Placement Brochure

2025

AAU

कृणवन्तो राष्ट्रं कृषिसंपन्नम्

B.TECH
(Agricultural Engineering)

FOR BATCH
2024-25

College of Agricultural Engineering and Technology,
Anand Agricultural University, Godhra-389 001
Gujarat (INDIA)

AAU
कृणवन्तो राष्ट्रं कृषिसंपन्नम्

University Song

હો સંસ્કૃતિ કૃષિ વત્સલમ્, કલ્યાણ કીજો મંગલમ્
કૃણવન્તો રાષ્ટ્રં કૃષિસંપન્નમ્ કૃણવન્તો રાષ્ટ્રં કૃષિસંપન્નમ્
કૃણવન્તો રાષ્ટ્રં કૃષિસંપન્નમ્

સરદાર ગાથા ગુર્જરી, ચારૂ અમુલ ચરોતરી,
ક્ષીર સંસ્કૃતિ મહીસાગરી, આતિથ્ય આદર સે ભરી,
કૃણવન્તો રાષ્ટ્રં કૃષિસંપન્નમ્

ડાકોર શ્રીઠાકોર કા, કાયાવરોહણ કલિકા,
વડતાલ ભાલ ગુલાલ, સૂન કરતાલ ધૂન નારાયણી,
કૃણવન્તો રાષ્ટ્રં કૃષિસંપન્નમ્

સંતરામ બોડાણા શ્રીમદ્, હરિ મારગી જોબન ભગત,
દિલ કે દિયે જલતે કિયે, ગુંજી ગીરા રવિશંકરી,
કૃણવન્તો રાષ્ટ્રં કૃષિસંપન્નમ્

સરદાર રાસ અડાસમેં, બાપુ ચલે થે સાથ મેં,
વિદ્યાનગર આણંદ મેં, વિજ્ઞાન જ્ઞાન ગંગોતરી,
કૃણવન્તો રાષ્ટ્રં કૃષિસંપન્નમ્

– ડૉ. બાલકૃષ્ણ જોષી

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FOR BATCH : 2024-25

College of Agricultural Engineering and Technology,
Anand Agricultural University, Godhra-389 001
Gujarat (INDIA)

Editor
Dr. J. Sravankumar
Asst. Professor &
Training and Placement Officer

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Dr. K. B. Kathiria
Vice Chancellor

From the Desk of Honorable Vice-Chancellor

I am delighted to introduce the "Placement Brochure-2024-25" for the final year B.Tech. and M.Tech. students of the College of Agricultural Engineering & Technology (CAET) at Anand Agricultural University, Godhra.

CAET stands as the sole institution in central Gujarat offering comprehensive programs in Agricultural Engineering at the undergraduate, postgraduate, and doctoral levels. Agricultural Engineers play a pivotal role in developing tools, systems, and machinery vital for the production of agricultural goods and services. Agricultural Engineers contribute by innovating affordable, eco-friendly technologies crucial for small and marginal farmers across the nation.

At CAET, Godhra, an ICAR accredited institution, we boast exceptional infrastructure and cutting-edge research facilities, including state-of-the-art laboratories such as GIS and Remote Sensing Lab, CAD-CAM Lab, Field Labs, Workshop, and Food Processing Plants. Our students are nurtured through academic and research pursuits in emerging areas of agricultural engineering such as micro-irrigation, RS & GIS for land and water management, precision agriculture, computer-aided design, modeling & simulation techniques, natural resource management, biomass & solar energy, and value addition in farm produce, among others.

I firmly believe that the current cohort of students will meet the societal, industrial, and national expectations by leveraging their skills and capabilities to overcome the challenges faced in agriculture.

I extend a warm welcome to all prospective employers and convey my best wishes to the students for their promising future endeavors.

Date: 01/02/2025

(K. B. Kathiria)

AAU

कृणवन्तो राष्ट्रं कृषिसंपन्नम्

Dr. D. H. Patel

DIRECTOR OF STUDENTS' WELFARE
ANAND AGRICULTURAL UNIVERSITY
ANAND-388 110
GUJARAT

Tel. : (O) +91-2692-264688
Email : dsw@aau.in

MESSAGE

It is a matter of great pride that the College of Agricultural Engineering and Technology, Godhra, is presenting its Placement Brochure for the academic year 2024-25. The Training and Placement Cell has consistently demonstrated its commitment to student success through a wide range of counseling, skill enhancement, and career development initiatives. Their efforts have resulted in exceptional placement records and significant achievements in higher education.

The field of agricultural engineering offers immense opportunities, and our students are well-equipped to contribute to research, innovation, and industrial advancements. The dedication of our faculty and the enthusiasm of our students have created a vibrant learning environment that fosters both academic excellence and professional growth.

I wholeheartedly congratulate the students and the placement team for their efforts and achievements. I am confident that our graduates will bring honor to the institution and make meaningful contributions to the agricultural sector. I extend my best wishes to them for a successful and fulfilling career.

Date: 01/02/2025

(D. H. Patel)

College of Agricultural Engineering and Technology
ANAND AGRICULTURAL UNIVERSITY
Godhra-389001

Dr. R. Subbaiah
Principal and Dean

Tel. : (O) +91-2672-265027
Email :dean.caet@aau.in

MESSAGE

It is with immense pride and satisfaction that I present the Placement Brochure for the graduating batch of 2024-25 from the College of Agricultural Engineering and Technology, Godhra. This institution has been a cornerstone of excellence in agricultural engineering education, consistently producing professionals who contribute significantly to the industry and academia.

The holistic training approach adopted by the Training and Placement Cell, which includes career counseling, technical software training, and soft skills development, has played a crucial role in shaping our students into competent professionals. The remarkable **100% placement record** in the previous year and the success of our students in securing admissions to **prestigious institutes like IIT Kharagpur** underscore the high academic and professional standards upheld by our college.

I extend my sincere appreciation to the faculty members and the Training and Placement Cell for their tireless efforts in preparing our students for the ever-evolving job market. I am confident that our graduates will excel in their respective careers and uphold the values of Anand Agricultural University.

Wishing all our students a bright future filled with success and accomplishments.

Date: 01-02-2025

(R. Subbaiah)

College of Agricultural Engineering and Technology
ANAND AGRICULTURAL UNIVERSITY
Godhra-389001

Dr. D. K. Vyas
Professor and Head (REE Dept),
Advisor, T&P Cell, CAET, Godhra

MESSAGE FROM PLACEMENT CELL ADVISOR

It is a moment of great pride to witness another batch of talented engineers from the College of Agricultural Engineering and Technology, Godhra, step into the professional world. The Placement Brochure for the academic year 2024-25 is a reflection of our collective efforts in equipping students with the necessary skills and knowledge to meet industry expectations.

At the Training and Placement Cell, we have made **tremendous efforts** to ensure our students receive the best training through **software skill development programs, career counseling sessions, and communication/soft skills workshops**. These initiatives have significantly contributed to the **100% placement success rate** in the previous year and have helped many students secure admissions in renowned institutions for higher studies.

I express my heartfelt gratitude to the dedicated faculty, recruiters, and well-wishers who have continuously supported our students. I am confident that this batch will bring laurels to the institution and make meaningful contributions to the field of agricultural engineering.

Wishing all our students great success in their careers and future endeavors!

Advisor,
Training and Placement Cell
College of Agricultural Engineering and Technology
Anand Agricultural University

College of Agricultural Engineering and Technology
ANAND AGRICULTURAL UNIVERSITY
Godhra-389001

Dr. J. Sravankumar
Asst. Professor (REE Dept)
Training and Placement officer,
CAET, Godhra

FROM TRAINING AND PLACEMENT CELL OFFICER

Greetings from the **College of Agricultural Engineering and Technology, Godhra**!

It is with great pleasure that I extend a warm invitation to esteemed organizations to participate in the campus placement process for the **graduating batch of 2024-25**. Our institution, a constituent college of **Anand Agricultural University**, is committed to nurturing highly skilled agricultural engineers who are well-equipped with **technical expertise, problem-solving abilities, and industry-relevant skills**.

At our Training and Placement Cell, we have worked diligently to **bridge the gap between academia and industry** by organizing **career counseling sessions, technical software training, and soft skills workshops**. These efforts have led to **outstanding placement records**, including a **100% placement rate last year**, and our graduates have also secured admissions in **prestigious institutions like IIT Kharagpur** for higher studies.

We take pride in our students' ability to **adapt to emerging technologies, contribute to innovation, and excel in diverse professional environments**. We invite your esteemed organization to **engage with our talented graduates** and explore opportunities for collaboration. We are confident that our students will add value to your company with their technical competence, work ethic, and dedication.

We look forward to hosting your recruitment team and fostering a mutually beneficial partnership. Please feel free to reach out to us for any assistance regarding the recruitment process.

