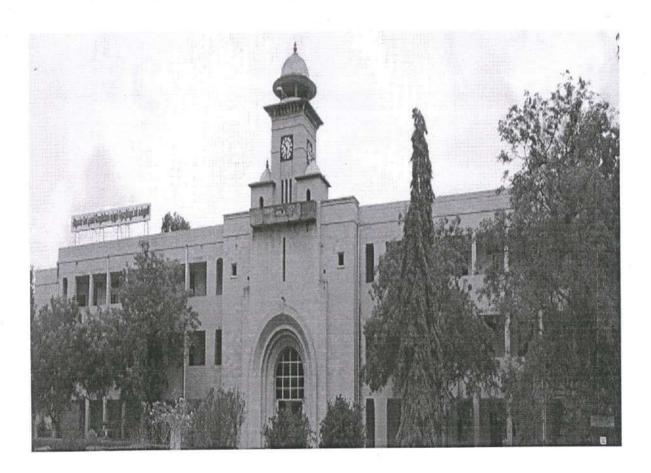




# ALAGAPPA CHETTIAR GOVERNMENT COLLEGE OF ENGINEERING & TECHNOLOGY



Strategic Plan 2021-2025



# <u>Founder</u>



தொட்டனைத்துஊறும்மணற்கேணிமாந்தர்க்குக்

கற்றனைத்துஊறும் அறிவு.---Thiruvalluvar

(Just as the water wells up in the well when used, Knowledge swells and wells up when learnt with effort....)



## INCEPTION

## 1.1. About the institute

Dr.R.M.Alagappa Chettiar, a man of rare wisdom and forethought, founded Alagappa Chettiar Educational Trust with the sole aim of developing the backward area of Karaikudi in Tamilnadu into a centre for higher education. Alagappa Chettiar College of Engineering and Technology was established in the year 1952 in the sprawling area of 200 acres.

# Milestones of the institution

| 1952 | Alagappa Chettiar Government College of Engineering and Technology (ACGCET) was initially started with three programmes Civil, Mechanical and Electrical and Electronics Engineering |  |  |  |  |
|------|--|--|--|--|--|
| 1953 | The foundation tablet of the main building of the institute was laid by the then President of India Dr. Rajendra Prasad  |  |  |  |  |
| 1966 | Institution was handed over to Government of TamilNadu   |  |  |  |  |
| 1969 | Electronics and Communication Engineering discipline was started   |  |  |  |  |
| 1971 | Part-Time B.E. programmes in Civil Engineering, Mechanical Engineering, Electrical and Electronics Engineering disciplines were introduced   |  |  |  |  |
| 2001 | B.E. Computer Science and Engineering discipline was started   |  |  |  |  |
| 2012 | Rs. 12.5 Crore was funded by TEQIP -II   |  |  |  |  |
| 2014 | Permanent Affiliation for 4 UG and 6 PG programmes   |  |  |  |  |
| 2015 | Permanent Affiliation for 4UG & 6 PG programmes  |  |  |  |  |
| 2015 | Controller of Examinations (CoE) building was constructed at the cost of Rs. 2.00 crore  |  |  |  |  |
| 2015 | Dr. Abdul Kalam Hostel was inaugurated by the then Honorable Chief Minister of Tamil Nadu  |  |  |  |  |
| 2016 | An additional grant of Rs. 5 Crores was released under TEQIP II scheme   |  |  |  |  |
| 2017 | An amount of Rs.7.00 Crores was granted under TEQIP -III scheme  |  |  |  |  |
| 2016 | AICTE recognized QIP centre was established  |  |  |  |  |
| 2019 | The Internet of Things (IOT) Laboratory worth 30 Lakhs (supported by Alumni)was established as the Centre of Excellence  |  |  |  |  |
|      |  |  |  |  |  |



#### 1.2 VISION

Our commitment as a centre of engineering education is to impart technical knowledge par excellence, motivate the learners in research, evolve result – oriented, innovative techniques in engineering, provide necessary career guidance, and train our learners in leadership qualities so as to achieve better productivity and prosperity for our country.

#### 1.3 MISSION

- > constantly updating the departmental resources, facility and other infrastructure by acquiring state of the art equipments.
- > imparting continuous in-service training to the faculty and supporting staff.
- > providing state of the art education and training to the student.
- > motivating the students to excel and augmenting their knowledge through continuing education programs.
- > providing soft skill development training to students.
- > inculcating the feeling of oneness responsibility and service to community in the minds of students to serve the society better.
- > Carrying out purposeful research.

