Self Study Report for Accreditation

2025-26

Submitted to

National Agricultural Education Accreditation Board

Indian Council of Agricultural Research

New Delhi



College of Agricultural Engineering and Technology

Junagadh Agricultural University

Junagadh -362001

Gujarat

College of Agricultural Engineering and Technology

Junagadh Agricultural University

Junagadh -362001

Gujarat

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SELF STUDY REPORT FOR B.Tech. (AGRIL. ENGG.) PROGRAMME

PREFACE

Agricultural Engineering as a profession was introduced in India in 1940 at Allahabad Agricultural Institute, Naini, by Prof. Mason Vaugh. The first batch graduated in 1942. Recognizing the importance of Agricultural Engineering in national development, the College of Agricultural Engineering and Technology (CAET) was established in May 1984 as a constituent college of the then Gujarat Agricultural University (GAU) at the Junagadh Campus.

With the promulgation of the Gujarat Agricultural Universities Act, 2004, effective from May 1, 2004, Junagadh Agricultural University (JAU) was formed, and the college became one of its constituent colleges. CAET was the 18th Agricultural Engineering College established in India. Since its inception, the college has been actively involved in imparting education, conducting research, and providing extension services in the field of Agricultural Engineering across Gujarat.

Agricultural Engineering plays a pivotal role in various critical areas, such as: timely farm operations using efficient agricultural machinery and implements, including their testing and evaluation, appropriate land and water management, water harvesting and groundwater recharge, efficient management of water resources and advanced irrigation technologies, post-harvest technology, value addition, and scientific storage of farm produce, packaging technology and renewable energy management at the farm level, protective cultivation, greenhouse technology, and plasticulture, integration of Artificial Intelligence in equipment, machinery, sensors, and processes for precision agriculture.

The College offers facilities for study of Agricultural Engineering, leading to degree of Bachelor of Technology (Agricultural Engineering). The M.Tech. Programme in different disciplines started from June, 1994. The disciplines included Master of Technology (Agril. Engg.) in Farm Machinery & Power Engineering, Soil & Water Engineering, Processing & Food Engineering and Renewable Energy Engineering. Irrigation and Drainage Engineering discipline started from 2022-23. From the year 2001, Ph.D. programme has also been started in discipline of Soil & Water Engineering. Since year 2005-06 Ph.D. programme started in other disciplines like Farm Machinery & Power Engineering, Processing & Food Engineering and Renewable Energy Engineering. Irrigation and Drainage Engineering discipline started from 2022-23.

The college is equipped with excellent infrastructure, including: academic and departmental buildings, separate hostels for boys, girls, and international students, a Testing & Training Centre for farm machinery, canning plant, dal mill, Agri-Voltaic system,

Green houses, pump testing unit, 120 KW SPV system and a well-developed instructional farm.

The B.Tech. (Agril. Engg.) program has been accredited by:

- ICAR, New Delhi in 1997, 2009, 2016, and 2021 (valid upto 27th March, 2026)
- Institution of Engineers (India), Kolkata in 2000
- AICTE, New Delhi in 2008 (for 2008–2013)

The first batch of B.Tech. students graduated in 1988, and since then, alumni have made notable contributions to academics, agro-industries, and entrepreneurship across the state and country. Many have become successful entrepreneurs, particularly in the micro-irrigation industry & Processing Industries of Gujarat.

CAET, JAU, Junagadh is the only Agricultural Engineering college in India participating in the annual GHRDC-CSR Ranking of Best Engineering Colleges in India. Notably, the college has improved its rank consistently for the past 10 years. In the 2025 ranking:

- Ranked 2nd in Gujarat, after Nirma Institute of Technology, Ahmedabad
- Ranked 21st nationally in the 6th category of "Engineering Colleges of outstanding Excellence"
- Ranked 4th in the Western Region of India

This is a matter of great pride for the institution. The Self Study Report (SSR) highlights the college's significant achievements over the past five academic years (2020-21 to 2024-25). Currently, the college offers: B.Tech. (Agril. Engg.), M.Tech. (Agril. Engg.), and Ph.D. (Agril. Engg.) in all five major disciplines (SWE, IDE, FMPE, PFE and REE).

The academic curriculum has been regularly updated. The ICAR's VI Deans' Committee recommendations have been implemented in the UG curriculum from the academic year 2024-25. To enhance skill development and entrepreneurial capabilities, the Student READY Programme has been introduced. At the PG and Ph.D. levels, the syllabus is revised as per the BSMA recommendations of ICAR, implemented from 2022-23.

The contributions and success of alumni in academia, industries, and startups reflect the quality of education and training provided by the college. The university and college-level committees are sincerely acknowledged for their guidance and support in preparing this report for submission to the ICAR Accreditation Board. My heartfelt thanks to all who provided valuable suggestions to enhance the quality and content of this presentation.

July 16, 2026

(K . C. Patel)
Principal & Dean
College of Agril. Engg. & Tech.
JAU, Junagadh

ABOUT THE COLLEGE

The College of Agricultural Engineering and Technology (CAET) was established in March 1984 as a constituent college of Gujarat Agricultural University, located on the Junagadh campus. On May 1, 2004, when Gujarat Agricultural University was splitted, it became a constituent college of the newly formed Junagadh Agricultural University (JAU). The JAU campus is situated in the heart of Junagadh city, approximately 4 km from the railway station and 3 km from the bus station. CAET occupies around 6 hectares within the campus, and it also maintains an instructional farm of about 35 hectares. This instructional farm supports undergraduate and postgraduate education, department-level research and practical training. It provides a live demonstration of mechanized farming to students, local farmers and is also used for the production of breeder and truthful seeds.

PARTICULARS OF THE COLLEGE

Table 1. Head of the college

Sr. No.	Name of Head	Duration
1.	Prof. (Dr.) M. V. Kanzaria	01/03/1984 to 16/11/1986
2.	Prof. L. G. Thakkar	17/11/1986 to 14/05/1987
3.	Prof. (Dr.) R. N. Pandey	01/06/1987 to 07/02/1990
4.	Prof. (Dr.) J. C. Patel	14/02/1990 to 30/09/1991
5.	Prof. (Dr.) L. P. Singh	01/10/1991 to 26/04/1992 14/05/1992 to 06/06/1993
6.	Prof. (Dr.) S. C. B. Siripurapu	07/06/1993 to 10/05/1994 20/08/1997 to 03/02/2001
7.	Prof. (Dr.) P. M. Singh	11/05/1994 to 20/10/1995
8.	Prof. (Dr.) N. C. Patel	20/10/1995 to 20/08/1997 29/05/2001 to 07/08/2009
9.	Prof. J. B. Savani	04/02/2001 to 28/05/2001 01/10/2010 to 26/08/2012
10.	Prof. A. H. Memon	07/08/2009 to 30/09/2010
11.	Prof. (Dr.) N. K. Gontia	27/08/2012 to 31/07/2023
12.	Prof. (Dr.) P. M. Chauhan	01/08/2023 to 30/06/2024
13.	Prof. (Dr.) H. D. Rank	01/07/2024 to 30/06/2026
14.	Prof. (Dr.) K. C. Patel	01/07/2026 to Continue…





College of Agricultural Engineering & Technology

JAU, Junagadh

6.4. REPORT OF THE B.TECH. (AGRIL. ENGG.) DEGREE PROGRAMME

The advancement in the farm mechanization, irrigation systems, post-harvest technologies and renewable energy has underscored the growing importance of Agricultural Engineering. Recognizing this, the College of Agricultural Engineering and Technology (CAET) was established in May 1984 at the Junagadh campus under Gujarat Agricultural University (GAU), with a broad mandate encompassing teaching, research, and agricultural extension in engineering.

The B.Tech. in Agricultural Engineering program admitted its first cohort in July 1984, with the first graduates completing their studies in 1988. The program has since maintained a strong reputation for producing accomplished engineers.

On May 1, 2004, following the enactment of the Gujarat Agricultural Universities Act 2004, Gujarat Agricultural University was subdivided, and CAET became a constituent college of the newly formed Junagadh Agricultural University (JAU). JAU's jurisdiction spans ten districts in Saurashtra: Bhavnagar, Surendranagar, Rajkot, Morbi, Amreli, Gir Somnath, Junagadh, Porbandar, Jamnagar, and Devbhumi Dwarka.

The B.Tech. (Agril. Engg.) program received accreditation from ICAR, New Delhi in 1997, 2009, 2016, and 2021 (valid upto 27th March, 2026); from the Institution of Engineers (India), Kolkata in 2000; and from AICTE, New Delhi in 2008 (valid through 2013).

The JAU campus is centrally located in Junagadh city, approximately 4 km from the railway station and 3 km from the bus station. CAET occupies around 11 ha, which includes academic buildings, hostels, department offices, lawns, orchards, roads, and related infrastructure, with a built-up area of approximately 20000 sq.m. Adjoining this is a 35 ha instructional farm, utilized for UG/PG teaching, departmental research, practical training, mechanized-farm demonstrations for students and farmers, and for producing breeder and truthfully-labeled seeds.

As recommended by the VI Deans' Committee, the college currently offers a spectrum of degree programs in agricultural engineering, spanning undergraduate, postgraduate, and research levels.

DEGREE PROGRAMMES

The college is offering following degree programme under semester system.

- B.Tech. (Agril. Engg.) of 4 years (8 Semester)

In additional to above UG programme, the college also offers M.Tech. (Agril. Engg.) of 2 years (4 Semester) in 5 disciplines and Ph.D. in Agricultural Engineering of 3 years (6 Semester) in 4 disciplines of Agriucltural Engineering.

6.4.1. BRIEF HISTORY OF THE DEGREE PROGRAMME

Agricultural Engineering in India traces its origins to 1942, when the Allahabad Agricultural Institute, Naini launched the country's first degree Bachelor of Science in Agricultural Engineering. At Junagadh, the College of Agricultural Engineering & Technology (CAET) began its journey during May, 1984 as part of Gujarat Agricultural University (GAU), initially using shared infrastructure in the Department of Farm Engineering at the College of Agriculture. The first undergraduate B.Tech. in Agricultural Engineering course launched in the 1984-85 academic year, with a 50-student intake.

In 1993, CAET moved into its new facilities on approximately 6 ha of land, with a built-up area of about 17000 m^2. This made it the 18th degree-granting agricultural engineering college in India. The M.Tech. program began in 1994, followed by the Ph.D. program in 2001.

Following the Gujarat Agricultural Universities Act in May 2004, GAU was bifurcated into four universities, and CAET transitioned to becoming a constituent college of Junagadh Agricultural University, effective May 1, 2004.

The first batch of B.Tech. Students graduated in 1988, and the program has since earned a reputation for excellence. Accreditation history includes:

- ICAR, New Delhi: 1997, 2009, 2016, and 2021 (valid upto 27th March, 2026)
- Institution of Engineers (India), Kolkata: 2000
- AICTE, New Delhi: 2008 (valid through 2013)

Table 2. Degree Programme

	Programmes	Duration
UG	B.Tech. (Agril. Engg.) (Bachelor of Technology) Since 1984	4 Years (8 Semesters)

OBJECTIVES OF DEGREE PROGRAMME:

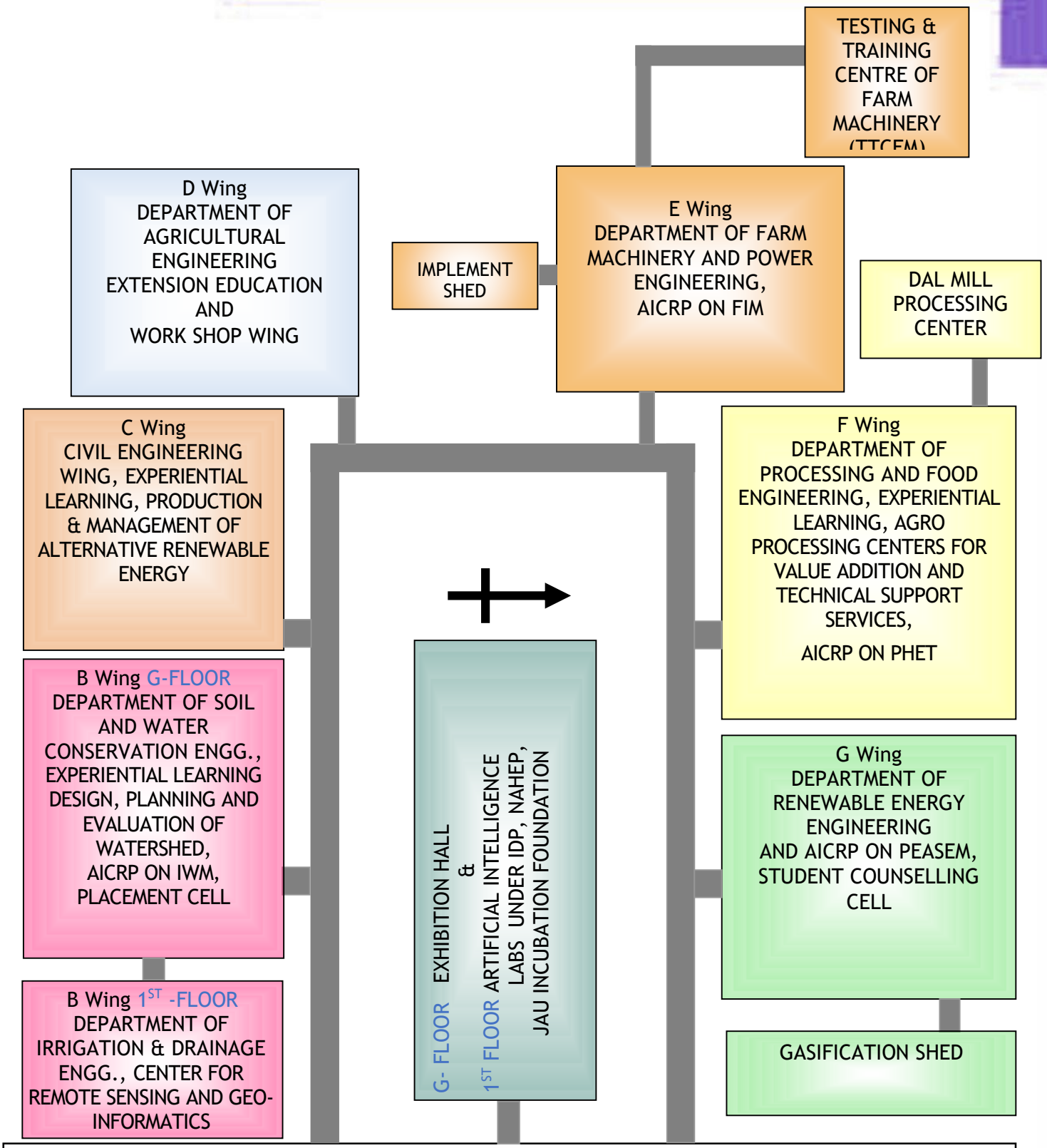
The B.Tech. (Agricultural Engineering) program at CAET, Junagadh, was designed to foster a vibrant academic environment and strengthen its tripartite mission of teaching, research, and extension. Its objectives include:

- To promote students learning in Agricultural Engineering & Technology to discover and improve new technology for stake holders.

- To provide the required manpower to state, nation and globally education in the field of agricultural engineering leading to B.Tech. (Agril. Engg.) Degree suitable for academic, research and extension for academic institutions, government agencies, public sector, private industries, agro-industries and NGOs'.
- To be centre of excellence in teaching, research and extension in the discipline of Agricultural Engineering and Technology.
- To assist farmers in reduction in cost of cultivation through better utilization of efficient machinery, soil and water conservation, irrigation water management, precision agriculture and irrigation technology, value addition through farm level processing, post-harvest technology; protective cultivation and use of renewable energy, application of artificial intelligence, robotics, drones and sensor technology in agriculture, application of emerging technology, AI and IoT in agriculture ultimately help the farmers to increase their income.

INSTITUTIONAL PROFILE OF COLLEGE OF AGRICULTURAL ENGINEERING AND TECHNOLOGY JUNAGADH

University	Name	Junagadh Agricultural University
	Headquarters	Junagadh
College	Name	College of Agricultural Engineering and Technology
	Address	Junagadh Agricultural University, Junagadh – 362 001
	Telephone	0285 2677426
	Fax	-
	E Mail	caet@jau.in
Date of Establishment	University	GAU : 01/02/1972 JAU : 01/05/2004 (GAU was bifurctaed into 4 universitites namely- JAU, AAU, NAU, SDAU from 01/05/2004)
	College	01/05/1984
Head of Faculty	Name	Dr. K. C. Patel
	Designation	Principal & Dean
Head of the College	Name	Dr. K. C. Patel
	Designation	Principal & Dean



LAYOUT OF COLLEGE OF AGRICULTURAL ENGINEERING & TECHNOLOGY

BRIEF ABOUT THE VARIOUS PROGRAMMES STARTED

Academic norms regarding course duration, syllabus, credit load, and regulations are periodically updated according to ICAR, New Delhi guidelines. As per the common core curriculum for Undergraduate recommended by the VI Deans' Committee, the revised UG syllabus was adopted from the academic year 2024-25. The common PG curriculum, formulated by ICAR's Broad Subject Matter Area (BSMA) has been in effect since the 2022-23 academic year.

Draft syllabi are developed and approved by the respective UG or PG Board of Studies. Upon endorsement, the syllabus is forwarded to the University Academic Council, consist of University Authorities, experts, and Head of Departments. Following their approval, the final version is submitted to the Board of Management, whose membership includes the Vice-Chancellor, Secretary of Education & Agriculture, ICAR nominees, industry experts, retired scientists, departmental directors, and progressive farmers. Only after their approval, the syllabus is formally implemented.

Table 3. Brief of the Various Educational Programmes

Name of the course/curricula	Date of initiation of the course	Date of approval by the Board of Studies	Date of approval by Academic Council	Academic Year of implementation of the programme
B. Tech. (Agril. Engg.)	August 1984	1987	1987	1984
1st Revision	-	1993	21/07/1993	1991
2nd Revision (as per III Deans' Committee Recommendation)	-	23/07/1999	21/09/1999	1999
3rd Revision (As per IV Deans Committee Recommendation)	-	16/06/2008	21/06/2008	30/07/2008 (Academic Year 2010-11)
4th Revision (As per V Deans	-	17/04/2017	24/04/2017	05/06/2017 (Academic Year 2017-18)

Committee Recommendation)				
5th Revision (as per VI Deans' Committee Recommendation)	-	11/12/2024	01/01/2025	10/01/2025 (Academic Year 2024-25)
M. Tech (Agril. Engg.)	1994			1994
1st Revision	-	-	04/06/1995	1997 (Academic Year 1997-98)
2nd Revision (as per III Deans' Committee Recommendation)	-	19/01/2007	30/01/2007	27/07/2007 (Academic Year 2007-08)
3rd Revision (as per IV Deans' Committee Recommendation)	-	13/07/2010	07/09/2010	30/09/2010 (Academic Year 2010-11)
4th Revision (As per BSMA of ICAR Recommendation)	-	13/09/2022	12/10/2022	12/10/2022 (Academic Year 2022-23)

DETAILS OF UNDER-GRADUATE AND POST-GRADUATE PROGRAMMES IN THE COLLEGE

Table 4. Details of Under-graduate and Post-graduate Programmes in the college

Department	Year Started	Approved Seats		Actual Enrolment	
		Year Established	Current Year	Year Established	Current Year
1. U.G.	1984	50	107 (78 + 19 ICAR + 10 EWS) +*	30	104

* 10% of intake capacity is admitted in 2nd year (3rd Sem.) from Diploma to Degree programme

ACCOMPLISHMENTS

The college has achieved greater goals year after year, reflected in its consistent successes across academics, research, and extension. It has developed numerous technologies and innovations that have positively impacted the farming community and agro-industries

ACADEMIC ACCOMPLISHMENTS (NATIONAL LEVEL)

Final-year UG students actively participate in national-level competitive exams, with many successful candidates. However, in Gujarat, where many graduates prefer entrepreneurship and private sector roles post-graduation, participation in competitive exams is relatively lower in initial years. The passed out got success in various national level examinations are as shown in table 5 below:

Table 5. Students' cleared various national level examinations

Year	Number of Students		
	JRF	GATE	Management Courses / NET/ARS /CAT / SRF
2020-21	2	7	0
2021-22	0	6	1 ARS+ 5 NET
2022-23	5	3	2 CAT + 3 SRF + 3 NET
2023-24	5	1	0
2024-25	0	2	2 ARS
Total	**12**	**19**	**16**

NATIONAL AND INTERNATIONAL CONFERENCES / TRAINING ORGANIZED

Table 6. National and International conferences / Training organized

Type of Conference	Number of National Conferences
Seminars	12
Workshops	13
Summer Institutes	03
Extension fairs	04
Others (Farmer training)	12

STUDENTS' FINANCIAL AID

Table 7. Students' received financial aid during last year

Agency	Under-Graduate Students No.
Central Govt.	-
ICAR, NTS (UG)	31
ICAR Merit Cum Means	-
State Govt. (SC/ST/SEBC)	204
Junagadh Agricultural University Scholarship	17
Student READY Stipend	133

RANKING OF BEST ENGINEERING COLLEGE OF INDIA

College is participating in the ranking survey of Best Engineering Colleges in India conducted by GHRDC. It is a matter of pride that the college has improved its ranking every year since last 14 years. It is worth to mention that according to GHRDC survey -2025, the college ranked 2nd in Gujarat state after Nirma Institute of Technology, Ahmedabad and at national level ranked 21st and 1st in the 6th category of Ranking of Engineering Colleges of Outstanding Excellence in India. The college ranked 4th in the Western region of India.

