



# A.V.C. COLLEGE OF ENGINEERING

[Affiliated to Anna University, Chennai] | Approved by AICTE, New Delhi  
[Accredited by NBA] | Re-Accredited by NAAC with 'B++' grade (2<sup>nd</sup> Cycle)  
[An ISO 9001:2015 Certified Institution]  
Mannampandal, Mayiladuthurai District, Tamilnadu- 609 305.



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[www.avccengg.net](http://www.avccengg.net)

## Best Practice I

### 1. Title of the Practice

Green is the way to go

### 2. Objectives of the Practice

To create environment consciousness,  
Maintain biodiversity,  
Increase Tree plantation,  
Use of renewable energy and Effective waste management.

### 3. The Context

Environmental degradation and the effects of climate change are the most pressing issues confronting the modern world. The lack of awareness amongst students and general public about this challenging situation and abuse of nature is evident. There is a need to educate students and public about these issues and their negative effects on communities and human life, both now and in the future. The environmentally sustainable campus will provide a message to students that if nature is conserved, climate change may be averted. The green natural setting of the campus provides a conducive learning environment as well as lessons on how to safeguard the environment and aid humanity.

### 4. The Practice

There are 8000 valuable trees in the campus with 500 new saplings belonging to different species of plants. Planting of trees is a continuous process and on each environmental day, national festivals and whenever VIP guests visit the campus, new saplings are planted. Rain water harvesting is implemented in the college Campus. Rain water harvesting pits are created at each block for recharge of ground water. The campus has adequate waste disposal and collection centers. There are 9 bore wells in our campus to meet the water requirement for drinking, laboratory use and other purposes. Four RO plants (Mineral Water Plant) each with a capacity of 1000 LPD for drinking is also established.

The Institution has been promoting digital note taking, reading and email correspondence for reducing paper wastage. Printing is done only when absolutely necessary. On the way of paperless office students are insisted to pay tuition fee & examination fee only through online.

The Institution celebrates the World Environment Day, Energy Conservation day, every year by conducting Seminars, Guest lectures & Tree plantation. Eco club is taking care of environmental issues and conducts rallies, seminars & awareness programs periodically. A separate department is functioning to maintain gardens and campus cleaning in a hygienic manner.

A Biomass Gasifier and accessories are installed with 25 Lakhs financial support by AICTE under RPS to convert bio mass in to fuel gas through thermal root. In this device we feed biomass namely garden waste, paper waste and with refuse derived fuel. Also Napkin Vending machine and incinerator are established in women's waiting hall and Girls hostel.

The different types of waste like solid, liquid, E waste, and damaged equipment are properly segregated before disposal. Civil department has constructed an incinerator for the disposal of solid waste. The liquid waste are collected separately & disposed periodically. E waste & other laboratory damaged equipments are disposed as per statutory norms.

The department of Mechanical Engineering, Computer Applications and Chemistry of AVC College of Engineering are Anna University approved Research Centres for the award of PhD and MS by Research. Innovative research on green products and green technology is being carried out in various domains. Bio composites, Bio fuel for IC Engines, Biomass gasification, fuel from different torrefied biomass and medical waste pyrolysis oil, Solar power utilization and Electric vehicle technologies are some domains in which the research are now being carried out.

### **5. Evidence of Success**

The Institution was selected as Green Champion of the District in 2021 and 2022 by MGNCRE consecutively and was awarded with Rs 1 lakh cash prize by the Environment and Pollution Control board. 23 Research papers in the above green areas have been published in reputed journals and conferences by the faculty. Our faculty member Dr. S. Rajkumar received a Grant-in-Aid of Rs 21,82,730/- from the Science and Engineering Research Board (SERB), New Delhi for conducting the research project “Improving the electrical yield CPL passive cooled solar PV panel with IoT” in the year 2022-23.

The department of mechanical engineering has obtained funding from AICTE under MODROBS for the project titled “Design and simulation of fluid flow & heat transfer in renewable energy applications” in the year 2019-20 for 14,73,334/-.

### **6. Problems encountered and resources required**

Some problems have been encountered during the implementation of various programmes outside the Institute. The dominant problem has been to manage ample time required to carry out these extensive activities amidst the hectic schedule of the college. Besides the distance of the villages has also proven to be a hindrance as transportation facilities need to be arranged for going to the villages. Ensuring involvement of villagers in Green initiatives was also difficult as villagers were often engaged in farming throughout the day. The financial resources required for carrying out these Green initiatives were managed from the college fund.

### **7. Notes (Optional)**

The Green practices though won accolade, the real satisfaction comes in the form of contribution “to the earth, Humanity in total and for the future”. The outcomes may be difficult to be substantiated in quantitative terms, but the Institute is moving in the right direction with firm footprints. After all, a journey begins with a small step.