Warm regards,
Training and Placement officer,
College of Agricultural Engineering and Technology,
Anand Agricultural University, Godhra

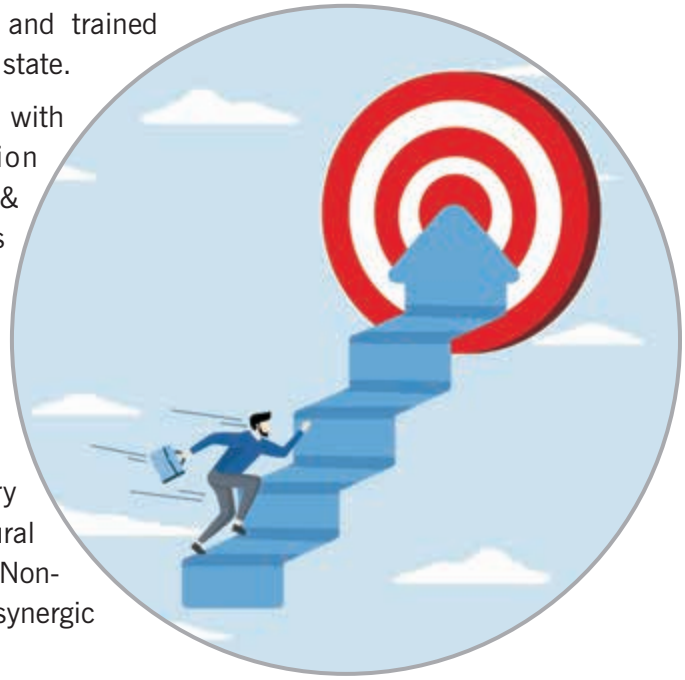
C O N T E N T

College at a Glance - a sky view

It is high time when 2nd green revolution knocking the door of nation which may be possible by mechanization of all types farm operations irrespective of crop and land holding, precise and efficient use of inputs including water and energy, reducing the on farm and off farm losses & doing value addition in farm produce and maximum use of non conventional sources of energy and information technology in the process of farm production. To develop, utilize, maintain and spread the technologies to meet above requirements of modern Indian Agriculture, there is high demand of skilled, motivated manpower. To cope up with these needs of nation the College of Agricultural Engineering and Technology was established in 2008 under the shade of Anand Agricultural University, by Government of Gujarat at Godhra, Gujarat. The college offers B.Tech. in Agricultural Engineering, M.Tech in Five disciplines comprising Soil and Water Conservation Engineering, Irrigation and Drainage Engineering, Farm Machinery and Power Engineering, Renewable Energy Engineering and Process and Food Engineering and Ph.D in four disciplines mainly Irrigation and Drainage Engineering, Soil and Water Conservation Engineering, Farm Machinery and Power Engineering, and Processing and Food Engineering.

The college possesses a Training &Placement cell to provide personal and carrier related support to the students with special emphasis on training the students on employability skill and ultimately provide placement in various industries/organizations by arranging Campus drives. Placement cell CARE for the students CAREER by providing the maximum opportunities to explore their potentials in the right direction and look at the employability skills and try to perfectly match with the requirements of the industry. We impart training as a part of our curriculum to mould and shape the personalities and make the students employable.

Goals



- To provide Agril. Engg inputs and trained manpower in tribal regions of the state.
- To facilitate progressive farming with enhanced valued production through efficient management & utilization of natural resources such as land, water, vegetation and energy, agricultural mechanization, agricultural processing and post-harvest technology.
- To provide consultancy & advisory services to different Agricultural Industries, Government and Non-Government Institutions with synergic partnership.
- To prepare highly skilled, technically sound manpower by starting academic programmes like B.Tech., M.Tech. and Ph.D. utilized for Agril. Industries and allied agencies.
- To carry out extensive training and extension activities in the thrust areas keeping in the liaison with the different Government and Non-Government organisations to transfer the benefits to the society.

Objectives

- To develop and sustain an academic environment conducive to academic and professional excellence at par.
- To provide world class quality technical education and induce academic, research and enterprising spirit to the youths joining the institute.
- To develop a conducive environment to the technical education and research in need based new and emerging technology areas.
- To create a technology savoir-faire campus and to impart value based education.
- To network with leading national and international institutions, R&D organizations and professional bodies.
- To promote techno-entrepreneurship.
- To promote continuing education programs (CEP) to in service teachers and working professionals.
- To promote all round development of students & create a sense of social responsibility.

Vision

- To be a reputable and creditable agricultural engineering college, producing quality graduates at a competitive level in line with the international education philosophy.
- To explore research areas that will significantly contribute to the development of the state of Gujarat and nation as a whole.
- To develop an environment for personal growth, opportunity, knowledge, exposure, personal attention and career directions in line with our nation's inspiration, which is to build a generation of professionals catering to a knowledge based economy to meet global needs.
- To explore research areas that will significantly contribute to the development of the nation.

Faculties and Supporting Staff - *the Sculptors of CAET*

Principal and Dean
Dr. R. Subbaiah
Ph. D. (IIT, Kharagpur)

Department of Irrigation and Drainage Engineering

Dr. A. N. Kunapara, Ph.D (IDE), Assistant Professor & Head
Er. Rajesh Godhani, M.Tech.(Agri. Engg.), Senior Research Assistant

Department of Soil and Water Conservation Engineering

Dr. M. K. Tiwari, Ph.D. (IIT Kharagpur) (SWCE), Associate Professor & Head
Er. Khyati Vyas, M.Tech. (Agril. Engg.), Senior Research Assistant

Department of Farm Machinery & Power Engineering

Dr. Pankaj Gupta, Ph.D. (Farm Machinery & Power Engg.), Professor & Head
Dr.D.R.Kathiriya, Ph.D.(Computer Science), Professor
Dr. R.C. Salunkhe, Ph.D. (Farm Machinery & Power Engg.), Assistant Professor
Dr. K. L. Dabhi, Ph.D. (Farm Machinery & Power Engg.), Assistant Professor
Dr. S.J. Pargi, Ph.D. (Farm Machinery & Power Engg.), Senior Research Assistant
Mr. Nilesh Patel, ITI (Fitter), Mechanic
Sh. Nirav M. Solanki, DME, Foreman Instructor

Department of Processing and Food Engineering

Dr. Neeraj Seth, Ph.D. (Post Harvest Process & Food Engg.), Assistant Professor
Dr. Kamlesh R. Jethva, Ph.D. (Processing & Food Engg.), Assistant Professor
Er. Yagnik C. Yoganandi, M. Tech. (Agril. Engg.), Senior Research Assistant

Department of Renewable Energy Engineering

Dr. D. K. Vyas, Ph. D.(Renewable Energy Engineering), Professor & Head
Dr. J. Sravankumar, Ph.D.(Electrical & Electronics Engg.), Assistant Professor

Department of Basic Engineering and Applied Sciences

Dr. B. A. Amin, Ph.D. (Physics), Assistant Professor & Head
Er.Kapil Mandloi, M.Tech. (Industrial Design), Assistant Professor
Dr. Hardik S. Sharma, Ph.D. (English), Assistant Professor
Dr. Gautam J. Kamani, Ph.D. (Computer Science), Associate Professor
Mrs. Shefali K. Modi, M.Sc. (Chemistry), Assistant Professor
Er. Chirag Jadav, M.E. (CAD/CAM), Assistant Professor
Mr. Nilesh Prajapati, M.Sc. (Chemistry), Lab Technician
Er. Vijay Patel, M.Sc.(Agri.), Agricultural Officer
Er. Suryaprakash Suryavansi, B. Tech. (Agril. Engg.), Senior Research Assistant
Mr. Rinkesh Talpada, ITI (Welder), Craftsman welder

Course curriculum
B. Tech (Agril. Engg.)

- a mirror for UG students

(*As per V Dean Committee,* ICAR, New Delhi)

Department of Irrigation and Drainage Engineering

- Irrigation Engineering
- Sprinkler and Micro Irrigation Systems
- Drainage Engineering
- Groundwater, Wells and Pumps
- Management of Canal Irrigation System
- Minor Irrigation and Command Area Development
- Precision Farming Techniques for Protected Cultivation
- Water Quality and Management Measures
- Landscape Irrigation Design and Management

Farm Machinery & Power Engineering

- Farm Machinery and Equipment - I
- Farm Machinery and Equipment - II
- Field Operation and Maintenance of Tractors and Farm Machinery - I
- Field Operation and Maintenance of Tractors and Farm Machinery - II
- Farm Power
- Tractor Systems and Controls
- Tractor Design and Testing
- Farm Power and Machinery Management
- Human Engineering and Safety

Soil and Water Conservation Engineering

- Watershed Hydrology
- Soil and Water Conservation Engineering
- Watershed Planning and Management
- Water Harvesting and Soil Conservation Structures
- Floods and Control Measures
- Waste land Development
- Information Technology for Land and Water Management
- Remote Sensing and GIS Applications

Processing and Food Engineering

- Engineering Properties of Agricultural Produce
- Agricultural Structures and Environment Control
- Post Harvest Engineering of Cereals, Pulses and Oilseeds
- Post Harvest Engineering of Horticultural Crops
- Dairy and Food Engineering
- Food Quality and Control
- Food Plant Design and Management
- Food Packaging Technology
- Development of Processed Products
- Process Equipment Design

Course curriculum
B. Tech (Agril. Engg.)

- a mirror for UG students

(*As per V Dean Committee,* ICAR, New Delhi)

Department of Renewable Energy Engineering

- Electrical Machines and Power Utilization
- Applied Electronics and Instrumentation
- Fundamentals of Renewable Energy Sources
- Renewable Power Sources
- Bio-Energy Systems: Design and Applications
- Project Planning and Report Writing (Student READY)
- Plastic Applications in Agriculture
- Photovoltaic Technology and Systems
- Waste and By-Products Utilization
- Energy Conservation and Audit in Agricultural Industry

Training and Research Activities

- Skill Development Training-I (Student READY) Registration only
- 10- Weeks Industrial Attachment /Internship (Student READY)
- 10- Weeks Experiential Learning On campus (Student READY)
- Skill Development Training-II (Student READY) Registration only
- Educational Tour (Registration only)
- Project Planning and Report Writing (Student READY)

Department of Basic Engineering and Applied Sciences

- Surveying and Levelling
- Engineering Mechanics
- Strength of Materials
- Design of Structures
- Fluid Mechanics and Open Channel Hydraulics
- Building Construction and Cost Estimation
- Soil Mechanics
- Engineering Drawing
- Workshop Technology and Practice
- Heat and Mass Transfer
- Machine Design
- Auto CAD Applications
- Thermodynamics, Refrigeration and Air Conditioning
- Theory of Machines
- Electrical Machines and Power Utilization
- Applied Electronics and Instrumentation
- Computer Programming and Data Structures
- Web Designing and Internet Applications
- Principles of Agronomy
- Principles of Soil Science
- Principles of Horticultural Crops and Plant Protection
- Engineering Physics
- Engineering Chemistry
- Engineering Mathematics-I
- Engineering Mathematics-II
- Engineering Mathematics-III
- Communication Skills and Personality Development
- Entrepreneurship Development and Business Management
- Environmental Science and Disaster Management

