



ARUNACHALA

COLLEGE OF ENGINEERING FOR WOMEN

Manavilai, Vellichanthai, Kanyakumari District - 629 203.

Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai.

(An ISO 9001: 2015 Certified Institution)

Best Practice: I

I. Title of the Practice: Empowering the Women through Skill Development and Career Opportunities

II. Objectives:

- To support the academic and professional advancement of women.
- To enhance interdisciplinary education through academic talks.
- To empower women to recognise their rights and benefits.
- To encourage women to pursue fulfilling careers and make them financially independent.
- To become involved in more community interactions and socially conscious activities.
- To provide career education and develop skills in students.
- To motivate students to pursue higher studies.

III. The Context:

The College was founded as the first women's Engineering Institution in Kanyakumari district in 2009 with the urgent need for women's education to improve women's prospects and foster a healthy society in mind. The college has always provided education to all socioeconomic strata in order to address the needs of the marginalised and close the large economic divide in society. A large number of our students lack knowledge related to their educational history, social backgrounds, and careers. It is our main responsibility to teach them self-sustaining, career-oriented knowledge and to instil in them a sense of self-worth and social consciousness. Counsellors provide students with up-to-date information on dates for competitive exams, higher education selection exams and application procedures.

IV. The practice:

1. Placement Opportunities:

Department-wise Career Awareness Programmes on higher education, employment prospects, and communication skills are held regularly. All faculty members emphasize the value of women's education, higher education, career options and other related fields during guidance




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and counselling hours. Each student receives the finest advice possible from their counsellor based on their history and areas of interest. Materials for reference and preparation for the subject-related competitive exams are given. Regular free coaching sessions are held after college hours, particularly for students in their last year.

2. Internship for Students:

Industrial linkage programmes like internship, industrial projects, field trips, and research works are organized. A total of 296 students attended these programmes. 89.8% of students benefited from the training over 5 years. For effective teaching-learning processes, 87% of faculty attended Professional Development Programmes and gained exposure to modern industrial practices. 57 workshops/ seminars are conducted on IPR & Industrial linkages.

3. Skill Development:

(i) Soft Skill Training Programme:

In both academic and professional contexts, these techniques help students in developing strong presenting and communication skills. Students receive individual attention and are enabled to enhance their interpersonal, interactive, and public speaking skills. This includes the enhancement of the following: Presentation Skills, Group Discussion, Resume Preparation, Interview Preparation, Leadership Qualities, Time Management, Team Player, etc.,

(ii) Coding and Aptitude Training:

Aptitude Skill Training increases the Reasoning, Data Interpretation, Logical, and Analytical Technical Skills in the students. The students are trained in advanced techniques of the languages like C/C++, JAVA, PYTHON and technologies and make them application oriented.

(iii) Career Development:

Skill-based, value-added, and certificate programmes are launched to improve the students skill set in partnership with corporations and industries. Industrial visits to significant locations and internships with businesses and corporations give students practical experience and a window into the working world. Numerous MOOC courses, such as SWAYAM, NPTEL,




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Spoken Tutorial, and Learnathon, are taken by students. Publication of articles in peer-reviewed journals and presentation of papers at seminars and conferences are promoted as ways to foster a research mind-set. Training programmes for the competitive exams like TNPSC, GATE and Bank exams are conducted for the benefit of students. Every year, Carnival expo is conducted to motivate the business ideas of the students. Students demonstrate their entrepreneurial skills and broaden their understanding of business at the exhibition.