6.4.2. FACULTY STRENGTH

The faculty of the College of Agricultural Engineering & Technology, Junagadh are engaged in the threefold functions of teaching, research and extension education. In addition to teaching undergraduate, postgraduate, and Ph.D. students, the faculty members also undertake research activities and serve the farming community through extension programs such as demonstrations, seminars, workshops and other outreach initiatives

FACULTY STRENGTH AT COLLEGE

The faculty of AICRPs and other schemes available in the college also contribute to teaching courses in the UG and PG programs. The sanctioned positions cater to both UG and PG programs of the college. Any shortage of UG teaching staff is managed by engaging faculty from departmental research schemes/projects and teachers from related disciplines in other colleges/units of the university. Around six faculty members from other departments of the university also teach UG courses and guest lecturers are invited as and when required. Therefore, an adequate number of teachers are available to handle UG courses, guide student projects, oversee the Student READY programs, and support other academic activities.

Table 8. Faculty strength of Departments

Sr. No.	Designation / Cadre	Faculty in place (No.)	Vacant position (No.)	Sanctioned strength (No.)	Recommended by the ICAR
1	Dean	00	01	01	01
2	Professor	03	01	04	05
3	Associate Professor	05	04	09	10
4	Assistant Professor	17	05	22	20
	Total	**25**	**11**	**36**	**36**

Note : In addition to above, 2 Associate Professors and 5 Assistant Professors of research schemes are also involved in UG/PG teaching theory/practical as detailed in Table-9.

Table 9. Faculty Strength of Schemes / Research Projects

Sr. No.	Designation / Cadre	Faculty in place (No.)	Vacant position (No.)	Sanctioned strength (No.)	Recommended by the ICAR
1	Professor	0	0	0	-
2	Associate Professor	03	01	04	-
3	Assistant Professor	07	02	09	-
	Total	**10**	**04**	**13**	**-**

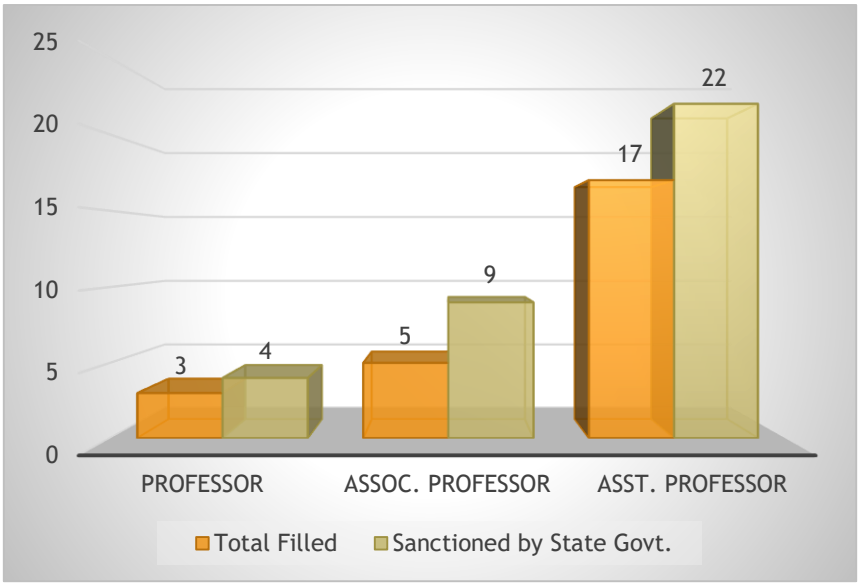
FACULTY PROFILE (DEPARTMENT WISE) (2025)

Table 10. Faculty Positions (Department wise)

Faculty	CAET	SWCE	IDE	FMPE	PFE	REE	AEEE	Total Filled	Sanctioned by State Govt.	Recommended by the ICAR
Dean	0	0	0	0	0	0	0	0	1	1
Professor	0	1	1	0	1	0	0	3	4	5
Assoc. Prof.	0	0	1	2	1	1	0	5	9	10
Asst. Prof.	0	2	1	4	5	6	0	17	22	20
Placement Officer	0	0	0	0	0	0	0	0	0	1
Total	**0**	**3**	**3**	**6**	**7**	**7**	**0**	**25**	**36**	**37**

CAET: College of Agril. Engg. & Tech.
SWCE: Soil and Water Conservation Engineering
IDE : Irrigation and Drainage Engineering
FMPE: Farm Machinery and Power Engineering

PFE: Processing & Food Engineering
REE: Renewable Energy Engineering
AEEE: Agricultural Engineering Extension Education

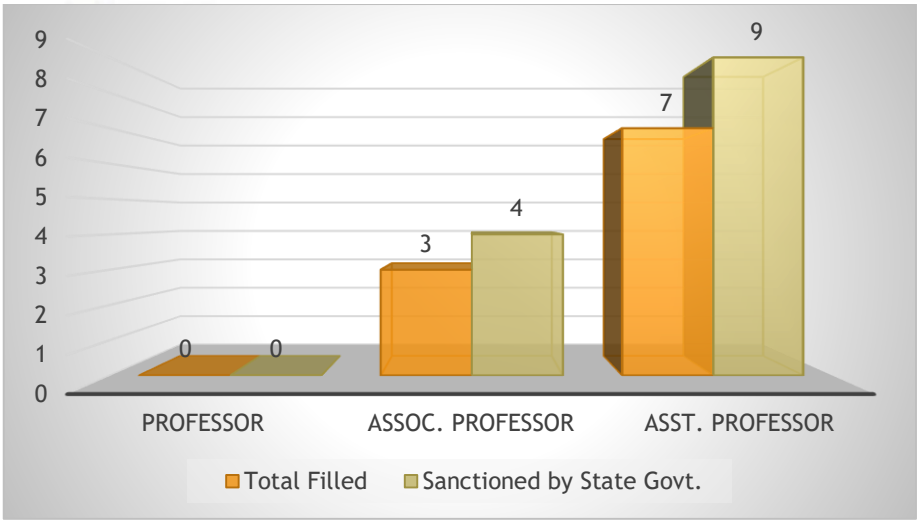


Faculty Positions in Teaching

Table 11. Faculty positions (Department wise Scheme / Research Projects)

	CRS&GA (SWCE)	IWM (IDE)	FIM & PWW (FMPE)	PHET (PFE)	PEASEM (REE)	Total Filled	Sanctioned by State Govt.	Sanctioned by the ICAR
Professor	0	0	0	0	0	0	0	0
Assoc. Professor	01	0	01	01	0	03	04	04
Asst. Professor	01	01	01	03	01	07	09	09
Total	**02**	**01**	**02**	**04**	**01**	**10**	**13**	**13**

AICRP on IWM- Irrigation Water Management
FIM- Farm Implements and Machinery
PHET- Post Harvest Engineering and Technology
PEASEM- Plastic Engineering in Agricultural Structure and Environment Management
CRS&GA-Centre of Remote Sensing and Geoinformatics in Agriculture
PWW-Other Scheme; Project on workshop wing



Faculty Positions in Research

6.4.3. TECHNICAL AND SUPPORTING STAFF

The college has been sanctioned with adequate technical and supporting staff to meet the requirement of teaching, research and extension, administration and academic activities. The vacancies are filled through contractual/ outsourcing. The details are presented in the Table 12.

Table 12. Technical Staff Positions in the college

Sr. No.	Name of Post	Post		
		Sanctioned	Filled	Vacant
College				
1	SRA / Technical Assistant	1	1	0
2	Agriculture Assistant	1	1	0
3	Driver	1	1	0
4	Peon/Lab boy	1	1	0
	Total	**04**	**04**	**0**
Soil and Water Conservation Engineering				
1	SRA / Technical Assistant	1	0	1
2	Agriculture Officer	1	0	1
3	Agriculture Assistant	1	1+1**	0
4	Lab. Technician	1	0	1
5	Peon/Lab boy	1	0	1
	Total	**05**	**1+1****	**04**
Irrigation and Drainage Engineering				
1	Tech. Mech./Field Tech.	1	1	0

Sr. No.	Name of Post	Post		
		Sanctioned	Filled	Vacant
	Total	**01**	**01**	**00**
	Farm Machinery & Power Engineering			
1	SRA / Technical Assistant	1	1	0
2	Agriculture Assistant	2	1+1*	0
3	Draftsman (Mechanic)	1	1*	0
4	Lab. Technician	1	1	0
5	Turner	1	0	1
6	Black smith	1	0	1
7	Senior Mechanic	1	1	0
8	Tech. Mech./Field Tech.	1	0	1
9	Engine Driver	0	1**	0
10	Peon/Lab boy	1	1	0
	Total	**10**	**05+02*+1****	**03**
	Processing and Food Engineering			
1	SRA / Technical Assistant	2	1	1
2	Lab. Technician	1	1	0
3	Investigator	1	0	1
4	Senior Mechanic	1	1	0
5	Craftsman	3	1+1*	1
6	Draftsman	1	0	1
	Peon/Lab boy	1	1	0
	Total	**10**	**05+01***	**04**
	Renewable Energy Engineering			
1	SRA / Technical Assistant	2	2	0
2	Lab. Technician	1	1	0
	Draftsman (Civil)	1	0	1
3	Peon/Lab boy	1	0	1
	Total	**05**	**03**	**02**
	Instructional Farm			
1	SRA / Technical Assistant	2	1	1
2	Agriculture Assistant	2	1	1
	Total	**04**	**02**	**02**
	Grand Total	**39**	**21+03*+02****	**15**

***-Working in Other Office **-Working from other office**

Table 13. Administrative and supporting Staff Positions in the College

Sr. No.	Name of Post	Post		
		Sanctioned	Filled	Vacant
1	Asstt. Adm. Officer	1	0	1
2	Office Superintendent	1	1	0
3	Head Clerk	2	1	1
4	Senior Clerk	6	2	4
5	Junior clerk	6	2	4
6	Steno grade-2	1	1*	0
7	Steno Grade-3	1	0	1
8	Peon/Lab boy	1	1	0
9	Sweeper	1	1	0
Total		**20**	**08+01***	**11**

*-Person working on pool to other office of the university

Table 14. Summary of College Staff as per Posts Filled and Recommended by ICAR

	Sanctioned	Filled	Vacant	Recommended by ICAR
Technical Staff				
Technical Assistant / Agricultural Officer	7	5	2	-
Agriculture Assistant	3	2	1	-
Total	**10**	**7**	**3**	-
Office Staff				
AO/Suptd.	2	1	1	1
Clerk	14	5	9	12
PA/Steno	1	1	0	8
Messenger/Peon	5	3	2	8
Total	**22**	**10**	**12**	**29**
Laboratory staff				
Laboratory Assistant	4	3	1	14
Workshop Staff/ Computer operator/ Driver/Technicians	4	1	3	27
Total	**8**	**4**	**4**	**41**
Grand Total	**40**	**21**	**19**	**70**

Table 15. Summary of Research Staff as per Posts Filled and Sanctioned by ICAR

	Sanctioned	Filled	Vacant
Technical Staff			
Technical Assistant	3	1	2
Agriculture Assistant	3	3	0
Total	**6**	**4**	**2**
Office Staff			
PA/Steno	1	0	1
Messenger/Peon	1	1	0
Total	**2**	**1**	**1**
Laboratory staff			
Workshop Staff/ Computer operator/ Driver/Technicians	8	5	3
Total	**8**	**5**	**3**
Grand Total	**16**	**10**	**6**

On the vacant posts the persons are employed on contractual bases

Apart from the staff filled on regular basis, the college is engaging the technical and supporting staff on contractual basis. At present, about **48 persons** are working on contractual basis out of which driver-8 (including tractor driver), computer operator-1, clerk-12, peon/messenger-12, electrician-1, Welder-1, Black Smith-1, Leb. Tech-1, Draftman-1, Fitter-1, Mali-1, Sweeper-7 and Helper-1. The positions lying vacant are taken care by engaging the contractual staff as above.

6.4.4. CLASS ROOMS AND LABORATORIES

The college has well-equipped classrooms featuring interactive panels, digital podiums, green boards, and internet connectivity through both LAN and Wi-Fi. Faculty members use PowerPoint presentations to enhance teaching effectiveness, and e-learning facilities are also available in the classrooms.

- Three classrooms are designated as smart classrooms and are equipped with air conditioning, smart boards, writing pads, smart podiums, interactive panels, and internet access via LAN and Wi-Fi.
- One classroom is equipped with a green board, smart board, writing pad, smart podium, interactive panel, and internet connectivity via LAN and Wi-Fi.
- Two classrooms have green boards, writing pads, LCD projectors with computers, and Wi-Fi connectivity.
- All departments have well-equipped laboratories with the necessary instruments and equipment, as detailed in the tables below.

- All classrooms are fitted with CCTV cameras and are under the surveillance of the Dean and other higher authorities of the university.

Table 16. Details of class rooms

Sr. No.	Class room No.	Area(m^2)	Seating capacity(No.)	Other facilities (Projector, Computer, Audio, etc.)
1	Class room No. 1	131.25 (12.5X10.5)	110	Intreactive Pannnel with digital podium, AC
2	Class room No. 2	131.25 (12.5X10.5)	110	Intreactive Pannnel with digital podium, AC
3	Class room No. 3	131.25 (12.5X10.5)	110	Intreactive Pannnel with digital podium, AC
4	Class room No. 4	131.25 (12.5X10.5)	110	Intreactive Pannnel with digital podium,AC
5	Class room No. 5	88 (11X8)	90	LED projector, Computer, Table
6	Class room No. 6	88 (11X8)	90	LED projector, Computer, Table

Table 17. Department wise laboratories established

Sr. No.	Name of laboratories	Area (m x m)	Working capacity (No.)
Soil and Water Conservation Engineering			
1	Soil Conservation Laboratory	9.10 x 7.60	50
2	Hydrology laboratory	9.25 x 8.30	50
3	Remote sensing & GIS Laboratory	9.10 x 7.60	50
4	Precision Agriculture Laboratory	9.20 x 6.00	50
5	Soil conservation field Laboratory (Runoff- Soil erosion measurement structure)	1220 sq.m	50
6	Instrumental Cell	7.50 x 4.50	50
Irrigation and Drainage Engineering			
1	Irrigation Systems Laboratory	15.80 X 7.60	50
2	Pump Testing Laboratory	12.35 X 7.60	50
3	Wells and Pumps Engineering Laboratory	12.20 x 7.50	50
4	Fluid Mechanics Laboratory	12.20 x 9.10	50
5	Soil Mechanics Laboratory	12.20 x 7.50	50
6	Drainage laboratory	7.75 m x 8.30 m	50
7	Water Quality analysis Laboratory,	12.20 x 7.60	50

Sr. No.	Name of laboratories	Area (m x m)	Working capacity (No.)
8	Incubation center on advanced irrigation technologies	17.20 m x 8.30m	100
9	High Tech MIS Park	25.0 m x 20.0 m	50
10	Hydraulic park	34.50 x 32.0	50
Farm Machinery & Power Engineering			
1	Fitting Shop	15 x 13	15
2	Mechanical Laboratory	19 x 8	50
3	Carpentry Shop	12 x 9	15
4	Machine Shop	22 x 13	30
5	Welding Shop	12 x 12	15
6	Cut Model Laboratory	6 x 12	10
7	Drawing Laboratory	22 x 10	100
8	Tillage & Traction Laboratory	12 x 19	35
9	Thresher Laboratory	12 x 16	35
10	Plant Protection Laboratory	12 x 6	35
11	Tractor Room	12 x 15	40
12	CAD CAM Laboratory	9 x 9	30
13	FIM Laboratory	12x 12	50
14	Incubation centre and Precision Mechanisation	12 x 6	35
15	AI and Robotic lab	12 x 19	50
Processing and Food Engineering			
1	Biochemistry laboratory	15 x 8	50
2	Drying laboratory	12 x 8	50
3	Engineering Properties laboratory	12 x 8	50
4	Size Reduction laboratory	12 x 8	50
5	Storage laboratory	12 x 8	50
6	Electrical Engineering Laboratory	12 x 9	50
7	Crop Process Engineering Laboratory	12 x 9	50
8	Workshop	12 x 10	50
9	Mango Canning Plant	24 x 10	50
10	Pulse Milling Plant	20 x 5	50
Renewable Energy Engineering			
1	Biomass Gasification Lab.	15.0 x 8.0	50
2	Solar Energy Lab.	9.60 x 7.60	50

Sr. No.	Name of laboratories	Area (m x m)	Working capacity (No.)
3	Bioenergy Lab.	9.20 x 7.60	50
4	Wind Energy Lab.	15.25 x 7.60	50
5	Physics lab.	12.15 x 7.60	50
6	Chemistry lab.	12.30 x 7.60	50
7	Civil Engg. Lab.	7.60 x 9.10	50
8	Ultramorden Communication Lab. (Language Lab.)	7.60 x 9.10	50
9	Experiential learning for production and management of RSE lab.	7.60 x 9.10	50
10	AICRP on PEASEM Lab.	12.15 x 7.60	50
Agril. Engg. Ext. Education			
1	Exhibition Hall (Museum)	26 X 22	100
At College Level			
1	Computer Lab (UG)	25 x 8	80
2	Computer Lab (PG)	7 x 7	20
3	Artificial Intelligence Lab under Institutional Development Plan (IDP), NAHEP, ICAR (4 labs)	26 x 22	50 in each lab
4	Instructional Farm	35 ha	

Table 18. Department wise Major Equipment

Sr. No.	Equipment Name	No. of Equipment
Soil and Water Conservation Engineering		
1	Water sediment sampler	2
2	Soil conservation models	11
3	Hydraulic flume	1
4	Data logger system	1
5	Digital Rainfall Recorder	1
6	Water level recorder	1
7	Turbidity meter	1
8	Sediment sampler	4
9	Digital cone pentrometer	1
10	Core cutter apparatus set	5
11	Porometer	1
12	Pressure bomb apparatus	1
13	GPS	1
14	Scanner cum Plotter	1
15	Data logger with sensor	1
16	Digital evaporation recorder	1
17	Temp/RH Meter	4
18	LCD multimedia projector	1
19	ESRI ArcGIS Arc view software with single license	1

20	PCI Geomatica (5-user license) software	1
21	DHI Software Mike SHE, Temporal analyst Software	1
22	Boss Storm Net Software	1
23	Boss River CAD XP Complete Package	1
24	Surfer Software	1
25	Grapher Software	1
26	Aquachem Software	1
27	FEFLOW 5.3 Software	1
28	Multi slot deviser	3
29	Soil thermometer	3
30	Digital planimeter	1
31	Nano Drone	5
32	Ordinary rain gauge (Non recording)	6
33	River sediment sampler	1
34	Pan Evaporimeter	4
35	Siphon type raingauge	3
36	Non - recording raingauge	5
37	Coshocton wheel	5
38	Water stage Recorder	2
39	Portable TDR soil moisture meter	2
40	Drone Kit for Lab	3
41	Crop Surveying Drone with 4k camera	1
42	Data retrieval system	3
43	Drone with Visible Camera	1
44	Drone with NIR Camera	1
45	NDVI Meter	1
Irrigation and Drainage Engineering		
1	Tensiometer	3
2	Ventury meter	2
3	Hot air oven	3
4	Submersible pump	1
5	Submersible K type pump	1
6	Micro controller based UV-VIS Spectrophotometer	1
7	Digital flame photometer	1
8	Rotary Flask shaker	1
9	Water and soil analysis kit	1
10	Pump testing set up	1
11	Submersible pump (6 HP 4 Stage as Per Indian STD ISI)	1
12	Submersible pump (7.5 HP 10 stage as Per Indian ISI)	1
13	Oil Sealed rotary Vacuum pump	1
14	Micro control based BOD Incubator with Shaker	1
15	Research centrifuge Model TC 8100	1
16	COD digester	1
17	M.S.Fler Fault valve stand	1
18	Lysimeter	1
19	Micro gopher	1
20	Total Survey station	2
21	Digital balance	2
22	Rpm frequency meter	1
23	Geometic Total Education Suits ver.10.0	1
24	Digital camera	2
25	Digital titration burette 50 ml	1