Irrigation and Drainage Engineering

- Irrigation Planning and Management
- Design of Surface Irrigation Systems
- Reclamation of Irrigated Lands
- Agricultural Drainage System
- Open Channel Flow
- GIS and Remote Sensing for Resources Management
- Water Resources System Engineering
- Irrigation Economics Planning and Management
- Water Conveyance and Distribution
- Design of Sprinkler and Micro Irrigation System
- Crop Environmental Engineering
- Design of Pumps for Irrigation and Drainage
- Ground Water Engineering
- Soil-Water-Plant Relationship
- Water Supply and Treatment
- Climate Change and Water Resources
- Master's Seminar
- Special Problem
- Master's Research
- Design, Operation & Evaluation of Pressurized Irrigation System
- Advances in Irrigation and Drainage
- Hydro-Chemical Modelling and Pollutant Management
- Plant Growth Modelling and Simulation
- Flow through Porous Media
- Advanced Hydo-Mechanics in Soil Aquifer Systems
- Command Area Development
- Doctoral Seminar I
- Doctoral Seminar II
- Special Problem
- Case Study
- Doctoral Research

Soil and Water Conservation Engineering

- Watershed Hydrology
- Design of Farm Irrigation Systems
- Soil and Water Conservation Engineering
- Ground Water Engineering
- Agricultural Drainage Systems
- Crop Environmental Engineering
- Design of Pumps for Irrigation and Drainage
- Open Channel Flow
- Flow through Porous Media
- Water Resources System Engineering
- GIS and Remote Sensing for Land and Water
- Resource Management
- Watershed Management and Modeling
- Land Development and Earth Moving Machinery
- Master's Seminar
- Special Problem
- Master Research
- Advanced Hydrology
- Soil and Water Systems' Simulation and Modeling
- Modeling Soil Erosion Processes
- Advanced Hydro-Mechanics in Soil Aquifer Systems
- Hydro-Chemical Modeling and Pollutant Management
- Plant Growth Modeling and Simulation
- Advances in Irrigation and Drainage
- Doctoral Seminar I
- Doctoral Seminar II
- Special Problem
- Case Study
- Doctoral Research

Course curriculum

M. Tech & Ph.D. (Agril. Engg.)

- a mirror for PG students

Farm Machinery & Power Engineering

- Design of Farm Power and Machinery Systems
- Soil Dynamics in Tillage and Traction
- Testing and Evaluation of Tractors and Farm Equipment
- System Simulation and Computer Aided Problem Solving in Engineering
- Applied Instrumentation in Farm Machinery and Stress Analysis
- System Engineering and Productivity
- Farm Machinery Dynamics Noise & Vibrations
- Tractor Design
- Operations Research in Farm Power &Machinery Management
- Ergonomics and Safety in Farm Operations
- Engineering Properties of Biological Materials
- Agro-Energy Audit and Management
- Design and Analysis of Renewable Energy Conversion Systems
- Master's Seminar
- Special Problem
- Master's Research

Process and Food Engineering (M.Tech)

- Transport Phenomena in Food Processing
- Engineering Properties of Food Materials
- Advanced Food Process Engineering
- Unit Operations in Food Process Engineering
- Energy Management in Food Processing Industries
- Processing of Cereals, Pulses and Oilseeds
- Food Processing Equipment and Plant Design
- Fruits and Vegetables Process Engineering
- Food Packaging, Food Quality and Safety Engineering
- Food Quality and Safety Engineering
- Farm Structures and Environmental Control
- Storage Engineering and Handling of Agricultural Products
- Seed Drying, Processing and Storage
- Biochemical and Process Engineering
- Master's Seminar
- Special Problem

Master's Research

Process and Food Engineering (Ph.D)

- Textural & Rheological Characteristics of Food Materials
- Advances in Food Processing
- Mathematical Models in Food Processing
- Advances in Drying of Food Materials
- Agricultural Waste and By-product Utilization
- Doctoral Seminar I
- Doctoral Seminar II
- Special Problem
- Case Study
- Doctoral Research

Renewable Energy Engineering

- Solar Energy Systems
- Wind Energy Technology
- Biomass Energy Engineering
- Biogas Technology & Mechanism
- Direct Energy Conversion System
- Alternate Fuel Technology & Applications
- System Simulation and Computer Aided Problems Solving In Engineering
- Greenhouse Technology & Management
- Integrated Rural Energy Planning & Organization
- Heat Transfer in Solar Energy
- Energy & Environmental Engineering
- Agro Energy & Audit Management
- Design & Analysis of Renewable Energy Conversion Systems
- Engineering Instrumentation & Control
- Statistical Methods
- Master's Seminar
- Special Problem
- Master's Research
- Advanced Energy Systems for Industrial Applications
- Computer Aided Analysis and Design of Renewable Energy Systems
- Energy Lab
- Numerical Analysis
- Agricultural Waste and By Product Utilization
- Doctoral Seminar -I
- Doctoral Seminar -II
- Special Problem
- Case Study

Doctoral Research

Laboratories *- a place of practical learning*

Department of Irrigation and Drainage Engineering

Irrigation Engineering Laboratory

Drainage Engineering Laboratory

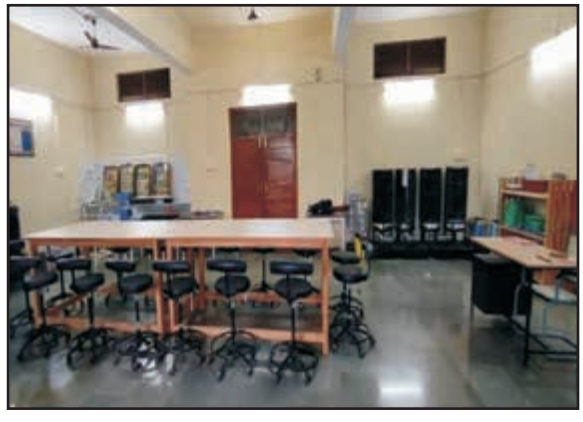
Field Lab

Department of Soil and Water Conservation Engineering

GIS and Remote Sensing Laboratory

Watershed Laboratory

Soil and Water Conservation Engineering Laboratory



Field Lab for Soil and Water Conservation Structures

Farm Pond

Water measurement structures

Pitcher irrigation system

Recharge pits

Contour bund, Terracing, Contour Trench

Rooftop Water Harvesting Structure

Department of Farm Machinery & Power Engineering

Tractor and Power Lab

Farm Equipment Lab

Thermodynamics & IC engine lab

Ergonomics lab

Implement Shed

Department of Processing and Food Engineering

Agricultural Structures and Environmental Control Lab

Food Engineering Laboratory

Process Engineering laboratory

Food Processing plant

Department of Renewable Energy Engineering

CLASS ROOM

BIOMASS, BIOGAS & BIOFUEL LABORATORY

WIND ENERGY LABORATORY

SOLAR ENERGY PARK & LABS

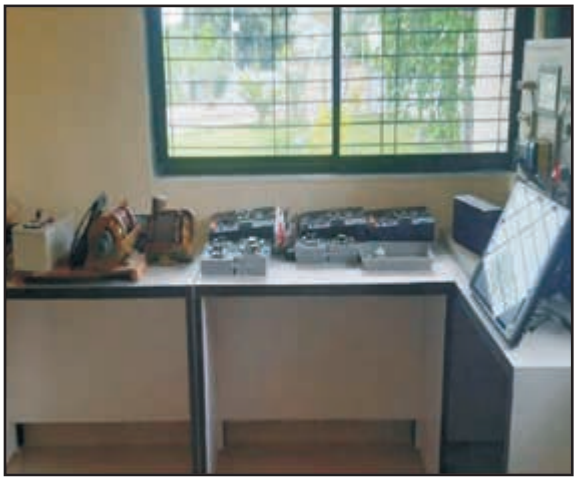
Solar Runnel Dryer for drying of Agricultural Produces

Thermo-gravimetric Analyser for biomass Thermal Characteristics Measurement

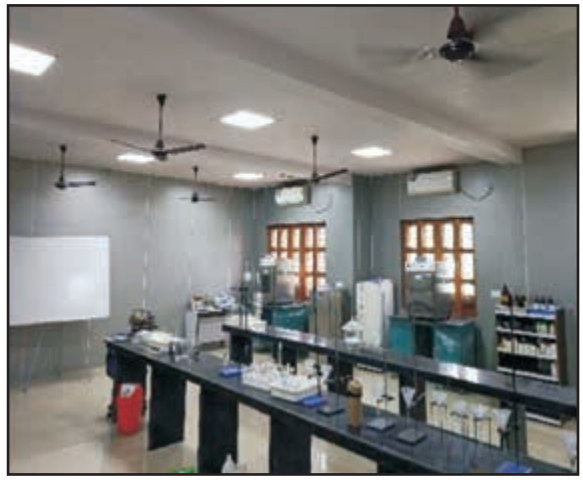
Sun Tracker for Solar Radiation Measurement

Sun Tracker for Solar Radiation Measurement

ELECTRICAL & ELECTRONICS LABORATORY



WATER QUALITY, GREEN HOUSE AND NET HOUSE



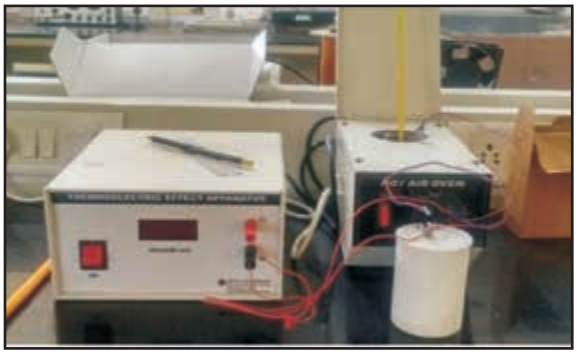
Engineering Drawing Hall

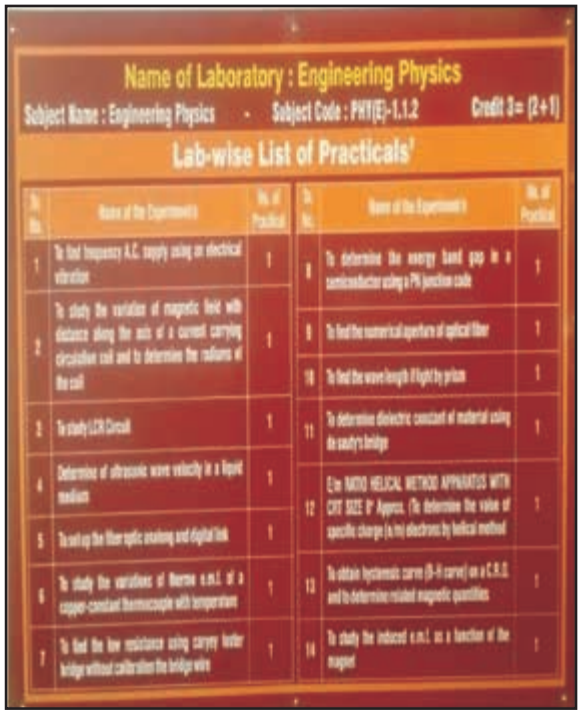
Department of Basic Engineering and Applied Sciences