#### 1.4 IDEOLOGY

ACGCET, a leading institute for higher education in engineering and technology in the state, is committed to excellence through the delivery of outstanding undergraduate, post-graduate and research - oriented technical education programmes that remains contemporary and responsive to the diverse needs of the young and energetic minds. With financial support from the state government and alumni, the faculty members and technical staff of the institute promote the creation of highly intellectual, professional and socially responsible engineers through innovative teaching and learning processes. The institution has been greatly dedicated to academic vitality, integrity, and diversity.

INTEGRITY: ACGCET is committed to ethical and responsible behavior in one's own actions and aims at developing the same commitment in our students, thus fostering individuals who have the skill, knowledge, and ability to engage positively with the diverse and changing technological world. ACGCET's commitment to excellence extends to all the levels of the institute campus to nurture a climate of ethical conduct, respect, responsibility, and trust.

ETHICS: ACGCET believes in working with honesty, courage, and trustworthiness.

**RESPECT**: ACGCET supports a community with admiration and thoughtfulness among students, faculty, staff.

**RESPONSIBILITY:** ACGCET is committed to be responsible and accountable at all levels of operations in the institution, be it a hassle-free environment or the continuous assessment for better academic programmes or transparency in budgetary and operational affairs

TRUST: ACGCET is committed to earn the public's trust and respect at all steps of its actions through teaching and learning process.

**DIVERSITY**: ACGCET is devoted to support a diverse community of students, faculty and staff members for enhanced multicultural learning opportunities. ACGCET respects the opportunity to work, learn, and develop to embrace the diversity of individuals, their



ideas, irrespective of their caste, race, ethnicity, religion, spiritual beliefs, national origin, age, gender, marital status, socioeconomic background, and physical ability.

INTELLECTUAL EXCELLENCE: ACGCET believes in lifelong intellectual development of students, faculty, and staff members. The institute instigates a continuous quest for upgradation of knowledge for sustained growth of technical skills through effective teaching and learning.

# The journey so far....

#### Institutional Profile

| S.<br>No                    | Department                                      | U.G Program                                     | PG Program  | Ph.D<br>Program          |
|-----------------------------|---|---|---|--------------------------|
| 1                           | Civil Engineering                               | B.E - Civil engineering                         | Structural Engineering     Environmental Engineering    |                          |
| 2 Mechanical<br>Engineering |   | Mechanical Engineering                          | 1.Manufacturing Engineering     2.Computer Aided Design |                          |
| 3                           | Electrical and<br>Electronics<br>Engineering    | Electrical and Electronics<br>Engineering       | Power Electronics and Drives                            |                          |
| 4                           | Electronics and<br>Communication<br>Engineering | Electronics and<br>Communication<br>Engineering | Optical Communication                                   | Recognized<br>PhD centre |
| 5                           | Computer Science and Engineering                | Computer Science and<br>Engineering             | -   |                          |
| 6 Science and Humanities    |   | Supporting Department                           | t for UG and PG Program.                                |                          |

| Year               | 2015-16 | 2016-17 | 2017-18  | 2018-19 | 2019-20 |
|--------------------|---------|---------|----------|---------|---------|
| Total Students     | 1977    | 1932    | 1892     | 1810    | 1757    |
| Total Faculty      | 99      | 108     | 115      | 121     | 116     |
| Degrees Conferred  | 526     | 492     | 492      | 463     | 441     |
| Paper publication  | 143     | 59      | 65       | 59      | 70      |
| Budget (Rs. Crore) | 17.52   | 13.86   | 15.63    | 18.403  | 19.63   |
| Grant (TEQIP-III)  |         |         | 7 crores |         |         |



# Strategic Plan 2021-2025 - A bird's eye view.

The strategic plan 2021-25 is focused on an organizational management activity that has been used to set priorities, focus energy and resources, strengthen operations to ensure that the employees and other stakeholders are working towards a common goal. Strategic plan has been used as an important tool for guiding the day to day decisions towards the progress of the institute and also for evaluating the changes in the approaches when heading forward through assistance from various stakeholders, external agencies like NBA, NAAC, NPIU, NIRF, IIC & ARIIA. At the end of period, the following are aim to achieve.