26	E-studio digital copier	1
27	Hydraulic ram test ring	1
28	Drip Irrigation filter testing ring	1
29	Hydrostatic pressure testing	1
30	Automatic water level recorder	1
31	Pump testing digital panel board	1
32	Well logger with data logger	1
33	Ground water sampler	1
34	Signal stacking resistivity meter	1
35	Flow measurement apparatus	1
36	Impact of Jet Apparatus	1
37	Jayant test sieves 8"	11
38	Reynolds apparatus	1
39	Digital manometer	6
40	Sand replacement cylinder	3
41	Digital pressure gauge with adapter	1
42	Manometer	4
43	Pelton turbine	1
44	Permeability apparatus	1
45	Bernoulli' s theorem apparatus	4
46	Core cutter apparatus set	4
47	Digital current meter	1
48	Electrically analogy apparatus	1
49	Metacentric Height of ship model	8
50	Manning's Roughness coefficient determination apparatus	1
51	Pipe friction Apparatus	2
52	Friction loss Apparatus	5
53	Automation Pumping System	1
54	Orifice and mouthpieces app.	1
55	Notch apparatus	1
56	Online UPS 5kva	1
57	Tensiometer Gauge Type Size:15, 30, 45 cm	1
58	Data retrieval system	1
59	Digital Soil Moisture meter	2
60	Water mark soil moisture (suction) sensor	28
61	Cut model of MIS filter	1
62	Sieve shaker	6
63	Darcy's law appratus	2
64	Screen filter	1
65	Gravel filter	1
66	Soil moisture meter	1
67	Soil auger	10
68	Clear transparent glass soil thermometer	20
69	Pycnometer Comprises 1 Kg glass Jar with Brass Cone	20
70	Emitter testing rig	1
71	Shrinkage limit set	5
72	Plastic limit set	5
73	Sap flow meter	1
74	Portable TDR soil moisture meter	1
75	Water meter	10
76	Digital soil moisture meter	1
77	Electronic water level indicator	5

78	Canopy chamber	1
79	Water level indicator	3
80	Direct shear test apparatus	3
81	Automation fertigation system	1
82	Sensors for irrigation	2
83	Manning's apparatus	7
84	Permeability apparatus	18
85	Ground water level indicator 100 mt	11
86	Ground water level indicator 200 mt	14
87	Different types of Automatic Filters	1
88	Centrifugal pump Test Rig	6
	Farm Machinery & Power Engineering	
1	Power weeder	1
2	Power tiller	1
3	Blade harrow cum land leveler – Tractor drawn	1
4	Disc plough - tractor operated (2 Disc) and (3 Disc)	3
5	Power sprayer	1
6	Power duster	1
7	Reversible M.B. plough (2+2 bottom)	2
8	M. B. plough tractor operated (2 bottom) and (3 bottom)	2
9	Multipurpose bullock drawn pipe implement	2
10	Single bullock drawn pipe frame implement	1
11	Ground nut digger - bullock drawn & tractor operated	2
12	Rotavator - tractor operated 4 ft, 6 ft	1
13	Planter - bullock drawn implement mounted & tractor operated	2
14	Tractor operated post hole digger	1
15	Subsoiler – tractor operated	1
16	Engine : VST shakti Z- 170F, 5 – HP, 8- HP. 10 HP	3
17	Trailer, 4-wheel	1
18	Ground nut & Caster decorticator	2
19	Cotton shredder, 5 – HP/ electric motor operated	1
20	Jettrofa decorticator	1
21	Measuring & Display unit of Dynamometer for bullock drawn & tractor drawn implement	2
22	Cultivator – tractor operated (9 tyne, 7 tyne, 5 tyne)	3
23	Integrated vibration & noise meter (vibration meter, noise meter & for multiple channels common retrieving unit)	9
24	Noise level Recorder (portable)	1
25	Dust level Recorder (portable)	1
26	Vibration Meter (portable)	1
27	Cotton shredder – tractor operated	1
28	Front end loader (for mini tractor)	
29	Front mounted dozer with M.B. plough	1
30	Green groundnut thresher	1
31	Ridger – tractor drawn	1
32	Cultivator cum rotary tiller	1
33	Disc harrow 12 disc, 8 disc	2
34	Reaper Harvester & Reaper Binder & Power reaper	3
35	Rice Transplanter	1
36	Thermo anemometer	5
37	Digital vacuum gauge	3
38	Digital multi meter, Digital LUX meter	7

39	Hand pallet truck, Manual Stacker Plate form hand trolley	3
40	Grain moisture meter	3
41	Hardness tester	3
42	Universal Testing Machine (UTM)	1
43	UTM Hydraulic unit with comp. acc.	1
44	Combine Harvester-Tractor mounted/ Self Propelled	2
45	Straw Combine-Tractor Drawn	1
46	Seed Germinator	1
47	Digital Bomb Calorimeter with Oxygen Cylinder	1
48	Digital ultra low temperature meter	1
49	Standard Penetrometer, Flow Cup Viscometer, Bulk Density Apparatus, Universal Moisture Meter Moag-U, Digital Moisture Meter AG-3, Digital Flow Anemometer, Outside Micrometer, Digital Micrometer, IR Non Contact Thermo (2 Nos).	10
50	Chaff Cutter	1
51	Mobile Chopper & Mobile Shredder	3
52	Grass Trimmer & Aqua Power Cleaner	2
53	Dust Level Recorder	1
54	Exhaust Gas Analyzer	1
55	Hardness Testing M/C	1
56	Seed Uniformity Test Setup	1
57	Heart Rate Monitor, Anthropometer	1
58	Single Cylinder Diesel Engine Test Rig.	1
59	Potato Planter Tractor Ope. & Potato Digger Tractor Ope.	2
60	Centrifugal Ceramic Process Pump, Self Priming Multistage Boiler Feed Pump, Submersible Dewatering Pump, Cross Section Of Self-Priming Mud Sewage Pump, Cross Section Of Process Pump, Submersible Mono Pumpset, ASPEE HTP sprayer pump	7
61	Fully Automatic Potato Planter Tractor Operated	1
62	Manual Muscle Tester	1
63	Displacement Measu. Tutor Using LVDT, Load Measu. Tutor Using Loadcell, Pressure Measu. Tutor Using Pressure Transducer, Strain Measu. Tutor Using Strain Cantilever Beam, Torque Measu. Tutor Using Torque Transducer, Temp. Measu. Tutor Using Thermister, Speed Measu. Tutor Using Elec. Magnetic, Angular Measu. Tutor Using Angular Sensor, Digital Wattmeter	9
64	Laser Guided Land Leveller	1
65	Digital Smoke Meter	1
66	Aero Blast Sprayer Model	1
67	Tractor Operated/Mounted 2 Disc Ridger Tractor Operated Ridge & Furrow Making Implement 2 In 1 Hand Operated Chaff Cutter	1 1 1
68	Tractor Operated Rotary Plough	1
69	Tractor Operated Mower	1
70	Spectrometer	1
71	Groundnut Digger Shaker	2
72	Fuel Pump & Fuel Filter Test Set-Up	2
73	Test Apparatus For Determination of Fatigue Failures In Compression Sprayer Tanks	1
74	Test Apparatus For Power Efficiency Measurement Of Power Operated Hydraulic Sprayers	1
75	Rig For Conducting Pump Performance And Endurance Test On Various Agricultural Sprayers	1

76	Microscope For Droplet Size (Agricultural Sprayer's Nozzles) Analysis	1
77	Cut Off Machine Heavy Duty	1
78	Spring Test Rig	1
79	Electronic Penetrologger Set	1
80	Patternator	1
81	Digital Vernier Caliper (150 Mm) With NABL Accredited Calibration Certificate	4
82	Thread Pitch (Screw Pitch) Gauge With NABL Accredited Calibration Certificate	2
83	Standard Wire Gauge With NABL Accredited Calibration Certificate	2
84	Digital Micrometer (0-25 Mm) With NABL Accredited Calibration Certificate	2
85	Stainless Steel Degree Protector With NABL Accredited Calibration Certificate	2
86	Stop Watch With NABL Accredited Calibration Certificate	2
87	Tachometer (Mechanical) With NABL Accredited Calibration Certificate	2
88	Tachometer (Contact Type Digital, Non-Contact Digital) With NABL Accredited Calibration Certificate	4
89	Dampened Pressure Gauge With NABL Accredited Calibration Certificate	2
90	Self Propelled (3-Wheeld) Multipurpose Farm Implement	1
91	Test Set Up (Patternator) For Spray Distribution For Boom Of Power Operated Hydraulic Sprayer's Nozzles	1
92	Laser Leveler Test Rig	1
93	Digital Dynamometer (Capacity: 2 Ton/100 G, 1 Ton/50 G)	1
94	Electric Seed Cum Fertilizer Drill Test Rig Set Up	1
95	Welding Machine	1
96	Power Thresher	1
97	Sieve Shaker (Gyratory)	1
98	Axial Compensated Load Cell	1
99	Portable Load Meter	1
100	Digital Cone Penetrometer	1
101	Tractor operated deep furrow sugarcane cutter planter	1
102	Tractor operated phule two row forward reverse rotavator for sugarcane crop	1
103	Hand tachometer chronometric	1
104	Soil bulk density measurement	1
105	Digital telemetry system for rotary torque measurement	1
106	Cut model of tractor steering assembly & clutch assembly	2
107	Tractor cut model	1
108	Post hole digger	1
109	Zero till drill, CIAE Tractor drawn precision drill, Tractor drawn seed cum fertilizer drill, Mini tractor operated rotary weeder cum fertilizer drill, Tractor operated multi crop seed cum fertilizer drill, Bullock drawn pipe frame seed drill	6
110	Engine operated portable post hole digger	1
111	Rotavtor/ Rotary tiller	1
112	Thresher cum cleaner cum grader	2
113	Castor/Jetropha Decorticator	1
114	variable frequency drive	1

115	Lazor leveler FRP case	1
116	Portable vibration analyser	1
117	Multiple human vibration analyzer with sensor	1
118	Precision vegetable seed planter	1
119	Horizontal diesel engine, 5 HP, 2.5 HP	2
120	Plastic mulch machine	1
121	Manually drawn Engine operated fooder crop harvester	1
122	Single row cotton planter	1
123	Mini tractor operated Groundnut digger elevator cum heap formator	1
124	self-propelled weeder & Solar operated power weeder	2
125	Remote operated sprayer	1
126	Sprayer calibrator	1
127	Combiened test ring for trigger type cut off device sprayer lance pressure test	1
128	Walking type battery operated boom sprayer cum weeder	1
129	Mulching machine attachment of rotavator	1
130	LCD dispay calipers, Digital Varniar calipers	2
131	Hydraulics motor operated bush cutter	1
132	Carrot harvesting machine	1
133	Remote controlled precision planter	1
134	Mini tractor operated two row cotton planter	1
135	Solar powered remote controlled sprayer	1
136	Self prpeeled riding type cheakpea harvester	1
137	Chilli transplanter	1
138	Onion digger cum detopper	1
139	Mini tractor operated groundnut digger cum inverter	1
140	Media mixture machine for horticultural crop	1
141	Warm and warm wheel	3
142	Parallelogram of force apparatus	3
143	Planimeter	2
144	Parallel ruler soil brass bridge wheel and pupets steel	5
145	Edge binding machine	1
146	Drawing Board (815x585)	20
147	Set of model of penetration 1. Two cylinder penetrating at right angle. 2. Two cylinder with oblique penetration. 3. Cylinder-cone with oblique penetration. 4. Cylinder-cone with penetrating at right angle. 5. Two cone at right angle. 6. Two square prism at right angle. 7. Two square prism at oblique angle. 8. Spear and cone at center. 9. Engineering drawing model (cylinder cube, triangular prism, hexagonal prism, triangular pyramid)	1 1 1 1 1 1 1 1 1 1
148	Slide crank mechanism (a) Reciprocating engine mechanism (b) Oscillating cylinder mechanism (c) White worth quick return mechanism	 1 1 1
149	Petrol Engine Model 4-stroke & Diesel Engine Model 2-stroke	2
150	Spring Dynamometer (Spring system based load sell type (0-500) kg Hydraulic Dynamometer (Hydraulic system based load cell type, 0-1000kg)	3

151	Motorized Gyroscope	1
152	Static & Dynamic Balance Apparatus	1
153	Air Conditioning Tutor	1
154	Moment of Inertia of Flywheel 15 cm, 20 cm, 25 cm dia.	3
155	Window Air Condition Cycle Test Rig	1
156	Ice Plant Tutor-30Kg	1
157	Computerized Multi-Fuel Research Engine Test Setup	1
158	Water cooler test ring	1
159	Experimental cold storage trainer	1
160	Cut section model of compressor	1
161	Workshop apparatus : Fitting vice 3" bench vice, Lag vice 6", Pipe vice 2", Universal marking gauge 9", Surface plate 8"x12", Smith hurth 24"x30"x6", Anvil 1.5 wt (London pattern), Earn steel 7"x7"x12", Swage block 12"x12", Metal lathe mate true chuck 9", Refractory Furness 9"x4"x4" 1200 C,	5
162	Lathe machine 1370 mm bed length S.S. & S.C. V-belt driven, fitted with Norton gearbox	2
163	Sand mixture capacity 3 kg	1
164	Wood surface planner 9"x48"(sarswati brand) with accessory	1
165	Fobars digital micrometer M 0-25	1
166	Contech Electonic Balance Model CP-2T/500 Capacity-2Ton, Accuracy-500gm. Platform Size-1200x1200mm	1
167	CNC Turning Center Model DX 200 with Isolation Transformer and with all standard accessories and electricals Lathe Machine 4.5" size 8" through chuck Lath machine (1000x300)	1 4 2
168	Variable speed gear boxes	7
169	Digital Techometer 0to10000 RPM	1
170	Wood working machine, Hacksaw machine	2
171	Mechanical starrer	1
172	Barbed wire making Machine	2
	173	
174	MIG (250) Welding Machine	1
175	Milling machine	1
176	S.E.W. Brand Pllar Drilling Machine.	1
177	All Geared type Shaping machine	2
178	Bench Grinder, Hand grinding machine 715 watt, 1200 rpm	2
179	Lawn mover Make/Model: Makita EL4110	1
180	Portable Welding Machine(ESSAB), Rocker arm Spot Welding Machine	2
181	Smith Hearth With Blower	1
182	Chain link Fence making machine	1
183	Vertical Milling machine	1
	Processing and Food Engineering	
1	Electronic top loading Balance	1
2	Specific gravity Separator	1
3	Deck Assembly for large seed	1
4	Deck Assembly For small seed	1
5	Stoner Deck Assembly	1
6	Hot air Oven	1
7	Seed huller	1
8	Tablet hardness tester	1

9	Weighing scale 10 kg capacity	1
10	Digital anemometer	1
11	Fluid type bed dryer	1
12	Tray dryer	1
13	Digital electronic dial vernier calliper	1
14	Bulk density apparatus	1
15	Digital stroke counter with reset and alarm system	1
16	Fruit and vegetable slicer	1
17	Muffle Furness	1
18	Penetrometer	1
19	Microwave oven	1
20	Data Logger	1
21	Data logger system with data receiving unit and printing device	1
22	Mango canning plant	1
23	Digital Electonic Top Loading Balance	1
24	Digital constant temperature water bath capacity 30 liter	1
25	Digital fruit firmness	1
26	Milk analyser	1
27	Tomato processing plant	1
28	Dehydration plant with Sorting Table (Belt Conveyor), Rotary Fruit & Vegetable Washing Machine, Blancher, Dicing & Cubing Machine, Dehydrator	1
29	Pre-cooling room walk in Cooler Room Size 3.65m x 2 3.65m x 23.05 m (H), capacity 2.5 tonmes	1
30	Cold storage room Size 7.01 m x 23.35m x 23.3528, capacity 20 tonnes	1
31	LCD Projector	1
32	Microscope	1
33	Laminar flow cabinet with SS table accessories for laminar flow, Transparent front door, static manometer, UV light for laminar flow, cock for gas or vacuum line	1
34	Ripening chamber	2
35	Pulper	1
36	Homogenizer	1
37	Groundnut pod grader model	1
38	Cumin cleaner cum grader model	1
39	Fruit grader model	1
40	Aloe Vera gel extractor machine model	1
41	Multicrop cleaner cum grader model	1
42	Onion grader model	1
43	Digital humidity temperature meter with infrared thermometer	2
44	Digital portable hand refractometer 0-55 brix	2
45	Digital portable hand refractometer 58-92 brix	1
46	Digital portable hand refractometer 0-70 brix	1
47	Ph meter	1
48	Ribbon blender	1
49	PDKV Mini Dall Mill	1
50	Pulse milling plant	1
51	Incubator cum mixer	1
52	Digital vernier caliper 0-200 mm LC 0.02	1
53	Digital vernier caliper 0-300 mm LC 0.02	3
54	Grain moisture meter	1

55	Spectrophotometer	1
56	Machine vision based colour sorting system machine vision	1
57	Three pan jaggary making machine	1
58	Desktop work station	1
59	Digital thermo hygrometer	2
60	Digital GSM tester	5
61	Digital thickness gauge	5
62	Drop tester	1
63	Forced convection apparatus brass tube	1
64	Fruit penetrometer	2
65	Fruit juice extractors	2
66	Stem jacketed kettle	1
67	Precision circulation waterbath	2
68	Continuous microwave dryer	1
69	Vapour absorption test apparatus	1
70	Thermal conductivity of liquid	1
71	Thermal conductivity measuring apparatus for metal rod.	1
72	Thermal conductivity measuring apparatus for powder	1
73	Automatic mild steel sieve shaker	1
74	Indented cylinder grader	1
75	Peanut flour base thabdi penda machine	1
76	Ultraviolet C Chamber for sapota	1
77	Vacuum packaging machine	1
78	Texture analyzer	1
79	Freeze dryer	1
80	Deep Freeze	1
81	Vacuum Heat Air Dryer	1
	Renewable Energy Engineering	
1	Sunshine recorder	1
2	Biomass gasifier plant (down draft)	1
3	Rockwell hardness testing machineSurveying equipment	1
4	Wind pump	1
5	Hot air oven	1
6	Precooler	1
7	L. C. D. projector	2
8	Plate bending machine	1
9	Shearing machine	1
10	Precision lathe machine	1
11	Modern workshop facility for fabrication of solar appliances	1
12	Modified atmosphere packaging machine	1
13	Shrink wrapping machine	1
14	Muffle furnace	2
15	Solar precision pyranometer with data logger	2
16	Solar PV pump	1
17	Zener characteristic circuit	1
18	B.O. D. incubator	1
19	Dissolved oxygen meter	1
20	C.O.D. digestion apparatus	1
21	Water bath	1

22	Computerized UTM 100-ton capacity	1
23	Horizontal wind turbine	1
24	Gas Chromatograph	1
25	Solar PV Trainer	1
26	Biogas plant with burners	1
27	Solar Thermal Training System	1
28	Biogas Analyser	1
29	Pore Point Apparatus	1
30	Digital Gas flowmeter	1
31	Biogas flow meter	1
32	Wind turbine Emulator	1
33	Wind Energy Training System	1
34	Biomass Briquetting Machine	1
35	Pyrheliomter with datalogger	1
36	Solar Concentrator Training system	1
37	E/M apparatus	1
38	LCR circuit	1
39	Biomass gasifiers	4
40	50 kW solar power plant	2
41	Bomb calorimeter	2
42	Junker's calorimeter	2
43	Lab-scale Biodiesel plant with major properties measurement apparatus (Flash point, Density, Viscocity etc.)	1
44	JAU Model Agri-voltaic System (13.5 kW)	1
45	load testing machine (electronic)	1
46	Willy mill	1
47	10 kW Solar Hybrid Inverter	1
48	Pellet making machine	1
49	Hybrid Solar PV plant (6.2 kW)	1
50	Solar Tracking Robot	1
51	Portable I-V checker for SPV plant	1
52	Vertical wind turbine	2
53	Spectrum-Temperature/Humidity Model No. 1250	2
54	Plant Growth Station	1
55	Automatic Methane potential test system	1
56	Compact Weather Station	1
57	Interactive Display Panel	2

CLASSROOM FACILITIES





LANGUAGE LABORATORY





FARM FACILITIES

Table 19. Instructional Farm (Department of Soil & Water Conservation Engineering)

Sr. No.	Crops grown	Farm Area (ha)	Status of Irrigation
1	Area is covered under road, building, nallah etc.	9.8	-
2	Mango	2.25	Drip Irrigated
3	Sapota	3.95	Drip Irrigated
4	Coconut	0.50	Irrigated
5	Jamun	1.16	Irrigated
6	Custard Apple	1.25	Irrigated
7	Lemon	1.25	Drip Irrigated
8	Field Crop Area	6.35	Mini Sprinkler Irrigated
		8.00	Irrigated







Table 20. Major farm equipment (costing > Rs.1 lakh) of Farm

Sr. No.	Name of the equipment	Quantity (No.)	Cost (Rs. in Lakhs)	Working condition (Excellent/Good/ Poor)
1	Tractor	2	14.00	Excellent
2	Mini Tractor	2	6.00	Excellent

Table 21. Farm Facility (Department of Renewable Energy Engineering)

Sr. No.	Name of the Department	Farm Area (Sq. m)	Irrigated/ Non-irrigated	Crops grown
1	Renewable Energy Park	3048	Irrigated (only Agri-voltaic system)	Crops as per objectives of the experiment
2	Plasticulture Park	4228	MIS Irrigated	Crops as per objectives of the experiment

THEORY AND PRACTICAL BATCHES FOR DEGREE PROGRAMME

The students are grouped into three batches for practical classes to enhance the quality of teaching and it also helps for effective monitoring.