Different Section of Basic Mechanical Engineering Laboratory i.e Machine Design, Engineering Mechanics,Thermodynamics, Refrigeration & Air Conditioning

Computer Lab

Engineering Physics





Name of Laboratory : Engineering Physics

Subject Name : Engineering Physics - Subject Code : PHY(E)-1.1.2 Credit 3= (2+1)

Lab-wise List of Practicals'

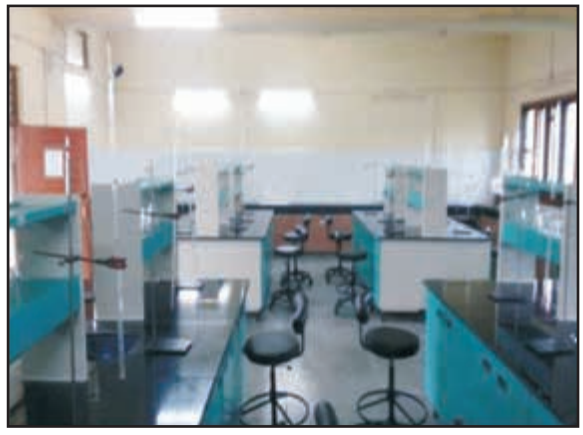
Sr. No.	Name of the Experiments	No. of Practical
1	To find frequency A.C. supply using an electrical vibration	1
2	To study the variation of magnetic field with distance along the axis of a current carrying circular coil and to determine the radiuns of the coil	1
3	To study LCR Circuit	1
4	Determine of ultrasonic wave velocity in a liquid medium	1
5	To set up the fiber optic analog and digital link	1
6	To study the variations of thermo e.m.f. of a copper-constant thermocouple with temperature	1
7	To find the low resistance using carrey foster bridge without calibration the bridge wire	1
8	To determine the energy band gap in a semiconductor using a PN junction code	1
9	To find the numerical aperture of optical fiber	1
10	To find the wave length if light by prism	1
11	To determine dielectric constant of material using the soutty's bridge	1
12	To use RADIO HELICAL METHOD APPARATUS WITH CRT SIZE 5" Approx. (To determine the value of specific charge (e/m) electrons by helical method	1
13	To obtain hysteresis curve (B-H curve) on a C.R.O. and to determine related magnetic quantities	1
14	To study the induced e.m.f. as a function of the magnet	1

Electrical & Electronics Laboratory

CAD/CAM Lab

Workshop

Chemistry Laboratory



Research and Technologies Development *- a zeal of institute*

All departments are extensively and continuously carrying out research activities to fulfill the needs of farmer and industry. All the students of UG (B. Tech.) and PG (M. Tech./Ph.D.) are actively involved in research activities through their research projects.

Sr. No	No. of Students	No. of Projects	Dept.	Name	Project Title
1	2	2	REE	ANKIT KUMAR	Study of Different type of Heat-Absorbing Media for Solar Drying Application
2				VED PRAKASH SHARMA	Integration of Fixed Tilt Vertically Mounted Bifacial Photovoltaic Modules in Agri-Voltaics
3	4	2	FMPE	PATEL KHANT PANKAJKUMAR	Development Of Sensor System for Farm Implement Testing
4				PRAGDA KISHAN JIGNESHBHAI	
5				BHASKAR TIWARY	Performance Study of Corn Shellers on Different Corn Varieties
6				MORI NASIB KUMAR VIJAYBHAI	
7	2	1	IDE	KUNPARA KETAN KUMAR VALLABHBHAI	Land use and land cover mapping using remote sensing and GIS.
8				SOLANKI SANJAY VARJANGBHAI	
9	2	1	SWCE	RAYPURA KRUNALKUMAR JAGDISHBHAI	Hydrological Modelling using Remote Sensing and GIS
10				PARMAR DIVYESHKUMAR PRAVINBHAI	
11	3	2	PFE	PATEL HIL VINODBHAI	Development and physical characterisation of bio-film using groundnut shell
12				CHAUHAN AJAYSINH JAYDIPSINH	
13				PATEL JAHANVI KAMLESHKUMAR	Preparation of ready to serve juice from dried indian jujube
14	2	1	BEAS	SHARMA HARSHITKUMAR JITENDRAKUMAR	Performance evaluation of fruit juice extractor using watermelon & muskmelon
15				SONI DHRUVIL YOGESHKUMAR	

Training and Placement Cell

- a bridge between students and Industry Partners

- ✓ Well Furnished and documented Training and Placement Cell is unique identity of the college.
- ✓ The cell is always trying to expand and make healthy relationships with industry and corporate sector.
- ✓ The students of the college getting 'Internship' and 'In-Plant Training' in various Central and State Government organizations along with Private companies related to the field of Agricultural Engineering.
- ✓ National Level '**Student READY**' Program conducted by ICAR, New Delhi is implemented in the college to make the student ready for corporate culture.

Past Employers where the students are placed

SN	Name of the Company
	MECHANIZATION INDUSTRIES
1	Mahindra & Mahindra Ltd. (Swaraj Division), Mohali, Punjab
2	Tractor and Farm Equipment(TAFE) Ltd., Ahmedabad
3	Captain Tractors Pvt. Ltd., Rajkot
4	Eicher Tractors
	IRRIGATION INDUSTRIES
5	Rivulis Irriation Private Limited, Pune
6	Jain Irrigation Systems Ltd., Jalgaon
7	NETAFIM Irrigation Pvt. Ltd., Vadodara
8	FinolexPlasson Industries Pvt. Ltd., Vadodara
9	Donga Watertech Pvt. Ltd., Eyaya, Sanand, Gujarat
10	Kothari Agritech Pvt. Ltd.
	OTHER INDUSTRIES
11	Netafim Agricultural Financing Agency
12	Vistaar Financial Services Pvt. Ltd., Bengluru
13	Signet Industries, Vadodara
14	Gujarat Green Revolution Company, Vadodara
15	Agriwyz, Surat
16	Patson Foods India Limited & GFIL
17	HDFC Bank
18	AgriVikas

Students Deputed for Skill Development Inplant Trainings during the Last Five Years

SN	Name of the Company
1	North Eastern Region Farm Machinery Training & Testing Institute, Assam
2	Northern Region Farm Machinery Training and Testing Institute, Hissar
3	Southern Region Farm Machinery Training and Testing Institute, Anantapur
4	BISAG - BhaskaracharyaIntitute for Space Applications and Geo-informatics, Gandhinagar
5	Indian Institute of soil water and conservation, Vasad
6	Central Farm Machinery Training and Testing Institute, Budni
7	Central Institute of Agricultural Engineering, CIAE, Bhopal
8	ICAR-Central Institute of Post Harvest Engineering & Technology (CIPHET), Ludhiana
9	ICAR-Central Institute of Post Harvest Engineering & Technology (CIPHET), Abohar
10	Central Horticultural Experiment Station (ICAR-CIAH),Vejalpur, Gujarat
11	Central Horticultural Experiment Station, Vejalpur
12	Waree Energies Limited, Tumb, Ubergaon, Valsad Dist., Gujarat
13	Sardar Patel Renewable Energy Research Institute(SPRERI), Anand
14	Netafim Irrigation Private Limited
15	Development Support Centre, Ahmedabad
16	Rajkot Dist. Co.-op Milk Producers Union Ltd.
17	Captain Tractors Pvt. Ltd., Rajkot
18	Sadguru Water and Development Foundation,Dahod
19	TAFE Tractors, Chennai
20	Sarvottam Dairy
21	Amar Dairy
22	VST Tillers and Tractors, Bangalore
23	SWANAGRO
24	Panchmahal Dairy
25	Anand Agricultural University
26	Phoenix Frozen Foods, Anand
27	Amidhara Drip Irrigation Pvt. Ltd., V.U.nagar, GIDC, Anand
28	Swaraj Tractors, Mahindra Tractor Division, Ranchi, Jharkhand
29	Loom Solar, Jaipur (Head Quarter, Haryana)
30	B.A College of Agriculture, AAU, Anand
31	Sonalika International, Jharkhand
32	Sardar Patel Renewable Energy Research Institute (SPRERI), Vallabh Vidyanagar, Anand
33	Central Institute of Agricultural Engineering (CIAE), Bhopal, Madhya Pradesh
34	Captain Tractors Pvt. Ltd., Veraval, Rajkot
35	Anand Milk Union Limited (AMUL), Anand
36	Bhumi Agro-Hitech Pvt. Limited, Rajkot
37	KM Food Products, 126,127 Labh Estate, Near Kadi-Narsinhpura Road, Kadi.

INAUGURAL CEREMONY OF T&P CELL ACTIVITIES (AY 2023-24) & A SPECIAL TALK ON SALES MASTERY

Training and placement (T&P) cell play a vital role in shaping the career goals of students. Every engineering student's dream is to get placed in an organization visiting their campus for recruitment. Considering this vital note, different kinds of training that help the students to be equipped with the latest technological interventions impacting society are important for students to know and are required to enhance their employability skills and achieve good placement in various industries. As a part of the same, T&P Cell planned different counseling and training activities for the academic year 2023-24.