- > To fill 90% regular faculty
- > All Faculty to complete Doctorate
- > To achieve SFR ratio as 1:15 in all programmes.
- > To achieve Placement as 80%.

To attain the above goals, the plan is prepared as,

#### Academic

Academic excellence is achieved using technology-based teaching learning process and by continuous faculty engagement with effective utilization of resources for sustainability.

- 1. Provide strong and flexible curriculum to promote creativity, problem solving and industry-oriented courses in line with Outcome Based Education (OBE).
- 2. To encourage students to earn at least 10% of their degree course credits through online platform through MOOC/NPTEL courses.
- Emphasize on PG Programs' curriculum with the inclusion of recent thrust research areas.
- 4. Students placement is given importance as it renders the students an opportunity to gain specific skills in their subject or industry of choice as well as the employability and entrepreneur skills required for real-life work. It also increases their knowledge of an industry or sector, allowing them to make better informed decisions about future career choices.
- 5. To create a learning environment that nurtures rise in leadership qualities, team-work and professional ethics. In order to bring about the required change, soft skills, which is also vital for placement is included in the curriculum and is blended in the program.
- To offer contemporary interdisciplinary courses such as Artificial Intelligence, IoT, Cloud Computing, 3D Printing, Communication Technology, Networks and Electric Vehicles as open electives.
- 7. Professional Ethics: The human values are useful for decision making. It is always directed towards specific purposes and are included in the courses accordingly.
- Co-curricular activity: To ensure every student to actively participate in any one of
  the co-curricular activities for better concentration and social values the co-curricular
  activities are planned to be included in the time table.



- 9. Financial Aid: Support financial assistance to student participation in national/international competition.
- 10. Engage industry experts and research emeritus as Adjunct faculty to impart specialized skills to students and help research scholars as per AICTE norms.
- 11. To achieve 100 % completion of their degree program within the specified duration through better teaching learning process.
- 12. To improve the mentor system to identify the slow-learning students and provide with counselling for the betterment of student's career.
- 13. To ensure all classrooms are provided with 100% ICT facility.
- Provision of project and model laboratories in each department to tap the student's knowledge, practical and simulation skills.
- 15. Create a better learning environment by implementing an effective feedback mechanism for ensuring high transparency in the internal and external assessment system. Continuously improving the system with the input from the stake holders through effective feedback mechanism.
- 16. Review the academic activities by internal and external audit and also from department advisory committees.
- 17. To conduct skill development course for every semester in all departments, insists to train all student in any one of the skill training before completion his/her degree.
- 18. To encourage, inspire, nurture young students by supporting them to materialize their ideas through advancement in incubation, patent filing, and develop entrepreneurship facilities by upgrading them.
- A unique mobile and web application will be designed and developed to monitor the day-to-day events in the institution.
- 20. Improve support systems for academically weak and vulnerable students.

#### Faculty and Staff

- 1. Extension of MIS: Management of Information System (MIS)is currently available in the institution at the TEQIP level, it is to extended to the entire college activities. To adopt effective & customized integrated ERP (Entrepreneur Resource Planning) system which reduce the time for extracting data to increase accuracy which is vital for planning and improvement. It is planned to reduce the administration work to provide a relief and encouragement to the faculty membersfor spending their most valuable time in teaching in online platform Moodle and to pursue research in the institute campus.
- 2. To train the supporting faculty in modern ICT handling tools.
- 3. Staff members and students undergo medical screening every three months.
- 4. Technical staff should enhance their skills through industrial training.



5. To improve the personal and professional career of Faculty and Staff,

### <u>Infrastructure</u>

The institution has given tremendous effort in the development of campus infrastructure.

- Effective utilization and maintenance of the institution's vast campus area and good infrastructure.
- 2. Construct new hostel buildings / renew the old buildings and improve the facilities in the hostel.
- 3. Enhance library resources.
- 4. Boost residential facilities for research scholars.
- 5. To Increase internal revenue.
- 6. A good bandwidth of internet connection to be given to all faculty, staff and students.
- 7. To encourage Digital India Movement, all the official circulars will be sent through electronic communications to reduce the paper consumption.
- 8. Encourage ICT enabled tools.