Table 22.Theory and practical batches of classes of the students

Academic Year	Theory class		Practical class			
	Batch (No.)	Students (No.)	Batches (No.)	Students (No.)		
				Batch I	Batch II	Batch III
2020-21	01	93	03	31	31	31
2021-22	01	95	03	31	31	33
2022-23	01	58	02	30	28	-
2023-24	01	63	02	30	33	-
2024-25	01	104	03	33	33	38

6.4.5. CONDUCT OF PRACTICAL AND HANDS ON TRAINING

Practical classes provide students with visual and hands-on understanding of scientific principles and their applications. These sessions help students develop essential skills, comprehend scientific investigation processes, and gain a broad understanding of core scientific concepts. Agricultural Engineering, being both theoretical and application-oriented, requires students to master both basic and advanced techniques for professional excellence.

To meet this objective, practical sessions are conducted in both laboratory and field settings. Based on the conceptual requirements, students are engaged in objective-based practicals. For effective monitoring and individual attention, each class is divided into two or three batches, with students further grouped into teams of 4–5 members. This structure ensures close supervision by the teacher or demonstrator and promotes experiential learning.

Each group performs experiments under the guidance of the course instructor. The experimental results from each group are displayed and discussed collectively to derive meaningful conclusions. All practical classes are designed and conducted with specific learning objectives in mind.

In addition to routine practicals, the following activities are organized to broaden students' knowledge and exposure:

- Exposure visits to well-established laboratories.

- Field visits to Agro-Industries, Food Processing Units, Solar Energy Plants, Irrigation Equipment Manufacturers, progressive farmers' fields, APMCs, and Research Stations.
- Hands-on training in the design and development of farm machinery and agricultural systems.

Students' participation in practicals is evaluated based on their experimental approach and interpretation of results. Details of the courses, ELP modules, and the skills imparted are mentioned below.

ELP MODULES AND SKILLS IMPARTED

Table 23. ELP modules and skills imparted

ELP Modules	Skills imparted
Design, Planning and Evaluation of Watershed.	The students are trained in watershed management and planning aspects. A watershed area is chosen for survey and planning. The survey is done using Remote Sensing & GIS techniques. Based on the survey thematic maps like slope map, drainage map, DEM map and aspect maps are prepared from these maps different soil conservation treatment and water harvesting technology are suggested for the area.
Agro processing Centre for value addition technologies and Technical Support Services.	An "Experiential learning - for hands on training on Agro Processing Centre for value addition technologies and technical Support services were used to trained the students in Food Processing and value addition. Kesar Mango the very famous variety of mango of this region is used for making pulp and canning it.

Production & Management of Alternative/ Renewable Sources of Energy.	The training facilities are created in such a way that the students are acquainted and trained on the operation of workshop machines required for such establishment at the industrial level. The lacuna in terms of the design, development and installation of renewable energy devices during the graduation programme will be overcome by the training. The students are specifically trained as per the following concepts. ➢ The emphases are given on the concept of alternate/renewable energy technology, its advantages and disadvantages, commercial uses, operation and maintenance, safety measures, small business entrepreneurship, etc. ➢ The students are educated in design, development, operation and maintenance of renewable energy devices. ➢ The cost analysis and project report writing.
➢ Testing of Farm Machinery equipment	➢ 15 days training imparted on line Testing of Farm equipment's, like MB Plough, Cultivator, Rotary tiller, Seed drill, Sprayer etc. ➢ Preparation of specifications sheet as per BIS test code. ➢ Laboratory tests as well as Field testing procedure explain online. ➢ Preparation of test report and its presentation

SUBJECT AND SKILLS IMPARTED

Table 24. Department wise skills imparted

Subject	Skills imparted
Department of Soil & Water Conservation Engineering	➢ The students become experts in design of various water harvesting/ground water recharge structures, soil moisture conservation measures, erosion control measures, watershed development and management, along with planning for watershed development activities, its installations, operations, monitoring, evaluations, maintenance and management in watershed as well as reclamation and management of problematic soils. ➢ The skills of watershed survey using advance tools like remote sensing/GIS, GPS, TS/DGPS, planning and hydrologic, hydraulic and structural design of various soil & water conservation structures, water harvesting, groundwater recharge structures, its executions, monitoring and evaluations are imparted to students. ➢ The skills on groundwater development, planning and management, its judicious use for irrigation. ➢ The skills for the applications of remote sensing & GIS, UAV/satellite imagery, AI and ML in water management are obtained by students.
Department of Irrigation and Drainage Engineering	➢ Students become expert in Planning and designing irrigation canals, pipes, drip and sprinkler systems. They also Understanding the behaviour of water in natural and artificial systems.

	➢ Students become proficient in Designing surface and subsurface drainage systems to manage excess water and prevent water logging. ➢ The skill on assessing water availability, distribution, and planning for sustainable use are enhanced. ➢ The Knowledge of how water interacts with soil and plant systems for optimal irrigation is imparted.
Department of Farm Machinery & Power Engineering	➢ The students are imparted with the skills like construction, operation, adjustment, power and draft calculation for implements and machinery meant for almost all agricultural operations like primary, secondary, sowing and planting operations, plant protection and interculture and caliberations ➢ Practical training on threshing, cleaning systems and loss calculations ➢ Practical training of harvesting of various crops like root crops, cotton, maize, vegetable and fruit crops ➢ Skills on functioning of basic system of tractor like IC engines, clutch gearbox, final drive, gears are also provided to the students. ➢ Skill on performance evaluation of tractor and implement are imparted keeping BIS standard in view.
Department of Processing & Food Engineering	➢ The students are imparted skill of processing and value addition of agricultural produce.

	➢ Students are also imparted skills for various electrical equipments/machines necessary for farm and agricultural industries. ➢ They are prepared with skill for farm structures. ➢ They are made skilled in computer utilization for web designing, internet applications and artificial intelligence. ➢ The student are made experts in applications of drone technologies, remote sensing, IoT, ML, AAN in various fields of agriculture.
Department of Renewable Energy Engineering	➢ Equipping the students with required skills and knowledge to installation and maintenance of SPV plant and Hybrid SPV plant. ➢ Imparted the technical knowledge about design, development, manufacturing and installation of renewable energy devices like solar thermal and SPV powered appliances through ELP to enhance their skills required for operation and maintenance of renewable energy devices. ➢ Students have hands on training on the working and maintenance of biomass gasifiers, biofuel production, solar dryer and biogas plant etc. ➢ Students gained the practical knowledge of application of Plastic in agriculture for higher production and moisture conservation like mulching, low tunnel vegetable cultivation also about high tech greenhouse and installation and maintenance of greenhouse system among students in that they are able to create employment themselves and others.

Department of Agricultural Engineering Extension education	➢ The knowhow and skills of the students on various technologies of agricultural engineering are enhanced through demonstrations in college museum. ➢ Hands on training on operation and maintenance of various farm machineries / equipment / implements, processing machineries and renewable energy appliance, pumps and MISs etc. ➢ The students are kept updated with the recent technologies concerning to various disciplines of agricultural engineering through demonstrations.

PRACTICAL CREDIT DETAILS

Table 25. Department wise Practical details

Sr. No.	Discipline	Number of credits for practical	Per cent of time spent	
			In laboratory	In field
1	Department of Soil & Water Conservation Engineering	22	60	40
2.	Department of Irrigation and Drainage Engineering	25	60	40
3.	Department of Farm Machinery & Power Engineering	37	70	30
4.	Department of Processing & Food Engineering	16	70	30
5.	Department of Renewable Energy Engineering	18	70	30
6.	Student READY	42	30	70

Regular practical for the students are conducted in the respective courses and individual student is given an opportunity to handle and learn the skills. Lab and field assistants take care of practical and hands-on trainings under the guidance of course teachers. The laboratory work comprises of training on handling of laboratory equipment, learning various design and estimation of equipment and systems. Practical classes with

field assignment dominate the programme with average 60 percent of time devoted to it under various courses. Practical knowledge gained by the student is assessed through a practical exam at the end of each course.

STUDY TOUR

As per the curriculum recommended by the VI Deans' Committee, a 15-day study tour is conducted for 7th semester B.Tech. students. The tour is organized to one or two neighboring states outside Gujarat, such as Rajasthan, Haryana, Delhi, Madhya Pradesh, Maharashtra, and Uttar Pradesh. During the tour, students visit various research institutes/stations, agro-industries, farm machinery manufacturing units, educational institutions, dairy and breeding farms, soil conservation structures, and non-conventional energy research centers. The objective is to familiarize students with the latest developments and activities carried out by reputed institutions and organizations in the field of Agricultural Engineering.

















STUDENT DEVELOPMENT PROGRAMMES UNDER NAHEP-IDP

Table 26. Students' development trainings/programmes organised during the Academic year 2020-21 under NAHEP-IDP

Sr. No	Type of training	Activities	Total no. of students benefitted
1	Job Oriented Cutting-Edge Skill Enhancement Training	Webinar on "Role of Design in Agriculture" (19-May-2020)	112
2		Webinar of "Introduction to Matrix Laboratory (MatLab) software and application of MatLab in agricultural domain on 14th May, 2020	55
3		Webinar of "Application of CAD in Agricultural Engineering" on 16thMay, 2020	37
4		Webinar on "Advanced Machinery for Tillage operations" on 19th May, 2020	42
5		Webinar on "Advanced Food Processing Techniques" on 21st May, 2020	53
6		Webinar on "Application of Robotics in Agriculture" on 27th May, 2020	79

Sr. No	Type of training	Activities	Total no. of students benefitted
7		Webinar on "Application of Remote Sensing and GIS in Agriculture Domain" on 29 th May, 2020	53
8	Soft & Language Proficiency skill classes/courses	One-week online training on "English Proficiency and Communication Skills" DURING 24-29TH August	132
9	Entrepreneurship skills development programmes	Saurashtra-Kutch Entrepreneurial Ecosystem Meetup (SEEM)" on 07-10-2020	39
10	Support for student learning	KRITAGYA- A National level AgriTech Hackathon- Ongoing Event	3
11	Job Oriented Cutting-Edge Skill Enhancement Training	NPTEL certification course for Agriculture Engineering during 14-Sep-2020 to 20-Dec-2020	41
12		5 Days Online Vocational Training on "Automation in Micro Irrigation System" from 13-19th February, 2021	170
13		National Webinar on "Agricultural Residue and Waste Utilization for Energy Generation" from 16-17th March, 2021	182
14	Personality development and employability skill classes/courses	Workshop on "Agritourism Management and Business Plan" from 22-26th March, 2021	5
Total Programmes = 14		**Total no of students benefited**	**1003**

Table 27. Students' development trainings/programmes organised during the Academic year 2021-22 under NAHEP-IDP

Sr. No	Type of training	Activities	Total no. of students benefitted
1	Job Oriented Cutting-Edge Skill Enhancement Training	Vocational Trainings i.e. 1. Vocational training on "Advances in Watershed Planning, Development and Management" (September 20-24, 2021)	91
2		Vocational Training on IoT (Internet of Thing) in Agriculture (October 04-08, 2021)	91

3		Vocational Training on Food Processing Technologies for Entrepreneurship Development (October 04-08, 2021)	93
4		Vocational Training on Solar Energy Technologies for Sustainable Agriculture & Rural Development (Feb. 28- March, 05, 2022)	99
5		Vocational Training on "Agricultural Spraying Drones" (Feb. 28- March, 05, 2022)	58
6	Entrepreneurship skills development programmes	One day programme on Aatmanirbhar Bharat: Opportunities in Start-up and MSME (March 28th, 2022)	281
7	Support for student learning	National level Championship on "Technology Innovation Forum for Agricultural Nurturing (TIFFAN-2021)"	25
Total Programmes = 07		**Total no of students benefited**	**738**

Table 28. Students' development trainings/programmes organised during the Academic year 2022-23 under NAHEP-IDP

Sr. No	Type of training	Activities	Total no. of students benefitted
1	Job Oriented Cutting-Edge Skill Enhancement Training	Two Days workshop on "Use of Modern Technologies and Automation in Food Processing" from January 05-06-2023	108
2		Two Days workshop on "Waste Utilization and Management for Energy Generation" from February 16-17,2023	79
3		Two Days' workshop on "Application of Robotics and Drone Technologies in Agriculture" from March 02-03,2023	91
4		Five Days Vocational Training Programme on "IoT and AR/VR Embedded Climate	73

Sr. No	Type of training	Activities	Total no. of students benefitted
		Smart Water Management" under Incubation Center on Advanced Irrigation Technologies from 05-09-2022 to 09-09-2022	
5		International Training and Experimental Learning on "Drones, IoT and Google Earth Engine and their Applications" at Geo-Informatics Centre, AIT, Bangkok, Thailand from 25-07-2022 to 23-09-2022	13
6	Support for student learning	National level Championship on "Technology Innovation Forum for Agricultural Nurturing (TIFFAN-2022)	25
Total Programmes = 06		**Total no of students benefited**	**389**

Table 29. Students' development trainings/programmes organised during the Academic year 2023-24 under NAHEP-IDP

Sr. No	Type of training	Activities	Total no. of students benefitted
1	Job Oriented Cutting-Edge Skill Enhancement Training	Vocational Training Programme on "Emerging Trends in Food Process Industries" August 21-25,2023	77
2		Vocational Training Programme on "Remote Sensing & GIS in Water Resources Management" August 21-25,2023	42
3		Vocational Training Programme on "Advanced Computer Aided Design using CREO Parametric Software " August 21-25,2023	45
4		International Training at Western Sydney University, Australia from July 28 to September 25, 2023	10
5		International Training at Hokkaido University, Japan	10
6		Drone Training with DGCA Certification from September 4 to 9, 2023	29
7	Entrepreneurship skills development programmes	Vocational Training Programme on "Start-Up Opportunities for Exporting Irrigation Equipment " August 21-25,2023.	40

8	Support for student learning	Special Coaching of various competitive exams, i.e. GPSC Class 1, 2 and 3, IBPS etc. for UG students of JAU from August 10, 2023 to September 24, 2023	94
9		Two months Industrial training at MAHINDRA and MAHINDRA ltd., Nagpur, Maharashtra from September 11 to November 11, 2023	16
10		Two months Industrial training at AGRINEXT Consultancy, Pune , Maharashtra from September 11 to November 11, 2023	16
11		Two months Industrial training at Albedo Foundation, Nashik, Maharashtra from September 11 to November 11, 2023	20
12		Two months Industrial training at Deccan Institute of Technologies, Hyderabad from September 11 to November 11, 2023	18
Total Programmes = 12		**Total no of students benefited**	**417**

6.4.6. SUPERVISION OF STUDENTS IN PG PROGRAMMES

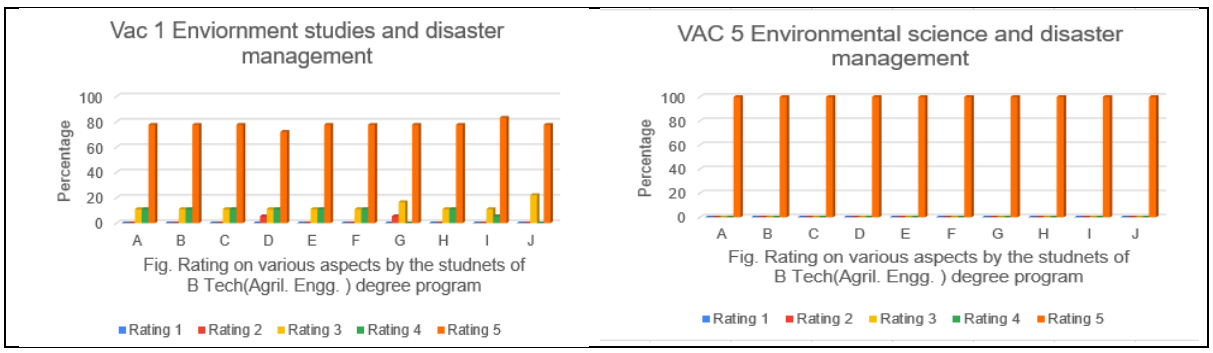
Not applicable

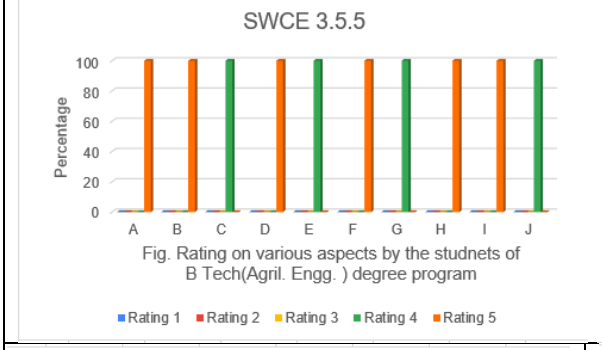
6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.)

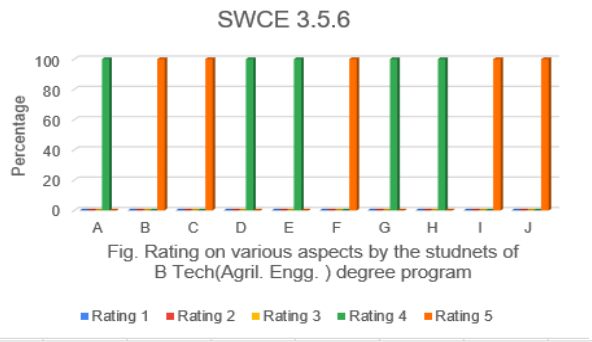
Feedbacks are collected from the respective stakeholders through various mechanisms like online google forms, emails, personal contacts, visitors register etc. The few of the feedbacks as received from the different stakeholders are appended in the Table 30 and documentary evidences of feedback received from various infdustries in particular are provided in the Annexure-I.

