EXCEL ENGINEERING COLLEGE
(AUTONOMOUS)

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai
Accredited by NBA (AERO, CSE, ECE & MECH), NAAC with "A+" and Recognised by UGC (2f &12B)
KOMARAPALAYAM





NEWS LETTER 2023-2024

VOLUME 4 (APRIL – JUNE)

DEPARTMENT VISION MISSION

VISION

To be a global leader in Agricultural Engineering, pioneering innovative solutions, fostering creativity and inspiring lifelong learning, all while embracing social responsibility to enhance agricultural sustainability and nourish the world.

MISSION

I.Provide an exceptional teaching and learning experience that integrates Experimental learning with practicalskills and knowledge in agriculture engineering.

2. Advance cutting-edge research and comprehensive training, stringing to be at the forefront of innovations and knowledge dissemination in our field.

3. Emphasis on skill development, value addition and hand-on field work, to make students academically proficient.

4. Foster technological advancements and create abundant career opportunities, to ensure graduates arc well prepared for successful careers and become industry leaders.

PROGRAMME EDUCATIONAL OBJECTIVES

- Graduates will demonstrate comprehensive technical proficiency as agricultural engineers, applying knowledge and skills to design, implement, and manage innovative agricultural systems effectively
- Graduates will cultivate an entrepreneurial mindset, showcasing the ability to identify, evaluate, and implement sustainable agricultural solutions, contributing to the growth and viability of agricultural enterprises.
- Graduates will champion sustainable development in agriculture by integrating environmentally conscious practices, promoting resource efficiency, and engaging in initiatives that address the socio-economic needs of communities
- Graduates will embrace a culture of creative learning, continuously adapting to emerging technologies and contributing to the advancement of agricultural sciences. Furthermore, they will actively serve society by applying their expertise to address agricultural challenges and promote community well-being.

PROGRAMME SPECIFIC OUTCOMES

- PSOI: To develop the skills in the field of Agriculture Engineering to become well versed in farm Mechanization, Food and Dairy Processing, Soil and Water Conservation, Bio Energy and IoT in Agriculture.
- PS02: To imbibe the skills on supervising, coordinating, guiding, leading and decision making in the minds of Agriculture Engineering students for completing crop production projects in time

MESSAGES

CHAIRMAN'S MESSAGE

Prof.Dr.A.K.NATESAN

Agricultural Engineering is one of the essential branches of Engineering which demands innovation. With the rapid advancement of technology, Agricultural Engineering is becoming more important to tackle challenges in the global food market. The future of Agricultural Engineering is to integrate technology with biology and the social aspects of agriculture to create sustainable environment. I congratulate the Department of Agricultural Engineering for their initiatives to introduce department newsletter and also I wish the students to shine in their career.

VICE CHAIRMAN'S MESSAGE

DR. N. MATHAN KARTHICK, M.B.B.S., M.H.SC. (DIABETOLOGY), AKS

Agricultural engineers' main role is to solve problems found in agricultural production. Goals may include designing safer equipment for food processing. Agricultural engineers must creatively apply the principles of engineering. Agricultural engineer solve problems concerning power supplies, machine efficiency, the use of structures and facilities, pollution and environmental issues, and the storage and processing of agricultural products. I congratulate the Department of Agricultural Engineering for their initiatives to introduce department newsletter.

DR. K. BOMMANNA RA.JA, PH.D.

Agricultural Engineering is highly job oriented discipline especially in India where agriculture plays a major role in the economy of the country. I congratulate all the students and faculty members in publishing the department newsletter portraying the academic activities, student and faculty participation and achievements.

DR.K.P.VISHALAKSHI, M.E., **PH.O.,**

The Department of Agriculture Engineering started during the Academic Year 2018-19 with an intake of 60 students. We have well established laboratories, well qualified and multi-disciplinary faculty members from various specializations such as Soil and Water Conservation Engineering, Farm Machinery and Power, Bio Energy Resources and ToT in Agriculture, Agricultural Process Engineering, Food and Dairy Engineering, Water Resources Engineering. Since agriculture started from ancient period, nowadays modern methods are being used. Also it requires much contribution from engineers to improve the economic wellbeing of the farmers through efficient mechanization. We are proud to create the entrepreneurs in agriculture field. I congratulate all the students also members of GRAES association to launch the newsletter for the Academic year 2022-2023.