The inaugural session of all those events, i.e., the inaugural ceremony of T&P cell activities was organized on 13th October 2023. The ceremony was presided over by Dr. R. Subbaiah, Principal and Dean, CAET, Godhra. After the welcome address by Dr. D.K. Vyas, HOD, Dept. REE, Er.J.Sravankumar, T&P officer, presented the T&P activities report for AY 2022-23 and the scheduled activities of T&P for AY 2023-24.

At the inaugural ceremony, a special talk by Shri Shailendra Singh, Managing Director, Agristar Farm Services, Anand, Gujarat on "SALES MASTERY" was organized to enable the students to choose their career path and start building the skills required for their future. The key emphasis of the talk was on the 8 proven ways of the sales process for becoming a sales superstar. More than 60 students and 20 faculty and staff members benefited from this session.

A session on "Effective Leader"

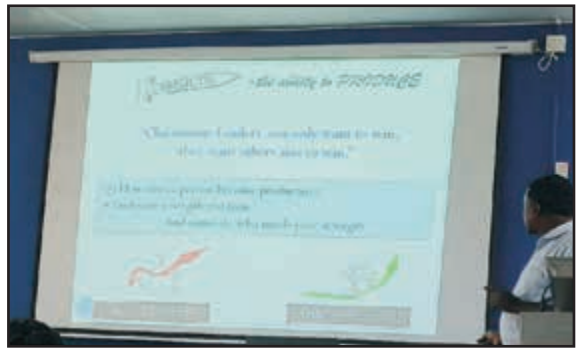
The Training and Placement cell conducted a special session on "How to become an Effective Leader" under the theme "Effective Leader" on 18th October 2023 for UG (Second and Third Year) Students.

Students and future leaders should have good morale, and the ability to improve productivity, promote better decision-making, build better teams, and train future leaders in their workplaces. Those traits or skills can be developed at any stage of their life. Understanding the needs of students of CAET, Godhra, and T&P cell, as a part of personality development activities, a session on "Effective Leader" was organized to inculcate the students with better values.

Er. J. Sravankumar, Assistant Professor, Dept. of REE and T&P officer held the session. The session was focused on how a successful leader is followed by others. How to empower team members with information, tools, skills, and professional development opportunities, and how a leader can successfully help team members reach their goals? were the key ideas addressed to the group. An important trait "CHARISMA" that is to be developed by everyone was the central theme of the session.

Throughout the session, student participants were very keen to learn and were enthusiastic to interact.

GLIMPSES OF WORKSHOP



Year wise B. Tech. (Agril. Engg.) Graduates Passed out & their placement

Years	Total No. of Graduates	Jobs obtained in different sectors					
		Gov. Services	Industry	Self-employed		Higher Edu.	Others (Preparing for Higher Education/competitive exams)
				Farming	Business		
2011-12	27	-	13	-	-	14	-
2012-13	27	-	12	-	-	15	-
2013-14	25	-	14	-	-	11	-
2014-15	28	-	21	-	-	07	-
2015-16	34	-	16	01	-	14	3
2016-17	51	-	20	-	-	10	21
2017-18	42	-	11	-	-	12	19
2018-19	39	-	02	-	-	14	23
2019-20	31	-	-	-	-	03	-
2020-21	42	-	02	-	-	07	33
2021-22	42	-	24	-	01	09	08
2022-23	38	01	13		02	01	21
2023-24	32	-	12	-	01	06	13
Total							

RESEARCH OUTPUT DURING 2023-24

a) SCI/SCOPUS Indexed Research publications in International Journals

Sr. No	Research/Review Article	Quartile (Q1 to Q4)	SCOPUS/ SCI	Impact Factor (for SCI (Thompson Reuters only)/ CITESCORE for only SCOPUS	NAAS Rating
1.	Jogunuri, S., FT, J., Stonier, A. A., Peter, G., Jayaraj, J., & Ganji, V. (2024). Random forest machine learning algorithm based seasonal multi-step ahead short-term solar photovoltaic power output forecasting. *IET Renewable Power Generation*.	Q2	SCI	Impact Factor: 2.6	8.6

2.	Jogunuri, S., Josh, F. T., Joseph, J. J., Meenal, R., Das, R. M., & Kannadhasan, S. (2024). Forecasting hourly short-term solar photovoltaic power using machine learning models. *International Journal of Power Electronics and Drive Systems (IJPEDS)*, *15*(4), 2553-2569.	Q2	SCOPUS	Cite Score 3.5	-
3.	Dhruv, S. D., Jayant Kolte, Pankaj Solanki, Vanaraj Solanki, J. H. Markna, Bharat Kataria, B. A. Amin, Naveen Agrawal, and D. K. Dhruv. "Synthesis, rietveld refinement, and microstructural characterization of bulk zinc gallium telluride. "*Interactions* 245, no. 1 (2024): 99.	-	SCOPUS	Cite Score 1.6	-
4.	Ram, B., Gaur, M. L., Patel, G. R., Tiwari, M. K. (2024). Deriving location-specific synthetic seasonal hyetographs using GPM records and comparing with SCS curves. Journal of Water and Climate Change, 15 (2): 747–758. https://doi.org/10.2166/wcc.2024.553	Q2	SCOPUS	CITESCORE: 3.4	4.8
5.	Sahoo, B.B., Panigrahi, B., Nanda, T. et al. Multi-step Ahead Urban Water Demand Forecasting Using Deep Learning Models. SN COMPUT. SCI. 4, 752 (2023). https://doi.org/10.1007/s42979-023-02246-6.	Q2	SCOPUS	3.1	-
6.	Wable, P.S., Jha, M.K., Adamala, S., Tiwari, M. K., Biswal, S. (2023). Application of hybrid ANN techniques for drought forecasting in the semi-arid region of India. Environ. Monit. Assess., 195, 1090. https://doi.org/10.1007/s10661-023-11631-w	Q2	SCOPUS	4.5	8.40

7.	Rank, P.H., Vaghasiya, D.R., Lunagaria, M.M., Patel, R.J., Tiwari, M.K., Rank, H.D. (2023). Climate change impacts on water flux dynamics in Shingoda basin having agriculture and forest ecosystems: A comprehensive analysis. Journal of Agrometeorology, 25(3), . https://doi.org/10.54386/jam.v25i3.2284	Q3	SCOPUS	1.4	4.98
8.	Nandgude, N.; Singh, T.P.; Nandgude, S.; Tiwari, M. (2023). Drought Prediction: A Comprehensive Review of Different Drought Prediction Models and Adopted Technologies. Sustainability, 15, 11684. https://doi.org/10.3390/su151511684	Q2	SCOPUS	5.8	9.90
9.	Bhukya, S., Tiwari, M.K. & Patel, G.R. (2023). Assessment of Spatiotemporal Variation of Agricultural and Meteorological Drought in Gujarat (India) Using Remote Sensing and GIS. J Indian Soc Remote Sens, 51, 1493–1510. https://doi.org/10.1007/s12524-023-01715-y.	Q2	SCOPUS	-	8.50
10.	Parmar, S. H., Patel, G. R., Tiwari, M. K. (2023). Assessment of crop water requirement of maize using remote sensing and GIS. Smart Agricultural Technology, 4, 100186. https://doi.org/10.1016/j.atech.2023.100186	Q1 -	SCOPUS	4.2	-

b) SCI/SCOPUS Indexed Research publications in International Conferences

Sr. No	Research/Review Article	SCOPUS/Web of Science (WoS)
1.	Dedhiya, N., Parmar, V., Jogunuri, S., & Vyas, D. K. (2024, July). Short Term Solar Radiation Forecasting Using Machine Learning Models for Sparse Data. In *2024 IEEE International Conference on Smart Power Control and Renewable Energy (ICSPCRE)* (pp. 1-5). IEEE.	SCOPUS

2.	Jadav, C., & Patel, S. (2024). Determination of Porosity-A Casting Defect Occurrence in Green-Sand Casting of Al-Si5-Cu3 by the Taguchi Method. In *ITM Web of Conferences* (Vol. 65, p. 01001). EDP Sciences.	-

c) Non-SCI/Non-SCOPUS Indexed Research publications in International Journals

Sr.No	Research/Review Article	NAAS Rating (if any)
1.	Balas, D. B., Tiwari, M. K., Patel, G. R. (2023). Estimation of Surface and Subsurface Soil Moisture Using Microwave Remote Sensing: A Typical Analysis. International Journal of Environment and Climate Change, 13 (10), 1804-1816. https://doi.org/10.9734/ijecc/2023/v13i102836	5.16
2.	Balas, D. B., Tiwari, M. K., Trivedi, M., Patel, G. R. (2023). Impact of Land Surface Temperature (LST) and Ground Air Temperature (Tair) on Land Use and Land Cover (LULC): An Investigative Study. International Journal of Environment and Climate Change. 13 (10):3117-3130. https://doi.org/10.9734/ijecc/2023/v13i102980	5.16
3.	Suryavansi, S., Subbaiah, R., Tiwari, M.K., Pampaniya, N.K., Gupta, P., Trivedi, M.M. (2023). Estimation of Runoff in Data Scare Watershed of Middle Gujarat, India Using HEC-HMS Model. International Journal of Environment and Climate Change, 13 (9), 1066-1084. https://doi.org/10.9734/ijecc/2023/v13i92329	5.16
4.	Ahirwar, S., Subbaiah, R., Gupta, P., Tiwari, M.K., Trivedi, M.M., Vaishnav, P. (2023). Effect of Irrigation Regimes and Mulching on the Crop Physiology and Yield of Rabi Maize (Zea mays). International Journal of Environment and Climate Change, 13 (9), 1011-1020. https://doi.org/10.9734/ijecc/2023/v13i92322	5.16
5.	Ahirwar, S., Subbaiah, R., Gupta, P., Tiwari, M.K., Trivedi, M.M., Vaishnav, P. (2023). Simulation of Maize Phenology and Grain Yield Using DSSAT Model. International Journal of Environment and Climate Change, 13 (9), 2545-2556. https://doi.org/10.9734/ijecc/2023/v13i92628	5.16
6.	Namwade, G., Trivedi, M.M., Tiwari, M.K., Patel, G.R. (2023). Rainfall-Runoff Modelling Using HEC-HMS Model, Remote Sensing and GIS in Middle Gujarat, India. International Journal of Environment and Climate Change, 13 (9), 952-962. https://doi.org/10.9734/ijecc/2023/v13i92317	5.16