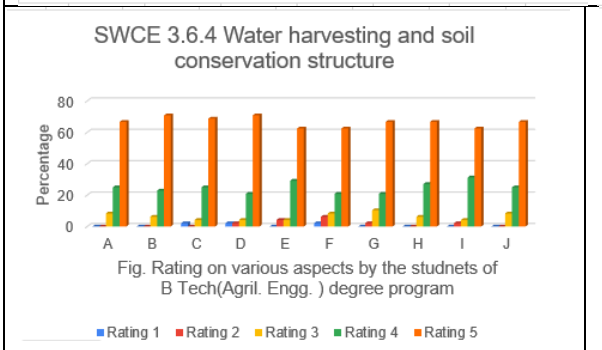
Table 30. Feedback received from stakeholders

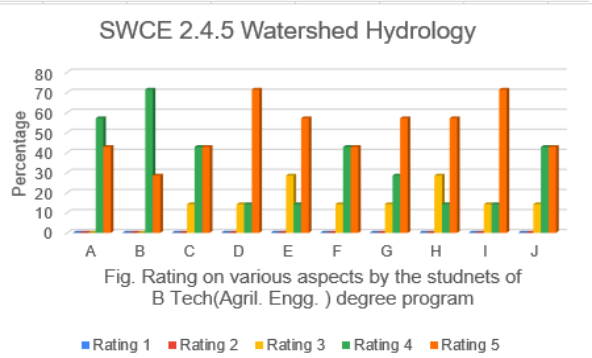
FEEDBACK FROM UG STUDENTS COURSE WISE

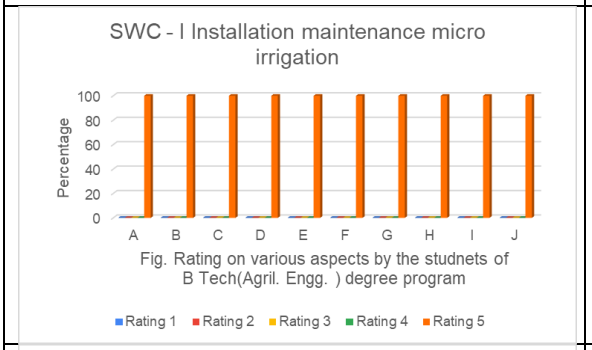


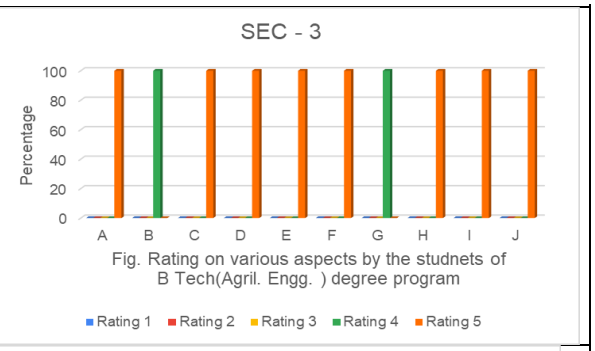

SWCE 3.5.5
Percentage
100
80
60
40
20
0
A B C D E F G H I J
Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program
Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

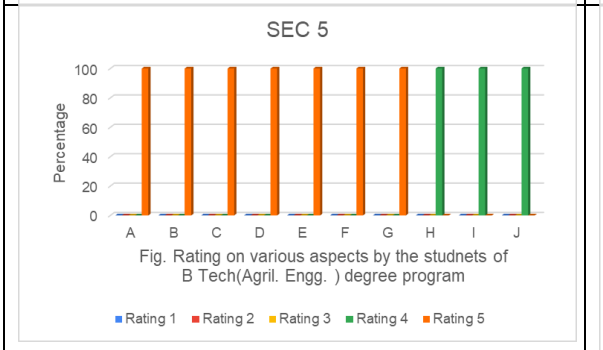

SWCE 3.5.6
Percentage
100
80
60
40
20
0
A B C D E F G H I J
Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program
Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

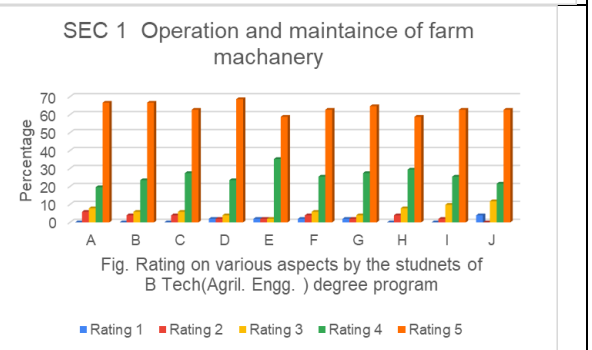

SWCE 3.6.4 Water harvesting and soil conservation structure
Percentage
80
60
40
20
0
A B C D E F G H I J
Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program
Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

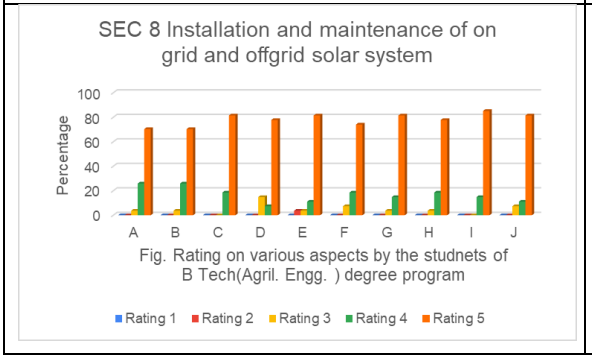

SWCE 2.4.5 Watershed Hydrology
Percentage
80
70
60
50
40
30
20
10
0
A B C D E F G H I J
Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program
Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

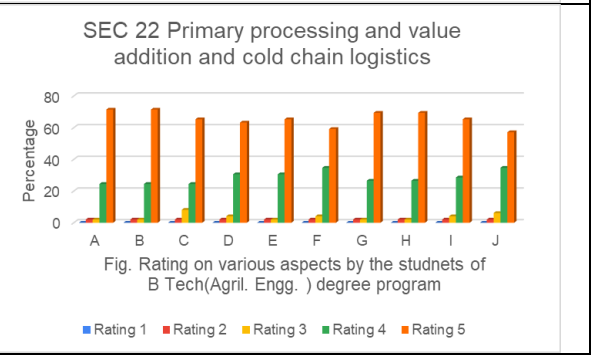

SWC - I Installation maintenance micro irrigation
Percentage
100
80
60
40
20
0
A B C D E F G H I J
Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program
Rating 1 Rating 2 Rating 3 Rating 4 Rating 5


SEC - 3
Percentage
100
80
60
40
20
0
A B C D E F G H I J
Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program
Rating 1 Rating 2 Rating 3 Rating 4 Rating 5


SEC 5
Percentage
100
80
60
40
20
0
A B C D E F G H I J
Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program
Rating 1 Rating 2 Rating 3 Rating 4 Rating 5


SEC 1 Operation and maintaince of farm machanery
Percentage
70
60
50
40
30
20
10
0
A B C D E F G H I J
Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program
Rating 1 Rating 2 Rating 3 Rating 4 Rating 5


SEC 8 Installation and maintenance of on grid and offgrid solar system
Percentage
100
80
60
40
20
0
A B C D E F G H I J
Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program
Rating 1 Rating 2 Rating 3 Rating 4 Rating 5


SEC 22 Primary processing and value addition and cold chain logistics
Percentage
80
60
40
20
0
A B C D E F G H I J
Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program
Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

SEC 13 Instalation and maintainance of micro irrigation system

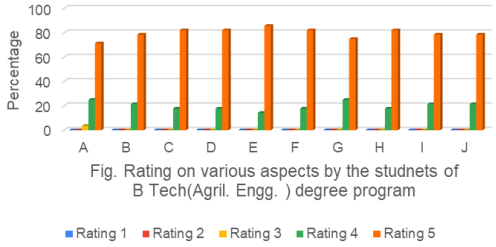


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

REE 3.5.8 Renewable power sources

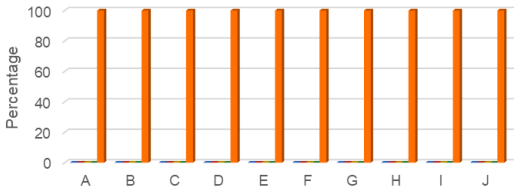


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

REE 3.6.8 Bio Energy system design and applications

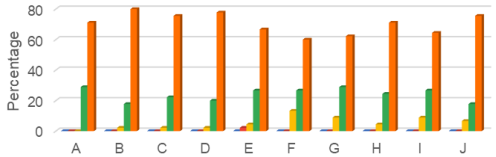


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

REE 2.4.8 Fundamental of renewable energy sources

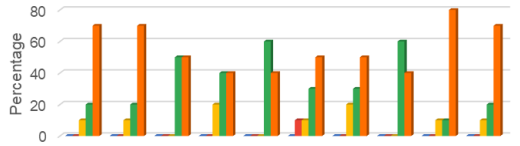


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

PFE 3.5.4

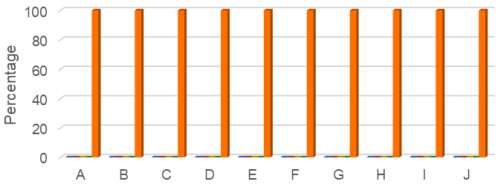


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

PFE 3.5.3

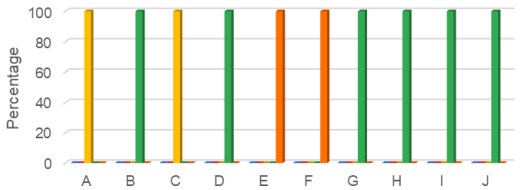


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

PFE 2.4.4 Engineering Properties of agriculture produces

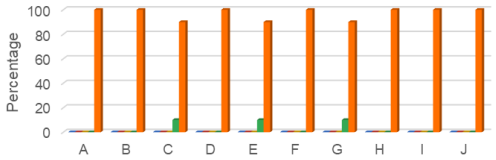


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

FMPE 2.4.3 Tractor and Automotive Engine

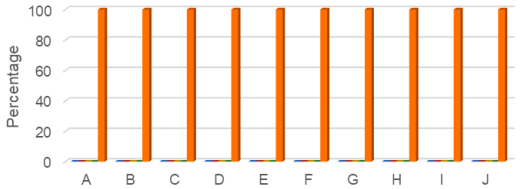


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

PFE 3.6.7 Dairy and food engineering

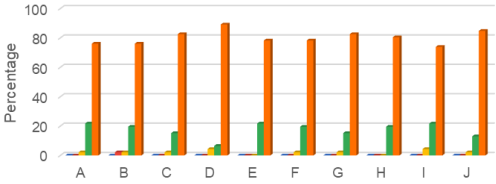


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

PFE 3.6.3. Post Harvest Engineering of Horticultural Crops

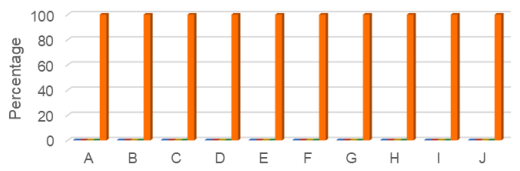


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

PFE 2.4.9 Post Harvesting engineering of Horticulture crops

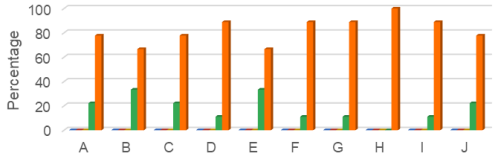


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

MDC-IV Farming based livelihood system

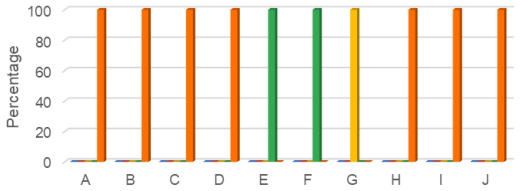


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

MDC I farming based livelihood system

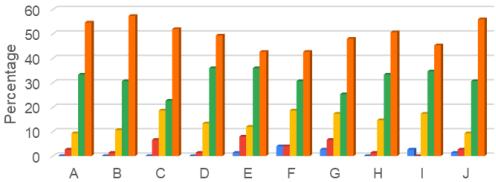


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

MD 1

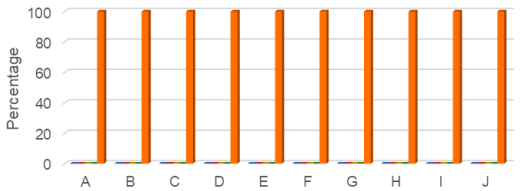


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

Math(E)-2.4.1 Engineering Mathematics -III

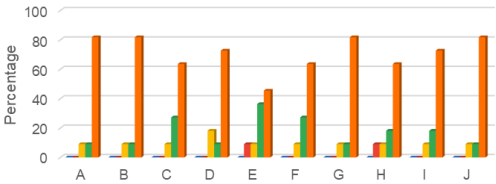


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

IDE 3.6.5 Ground water ,wells and pumps

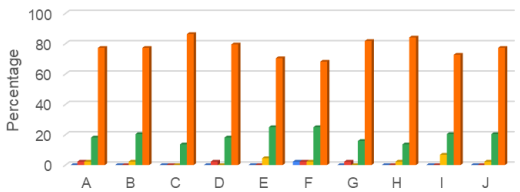


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

IDE 3.5.7 Drainage Engineering

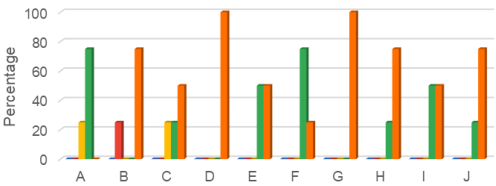


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

IDE 2.4.7 Sprinkler and micro irrigation systems

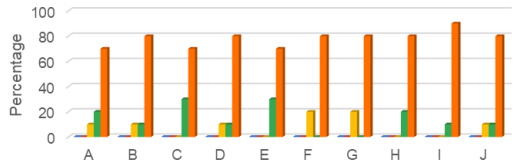


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

IDE 2.4.6 Irrigation engineering

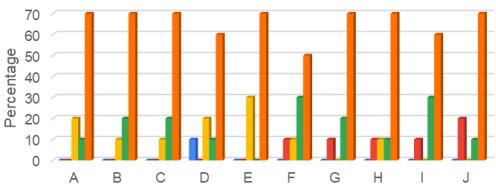


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

FMPE 3.6.2 Farm machinery and equipment 2

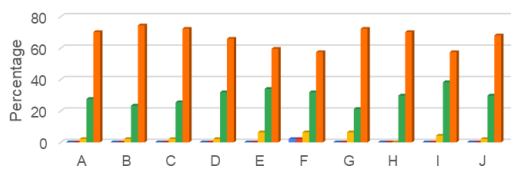


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

FMPE 3.5.2 Farm Machinery and Equipment - 2

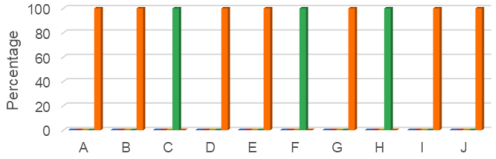


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

FMPE 3.5.1

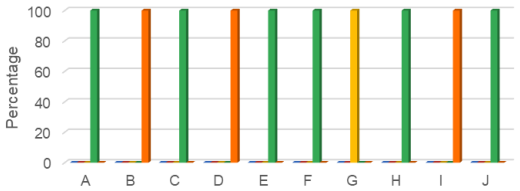


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

FMPE 3.6.6 Tractor and farm machinery operation and maintenance

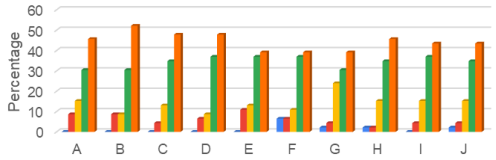


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

FMPE 2.4.3 Tractor and automotive engine

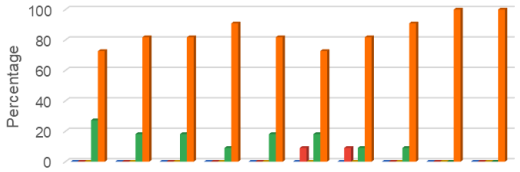


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

FMPE 2.1 Workshop technology and practices

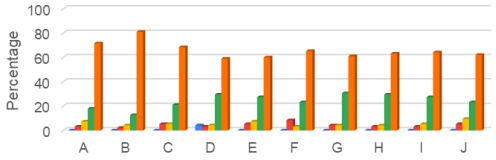


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

EE 3.6.3 Applied electronics and instrumentation

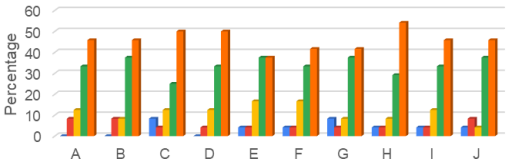


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

EE 3.6.2 Applied electronics and instrumentation

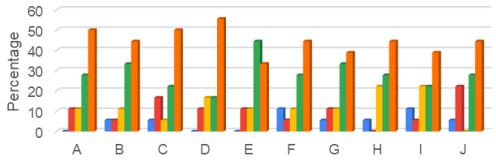


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

CSE 3.6.1 Computer programming and data structure

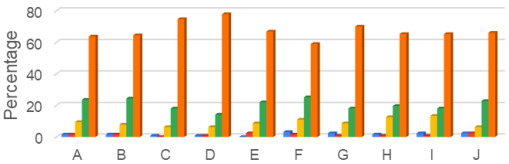


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

CE 2.4.2 Building construction cost estimations

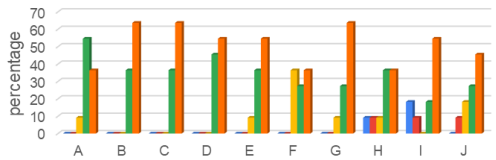


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5

AEC VI Computer programming and Data structure

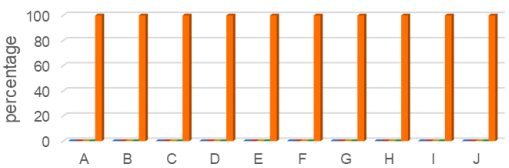
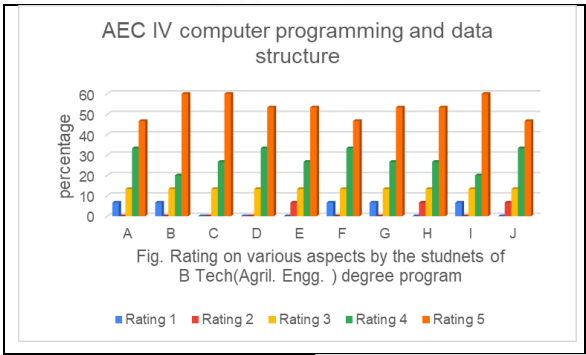
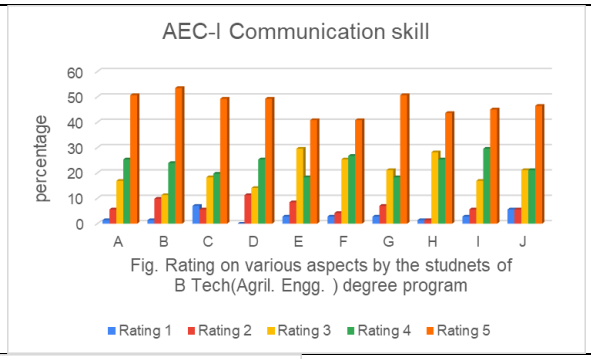
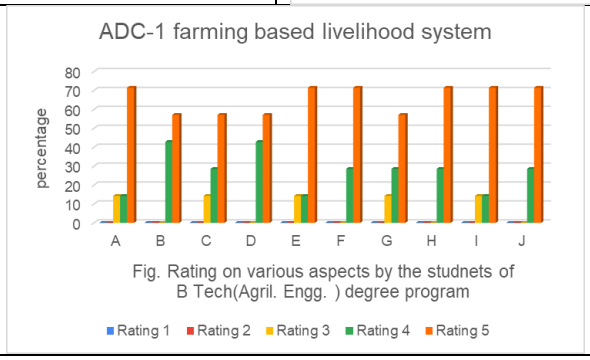


Fig. Rating on various aspects by the studnets of B Tech(Agril. Engg.) degree program

Rating 1 Rating 2 Rating 3 Rating 4 Rating 5







FEEDBACK FROM FARMERS, PARENTS & FEMALE AND EMPLOYER

Sr. No.	Feed back	Action taken
Farmers		
1	There is an issue of attacking of wild animals particularly leopard in the villages surrounding the Gir forest. There is a need to develop IoT based mobile operated pumping sustem as well as drip irrigation systesm.	An IoT based automated MIS is developed in which farmer can operate pumping system as well as MIS using mobile for the desired time or volume or can be operated based on the weather data.
2	The training programs as well as Agri Fair/Demonstration mela should be organised frequently for extending the latest technologies to farmers.	The Technology Demonstration –cum-Krishi Mela is organised every year.
Parents		
1	The awareness program should be organised for the girl students and	A college level/university level Gender Committee (Grievances Cell Of Women) is

	women faculties regarding the protections of them from sexual harassment at hostel, college, campus or offices.	constituted as per Sexual Harassment of Women act, GOI, 2013. The awareness programs are organised for them.
2	The girl students' entry/exit movements into the hostel should be montitored and be restricted during night hours.	The movement register is maintained at entry/exit of girls' hostel and women care taker moniotor the movements and restrict the girls during night time.
Employer **Hon. Vice-Chancellor, JAU, Junagadh**		
1	Efforts should be continued to ensure that more numbers of students should appear in various competitive examinations.	The special classes are arranged for the various competitive examination like GATE, JRF/SRF, NET and GPSC/GGSPM.
2	Publications of research papers should be enhanced in reputed NAAS rated journals.	The staff and M Tech/PhD students are encouraged for the publications of research papers NAAS rated journals.
3	The ELP as well as more number of PG research problems should be planned based on drone, AI, robotics, remote sensing & GIS utilizing facilties created under IDP.	During the various ELP programs, the IDP facilties are used. The M Tech/PhD students' research projects are given on remote sensing & GIS, IoT and AI.
4	Feedback from students should be collected.	The feedback from UG/PG students are collected.