"Energy Audit Management in Households, Motors and Agricultural Equipments"

Department of Agriculture Engineering, Excel Engineering College (Autonomous) has organized off day seminar on Energy Audit Management in Households, Motors and Agricultural Equipments on 02.03.2024.

Chief guest Dr.T.Logeswaran Associate Professor Department of Electrical and Electronics Engineering Kongu Engineering College, Perundurai, Erode (Dt). External Faculty has Delivered on Energy Audit Management in Households, Motors and Agricultural Equipments to our Agricultural Engineering students.

Benefitted Participants are 55 students and 3 faculty members.

An **energy audit** is an inspection survey and an analysis of energy flows for energy conservation in a building. It may include a process or system to reduce the amount of energy input into the system without negatively affecting the output. In commercial and industrial real estate, an energy audit is the first step in identifying opportunities to reduce energy expense and carbon footprint. A *home energy audit* is a service where the energy efficiency of a house is evaluated by a person using professional equipment (such as blower doors and infrared cameras), with the aim to suggest the best ways to improve energy efficiency in heating and cooling the house. An energy audit of a home may involve recording various characteristics of the building envelope including the walls, ceilings, floors, doors, windows, and skylights. For each of these components the area and resistance to heat flow (R-value) is measured or estimated.

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"Agricultural Industry 4.0 – AI & ML in Farm Machineries"

Department of Agriculture Engineering, Excel Engineering College (Autonomous) has organized off day seminar in Agricultural Industry 4.0 – AI & ML in Farm Machineries on 11.03.2024.

Chief guest Dr.B.Kailashkumar Assistant Professor Department of Agriculture Engineering Mahendra Engineering College . External Faculty has Delivered on Agricultural Industry 4.0 – AI & ML in Farm Machineries to our Agricultural Engineering students.

Benefitted Participants are 60 students and 3 faculty members.

The agricultural industry is undergoing a significant transformation with the integration of Industry 4.0 technologies, including Artificial Intelligence (AI) and Machine Learning (ML). Farm machineries are being equipped with AI and ML capabilities to optimize crop growth, reduce waste, and increase the productivity.

Automated Farm Machinery: AI-driven farm machinery, such as:

1. Driverless tractors
2. Smart irrigation systems
3. Fertilization systems
4. IoT-powered agricultural drones
5. Smart spraying systems
6. Vertical farming software
7. AI-based greenhouse robots for harvesting

are revolutionizing farming practices. These machines are more efficient and accurate than human farm workers, reducing labor costs and increasing yields.

JOURNAL, CONFERENCE PUBLICATIONS

Journal, conference publications 2023-2024

S. No	Name of the Faculty	Title of the Paper	Journal Name	Volume No.	Issue No.	DOI
1	Dr.K.P.Vishalakshi	Water Consumption, Yield, and Total Dry Matter of Drip-Irrigated Cabbage Grown at Various Water Application Levels	Journal of Advanced Zoology	44	S-07	10.53555
2	Dr.P.S.Senthil Kumar	Water Consumption, Yield, and Total Dry Matter of Drip-Irrigated Cabbage Grown at Various Water Application Levels	Journal of Advanced Zoology	44	S-07	10.53555
3	Mr.S.Rameshkumar	Fabrication and Analysis of a Solar-Powered Sprayer with various uses for Agriculture	Interna-tional Journal of Food and Nutritional Sciences	1	1	10.48047
4	Mr.M.Tamilselvan	Fabrication and Analysis of a Solar-Powered Sprayer with various uses for Agriculture	Interna-tional Journal of Food and Nutritional Sciences	1	1	10.53555
5	Mr.V.Bharath	Vertical Axis Wind Turbine Powered Highway Divider Air Filtration System: An Analysis	Interna-tional Journal of Food and Nutritional Sciences	12	1	10.48047
6	Mr.V.R.Vellingiri	Vertical Axis Wind Turbine Powered Highway Divider Air Filtration System: An Analysis	Interna-tional Journal of Food and Nutritional Sciences	12	1	10.48047
7	Mr.C.Manoj Prabhu	An Investigation of Pyrolysis, A Substitute Technology for Managing Agricultural Solid Waste in Indian Cities	Journal of Advanced Zoology	44	S-07	10.53555
8	Mr.D.Logachandran	An Investigation of Pyrolysis, A Substitute Technology for Managing Agricultural Solid Waste in Indian Cities	Journal of Advanced Zoology	44	S-07	10.53555