Any other information regarding Institutional Values and Best Practices which the university would like to include.



தமிழ்நாடு அரசு

பசுமை முதன்மையாளர் விருது

GREEN CHAMPION AWARD

2022

AWARDED TO

A.V.C College of Engineering  
Mannampandal, Mayiladuthurai Taluk  
Mayiladuthurai District

For exemplary contribution in the field of Environmental  
protection and awareness

*Tayanthi M*

தலைவர்

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## **Best Practice 2**

### **1. Title of the Practice**

On the way to NEP 2020

### **2. Objectives of the Practice**

- To transform into a holistic multidisciplinary institution
- To strengthen the vocational education and soft skills of students in alignment with National Skills Qualifications Framework
- To integrate the Indian Knowledge system (teaching in Indian Language, culture etc.) into the curriculum
- To transform curriculum towards Outcome based Education
- To increase the possibilities of offering vocational courses through ODL mode

### **3. The Context**

Education without ethics and human value is equivalent to flood in Wild River. A good education system is one which develops good human beings capable of rational thought and action, possessing compassion and empathy, courage and resilience, scientific temper and creative imagination, with sound ethical moorings and values. Our institution also aims at producing engaged, productive, and contributing citizens for building an equitable, inclusive, and plural society as envisaged by our Constitution. Making the student feels welcomed; creating safe and stimulating learning environment, providing wide range of learning experiences and providing good physical infrastructure and appropriate resources conducive to learning to all students are the tools for a good educational institution. NEP 2020 fulfils all the above aspects and we are marching towards it.

### **4. The Practice**

Different learning avenues are utilized apart from the affiliating AU curriculum with various clubs and cells. Women Empowerment Cell looks after Gender parity. Human value is taught through the Universal Human Value cell since 2020.

Induction programme is conducted to the first year UG students through SIP, IKS cell and Yoga club before the commencement of the regular classes, to obtain holistic learning. To share Indian culture and knowledge “Heritage of Tamils” and “Tamils and Technology” is taught to the students in Tamil along with curriculum by an expert Tamil faculty. Exams for these subjects can be written either in English or Tamil. The institution encourages faculty to use English and vernacular languages in the class rooms.

The affiliating university offers multiple entry and exit plans for students through the regulation 2021 like flexibility to drop courses, online courses instead of professional elective subjects/Open electives, credit transfer, B.E/B.Tech Honours options and Minor degree.

Community engagement is the part of the extension activities for the NSS, NCC and Eco Club students, carried out regularly and some of them have turned out to be community projects by the students.

The research and Innovation Eco system practised is supported by the R&D Cell enabling multi-disciplinary projects and researches. Research Proposals are scrutinized and submitted. Some of them are funded by Institutional RPS. Eleven IPRs have been filed as solutions to society's most pressing issues and challenges. A total of Rs 38 Lakhs has been fetched in last 5 years from various funding agencies for research projects.

Efforts are made to strengthen the vocational education and soft skills of students in alignment with National Skills Qualifications Framework. The “Naan Mudhalvan” Scheme supported by the Tamil Nadu Government is one of the major initiatives undertaken.

PMKVY scheme was successfully deployed in the institution till COVID 19 pandemic.

The learning of problem solving skills is evident as our students won in the Hackathon, Mapathon competitions conducted at National and state level respectively.

The Outcome-based Education model is followed since 2017 to focus on setting academic goals and working towards achieving these goals in a systematic manner. All curriculums have set programme objectives (POs) and Programme Specific Outcomes (PSOs). The CO-PO mapping is practised to find the curricular gaps and fill the same with adequate knowledge sharing sessions. 60% of our UG programmes are accredited with NBA till 2025 and for the remaining programmes it is under process.

The technological (ICT) tools for teaching learning activities are supported by 38 LCD Projectors, 03 smart boards, Coursera, Google educational package and Google meet licence. NPTEL, IITB Spoken Tutorial, SoloLearn and HackerRank certification courses are being offered. The course materials are uploaded in the Google cloud and college website for easy access of students.

### **5. Evidence of Success**

The AICTE has trained and certified our 24 staff members on Universal Human values.

Request for offering B.E Honours degree for four eligible students has been initiated with Anna University.

Every year since 2017, our institution students' team enter in to the grand finale of Smart India Hackathon organized by the Ministry of Higher Education, India and won title twice in the year 2021 & 2023. One team has won the Mapathon competition in 2023.

The number of Ph.Ds in during the accreditation period has increased to 58 from 34 and the total publications are: Journal articles 309 and Books 44. The IPRs filed has increased to 11 in the past year.