6.4.8. STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS

Year wise information on sanctioned strength, actual intake and attrition during the last five years of the Degree Programme are furnished in the tabular form. This attrition is due to shifting of students to some other degree programme like engineering and dairy sciences etc.

Table 31. Student Intake and Attrition in the UG Programme for Last Five Years

Year	Sanctioned seats	Actual intake	Attrition	Attrition Percentage
2020-21	108 (99+9*)	93(93+9*)	6 + 1*	6.86
2021-22	108 (99+9*)	95(95+10*)	6 + 1*	6.67
2022-23	118(107+11*)	58(58+10*)	9+1*	14.71
2023-24	118(107+11*)	63(63+11)	6+2*	10.81
2024-25	118(107+11*)	104(104+11)	2	1.74

*- Student Admitted through Diploma to Degree Programme in 3rd Semester

6.4.9. ICT APPLICATION IN CURRICULA DELIVERY

The college has a well-established Computer Cell equipped with a variety of software applications. Students and faculty are encouraged to develop their own digital resources and share them through digital repositories. Practical training is provided to students in the Computer Cell under the guidance of a dedicated computer engineering faculty member.

ICT-enabled teaching and learning at the college encompasses a wide range of tools, techniques, content, and resources aimed at improving the quality and effectiveness of the teaching-learning process. Teachers and students have access to various ICT tools for enhanced academic engagement. Faculty members actively participate in the selection and critical evaluation of digital content, and are further encouraged to create and share their own digital resources with colleagues and students. Each faculty member is allotted a high-performance computer system with high-speed internet connectivity to support the sharing and development of digital content.

COURSE CURRICULUM DEVELOPED RELATED TO ARTIFICIAL INTELLIGENCE USING IDP LABS

In additions to the course curricula of the ICAR V Dean committee syllabus, the new age courses related to artificial intelligence, precision agriculture, application of robotics and drone in Agriculture are introduced as an elective courses in the UG programme (8th semester) of Agricultural Engineering. The details of the courses are given in the Table 32.

Table 32. Courses introduced as an elective course to students of Faculty of Agricultural Engineering and Technology since academic year 2019-20

Sr. No.	Course Number	Course Title	Course Credit
1	CSE-4.8.25	Artificial Intelligence in Agriculture	3(1+2)
2	IDE-4.8.10	Precision Agriculture & Animal Husbandry	3(1+2)
3	FMPE-4.8.17	Robotics in Agricultural Engineering	3(2+1)

In the course curricula of the ICAR VI Dean committee syllabus, new age courses like AI, Robotics, ML, Automated precison farming etc. have been already incorporated into the course curricula. Besides an array of elective courses have been included so that the student can get deeper knowledge and understanding in the subject of his interest. The details of the courses are given in the Table 33. Addition of new age courses related to Agricultural Engineering and incorporation of choice based online courses which can be taken up from NPTEL, moo KIT, edX, Coursera, SWAYAM or any other portal in open digital learning environment.

Table 33. New Age courses since academic year 2024-25 (VI Dean committee syllabus)

Sr. No.	Course Number	Course Title	Course Credit
1	VAC - II	Agricultural Informatics and Artificial Intelligence (1st Sem)	3 (2+1)
2	CSE6.3	Sensors, AI and Robotics in Agriculture (6th Sem)	3 (2+1)
3	FMPE8.8	Precision Agriculture and System Management (8th Sem)	3 (2+1)
4	CSE8.30	Python Programming (Elective)	3 (1+2)
5	CSE8.31	Artificial Intelligence (Elective)	3 (2+1)
6	CSE8.32	Advances in Automation and Robotics in Agriculture (Elective)	3 (2+1)
7	CSE8.33	Machine Learning (Elective)	3 (2+1)
8	SEC6	Machine vision, sensors and sensors architecture	4 (0+4)

(A) UG/PG Admission system

Junagadh Agricultural University (JAU) participates in a centralized Common Admission Portal, jointly managed by all four State Agricultural Universities (SAUs) of Gujarat, for the streamlined administration of admissions to diploma, undergraduate, postgraduate, and doctoral programmes. The portal enables prospective students to register, submit applications, pay fees online, track application status, and access rank lists. Additionally, applicants receive real-time SMS notifications regarding important updates such as entrance exams schedule and admission rounds.

On the administrative side, the portal supports several backend operations including application verification, eligibility validation, rank list generation, and programme allotment, thereby ensuring a uniform, transparent, and efficient admission process across all SAUs. Candidates can select their preferred colleges and degree programmes, and the system automatically allocates admissions based on merit and preference. The entire process, including the publication of merit lists and category-wise vacancy matrices, is conducted online to ensure accessibility, fairness, and transparency.

(B) Online Fees collection system

College students pay their semester fees online through the dedicated portal http://online.jau.in/student_fees/, which is accessible via the Student Corner on the official university website. The system supports multiple payment modes, including UPI, credit/debit cards, and net banking, providing a convenient and secure method for fee transactions during subsequent semesters of various degree programmes.

The collected fees are directly deposited into the respective college's bank account, ensuring accuracy and transparency in financial management. Additionally, college administrators have access to real-time fee collection reports through the system, enabling effective monitoring and record maintenance.

(C) Academic activities

Simultaneously, the Academic Information Management System (AIMS) enhances curriculum delivery and monitoring by providing a dynamic digital interface for faculty and students. Through AIMS, instructors upload and share lecture notes, assignments, class materials, and video lectures, ensuring round-the-clock access to learning resources. The platform also supports online assessments, attendance tracking, and real-time academic monitoring, including faculty feedback and progress reports. These ICT-enabled features promote interactive learning, strengthen academic accountability, and create a personalized, student-focused educational environment at JAU.

(D) Teaching through ICT tools

Teaching is made by using PPT, videos, visual, animations and smart boards. During COVID-19 pandemic s, all classes are conducted online using the various platforms viz. Zoom, Google Meet through Google Classroom and WhatsApp applications during academic year 2020-21 and 2021-22. The teachers are taking live lectures as well as supplying the teaching materials using these platforms. The teachers are performing live practical on Zoom or Google Meet through Google Classroom platforms online for the students. The examinations

are also conducted online using the Online Examinations Management Software (OEMS) and a proper evaluation is made to justify the students' efforts.

The faculty members are involved in preparing the virtual lectures in the well-developed virtual classroom facility in the university which is appreciated by the ICAR also.

(E) Examination Management system

The JAU Examination Management System (JEMS) is a comprehensive ICT-based platform that efficiently manages academic and examination-related activities for undergraduate and postgraduate students. It facilitates the entry of internal and external marks and streamlines critical postgraduate processes such as online submission of campus forms, synopsis, preliminary proposals, exam results, thesis evaluation and examination panel selection, and final viva voce outcomes. Each stage - from submission by the major advisor to review by the Head of Department and Dean of the respective faculty, and final approval by the Dean of Postgraduate Studies and the Registrar - is conducted digitally through the JEMS portal. This robust system ensures timely tracking of student progress, adherence to academic timelines, and transparent, paperless record management

(F) Online Alumni Portal

The College of Agricultural Engineering and Technology (CAET) offers an online Alumni Portal where graduated students can register themselves and stay connected with the institution. The portal includes features such as searching alumni from other batches, viewing current city/location, and the ability to update personal profiles at any time throughout the year. This platform serves as a valuable tool for fostering professional networking, maintaining alumni engagement, and strengthening the bond between alumni and the institution.

(G) E-library

E-library for all the constituent colleges of the JAU is managed by the University Campus Library, established in the year 1978. The two storied new Building is located at the eastern side in the main campus. The Library with ICT platform is one of the most important centers of the University, which facilitates the teaching, research and extension program. Both students and faculty extensively use the facility. The Junagadh Agricultural University has given key prominence to the development of the library facilities at the headquarters as well as the constituent colleges and research stations.

Our library provides services students/faculties to constituent colleges, which come under Junagadh Agricultural University, viz., 5 at Junagadh campus like College of

Agriculture, College of Agriculture Engineering & Technology, College of Horticulture, Junagadh, Post Graduate Institute of Agri. Business Management and College of Agriculture(Morbi, presently at Junagadh), 3 College of Agriuclture, at Khapat, Mota Bhandariya and Targhadiya, 3 Different Polytechnics of Agro Processing & Food Technology, Agriculture, Horticulture in the Junagadh campus, 3 Polytechnics of Agriuclture at Amreli, Dhari and Halvad and 1 Polytechnic of Agriucltural Engineering at Targhadiya.

Many knowledge-based services like that of Reference, Bibliography, INFLIBNET service. CD-ROM Databases, Internet browsing and e-services are provided by the library for its users.

Under Automation, library has RFID for the library circulation and security of library material along with OPAC through KOHA, thus the library is fully automized. Post Graduate and Doctorate theses of research scholars of different faculties and rare or important books and documents are digitized in the university library through the digitization camera available in the library. The library circulation section works with KOHA as well as LIBSYS library software.

Books, periodicals, theses, reports, maps and encyclopedia relevant to the mandate areas of the university have been stocked in the University Library and its constituent center. University Library is well equipped with 59509 text as well as reference books, 80 research journals/periodicals, 3982 thesis, 14000 bound volumes, 1037 e-books, 2 e-journals, various reports, maps and encyclopedia relevant to teaching, research and extension activities of the university. The library has offline database in the form of CAB, Agris, and Agricola as well as online database is available at e-library tab on university website. University Library subscribes 10 newspapers to acquaint users with daily news.

The university library renders its services to users from 8:00 to 18:10 h. A separate air conditioned reading room is developed with the best facilities as well as good ventilation and aeration. This AC reading room accommodates approximately 150 students. The Reading Room remains open for its users from 8.00 to 23.00 hours on working days whereas 8.00 to 14.00 hours on holidays.

(H) Internet

The College Cyberary, equipped with high-speed internet connectivity, provides students and faculty with seamless access to a wide range of online journals and academic databases. Key databases such as CABI, AGRIS, and AGRICOLA are available in CD-ROM format, while resources like INDIAN HARVEST are accessible as online databases. To enhance

user experience, the library uses WinSPIRS, a Windows-based client interface, for efficient access to the various subscribed databases. This digital infrastructure supports academic research and learning by ensuring convenient and reliable access to global and national scientific literature.

The Library is equipped with 40 computer workstations with internet connectivity, along with scanning and CD writing facilities, all of which are extensively utilized by both students and faculty members for academic and research purposes. To support academic learning, the library also offers a Book Bank facility, through which students are provided with textbooks related to their respective subjects and semesters. This initiative ensures that students have easy access to essential learning resources throughout their academic journey.

(I) Wi-fi facility

The University provides 24x7 Wi-Fi connectivity across key areas of the campus, including the library, departments, and hostels, with secure login-based authentication to ensure safe and reliable access. In addition, the main campus is connected through an IP-based network, allowing students and faculty members to access the internet seamlessly from their respective hostels and departments. This connectivity enables users to browse scholarly resources, access previous literature, stay updated with recent advancements, and enhance their academic and research pursuits.

The e-library is having following online access facilities:

J-Gateplus (Complete):

J-Gate is a comprehensive online indexing and access gateway to global e-journal literature. It has indexes more than 58 million journal articles from over 58,000 journals, covering multiple disciplines including science, technology, medicine, social sciences, and humanities.

J-Gate is highly useful in the agricultural discipline for researchers, students, faculty, and professionals by providing streamlined access to a wide range of scholarly literature. J-Gate indexes thousands of journals, including many in the field of agriculture such as: Agronomy, Soil Science, Horticulture, Agricultural Engineering, Plant Pathology, Crop Science and Animal Husbandry. J-Gate allows searches using: Keywords, Author names, Journal titles & Subject categories. This helps agriculture researchers find specific articles or trends efficiently. Junagadh Agricultural University use J-Gate through consortia like: CeRA (Consortium for e-Resources in Agriculture) by ICAR.

CeRA :

CeRA (Consortium for e-Resources in Agriculture) plays a vital role in agriculture by providing **access to a wide range of electronic journals and research resources** to Junagadh Agricultural university. CeRA is the ICAR Consortium of e-resources in Agriculture. This covers more than 3000 scholarly journals pertaining to the Agriculture and allied sciences which are available in full text. Its main functions include:

Facilitating access to scholarly literature for scientists, researchers, and students in agriculture and allied sciences. **Promoting information sharing** among ICAR institutes and State Agricultural Universities (SAUs). **Supporting research and innovation** by offering timely and comprehensive digital resources. Overall, CeRA enhances the **quality and reach of agricultural research and education** in India.

ASTRAL :

Junagadh Agricultural University have purchased 630 e-books from Astral International (P) Ltd. These e-books are related to agriculture and allied sciences.

ScienceDirect :

Junagadh Agricultural University has subscription of ScienceDirect, a leading full-text scientific database from Elsevier, is highly valuable in agricultural research and education. It provides access to peer-reviewed journals, book chapters, and research articles.

KrishiKosh:

KrishiKosh is a digital repository of agricultural knowledge in India, developed and maintained by the Indian Council of Agricultural Research (ICAR). ICAR have provided access to all the State Agricultural University of India. These digital repositories include theses, research papers, reports, books, journals, and other academic resources in agriculture and allied sciences. Krishikosh is a database of theses submitted to the Agriculture universities and ICAR institutions are freely accessible by students. The JAU Library is member for Krishikosh and all the theses submitted to the JAU are being uploaded regularly.

EBSCOhost:

Junagadh Agricultural University has subscription of is also powerful online research platform provided by EBSCO Information Services that gives access to a wide range of academic, scientific, and professional databases. **EBSCOhost** is offering access to : Scholarly

journals, E-books, Magazines, Research articles, Conference papers across multiple disciplines including **agriculture** and allied sciences.

NIPAERS:

The JAU has access to 204 e-books.

e-KrishiShiksha:

e-KrishiShiksha is the ICAR e-learning portal on agricultural education.

Art & Science Academic Publications (ASAP):

ASAP is providing access of e-books from more than 51 publishers across the globe in various fields to JAU based on IP and Login.

Commodities:

The recent news on agricultural commodities is published on this platform. The university has acceptance of the usage agreement & privacy policy with Centre for Monitoring Indian Economy Pvt. Ltd.

The following ICT facilities have been well established in the college during the period 2020-21 to 2024-25. Detailed information about the ICT lab facilities available for undergraduate students at CAET, JAU is provided in Table 34 below.

Table 34. ICT Lab facilities available for undergraduate students at college

Sr. No.	Name of Lab	Equipment	Usage
1	ICT Enabled Class Rooms	4 UG Class rooms with Interactive Panneel with Degitial Podium	For educational video, PPT, conferencing, teaching and learning
2	UG - Computer Lab	80 Computer System with 10 KW UPS Facilities equipped with various useful software	Training of ICT, browsing Internet and Statistical data analysis
3	PG - Computer Lab	20 Computer System with 10 KW UPS Facilities equipped with various useful software	Training of ICT, browsing Internet and Statistical data analysis
4	RS & GIS Lab	05 Computer System, Plotter & Printer equipped with Remote Sensing & GIS software	The survey of area is done using Remote Sensing & GIS techniques. Based on the survey thematic maps like slope map, drainage map, DEM map and aspect maps are prepared from these maps different soil conservation treatment,

Sr. No.	Name of Lab	Equipment	Usage
			water harvesting technology and crop water management are suggested for the area.
5	Machine shop	It consist of on 01 no CNC machine (JYOTI CNC model DX 200)	For demonstrative Students about CNC coding and programming.
6	Robotics and Automation Lab	Automatic welding robot (YASKWA make)	For demonstrating student about the functioning of automatic welding through robot. Students can programme the robot and operate through controller for customized welding of various objects of interest.
		Parallel robot training cell	Parallel robot (PR) is a mechanical system that utilized multiple computer-controlled limbs to support one common platform or end effector. Comparing to a serial robot, a PR generally has higher precision and dynamic performance and, therefore, can be applied to many applications. The robot is a learning system combining theory and practical built for students to learn parallel robot intricacies in and out and proceed to develop real-world applications for the industry.
		IoT Boards and sensors (raspberry-PI, Arduino board, infrared sensor, ultrasonic sensor, pH sensor, GPS module, soil moisture sensors, temperature and humidity sensors, LCD display, breadboard, Bluetooth module, Wi-Fi module, relay module, etc.)	For providing practical education to students about working mechanism of various IoT boars like Raspberry-PI, Arduino boards, etc. Students can perform practical on integrating various sensors on these boards and programme them for the agricultural application.
		Lab based spraying robot	For demonstrating students about various farm operations like weeding, spraying, cutting and sowing through lab based robots which can be remotely controlled and perform basic lab based operations under the constrained environment.
		Lab based weeding robot	
		Lab based sugarcane cutting robot	
		Lab based sowing robot	

Sr. No.	Name of Lab	Equipment	Usage
7	Artificial Intelligence Lab	Instruments for Artificial Intelligence comprising of 2 Nos NVIDIA V-100 GPU, 384 GB RAM and 12 TB of storage facility 2 Nos High end servers 50 Nos High end desktop computer systems	For providing practical education to students about various facets of artificial intelligence and its applications in agriculture domain. For conducting practical in the advance technical domains i.e. machine learning, python programming, computer vision, remote sensing, etc.
8	CAD and Simulation Lab	14 nos high configuration computer systems installed with solid works and Auto CAD software	Students learns and practice of different modelling technique and prepared 2D and 3 D drawings.
9	Precision Agriculture Lab	Automatic filters	For providing practical demonstration to students that how to remove impurities from irrigation water. These filters prevents blockage of the irrigation and fertigation system.
		Sensors for irrigation	For practical demonstration of measuring different weather and soil parameters. Students can perform practical on measuring and recording the different parameters like soil moisture, temperature, solar radiation, wind velocity, EC, pH, etc. with help of these sensors.
		Automatic irrigation fertigation system	For providing practical education to students about this advance technology for micro irrigation system and thereby to promote and educate precision farming. Students can perform time based, volume based and sensor based irrigation and can easily operate the system remotely through internet.
		Data retrieval system	For conducting practical about data fetching methods from different sensors and utilization of these data for decision making process.
		Drone with visible and NIR camera	Students can perform crop survey of the large field area through drone and would be able to monitor the crop condition such as monitoring of growth and disease, forecasting crop yield, etc.

Sr. No.	Name of Lab	Equipment	Usage
10	SPV Unit	Data acquisition system	The equipment comprising of analog channels, analog sensors, thermocouples, RTD, temperature, humidity and other environmental sensor with storage facility can be used for practical and research work though environmental data acquisition and its usage in agriculture domain.
		Robot for solar energy applications with accessories	The equipment is fully automatic total solar station equipped with solar irradiance sensor, temperature and humidity sensors with data logger, portable type IV curve checker, robotic sun tracker for all weather condition that can be used for practical demonstration of measurement of all global, diffuse and direct radiation.
		Greenhouse environment control automation system with sensors and controllers	The greenhouse is polycarbonate fan and pad green house with automated water circulation and climate control system. The greenhouse is currently utilized for departmental and undergraduate student research work of hydroponic cultivation of vegetable crops in greenhouse.
		Wind energy mechanism and sensors	The equipment is consisted of vertical axis wind mill of 1kW with S type and H type blades with charge controllers, inverters, data logger, data acquisition system along with total weather station which includes wind speed, direction, smart sensors, temperature and humidity sensors. The system is being used for departmental research work and students' practical education.
11	Processing and Food Engineering	Lab based colour sorting, picking, placing and grading robot	For practical demonstration of sorting object through colour sensors and microcontroller. To make students understand the working mechanism of robotic arms and how to program them for picking, sorting and placing objects of interest.