Table 1: Various skill development programmes

SI No	Name of the Programme	Date
1.	EDII-TN Sponsored Awareness Seminar Programme on Creative Thinking for Entrepreneurship and Women making an Impact	18-08-2022
2.	One day Seminar on Web Page Development using XAMPP Server	16-09-2022
3.	Seminar on Teaching Methodology & Research Guidance	29-11-2022
4.	Workshop on Design thinking, Critical Thinking and Innovation Design	24-02-2023
5.	Seminar on Communication Skills and Personality Development (Entrepreneurship)	05-07-2018
6.	Seminar on How to solve the Entrepreneurs' problems in real life (Entrepreneurship)	05-03-2020
7.	Webinar on Awareness Programme on Entrepreneurship and Innovation	11-06-2021

(iv) Developing the social responsibility:

The National Service Scheme plans a wide range of public outreach programmes in the neighbouring communities. It supports environmental, health awareness campaigns, Swachh Bharat and other programmes. The volunteers also visit special schools, elderly homes in order to focus on serving humanity. There are planned medical camps, sapling distributions, and rally participation. Departments have been actively addressing the needs of the community by working with them on a regular basis. Students organize a number of awareness programmes, health and hygiene camps and youth empowerment through regular visits.




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V. Evidence of Success:

- 18% of the students go for higher studies and 78% are placed in campus recruitment.

Table 2: Students placed and joined for Higher Education

Sl. No	Year	Students Placed	Students joined for Higher Education
1.	2019-2020	348	33
2.	2020-2021	378	58
3.	2021-2022	287	46
4.	2022-2023	432	31

- 8 students started their own business ventures based on their skills through the various training programmes conducted in the college.

Table 3: List of Entrepreneurs

Sl No	Name	Company Name	Place	Photo
1.	R. Bhuvana Lohini	Oxick Technologies	Puthukudierupu, Nagercoil	
2.	S.V.Vibisha	Swarna Ecocrafts Suvi Textile mills	Mottavilai, Peyankuzhi Post	
3.	D.Deva Shoba	Grace Nuts and Spices	Nagercoil	
4.	Praveena.V.G	Nisha's Boutique	Nagercoil	




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5.	Stabi Lebia.L	E-Sevai Mayyam	Thovalai	
6.	Infant Rayani	Rayans Boutique	Manapakkam, Chennai	
7.	S.Varsha	Aariwork,SilkThead Jewellery	Neyoor	
8.	R.J.Nisha	Velvet Forest	Muvattupuzha, Ernakulam	

VI. Problems Encountered and Resources Required:

(i) Problems Encountered:

- Most of our students speak regional language. It takes a while for them to get past their language barrier and change.
- The proficient student takes benefit of the opportunity that arises. For everyone else, mentoring is necessary.
- Most students refuse employment offers from companies other than their district. They take jobs in schools and workplaces back in their hometowns.

(ii) Resources Required:

- More attention and mentoring should be given to students by instructors according to their requirements.
- Establishing an interdisciplinary network of resource persons from diverse organizations to educate students on current affairs across a range of subjects.
- The amount of money required to schedule each event.



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VII. Impact:

When exposed to a range of programmes, students learn how to maximize the opportunities that are presented to them. They make the most of the opportunities for their own advancement.




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Best Practice:II

I. Title of the Practice: Infuse Innovation Practice Among the Students

II. Objective of the practice:

The Institution Innovation Practice among the students at ACEW is designed to equip its students with the knowledge skills and mindset required to excel in the field of Innovation.

The primary objectives of this practice are:

- To educate the students about current advancement and research in a wide range of engineering domains and assist them to determine their professional goal.
- To encourage aspiring engineers to look for challenges dealing with technical fields either currently or in the future, develop solution for societal requirements and establish the most effective potential remedies.
- To identify the problem encountered in the industry and offer best solution.
- To motivate the students for getting their research articles acknowledged.
- To create an environment that encourages students to come up with their own business proposals and see them through their conclusion in order to achieve success.
- To widen students fields of competence and encourage them to come up with innovative models for their projects.

III. The Context:

Conventional engineering education might not be enough in today's cutthroat job market to guarantee students' overall growth. Students are more prepared to tackle challenges in the real world with fresh and creative solutions after being exposed to research trends. A solid understanding of basic concepts must be acquired in order to develop innovative and new methods to practical problem in a societal context using multidisciplinary tools. Arunachala College of Engineering for Women recognized this need and established the Institution



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Innovation Practice to enable students to create chances for employment instead of just looking for them.