Under "Naan Mudhalvan"(TN Government Skill Development Programme) 600 students were trained in the past year and 800 of them are being trained now. The number of students certified under NPTEL, IITB Spoken Tutorials and Online training portals is more than 6000. In the PMKVY scheme 64 members of the society were skilled and made Job ready.

### **6. Problems encountered and resources required**

Some problems like transportation, making villagers to participate in extension activities needed additional funding from institute. Taking new roles through various cells/clubs every academic year is little difficult for students. Continuing a project begun by a set of students after they leave as new students want to innovate hampers performance requiring constant monitoring from faculty. Time Management, tackling academic, extracurricular and leadership roles is at times stressful for the students/faculty.

### **7. Notes (Optional)**

Institutions grow when their stakeholders contribute 100 percent. The student body which forms the core of an educational institution should be accountable and feel part and parcel of the institution's growth and the above practices make the Institution ready for NEP 2020.

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## A.V.C COLLEGE OF ENGINEERING, MANNAMPANDAL

### World's Biggest Open Innovation Model



## SMART INDIA HACKATHON 2022 Congratulations to the Winning Team



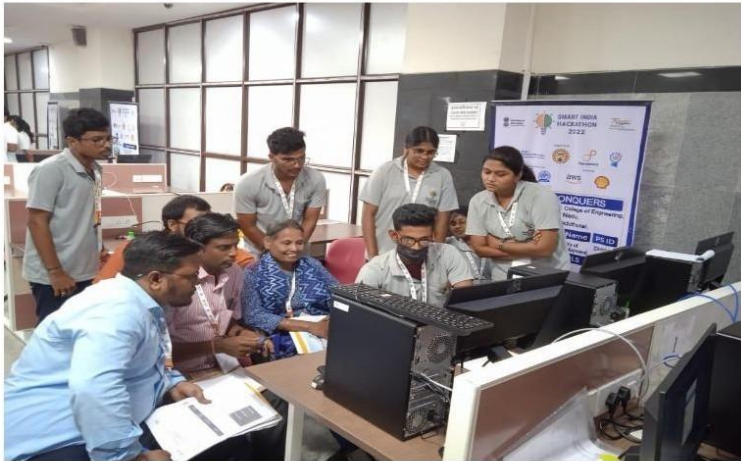
**Team Name : SmartCoders22, Nodal Center : Presidency University, Bengaluru**

**IT Students:** Baraniraj B, Sasikumar S, Dharanika S, Priyadharshini B, Parkavi P T, Sandhiya B

**Faculty Mentor:** Mrs. K. Aruna, Assistant Professor - IT

**Industry Mentor:** Mr.Vetrivelan M, Web Developer, CompIndia Infotech Pvt Ltd, Chennai

## Congratulations to the Grand Finale Participants



**Team 1 : CONQUERS, Nodal Center : IIT(ISM) Dhanbad, Jharkhand**

**CSE Students :** Abinaya.M, Arul.M, Ramaprabhakaran.R, Kiruthiga C, Samyuktha G U

**Faculty Mentor :** Mr. J. Madhu Karthick Assistant Professor - CSE,

**Industry Mentor :** Mr.Vigneshwaran R, SDE 1/ Amazon, Chennai



**Team 2 : CodErroRepeat, Nodal Center : Anand Institute of Higher Technology, Chennai**

**CSE Students :** Akshaya. V, Santhini Devi.S, Sneha. V, Haritha.G, Sharitha.G, Santha Rajani.N

**Faculty Mentor :** Dr. K. Krishnakumari, Associate Professor - CSE

**Industry Mentor :** Mr.Vignesh Thangamariappan, Software Engineer , FULL Creative, Chennai



**Team 3 : TECHNOMADRID, Nodal Center : Vignana Bharathi Institute of Technology,  
Telangana**

**CSE Students :** Gokulakrishnan V, Vishwavengadesh D, Parvadhavarthini S, Monika T, Gopinath B

**Faculty Mentor :** Mrs. R. Sudha, Assistant Professor - CSE

**Industry Mentor :** Mr.Rajkumar Kalaimani , Technical Lead, Citius Tech, Chennai



**Team 4 : SCREENAGERS, Nodal Center : Sri Eshwar College of Engineering,  
Coimbatore**

**MCA Students :** Ajith P, Kavitha B, Senthil Raj S, Mahalakshmi M, Hemavarshini S, Radha Rukmani V

**Faculty Mentor** Mr. N. Srinivasan, Assistant Professor - MCA

**Industry Mentor** Mr.G. Vasanth,Senior Software Engineer,NMS Works Pvt. Ltd, Chennai