7.	Jethva K. R., Suthar R. F. and Kumar N. (2024). Effect of drying on Physico-chemical properties of protein fortified kesar mango leather. *International Journal of Advanced Biochemistry Research*, 8(2): 101-107	-
8.	Jethva K. R. , Rathod S. R. and Pargi S. J. (2023). Optimization of process variables for development of dragon fruit leather by using fruit peel as by-product utilization. *The Pharma Innovation Journal,* 12(7): 1154-1159	5.23
9.	Gandhi R., Jethva K. R and Damor H. (2023). Effect of drying temperature on Physio-chemical properties of protein enriched mango leather. *The Pharma Innovation Journal,* 12(11): 301-307	5.23
10.	Gandhi R., Kumar N., Mistry A. (2023). Physicochemical characterization of steam blanched parijat (Nyctanthes arbor-tristis L.) leaves. *The Pharma Innovation Journal*, 12(8), 2261-2269	5.23
11.	Sethi S., and Seth N. (2023). Physiochemical properties of pretreated tomato powder from different drying technique. *International Journal of Innovative Research in Science, Engineering and Technology (IJIRSET)*, 12(1): 243-250	-
12.	Amin, B.A., Suthar, J.V. (2023). Study of Essential Growth Parameters of Onion and Cumin seeds Exposed with a Magnetic Field. International Journal of Advanced Research in Science, Communication and Technology, 3(3), 1301	-
13.	Parmar, R. S., Kamani, G. J., & Ghodasara, Y. R. (2023). Tree-based ensemble models for productivity trend of minor millets. International Journal of Statistics and Applied Mathematics, SP-8(5), 170	5.12
14.	Agravat V.V., Swarnkar R., Kumar N., Balas P.R. and Matholiya C.S.(2023). Development of electric harvester. The Pharma Innovation Journal, 12(5): 1087-1089.	5.23
15.	Bhabhor R. V., Chavda S.K., Parmar B.S., Chavda J.M. and Dabhi K.L. (2023). Mini tractor-drawn multi-tillage tool performance evaluation. The Pharma Innovation Journal, SP-12(12): 1764-1768.	5.23
16.	Dabhi K.L., Sharma A., Sen, P., Soni A. and Kaushik S. (2023). Comparative study of mini tractor drawn combine tillage tool and cultivator for seed bed preparation in sandy loam soil conditions. Multilogic in Science, SP-12(12): 1764-1768.	4.51

17.	Dhakad S. Salunkhe R.C., Dabhi K.L. and Gupta P. (2023). Agricultural drone spraying efficiency enhancement via patternater-based effective swath width determination. The Pharma Innovation Journal, 12(10): 952-961.	5.23
18.	Shukla K., Gupta P., Dhakad S. and Panwar G. (2023). Effect of auger size and depth of operation on bulk density, cone index, germination, root length, root weight and cob weight for maize crop. International Journal of Environment and Climate Change, 13(11): 2899-2911.	5.13
19.	Shukla K., Gupta P., Panwar G., Godhani R.S., Dhakad S. and Kumar G. (2023). Minimum tillage a futuristic approach: Review. The Pharma Innovation Journal, SP- 12(9): 1078-1084.	5.23
20.	Matholiya C.S., Balas P.R., Pargi S.J., Agravat V.V. and Gupta P. (2023). Development of an algorithm for crop row detection for autonomous fertilizer side dressing machine. The Pharma Innovation Journal, 12(12): 3398-3407.	5.23
21.	Panwar G., Swarnkar R., Gupta P. and Shukla K. (2023). A review of methodologies and influencing factors in planter performance evaluation for higher maize yield. The Pharma Innovation Journal, SP-12(12): 1465-1471.	5.23

d) Non-SCI/Non-SCOPUS Indexed Research publications in National Journals

Sr.No	Research/Review Article	NAAS Rating (if any)
1.	Tiwari, M., & Brahmbhatt, M. P. (2024). Forecasting drought indices using artificial neural network and M5 model tree techniques in middle Gujarat region of India. Journal of Agricultural Engineering (India), 61(3), 413-431. https://doi.org/10.52151/jae2024613.1856	5.85
2.	Bal, J., Vyas, D. K., Jogunuri, S., & Sayyad, F. G. (2024). Mathematical Modelling of Solar Tunnel Dried Ginger (*Zingiber officinale* L.) Slices.*Journal of Agricultural Engineering*, *61*(2), 299-310.	5.85

PATENTS PUBLISHED /GRANTED

Invention Category: -

Title: Apparatus and Method for Measuring Angle of Repose

Application No: 202021045467

Publication Date: 08/12/2023

Grant No. & Date: 479162 & 08/12/2023

Students' Profile

B. Tech (Agril. Engg.)

-where your search may end

ANKIT KUMAR

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Email : **ankituday123@gmail.com**
Mob : **6205201375**
Address : H.No: 121
Village : Patel Nagar
Mandal : Nawada
District : Nawada
Pincode : 805110
State : Bihar

Skill Development Training-1

North Eastern Regional Farm Machinery Training and Testing Institute, Bishwanath Charali, Assam

Skill Development Training-2

SWARAJ Tractors, Mahindra Tractor Division, Ranchi, Jharkhand

Industrial Training:

Sardar Patel Renewable Energy Research Institute, Vallabh Vidyanagar, Gujarat

Final Year Project:

Title : Study of Different type of Heat-Absorbing Media for Solar Drying Application

Abstract : The rising global energy demand and environmental concerns have driven the shift toward sustainable energy, with solar energy offering immense potential due to its abundance. Efficient systems for capturing, storing, and utilizing solar energy are essential. This study reviews solar energy applications, focusing on photovoltaic and solar thermal technologies and advancements in thermal energy storage (TES) systems. TES methods—sensible, latent, and thermochemical—help address energy intermittency, boost efficiency, and optimize solar utilization. Integrating TES into solar dryers significantly enhances performance by enabling heat storage and controlled release, improving drying efficiency, reducing weather dependency, and ensuring operation during low sunlight. Innovations in solar dryer designs, drying kinetics, and energy analysis are explored to enhance efficiency, product quality, and cost-effectiveness. By advancing materials and methods to improve storage density, thermal conductivity, and sustainability, this research supports the optimization of solar energy systems for a sustainable energy future.

BHASKAR TIWARY

Reg. No.	:	**3050721004**
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Village	:	Ranka
Post Office	:	Ranka Bauliya
District	:	Garhwa
Pincode	:	822114
State	:	Jharkhand

Skill Development Training-1

At- North Eastern Region Farm Machinery Training & Testing Institute, Biswanath Chariali, District: Biswanath, Assam

Skill Development Training-2

At- Jharkhand Agricultural Machinery Testing and Training Centre, Ranchi, Jharkhand

Industrial Training:

At- Sonalika International, Maa Kali Automobiles, Opp. DFO Residence, Garhwa, Jharkhand

Final Year Project:

Title: Performance Study of Corn Shellers on Different Corn Varieties

Abstract : This project examines the performance of different corn shellers with various corn types, including dent, flint, and sweet corn. It tests manual, motorized, and automated shellers to assess their efficiency, kernel damage, and speed under different conditions. To ensure fair comparisons, corn samples are carefully prepared, and factors like moisture content and cob size are controlled.

The study's goal is to determine how well each type of sheller handles different corn varieties, offering valuable insights for farmers and agricultural workers. By comparing their performance, the research aims to guide users in selecting the most suitable sheller for their needs, ultimately improving post-harvest processing efficiency. This analysis supports better equipment choices, leading to enhanced productivity and easier corn handling. The findings contribute to improving agricultural practices by providing practical information that helps the farming community make informed decisions about corn shelling tools and methods.

KUNPARA KETAN KUMAR VALLABHBHAI

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Address	:	Vadivistar, Hariyasan, Rajkot, Gujarat
H.No	:	Badivistar
Area	:	Vadivistar
Village	:	hariyasan
Mandal	:	Upleta
District	:	Rajkot
Pincode	:	360480
State	:	Gujarat

Skill Development Training-1

At, ICAR - CENTRAL INSTITUTE OF AGRICULTURAL ENGINEERING, BHOPAL, MADHYA PRADESH.

Skill Development Training-2

At, ICAR-CENTRAL INSTITUTE OF POST-HARVEST ENGINEERING & TECHNOLOGY (CIPHET), REGIONAL STATION, ABOHAR, PUNJAB.

Industrial Training

At, ICAR - CENTRAL INSTITUTE OF AGRICULTURAL ENGINEERING, BHOPAL, MADHYA PRADESH.

Final Year Project

Title: Land use and land cover mapping using remote sensing and GIS.

Abstract: Land use and land cover (LULC) mapping is an essential tool for understanding the spatial distribution of various land types and their changes over time. This information is critical for sustainable land management, urban planning, natural resource management, and environmental conservation. Remote sensing and Geographic Information System (GIS) technologies offer powerful methods for analyzing and visualizing LULC patterns efficiently and accurately. This study highlights the integration of remote sensing data, such as satellite imagery and aerial photographs, with GIS techniques to classify and map land use and land cover across diverse landscapes. Advanced classification algorithms, including supervised, unsupervised, and machine learning approaches, are employed to process and analyze high-resolution imagery. The study further explores the temporal dynamics of LULC changes by incorporating time-series data, enabling the detection of trends and driving factors behind land transformations. The results demonstrate the effectiveness of remote sensing and GIS in producing detailed and reliable LULC maps. These outputs are instrumental for policymakers and planners to address issues like deforestation, urban sprawl, agricultural expansion, and climate change impacts. The paper underscores the need for continuous advancements in remote sensing technology, such as the use of drones, hyperspectral imaging, and improved machine learning models, to enhance the precision and applicability of LULC studies.