Sr. No.	Name of Lab	Equipment	Usage
12	Processing and Food Engineering	Machine vision based colour sorting system	This machine can sort the impurities or undesired materials from the food materials on the basis of colour properties. This machine can be utilized for cleaning and sorting of most of the granular materials. It is being utilized by students and department for the sorting of the pigeon pea dhal.
13	English Digital Language Laboratory	Computer System and Hearing and Speaking Headphones with 32 students capacity. Various modules are available for preparation of TOEFL and IELTS exams.	English Speaking Learning and use of Various modules for preparation of TOEFL and IELTS exams.

Table 35. ICT Facilities, equipment and their uses

S.No.	Name of Lab	Equipment	Uses
1	ICT Enabled Seminar Hall	Interactive Panneel with Degitial Podium, Audio Speakers, Generator, AC	Use for Workshop, Seminar, different counselling lectures, meetings, other technical programmes etc. organized
2	ICT Enabled Conference Hall	Computer System, AC	Use for Training & Placement activity, meetings, other technical programme, admission work etc. organized
3	CCTV Surveillance System	CCTV Camera, Computer System	To monitoring all the college activity like academic, exam, department monitoring etc.

Table 36. Different ICT Software's Used

S. No	ICT Application	Uses
1	Admission Software GSAUCA	GSAUCA is an online web portal for conducting all admission procedures.
2	Academic Management System Software	Online UG Student Attendance, Time Table and Course materials etc.
3	JEMS (Junagadh Examination Management System) Software	Students registration, course registration, internal/external marks entry, evaluation reports, transcript and Complete activities of Student, Staff, Academic section activities, automated in this software. In post graduate studies, this system has replaced the cumbersome paper procedure to

S. No	ICT Application	Uses
		paperless system i.e. Filling of campus form, filling of course card, online submission of synopsis for Dean PG's approval, Proposal of Qualifying examination including written and oral examination, Proposal of External examiner for thesis evaluation as well as Oral thesis viva voce examination, submission of result of thesis evaluations as well as declaration of Notification and transcripts etc.
4	AutoCAD	Landscape and Gardening designs using software
5	Students Fees Management Software	The students are paying their all fees online through the software.
6	Account Management System	All account is managed on this software.
7	HRD Management	Occasionally, faculty are going out for Human Resource Development (HRD)/university work with prior permission according to statute of JAU within short time of period. For obtaining approval from the respective offices, faculty has to apply through proper channel. Due to implementation of Online HRD system, problems related to permission for attending HRD events has been reduced and it has reduced time as well as stationary required for through channel application. Also, history of each HRD event attended by staff has been digitally stored, which is very useful before approval of HRD application.
8	JAU IT Asset Management System	University have JAU IT Asset Management System in this college add their all IT assets. To make college offices modern and digital, every office is strengthened with IT equipment such as computers, printers, network equipment, laptops etc. Through Online IT Asset Management System, online process of technical recommendation towards purchase, repair and write-off of IT items become faster. So students and faculties can access internet and other IT services timely.
9	MGMG online Form	The work done by faculty under *Mera Gaon Mera Gaurav* programme is reported through software
10	Web Mail of JAU	Google based JAU web mail system for managing the mail id and correspondence of faculty, staff and students.

S. No	ICT Application	Uses
11	Online Circular Management System	With the development of online circular managemet system, the delivery of the circulars/notices became fast and direct access was possible to all the faculties. In turn, by implementing Online Circular Management System, reduced the wastage of stationary, time and man-hours which ultimately help in academic excellence.
12	Information Retrieval System (IRS):	Faculty is doing the Research work (like paper publishing, book publishing, conference processing, etc.). Developed Information Retrieval System (IRS) helps in updating research publication related information of an employee regularly, which helps the university to analyse fresh information and use it properly.
13	Online Job Application System	Applications are invited from the candidate for various recruitment procedures of the College. Due to implementation of Online Job Application System (OJAS), the recruitment process has become faster and more transparent
14	Online Examination System	Various examinations are conducted by college / university for PG admission as well as for recruitment. The results of these examinations were delayed due to offline mode examination. Online Examination System (OES) is very useful in conducting online examination at a time on 150 terminals. Also, the result of candidate is displayed immediately on his terminal screen as soon as he/she finishes the examination. Hence, the examination process became faster as well as transparent.

6.4.10. CERTIFICATE

I the Dean, College of Agricultural Engineering & Technology, JAU, Junagadh hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college and degree awarding university.

July 16, 2026

(K . C. Patel)
Principal & Dean
College of Agril. Engg. & Tech.
JAU, Junagadh

SELF STUDY REPORT FOR
M.Tech. (AGRIL. ENGG.)
PROGRAMME IN THE DISCIPLINE OF

SOIL & WATER CONSERVATION ENGINEERING

6.4. SELF STUDY REPORT FOR THE M.TECH. (AGRIL. ENGG.) IN DISCIPLINE OF SOIL AND WATER CONSERVATION ENGINEERNG (SWCE) DEGREE PROGRAMME

6.4.1. BRIEF HISTORY OF THE DEGREE PROGRAMME

EVOLUTION OF THE P.G. PROGRAMME:

The B. Tech. (Agril. Engg.) Degree program is offered since the establishment of college in 1984. The M Tech. (Agril. Engg.) in the disciplines of Soil and Water Engineering (SWE) was started since 1994-95. The Soil and Water Engineering Department under CAET, JAU, Junagadh has been bifurcated into Soil & Water Conservation Engineering (SWCE) and Department of Irrigation & Drainage Engineering (IDE) from 2017-18 with the implementations of 5th Dean's committee recommendations approved by ICAR, New Delhi. The primary aim of the degree program was training the students and meeting the trained man power requirement in the sector of Soil & Water Conservation Engineering, Watershed hydrology, Watershed Planning and Management, Ground Water Engineering, Remote Sensing and GIS, Applications of ML/AI/IoT technologies in water management and allied fields.

OBJECTIVES

- To create and nourish a stimulating learning environment that ensures a globally relevant education based on Eternal human values.
- To provide the intellectually and trained human resource for the public and private sector to develop the strategies of soil conservation, water conservation, augmentation of surface and groundwater resources through rainwater management and artificial groundwater recharge, groundwater management, enhancing water productivities and irrigation acreage through irrigation water management technologies.
- To conduct the research on soil and water conservation, artificial groundwater recharge and irrigation water management strategies and fosters interactions and collaboration between faculty, researchers, industry and farmers.
- To promote a supportive learning environment for life through implementing continuous learning programmes.

FACILITIES AND SERVICES:

DEPARTMENT FACILITIES

The department has 1 office/Room for HoD, 1 Room for Steno/PA, 1 Room for Administrative staff and 9 Office/Rooms for the Faculty/Technical staff/Supportive staff in main building. It has well equipped 4 Laboratories in department, 1 Field laboratory, 1 Instrumental Cell, 1 classroom and 1 seminar hall. The hydraulic park is well equipped with auto pumping unit, all water flow measuring structures and groundwater recharge filter testing set ups. The 50KW solar plant is established as part green energy initiatives. The roof top water harvesting measures are adopted with sunken pond and tube well recharge system. The department library has 325 Text/Reference books on Water Harvesting and Soil Conservation Structures, Watershed management & Modelling, Remote Sensing & GIS Applications, Watershed Hydrology, Groundwater Engineering, Fluid Mechanics, Soil Mechanics, Irrigation Engineering, Sprinkler and Micro Irrigation System, Drainage Engineering, Water Wells and Pumps, Open Channel Flow along with Practical manual, technical bulletins, Annual reports etc.

Table 1. Infrastructure Facilities

SN	Facilities	Size	Nos.
1	Office/Room for HoD with computer, printer and required peripherals	4.45 m x 4.4 m	01
2	PA Steno Office/Room with computer, printer and required peripherals	4.45 m x 3.1 m	01
3	Administrative Office/Room	4.45 m x 3.10 m	01
4	Office/Chamber/Room separate for each faculty/staff with computer, printer and required peripherals.	4.6 m x 3.10 m	09
5	Department Library	7.5 m x 5.6 m	01
6	Instrumental Cell	7.5 m x 4.5 m	01
7	Laboratories in Department	Given Lab list	04
8	Field Laboratory	Given Lab list	01
9	Instructional Farm	35 ha	01

FARM FACILITIES

The CAET Instructional farm is managed Soil and Water Conservation Engineering Department has total 35 ha area, out of which 25.20 ha area is under cultivation and rest of the area is covered under road, building, nallah etc. The area under horticultural crops are 10.40 ha like mango (1.95 ha), sapota (3.85 ha), coconut (0.85), Jamun (1.40 ha), custard apple (1.25 ha) and lemon (1.10 ha). The rest of the cultivation area i.e. 14.66 ha is under

field crops to produce breeder seed, certified seed and truthful seeds. Entire cultivated area of the farm is commanded by different micro irrigation systems. The farm has 2 open wells and 4 tube wells having potential of enough groundwater pumping. It has also 3 water harvesting structures from which the harvested water is used for life saving/supplemental irrigation to monsoon crops as well as few irrigations to winter crops too. It also helps to augment the groundwater resources.

The farm owns entire series of all farm equipment/implements with 2 tractors for primary /secondary tillage operations, 2 mini tractors for sowing/inter-culturing operations, thresher/ winnower etc.

Beside this, various soil and water conservation structures such as drop inlet spillway, drop spillway, check dams, runoff- soil erosion measurement structures and well recharge structure with filter are constructed on farm for demonstration purpose. The unique demonstration on tube well recharge using overflowing water from check dam spillway through connector well technique is also demonstrated. The process is going on to develop as a fully mechanized modern farm including fully automated drip irrigation system.

The M. Tech./Ph.D.(Agril. Engg.) as well as B. Tech.(Agril. Engg.) students' practical/ their research experiments, departmental research experiments as well as AICRP experiments are undertaken in the instructional farm.

ACCOMPLISHMENTS:

M. Tech. (Agril. Engg.)-SWCE students' research outcomes which are helpful for the Farming community and further research are highlighted in Table 2 below.

Table 2. Students' research topics linked with staff research projects

SN	Title of Thesis	Name of Student	Name of Guide	Month/Year of submission
1	Assessment of groundwater resources of uben river basin using modflow	Tank Dhara Prabhudasbhai	P B Vekariya	Feb-21
2	Crop Monitoring and Yield Estimation Using near Surface Remote Sensing	Khade Patilba Ramdas	H V Parmar	Sep-21
3	Mapping of Groundwater Recharge Potential Zones of Ozat River Basin	Rakshit Nileshkumar Vasoya	P B Vekariya	Oct-21
4	Assessment of flood risk vulnerability of vishwamitri river basin using remote sensing and GIS	Patel Charmiben Atulkumar	V K Sardhara	April-22

SN	Title of Thesis	Name of Student	Name of Guide	Month/Year of submission
5	Identification of Groundwater Recharge Potential Zones Bhadar River Basin	Namrata Sankhla	P B Vekariya	Oct-22
6	Assessment and mapping of soil salinity using remote sensing and GIS for Mangrol-Una Coastal Belt	Kaivalya Bhandwalkar	G V Prajapati	Dec-23
7	Demarcation of Potential Groundwater Recharge Zones of Aji River Basin	Akansha Ghritesh	P B Vekariya	Jan-24
8	Mapping and Modelling of soil salinity using remote sensing and GIS In area of Porbandar District	Desai Naimish Mansukhbhai	K C Patel	April-24
9	Soil erosion vulnerability mapping of the ozat river basin using remote sensing and GIS	Dhodia Jugnuben Bhikhubhai	H H Mashru	Aug-24
10	Analysis of Meteorological Drought Characteristics Based on Climate Change	Vigneshwari R	K C Patel	Aug-24
11	Estimation of Runoff Potential of Gujarat State Using Remote Sensing and GIS	Anjali Yadav	P B Vekariya	Nov-24
12	Application of Remote Sensing for Estimation of Leaf Area Index and Plant Nitrogen for Crop Monitoring	Ahysh Ranjan	H V Parmar	July- 25
13	Comprehensive Statistical Analysis of Rainfall Trends for Crop Planning Stragegies in Amreli District of Gujarat	Anshul Pal	R J Patel	July-25

EXTERNAL FUNDED PROJECTS

Table 3. Completed projects/schemes

Sr No	Name of the project/scheme	Date of start	Date of termination	Sponsoring Agency
1	National watershed development project (B. H.18023-4)	April, 1996	March, 1999	Plan scheme, GOI
2	Modeling Water and Energy Fluxes Over Forested System (B.H.18246-96)	April, 2015	March, 2017	ISRO
3	River Flow Simulations Integrating Satellite Data in Forested Catchment (B.H.18246-91)	August, 2017	March, 2022	ISRO
4	Modeling of water fluxes and ground water discharge using 1D- 2D coupled model and in situ measurements in the Gir forest catchment (B.H. 18126-25)	October, 2021	March, 2024	ISRO

Table 4. Ongoing projects/schemes.

SN	Name of the Project / Scheme	Starting Year
1	Establishment of Instructional Farm for College of Agricultural Engineering and Technology (BH 12127)	1992-93
2	Research on Watershed Management (BH: 12905)	2000-01
3	Strengthening of Instructional farm at college of Agricultural Engineering and Technology. (BH. 12120)	2012-13
4	Centre of Remote Sensing and Geoinformatics in Agriculture (BH: 12024)	2012-13

6.4.2. FACULTY STRENGTH:

Table 5. Faculty strength

SN	Sanctioned Faculty	Faculty in Place	Vacant position	Faculty recommended by ICAR	Deviations from ICAR recommendations	Remarks
Department of Soil and Water Conservation Engineering						
1.	Professor	0	1	1	-1	-
2.	Associate Professor	0	2	2	-2	-
3.	Assistant Professor	2	2	4	-2	-
Centre of Remote Sensing and Geoinformatics in Agriculture						
4	Associate Professor	1	0	-	+1	-
5	Assistant Professor	1	0	-	+1	-
Services of Faculty from other department to carry out courses and guidance to the PG students.						
6	Research Engineer, AICRP on IWM, IDE	1	0	-	-	-
7	Assistant Professor, AICRP on IWM/ IDE	2	0	-	-	-
8	Associate Professor, Polytechnic in Agril. Engg., Targhadiya	1	0	-	-	-

SN	Sanctioned Faculty	Faculty in Place	Vacant position	Faculty recommended by ICAR	Deviations from ICAR recommendations	Remarks
9	Associate Professor, DFRS, Targhadiya	1	0	-	-	-
10	Associate Professor, College of Agriculture, Khapat	1	0	-	-	-
11	Assistant Professor, IT Cell, JAU, Junagadh	1	0	-	-	-
12	Assistant Professor, PGIABM, JAU, Junagadh	1	0	-	-	-
13	Assistant Professor, College of Agriculture, Mota Bhandariya	1	0	-	-	-

6.4.3. TECHNICAL AND SUPPORTING STAFF:

Table 6. Supporting staff position

SN	Sanctioned Faculty	Staff in place	Vacant position	Staff recommended by ICAR/UGC/VCI/ Other regulatory bodies	Deviations from ICAR recommendations	Remarks
Department of Soil and Water Conservation Engineering						
1	Jr. Clerk	-	1	1	-1	-
2	PA/Steno	-	1	1	-1	-
3	Messenger/ Peon	-	1	1	-1	-
Centre of Remote Sensing and Geoinformatics in Agriculture						
4	Senior Research Assistant/ Agriculture Officer	1	-	-	+1	-

SN	Sanctioned Faculty	Staff in place	Vacant position	Staff recommended by ICAR/UGC/VCI/ Other regulatory bodies	Deviations from ICAR recommendations	Remarks
5	Agriculture Assistant	1	-	-	+1	-
Strengthening of Instructional farm at CAET						
6	Technical Assistant	1	1	-	+1	-
7	Agriculture Assistant	1	1	-	+1	-

Apart from this four persons are working on contractual basis, which includes 1 Jr. Clerk, 1 Peon and 1 Driver.

6.4.4. CLASSROOMS AND LABORATORIES:

Table 7. Classroom/Seminar hall

Sr. No	Classroom	Area (m x m)	Seating capacity	Other facilities
1	Seminar Hall	12.20 x 9.10	60	Display system-1 Plasma Screen-1 Computer-1 Furniture
2	Classroom	11.15 x 8.30	60	LCD Projector-1 Computer-1 Furniture

Table 8. Major laboratories

SN	Name of laboratory	Area (m x m)	Working capacity
1	Soil Conservation Laboratory	9.10 x 7.60	50
2	Hydrology laboratory	9.25 x 8.30	50
3	Remote sensing & GIS Laboratory	9.10 x 7.60	50
4	Precision Agriculture Laboratory	9.20 x 6.00	50
5	Soil conservation field Laboratory (Runoff- Soil erosion measurement structure)	1220 sq.m	50
6	Instrumental Cell	7.50 x 4.50	50

Table 9. List of major equipment

SN	Equipment Name	No. of Equipment
1	Water sediment sampler	2
2	Soil conservation models	11
3	Hydraulic flume	1

SN	Equipment Name	No. of Equipment
4	Data logger system	1
5	Digital Rainfall Recorder	1
6	Water level recorder	1
7	Turbidity meter	1
8	Sediment sampler	4
9	Digital cone pentrometer	1
10	Core cutter apparatus set	5
11	Porometer	1
12	Pressure bomb apparatus	1
13	GPS	1
14	Scanner cum Plotter	1
15	Data logger with sensor	1
16	Digital evaporation recorder	1
17	Temp/RH Meter	4
18	LCD multimedia projector	1
19	ESRI ArcGIS Arc view software with single license	1
20	PCI Geomatica (5-user license) software	1
21	DHI Software Mike SHE, Temporal analyst Software	1
22	Boss Storm Net Software	1
23	Boss River CAD XP Complete Package	1
24	Surfer Software	1
25	Grapher Software	1
26	Aquachem Software	1
27	FEFLOW 5.3 Software	1
28	Multi slot deviser	3
29	Soil thermometer	3
30	Digital planimeter	1
31	Nano Drone	5
32	Ordinary rain gauge (Non recording)	6
33	River sediment sampler	1
34	Pan Evaporimeter	4
35	Siphon type raingauge	3
36	Non - recording raingauge	5
37	Coshocton wheel	5
38	Water stage Recorder	2
39	Portable TDR soil moisture meter	2
40	Drone Kit for Lab	3
41	Crop Surveying Drone with 4k camera	1
42	Data retrieval system	3
43	Drone with Visible Camera	1
44	Drone with NIR Camera	1
45	NDVI Meter	1

Table 10. Instructional farm facilities

SN.	Crops grown	Farm Area (ha)	Status of Irrigation
1	Area is covered under road, building, nallah etc.	10.3	-
2	Mango	1.95	Drip Irrigated

SN.	Crops grown	Farm Area (ha)	Status of Irrigation
3	Sapota	3.85	Drip Irrigated
4	Coconut	0.85	Drip Irrigated
5	Jamun	1.40	Irrigated
6	Custard Apple	1.25	Drip Irrigated
7	Lemon	1.10	Drip Irrigated
8	Field Crop Area	6.66	Mini Sprinkler Irrigated
		8.00	Sprinkler Irrigated
9	Civil facilities Runoff-soil erosion measurement structures	0.14	Rain fed

CIVIL STRUCTURE DEVELOPED FOR RESEARCH AT INSTRUCTION FARM, CAET AT JUNAGADH

Different civil structures have been developed at the instruction farm for the PG research work includes Soil conservation field laboratory (Runoff-Soil Erosion Measurement plots), water harvesting structures, farm godown, Irrigation facilities including, etc.

P.G RESEARCH FACILITY AVAILABILITY:

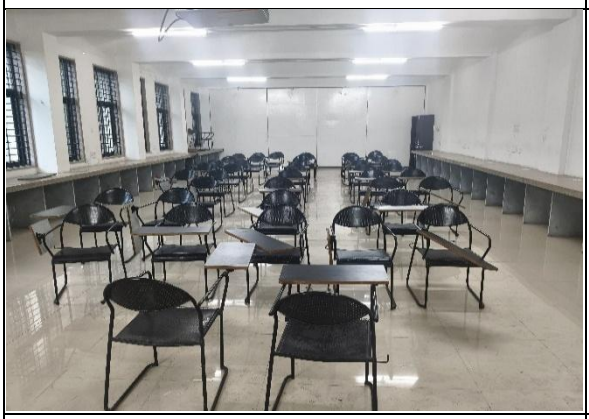
Research facilities like runoff plots, water harvesting sites, runoff recharge, ground water measurement, inputs for field experiments (Seeds, fertilizers, irrigation and pesticides) and workforce required for conducting PG (M. Tech.) research are facilitated.