#### Industry - Institute interaction:

- 1. To improve industry-institute interaction
- 2. To record at least 100 active Memoranda of Understanding (MOU) with the industry and reputed institutions.
- 3. To achieve at least 30% of Student's projects that are Industry based.
- 4. To provide seed grant for start-ups.
- 5. To mutually exchange intellectual resources with industry.
- 6. Constitute IIP functional teams that comprise of faculty members to monitor internship, apprentice, industrial visit and placement of the students.
- 7. Every faculty member to be engaged with one industry appropriate to his specialization.
- 8. Deputation of faculty to industry for short term training.
- 9. Establish industry supported laboratories in all departments.
- 10. Design curriculum To introduce collaborative industry (MOU) required course, consulting with the appropriate industry person

#### Research

1. To establish Centre of Excellence in all departments.



- 2. To augment sophisticated equipments and establish research facilities in all the programmes.
- 3. To have all the faculty members involve in effective research activity in their field of research.
- To encourage faculty members for establishing research laboratories through funding agencies like DST, DRDO etc.
- 5. To encourage faculty members for establishing collaborative research work with national research laboratories and academic institutions.
- 6. Efforts to be made to admit fellowship students through the external funding agency.
- 7. To file a minimum of 10 patents every year.
- 8. To provide positive environment for research consultancy.
- Establish a Research Advisory Council and Technology Board with internal and external members to interact with faculty and suggest long term opportunities and trends.
- 10. Encouragement of collaborative research between faculty of basic science and engineering & technology programmes.
- 11. To achieve ACGCET h- index as 150 in SCOPUS institutional profile.

#### Innovation and Enterprenurship

- 1. To set up a technology park in collaboration with alumni and industry.
- 2. To commercialize software developed in the Institute.
- 3. To provide substantial start-up grants for high-potential research work which enables to attain national rank.

#### Alumni Relations

ACGCET alumni association is a classic symbol of philanthropy of the institution. Their huge contribution for the welfare of the institution stands next to the prestigious institutes like IIT's. The Institute is committed to lifelong involvement with all the graduates and continuously support to their careers and professions. The institution's development activities heavily depend on alumni contributions.

- 1. Increasing the presence of the Institute in social media to promote engagement between alumni, students and faculty members.
- Creating more opportunities for alumni to spend time on campus and engage with students and faculty.
- 3. Engage alumni as Adjunct faculty



#### Placement and Career Guidance

- 1. Students will be trained to match their specialized knowledge for the benefit of job opportunities.
- 2. Efforts to attract more industry for campus recruitment.
- 3. Students will be provided career counseling starting from their fourth semester of their academic program.
- 4. Provide GATE, IELTS, TOFEL training for students who aspire for higher education.
- 5. Special efforts are required to improve student's communication skill which is vital for student's self-actualization.

#### Outreach

Outreach activities are aimed to strengthen relations with industry, to contribute directly to society at large and to spread awareness in the community about the important contributions of the institution. To adopt one nearby village every year and develop sustainable water management system.

#### **Environment Policy**

It is committed that all future activities and growth of institution will be done without compromising the environment policy of the institution.

At the end of 2025, attain status of Green campus.

- ✓ Clean and Plastic free Campus.
- ✓ Effective waste management.
- ✓ Encourage students to do project in energy conservation.
- ✓ Develop sustainable water management.
- ✓ To develop a road map for reduction of carbon emission in the campus activities.
- ✓ Focus on low-cost sanitation facilities.
- ✓ Participation in national level programs like digital India, Swatchh Bharat, Unnath Bharat Abhiyan
- ✓ One tree one student
- ✓ One tree one person: All Faculty Members, technical and Administration Staff of the Institutions will plant at least one tree themselves.
- ✓ Ensure that the institution comply with ISO 14001 guidelines that concerns with environmental hazards with respect to the activities carried out in the laboratories, workshop and in all workspaces.
- ✓ Students are encouraged to earn credits for their environmental activities.
- ✓ To attain the status of eco-friendly institution through installing solar panels thus reducing the carbon footprint.
- ✓ To install a biogas plant with assistance from MHRD in hostels to reduce LPG usage.
- ✓ Involve in Afforestation, a process which is necessary for conservation of soil by retaining its fertility by growing native trees and preventing soil erosion.

#### Implementation:

We will rigorously measure our progress in achieving change and improvement against the strategic objectives in this Plan. The Key Performance Indicators (KPIs) will allow us to evaluate our success year-on-year in the areas of greatest strategic priority.