IV. The Practice:

The Innovation Programme at ACEW includes access to resources that are critical for emerging inventions, as well as a sequence of workshops, seminars, and mentorship sessions. Students are encouraged to create business plans and are exposed to case studies from the real world. The students are also encouraged to publish their research articles. The research scholars are encouraged by the management for their research. The concept of executing final year projects in the campus gives students the chance to view the results of their work. Students also can improve their research oriented thinking skills on platforms provided by the internal competitions and exhibitions. In order to offer insightful information, the curriculum also involves interactions with investors and successful innovators.

Table 1: List of activities related to Institution Innovation Practice year wise.

Sl. No	Title of the Programme	Date
1.	Business Model Canvas	31-05-2023
2.	Celebrating World Creativity and Innovation Day	21-09-2023
3.	Prototype/Process Design and Development	23-03-2023
4.	Entrepreneurship and Innovation as Career Opportunity	18-08-2022
5.	Motivational Session by Successful Entrepreneur	17-11-2022
6.	Workshop on IPRs	10-02-2023
7.	National Start-up day	20-01-2023

V. Evidence of Success:

The success of the Institution Innovation Practice programme is evident through several key indicators:




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- Start-ups Launched: Students and alumni of ACEW have produced a sizable number of student-led startups.
- Students from ACEW have demonstrated their innovative ideas by winning awards in regional and national contests.
- Students have filed 27 patents, presented 131 papers in conferences and published 17 articles in peer reviewed journals.

Table 2: List of patents filed by the students

Sl No	Title of the patent	Application No	Date of Publication
1.	Development of image processing based fruit spoiled detection system	202141008722	12/03/2021
2.	Automatic accident detection system to prevent and avoid accident and surveillance systems using IOT and deep learning algorithms.	202241046845	16/09/2022
3.	Smart control system using IOT for electric vehicles management.	202341002610	17/02/2023
4.	Power distribution system planning for smart grid applications using ANN	202341001951	20/01/2023
5.	Battery balancing using artificial intelligence for electric vehicle battery management system.	202341008020	17/02/2023
6.	Edge - Assisted deep learning models for intelligent video analytics in smart city surveillance.	202341049490	01/09/2023




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Table 3: Various Innovative Ideas and their prizes in various institutions

Sl .No	Name of the student	Innovative idea	Model developed	Prize (or) Award
1.	MELFA.M.P SHAMINI.M MUTHU SELVI.S KEERTHIKA.N.A	Obstacle detector using lidar		IET Trivandrum Award Rs. 10000
		IET based automatic stopping of train travelling in the opposite side of the same track		
2.	INDUJAA.R.S AKISHMA.S	Plant based sanitary napkins		2nd prize/ 10000 Ideation level
3.	ANTONIET SHREYA S MADHUBALA J	AI-powered diabetic detection device by scanning human eye		TNSI Finalist
4.	THIRSHA.M ABI. A PAVITHRA. P ANISHKA.R	Current produced from pulley		—




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Innovative Project development by our students



Bluetooth based follow me trolley with automated billing system

Quality education for the disabled audio visual aids Raspberry Pi



AI powered diabetic detection device by scanning human eye

IET Based automatic stopping of train travelling in the opposite side of the same track

VI. Problems Encountered:

Some challenges encountered include:

- Limited Funding: Securing adequate financial resources to support student's start-ups is challenging.
- Maintaining a steady and competent pool of mentors and advisors is a realistic task that is to be overcome in the future.




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VII. Resources Required:

To sustain and expand the Institution Innovation Practice, ACEW requires the following resources:

- Funding for Seed capital: To provide initial funding for student start-ups
- Access to Co-working spaces: Providing a dedicated work space for student entrepreneurs.

The integration of innovation education into engineering curricula can be modeled after Institution Innovation Practice. By encouraging students to have an innovative mindset, the college equips them to start their own businesses and create jobs, which benefits the local economy as well as the larger innovation system.




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