MORI NASIB KUMAR VIJAYBHAI

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State : Gujarat

Skill Development Training-1

North Eastern Regional Farm Machinery Training and Testing Institute, Bishwanath Charali, Assam

Skill Development Training-2

CIPHET, Ludhiana, Punjab

Industrial Training:

Captain Tractors Pvt. Ltd., Veraval, Rajkot

Final Year Project:

Title : Performance Study of Corn Shellers on Different Corn Varieties

Abstract : This project examines the performance of different corn shellers with various corn types, including dent, flint, and sweet corn. It tests manual, motorised, and automated shellers to assess their efficiency, kernel damage, and speed under different conditions. To ensure fair comparisons, corn samples are carefully prepared, and factors like moisture content and cob size are controlled.

The study's goal is to determine how well each type of sheller handles different corn varieties, offering valuable insights for farmers and agricultural workers. By comparing their performance, the research aims to guide users in selecting the most suitable sheller for their needs, ultimately improving post-harvest processing efficiency. This analysis supports better equipment choices, leading to enhanced productivity and easier corn handling. The findings contribute to improving agricultural practices by providing practical information that helps the farming community make informed decisions about corn shelling tools and methods.

PARMAR DIVYESHKUMAR PRAVINBHAI

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State : Gujarat

Skill Development Training-1

At, NORTHERN REGION FARM MACHINERY TRAINING AND TESTING INSTITUTE, Hisar, Haryana

Skill Development Training-2

At, B.A COLLEGE OF AGRICULTURE, AAU, ANAND

Industrial Training:

At, B.A COLLEGE OF AGRICULTURE, AAU, ANAND

Final Year Project:

Title: Hydrological Modelling using Remote Sensing and GIS

Abstract : This project explores the application of remote sensing and GIS in hydrological modelling to enhance water resource management. By integrating satellite imagery, GIS-based tools, and hydrological models, the study aims to assess watershed characteristics, monitor land-use changes, and predict runoff and flood potential. Remote sensing data, such as precipitation and vegetation indices, will be combined with GIS for spatial analysis, enabling the creation of accurate hydrological models. The ultimate goal is to improve decision-making for water resource management, disaster preparedness, and sustainable land use by providing more efficient, real-time data for hydrological assessments. This approach offers significant potential for managing water resources in regions with limited ground-based data.

PATEL HIL VINODBHAI

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State : Gujarat

Skill Development Training-1

At, Mitarsh Energy Pvt.Ltd, Ahmedabad

Skill Development Training-2

At, Neel Industries, Ahmedabad

Industrial Training:

At, KM Food Products, Kadi(Mehsana)

Final Year Project:

Title : Development and physical characterisation of bio-film using groundnut shell

Abstract : This study explores the development and physical characterization of bio-films derived from groundnut shells, a readily available agricultural waste. Groundnut shells were processed into fine powder and incorporated with starch and glycerol as binders and plasticizers to form bio-film matrices. The films were cast and dried under controlled conditions, resulting in thin, flexible sheets. Surface morphology was analyzed using SEM. Biodegradability tests confirmed the environmental compatibility of the films. The bio-films exhibited good mechanical properties, low moisture permeability, and effective degradability, indicating their potential for applications in sustainable packaging and agriculture. This research underscores the feasibility of utilizing groundnut shells for eco-friendly bio-film production, contributing to waste valorization and environmental conservation.

PATEL JAHANVI KAMLESHKUMAR

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State	:	Gujarat

Skill Development Training-1:

At, North eastern region farm machinery training & testing institute, Assam

Skill Development Training-2:

At, Central Institute of Agricultural Engineering, Bhopal

Industrial Training:

At, Anand milk union limited(AMUL) ,Anand

Final Year Project:

Title : Preparation of ready to serve juice from dried indian jujube

Abstract : The study focuses on the preparation of ready-to-serve (RTS) juice from dried Indian jujube (Ziziphus mauritiana), a fruit known for its nutritional value and medicinal properties. The process involves rehydration of dried jujube to extract the pulp, which is then blended with water, sugar, and citric acid to formulate a palatable juice. The product is evaluated for physicochemical properties, including pH, total soluble solids, and acidity, as well as sensory attributes like taste, color, and overall acceptability. Optimization of the formulation ensures a balance between sweetness and tanginess, catering to consumer preferences. The RTS juice retains the rich antioxidants, vitamins, and minerals of the dried fruit, making it a healthy beverage option. This method provides an economical and sustainable approach to utilizing dried jujube, extending its market value while offering a convenient, shelf-stable drink for health-conscious consumers.

PATEL KHANT PANKAJKUMAR

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Skill Development Training-1

At, NORTHERN REGION FARM MACHINERY TRAINING AND TESTING INSTITUTE, HISAR, HARYANA

Skill Development Training-2

At, NEEL INDUSTRIES,AHMEDABAD

Industrial Training:

At, BHOOMI AGRO HI-TECH PVT. LTD. ,METODA (RAJKOT)

Final Year Project:

Title : Development Of Sensor System for Farm Implement Testing

Abstract : Farm implement testing is crucial for improving agricultural efficiency and ensuring optimal performance. This study focuses on developing a sensor-based system for testing farm implements. The proposed system integrates strain gauges, ultrasonic sensors, and other precise measurement tools to monitor and evaluate key performance parameters such as draft force, soil engagement depth, and operational speed. Strain gauges measure stress and strain on the implement, while ultrasonic sensors determine depth and position in real time. The system is designed to provide accurate, reliable, and cost-effective data, enabling farmers and manufacturers to assess implement performance under varying field conditions. Data acquisition is handled through a microcontroller-based setup with wireless transmission for easy analysis. This sensor system aims to enhance the reliability of implement testing, improve design optimization, and support sustainable agricultural practices

PRAGDA KISHAN JIGNESHBHAI

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Skill Development Training-1

At, Northern Region Farm Machinery Training & Testing Institute, Hisar (Haryana)

Skill Development Training-2

At, Central Institute Of Post-Harvest Engineering & Technology, Ludhiana(Punjab)

Industrial Training:

At, Bhoomi Agro Hi Tech Pvt. Ltd., Metoda(Rajkot)

Final Year Project:

Title : Development Of Sensor System For Farm Implement Testing

Abstract : Farm implement testing is crucial for improving agricultural efficiency and ensuring optimal performance. This study focuses on developing a sensor-based system for testing farm implements. The proposed system integrates strain gauges, ultrasonic sensors, and other precise measurement tools to monitor and evaluate key performance parameters such as draft force, soil engagement depth, and operational speed. Strain gauges measure stress and strain on the implement, while ultrasonic sensors determine depth and position in real time. The system is designed to provide accurate, reliable, and cost-effective data, enabling farmers and manufacturers to assess implement performance under varying field conditions. Data acquisition is handled through a microcontroller-based setup with wireless transmission for easy analysis. This sensor system aims to enhance the reliability of implement testing, improve design optimization, and support sustainable agricultural practices

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State	:	Gujarat

Skill Development Training-1

At, NORTHERN REGION FARM MACHINERY TRAINING AND TESTING INSTITUTE, Hisar, Haryana

Skill Development Training-2

At, B.A COLLEGE OF AGRICULTURE, AAU, ANAND

Industrial Training:

At, B.A COLLEGE OF AGRICULTURE, AAU, ANAND

Final Year Project:

Title : Hydrological Modelling using Remote Sensing and GIS

Abstract : This project explores the application of remote sensing and GIS in hydrological modelling to enhance water resource management. By integrating satellite imagery, GIS-based tools, and hydrological models, the study aims to assess watershed characteristics, monitor land-use changes, and predict runoff and flood potential. Remote sensing data, such as precipitation and vegetation indices, will be combined with GIS for spatial analysis, enabling the creation of accurate hydrological models. The ultimate goal is to improve decision-making for water resource management, disaster preparedness, and sustainable land use by providing more efficient, real-time data for hydrological assessments. This approach offers significant potential for managing water resources in regions with limited ground-based data.

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State	:	Gujarat

Skill Development Training-1

Northern Region Farm Machinery Training and Testing Institute, Hisar.

Skill Development Training-2

At, ICAR-CENTRAL INSTITUTE OF POST-HARVEST ENGINEERING & TECHNOLOGY (CIPHET), REGIONAL STATION, ABOHAR, PUNJAB.

Industrial Training

At, ICAR - CENTRAL INSTITUTE OF AGRICULTURAL ENGINEERING, BHOPAL, MADHYA PRADESH.

Final Year Project

Title : Land use and land cover mapping using remote sensing and GIS.

Abstract : Land use and land cover (LULC) mapping is an essential tool for understanding the spatial distribution of various land types and their changes over time. This information is critical for sustainable land management, urban planning, natural resource management, and environmental conservation. Remote sensing and Geographic Information System (GIS) technologies offer powerful methods for analyzing and visualizing LULC patterns efficiently and accurately. This study highlights the integration of remote sensing data, such as satellite imagery and aerial photographs, with GIS techniques to classify and map land use and land cover across diverse landscapes. Advanced classification algorithms, including supervised, unsupervised, and machine learning approaches, are employed to process and analyze high-resolution imagery. The study further explores the temporal dynamics of LULC changes by incorporating time-series data, enabling the detection of trends and driving factors behind land transformations. The results demonstrate the effectiveness of remote sensing and GIS in producing detailed and reliable LULC maps. These outputs are instrumental for policymakers and planners to address issues like deforestation, urban sprawl, agricultural expansion, and climate change impacts. The paper underscores the need for continuous advancements in remote sensing technology, such as the use of drones, hyperspectral imaging, and improved machine learning models, to enhance the precision and applicability of LULC studies.

SONI DHRUVIL YOGESHKUMAR

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District	:	Godhra
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State	:	Gujarat

Skill Development Training-1

At, North Eastern Region Farm Machinery Training &Testing Institute, Biswanath, Assam

Skill Development Training-2

At, Central institute of post-harvest engg.&technology(CIPHET),Abohar,Punjab

Industrial Training:

At, Anand milk union limited(AMUL) ,Anand

Final Year Project:

Title : Performance evaluation of fruit juice extractor using watermelon & muskmelon

Abstract : Several varieties of juicy fruits are available in abundant quantities in many parts of India, most especially during the harvesting seasons. Incidentally, there is an increasing demand for fruits juices among people of all age groups due to the vitamins, mineral and fiber contents. These products are essential for human and animal growth, aid metabolic activities and improve health standards. The high-water content of watermelon makes it an excellent choice for quenching thirst and preventing dehydration. Collecting watermelon juice usually requires using a knife to cut the fruit and a blender to puree it. While this method is effective, it can be tedious and require many workers if large quantities of watermelon juice must be collected.Therefore, the machine could extract watermelon juice effectively and help the entrepreneur save on production and labour costs. The watermelon juice extraction machine is easy to use, efficient, and cost-effective, which makes it suitable for small-scale businesses.

VED PRAKASH SHARMA

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Mandal	:	Amber
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Pincode	:	303805
State	:	Rajasthan

Skill Development Training-1

At, North Eastern Region Farm Machinery Training &Testing Institute, Biswanath, Assam

Skill Development Training-2

Loom Solar private limited, plot no.14/6, Mathura Road,Sec-27B, Faridabad,Haryana - 121003

Industrial Training:

Loom Solar private limited, plot no.14/6, Mathura Road,Sec-27B, Faridabad,Haryana - 121003

Final Year Project:

Title : Integration of Fixed Tilt Vertically Mounted Bifacial Photovoltaic Modules in Agri-Voltaics

Abstract : The integration of vertical bifacial agrivoltaic systems with turmeric cultivation presents a promising solution to address the dual challenges of energy generation and sustainable agriculture. This project investigates the feasibility, performance, and benefits of deploying single-row vertical bifacial photovoltaic (PV) panels in turmeric fields. Vertical bifacial panels harness sunlight from both sides, optimizing energy capture while maintaining adequate light availability for crop growth.

Turmeric, a shade-tolerant crop, can benefit from the microclimatic modifications created by agrivoltaic installations, such as reduced heat stress and enhanced soil moisture retention. The project aims to assess the energy yield of the bifacial panels, their impact on turmeric crop yield, and the overall system's economic viability. Parameters such as panel orientation, inter-row spacing, and shading effects will be analyzed to determine optimal configurations for maximizing energy generation without compromising crop productivity.

By integrating renewable energy generation with turmeric farming, the project has the potential to enhance land-use efficiency and provide additional income streams for farmers. The outcomes of this study could pave the way for the large-scale adoption of agrivoltaics in turmeric cultivation, contributing to the transition toward sustainable energy and agriculture.

CHAUHAN AJAYSINH JAYDIPSINH

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Mandal	:	Anand
District	:	Anand
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State	:	Gujarat

Skill Development Training-1

At, PHOENIX FROZEN FOOD PVT.LTD. ,MOGAR,ANAND

Skill Development Training-2

At, AMIDHARA DRIP IRRIGATION PVT. LTD.,GIDC,ANAND

Industrial Training:

At, ANAND MILK UNION LIMITED(AMUL) ,ANAND

Final Year Project:

Title : Performance evaluation of fruit juice extractor using watermelon & muskmelon

Abstract : Several varieties of juicy fruits are available in abundant quantities in many parts of India, most especially during the harvesting seasons. Incidentally, there is an increasing demand for fruits juices among people of all age groups due to the vitamins, mineral and fiber contents. These products are essential for human and animal growth, aid metabolic activities and improve health standards. The high-water content of watermelon makes it an excellent choice for quenching thirst and preventing dehydration. Collecting watermelon juice usually requires using a knife to cut the fruit and a blender to puree it. While this method is effective, it can be tedious and require many workers if large quantities of watermelon juice must be collected.Therefore, the machine could extract watermelon juice effectively and help the entrepreneur save on production and labour costs. The watermelon juice extraction machine is easy to use, efficient, and cost-effective, which makes it suitable for small-scale businesses.

SHARMA HARSHITKUMAR JITENDRAKUMAR

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District	:	Anand
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State	:	Gujarat

Skill Development Training-1

At, Phoenix frozen food pvt.ltd., Mogar, Anand

Skill Development Training-2

At, Amidhara drip irrigation pvt.ltd., V.U.nagar, Gidc, Anand

Industrial Training:

At, Anand milk union limited(AMUL), Anand

Final Year Project:

Title : Development and physical characterisation of bio-film using groundnut shell

Abstract : This study explores the development and physical characterization of bio-films derived from groundnut shells, a readily available agricultural waste. Groundnut shells were processed into fine powder and incorporated with starch and glycerol as binders and plasticizers to form bio-film matrices. The films were cast and dried under controlled conditions, resulting in thin, flexible sheets. Physical characterization included mechanical testing for tensile strength and elongation at break, thermal stability assessment using TGA and DSC, and barrier property evaluation for water vapor permeability. Surface morphology was analyzed using SEM, while FTIR spectroscopy identified functional groups and chemical interactions. Biodegradability tests confirmed the environmental compatibility of the films. The bio-films exhibited good mechanical properties, low moisture permeability, and effective degradability, indicating their potential for applications in sustainable packaging and agriculture. This research underscores the feasibility of utilizing groundnut shells for eco-friendly bio-film production, contributing to waste valorization and environmental conservation.

Other Facilities

Spots to overall development of the students

Library: Air conditioned Library cum Reading Room with more than 3000 books and citations and connected with Central Library through net access to all e-journals available on ICAR e-CeRA platform

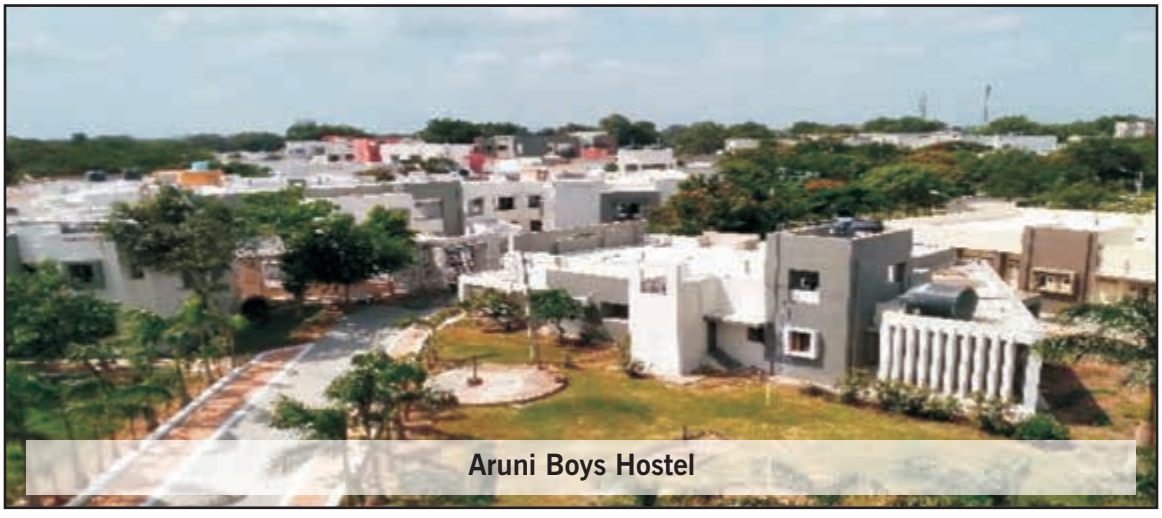
Auditorium: Central AC with 500 seating capacity

Other Facilities

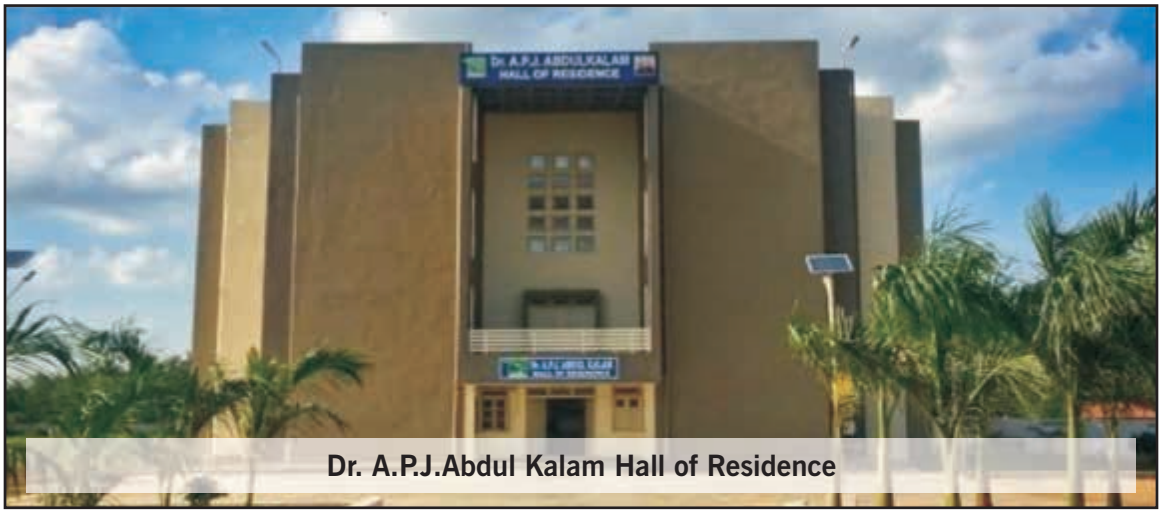
Spots to overall development of the students

Seminar Hall and Committee Room :Well furnished and equipped with AC and Audio-Visual aids

Hostel Facilities at CAET, AAU, Godhra



Aruni Boys Hostel



Dr. A.P.J.Abdul Kalam Hall of Residence

Residence (for Boys & Girl's)

Dining Halls

Dining Area with seating capacity of 96

Kitchen Area

Hostel Reading Room

Facilities available in the hostels

Solar Water Pumping System

Solar Water Heating System

Drinking water with RO facility

Electric Geyser for water heating

TV Hall

Gym

Badminton Court

Play Ground

FARMING
is not just a **JOB**

it's a
WAY OF LIFE

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