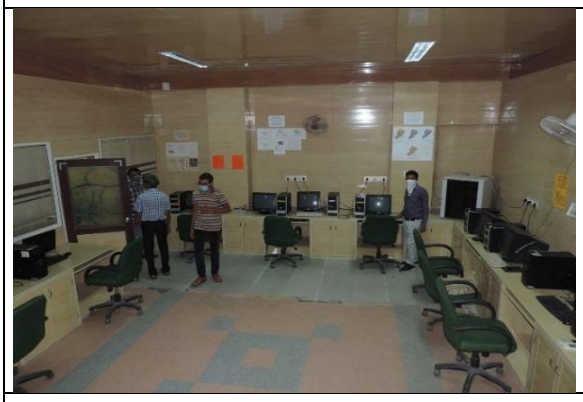
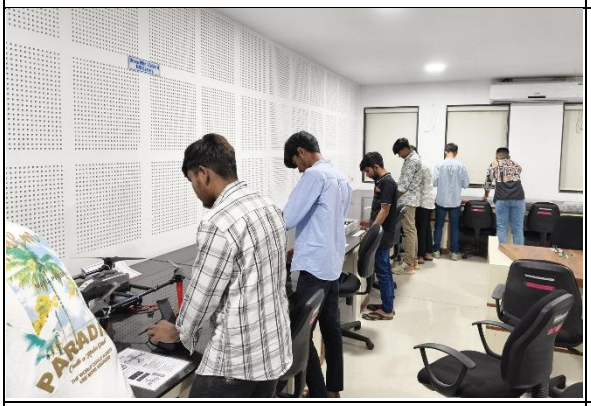
WORKSHOPS:

The required fabrication works are carried out in workshop available in Farm Machinery and Power Engineering Department of the college.

The department is facilitated with the equipment's which are sufficient to carry out the PG students' research. The field related equipment's, the land requirement for conducting the research work is also sufficient. The faculty members are well qualified to guide, mentor and handle the courses of PG (M. Tech.) students to fulfill the course curriculum of supporting courses.

GLIMPSE OF DEPARTMENT

	
Seminar Hall	Seminar Hall
	
Classroom	Classroom
	
Department Library	Department Library
	
Soil Conservation Laboratory	Soil Conservation Laboratory

	
Hydrology Laboratory	Hydrology Laboratory
	
Remote Sensing & GIS Laboratory	Remote Sensing & GIS Laboratory
	
Precision Agriculture Laboratory	Precision Agriculture Laboratory
	
Instrumental Cell	Instrumental Cell




Soil Conservation Field Laboratory (Runoff- Soil Erosion Measurement Structure)

6.4.5. CONDUCT OF PRACTICAL AND HANDS-ON-TRAINING

Students conduct their practical in well-developed laboratories with modern equipment. They also under go Hands-on-Training for watershed survey using modern instruments like TS, DGPS, GPS, contour mapping, planning, design of various soil and water conservation structures, etc at well-developed instructional farm of 35 ha land. They also take hands-on-training on water flow measurement at High Tech Hydraulic Park with automated pumping systems. They also performing practical on measurements of runoff and soil erosion under at runoff-sediment measurement structures at instructional farm. The mapping analysis is done using surveyed data, downloaded satellite data at well-developed remote sensing and GIS laboratory.











6.4.6. SUPERVISION OF STUDENTS IN PG PROGRAMMES

Every M. Tech. student has an Advisory Committee with a Major Guide, a minor guide and two members among whom one members is from the major field of specialization and one from statistics or mathematics discipline. If necessary, additional members may be added with permission of the Dean, PG studies. The research problem is selected as per the need of the farmers, existing problems including basic, strategic and applied research. The student has to present the research proposal in synopsis seminar in the presence of an Advisory Committee as well as faculties of Major Field. The suggestions/critics are considered by student before submitting the synopsis to the advisory committee. The Programme of Research is proposed by the Advisory Committee and recommended by PG Coordinator and Dean, Faculty of Agricultural Engineering and approved by the Dean, Director of Research & Dean, Post Graduate Studies. The Research work is carried out by the student under the supervision of Advisory Committee. Totally 9 M.Tech. (Agril. Engg.)-SWE and 04 M.Tech. (Agril. Engg.)-SWCE students are passed out from the Department of Soil and Water Conservation Engineering from academic year 2020-21 to 2024-25. The research is carried out by students in area of soil conservation, water conservation, watershed management, irrigation water management, remote sensing & GIS and climate change etc.

Table 11. Student Intake and Student to teacher ratio of the Department

Year	No. of PG recognized teachers	Intake of students	Student Teacher ratio	
		M Tech	Theory	Practical
2020-21	10	10	1	1
2021-22	11	8	0.73	0.73
2022-23	12	11	0.92	0.92
2023-24	13	12	0.92	0.92
2024-25	12	11	0.92	0.92

Table 12. Details of PG students' guidance.

SN	Title of Thesis	Name of Student	Name of Guide	Remarks/ achievement
2020-21				
1	Assessment of groundwater resources of uben river basin using MODFLOW	Tank Dhara Prabhudasbhai	P B Vekariya	-
2021-22				
2	Crop Monitoring and Yield Estimation Using near Surface Remote Sensing	Khade Patilba Ramdas	H V Parmar	-
3	Mapping of Groundwater Recharge Potential Zones of Ozat River Basin	Rakshit Nileshkumar Vasoya	P B Vekariya	-
4	Assessment of flood risk vulnerability of vishwamitri river basin using remote sensing and GIS	Patel Charmiben Atulkumar	V K Sardhara	-
2022-23				
5	Identification of Groundwater Recharge Potential Zones Bhadar River Basin	Namrata Sankhla	P B Vekariya	-
2023-24				
6	Assessment and mapping of soil salinity using remote sensing and GIS for Mangrol-Una Coastal Belt	Kaivalya Bhandwalkar	G V Prajapati	-
7	Demarcation of Potential Groundwater Recharge Zones of Aji River Basin	Akansha Ghritesh	P.B. Vekariya	-
8	Mapping and Modelling of soil salinity using remote sensing and GIS In area of Porbandar District	Desai Naimish Mansukhbhai	K C Patel	-

SN	Title of Thesis	Name of Student	Name of Guide	Remarks/ achievement
2024-25				
9	Soil erosion vulnerability mapping of the ozat river basin using remote sensing and GIS	Dhodia Jugnuben Bhikhubhai	H H Mashru	-
10	Analysis of Meteorological Drought Characteristics Based on Climate Change	Vigneshwari R	K C Patel	-
11	Estimation of Runoff Potential of Gujarat State Using Remote Sensing and GIS	Anjali Yadav	P B Vekariya	-
12	Application of Remote Sensing for Estimation of Leaf Area Index and Plant Nitrogen for Crop Monitoring	Ahysh Ranjan	H. V. Parmar	-
13	Comprehensive Statistical Analysis of Rainfall Trends for Crop Planning Stragegies in Amreli District of Gujarat	Anshul Pal	R J Patel	-

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.)

Feedbacks are collected from the respective stakeholders through various mechanisms like personal contacts, visitors register, emails, etc. The few of the feedbacks as received from the different stakeholders are appended in the Table 13 and the documentary evidences are provided in the Annexure-II.

Table13. Feedbacks received from stakeholders

No.	Feedback detail	Excellent	Very Good	Good	Average	Poor
1	How do you rate the sequence and syllabus of the Courses studied in the previous semester?	38	37	25	0	0
2	How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?	13	75	0	12	0
3	How do you rate the relevance of the units in the Syllabus relevant to the course?	38	38	24	0	0
4	How do you rate the sequence of the units in the course?	25	63	0	12	0
5	How do you rate the allocation of the credits to the courses?	25	50	25	0	0

6	How do you rate the distribution of the contact hours among the course components (L-T-P)?	13	75	12	0	0
7	How do you rate the electives offered regarding their relevance to the specialization streams?	13	62	25	0	0
8	Rate the courses in terms of extra learning or self-learning considering the design of the courses.	29	14	57	0	0
9	Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.	25	50	13	12	0
10	How do you Rate the loading of the courses in a semester?	38	37	25	0	0
11	How was the evaluation/exam pattern of the courses?	25	63	12	0	0
12	How do you rate the objectives stated for each of the courses?	50	25	25	0	0
13	How do you rate the skill improvement from the courses?	29	43	28	0	0
14	How do you rate the practical exposure from the courses?	13	38	37	12	0
15	How do you rate the experiments about the real-life Applications?	25	63	0	12	0
16	Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)	-	-	-	-	-

6.4.8. STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS

Table 14. Details of student intake and attrition in the programme for last five years

Year	Sanctioned seats	Actual intake	Attrition	% Attrition
	M Tech	M Tech	M Tech	M Tech
2020-21	10	3	1	33
2021-22	8	3	0	0
2022-23	11	3	0	0
2023-24	12	2	0	0
2024-25	11	5	0	0
Total	**52**	**16**	1	0

Note: *Students who either got job in government sector or opted for competitive examinations had left the studies.*

6.4.9. ICT APPLICATION IN CURRICULA DELIVERY

(A) UG/PG Admission system

Junagadh Agricultural University (JAU) participates in a centralized Common Admission Portal, jointly managed by all four State Agricultural Universities (SAUs) of Gujarat, for the streamlined administration of admissions to diploma, undergraduate, postgraduate, and doctoral programmes. The portal enables prospective students to register, submit applications, pay fees online, track application status, and access rank lists. Additionally, applicants receive real-time SMS notifications regarding important updates such as entrance exams schedule and admission rounds.

On the administrative side, the portal supports several backend operations including application verification, eligibility validation, rank list generation, and programme allotment, thereby ensuring a uniform, transparent, and efficient admission process across all SAUs. Candidates can select their preferred colleges and degree programmes, and the system automatically allocates admissions based on merit and preference. The entire process, including the publication of merit lists and category-wise vacancy matrices, is conducted online to ensure accessibility, fairness, and transparency.

(B) Online Fees collection system

College students pay their semester fees online through the dedicated portal http://online.jau.in/student_fees/, which is accessible via the Student Corner on the official university website. The system supports multiple payment modes, including UPI, credit/debit cards, and net banking, providing a convenient and secure method for fee transactions during subsequent semesters of various degree programmes.

The collected fees are directly deposited into the respective college's bank account, ensuring accuracy and transparency in financial management. Additionally, college administrators have access to real-time fee collection reports through the system, enabling effective monitoring and record maintenance.

(C) Academic activities

Simultaneously, the Academic Information Management System (AIMS) enhances curriculum delivery and monitoring by providing a dynamic digital interface for faculty and students. Through AIMS, instructors upload and share lecture notes, assignments, class materials, and video lectures, ensuring round-the-clock access to learning resources. The platform also supports online assessments, attendance tracking, and real-time academic monitoring, including faculty feedback and progress reports. These ICT-enabled features promote interactive learning, strengthen academic accountability, and create a personalized, student-focused educational environment at JAU.

(D) Teaching through ICT tools

Teaching is made by using PPT, videos, visual, animations and smart boards. During COVID-19 pandemic s, all classes are conducted online using the various platforms viz. Zoom, Google Meet through Google Classroom and WhatsApp applications during academic year 2020-21 and 2021-22. The teachers are taking live lectures as well as supplying the teaching materials using these platforms. The teachers are performing live practical on Zoom or Google Meet through Google Classroom platforms online for the students. The examinations are also conducted online using the Online Examinations Management Software (OEMS) and a proper evaluation is made to justify the students' efforts.

The faculty members are involved in preparing the virtual lectures in the well-developed virtual classroom facility in the university which is appreciated by the ICAR also.

(E) Examination Management system

The JAU Examination Management System (JEMS) is a comprehensive ICT-based platform that efficiently manages academic and examination-related activities for undergraduate and postgraduate students. It facilitates the entry of internal and external marks and streamlines critical postgraduate processes such as online submission of campus forms, synopsis, preliminary proposals, exam results, thesis evaluation and examination panel selection, and final viva voce outcomes. Each stage - from submission by the major advisor to review by the Head of Department and Dean of the respective faculty, and final approval by the Dean of Postgraduate Studies and the Registrar - is conducted digitally through the JEMS portal. This robust system ensures timely tracking of student progress, adherence to academic timelines, and transparent, paperless record management

(F) Online Alumni Portal

The College of Agricultural Engineering and Technology (CAET) offers an online Alumni Portal where graduated students can register themselves and stay connected with the institution. The portal includes features such as searching alumni from other batches, viewing current city/location, and the ability to update personal profiles at any time throughout the year. This platform serves as a valuable tool for fostering professional networking, maintaining alumni engagement, and strengthening the bond between alumni and the institution.

(G) E-library

E-library for all the constituent colleges of the JAU is managed by the University Campus Library, established in the year 1978. The two storied new Building is located at the eastern side in the main campus. The Library with ICT platform is one of the most important centers of the University, which facilitates the teaching, research and extension program. Both students and faculty extensively use the facility. The Junagadh Agricultural University has given key prominence to the development of the library facilities at the headquarters as well as the constituent colleges and research stations.

Our library provides services students/faculties to constituent colleges, which come under Junagadh Agricultural University, viz., 5 at Junagadh campus like College of Agriculture, College of Agriculture Engineering & Technology, College of Horticulture, Junagadh, Post Graduate Institute of Agri. Business Management and College of Agriculture(Morbi, presently at Junagadh), 3 College of Agriuclture, at Khapat, Mota Bhandariya and Targhadiya, 3 Different Polytechnics of Agro Processing & Food Technology,

Agriculture, Horticulture in the Junagadh campus, 3 Polytechnics of Agriuclture at Amreli, Dhari and Halvad and 1 Polytechnic of Agriucltural Engineering at Targhadiya.

Many knowledge-based services like that of Reference, Bibliography, INFLIBNET service. CD-ROM Databases, Internet browsing and e-services are provided by the library for its users.

Under Automation, library has RFID for the library circulation and security of library material along with OPAC through KOHA, thus the library is fully automized. Post Graduate and Doctorate theses of research scholars of different faculties and rare or important books and documents are digitized in the university library through the digitization camera available in the library. The library circulation section works with KOHA as well as LIBSYS library software.

Books, periodicals, theses, reports, maps and encyclopedia relevant to the mandate areas of the university have been stocked in the University Library and its constituent center. University Library is well equipped with 59509 text as well as reference books, 80 research journals/periodicals, 3982 thesis, 14000 bound volumes, 1037 e-books, 2 e-journals, various reports, maps and encyclopedia relevant to teaching, research and extension activities of the university. The library has offline database in the form of CAB, Agris, and Agricola as well as online database is available at e-library tab on university website. University Library subscribes 10 newspapers to acquaint users with daily news.

The university library renders its services to users from 8:00 to 18:10 h. A separate air conditioned reading room is developed with the best facilities as well as good ventilation and aeration. This AC reading room accommodates approximately 150 students. The Reading Room remains open for its users from 8.00 to 23.00 hours on working days whereas 8.00 to 14.00 hours on holidays.

(H) Internet

The College Cyberary, equipped with high-speed internet connectivity, provides students and faculty with seamless access to a wide range of online journals and academic databases. Key databases such as CABI, AGRIS, and AGRICOLA are available in CD-ROM format, while resources like INDIAN HARVEST are accessible as online databases. To enhance user experience, the library uses WinSPIRS, a Windows-based client interface, for efficient access to the various subscribed databases. This digital infrastructure supports academic research and learning by ensuring convenient and reliable access to global and national scientific literature.

The Library is equipped with 40 computer workstations with internet connectivity, along with scanning and CD writing facilities, all of which are extensively utilized by both students and faculty members for academic and research purposes. To support academic learning, the library also offers a Book Bank facility, through which students are provided with textbooks related to their respective subjects and semesters. This initiative ensures that students have easy access to essential learning resources throughout their academic journey.

(I) Wi-fi facility

The University provides 24x7 Wi-Fi connectivity across key areas of the campus, including the library, departments, and hostels, with secure login-based authentication to ensure safe and reliable access. In addition, the main campus is connected through an IP-based network, allowing students and faculty members to access the internet seamlessly from their respective hostels and departments. This connectivity enables users to browse scholarly resources, access previous literature, stay updated with recent advancements, and enhance their academic and research pursuits.

The e-library is having following online access facilities:

J-Gateplus (Complete):

J-Gate is a comprehensive online indexing and access gateway to global e-journal literature. It has indexes more than 58 million journal articles from over 58,000 journals, covering multiple disciplines including science, technology, medicine, social sciences, and humanities.

J-Gate is highly useful in the agricultural discipline for researchers, students, faculty, and professionals by providing streamlined access to a wide range of scholarly literature. J-Gate indexes thousands of journals, including many in the field of agriculture such as: Agronomy, Soil Science, Horticulture, Agricultural Engineering, Plant Pathology, Crop Science and Animal Husbandry. J-Gate allows searches using: Keywords, Author names, Journal titles & Subject categories. This helps agriculture researchers find specific articles or trends efficiently. Junagadh Agricultural University use J-Gate through consortia like: CeRA (Consortium for e-Resources in Agriculture) by ICAR.

CeRA :

CeRA (Consortium for e-Resources in Agriculture) plays a vital role in agriculture by providing **access to a wide range of electronic journals and research resources** to

Junagadh Agricultural university. CeRA is the ICAR Consortium of e-resources in Agriculture. This covers more than 3000 scholarly journals pertaining to the Agriculture and allied sciences which are available in full text. Its main functions include:

Facilitating access to scholarly literature for scientists, researchers, and students in agriculture and allied sciences. **Promoting information sharing** among ICAR institutes and State Agricultural Universities (SAUs). **Supporting research and innovation** by offering timely and comprehensive digital resources. Overall, CeRA enhances the **quality and reach of agricultural research and education** in India.

ASTRAL :

Junagadh Agricultural University have purchased 630 e-books from Astral International (P) Ltd. These e-books are related to agriculture and allied sciences.

ScienceDirect :

Junagadh Agricultural University has subscription of ScienceDirect, a leading full-text scientific database from Elsevier, is highly valuable in agricultural research and education. It provides access to peer-reviewed journals, book chapters, and research articles.

KrishiKosh:

KrishiKosh is a digital repository of agricultural knowledge in India, developed and maintained by the Indian Council of Agricultural Research (ICAR). ICAR have provided access to all the State Agricultural University of India. These digital repositories include theses, research papers, reports, books, journals, and other academic resources in agriculture and allied sciences.

Krishikosh is a database of theses submitted to the Agriculture universities and ICAR institutions are freely accessible by students. The JAU Library is member for Krishikosh and all the theses submitted to the JAU are being uploaded regularly.

EBSCOhost:

Junagadh Agricultural University has subscription of is also powerful online research platform provided by EBSCO Information Services that gives access to a wide range of academic, scientific, and professional databases. **EBSCOhost** is offering access to: Scholarly journals, E-books, Magazines, Research articles, Conference papers across multiple disciplines including **agriculture** and allied sciences.

NIPAERS:

The JAU has access to 204 e-books.

e-KrishiShiksha:

e-KrishiShiksha is the ICAR e-learning portal on agricultural education.

Art & Science Academic Publications (ASAP):

ASAP is providing access of e-books from more than 51 publishers across the globe in various fields to JAU based on IP and Login.

Commodities:

The recent news on agricultural commodities is published on this platform. The university has acceptance of the usage agreement & privacy policy with Centre for Monitoring Indian Economy Pvt. Ltd.

6.4.10. CERTIFICATE

I the Dean, College of Agricultural Engineering & Technology, Junagadh Agricultural University, Junagadh, hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college and degree awarding university.



July 16, 2026

(K . C. Patel)
Principal & Dean
College of Agril. Engg. & Tech.
JAU, Junagadh

SELF STUDY REPORT FOR

M.Tech. (AGRIL. ENGG.)

PROGRAMME IN THE DISCIPLINE OF

IRRIGATION AND DRAINAGE ENGINEERING

6.4. SELF STUDY REPORT FOR THE M.TECH. (AGRIL. ENGG.) IN DISCIPLINE OF IRRIGATION AND DRAINAGE (IDE) DEGREE PROGRAMME

6.4.1. BRIEF HISTORY OF THE DEGREE PROGRAMME

EVOLUTION OF THE P.G. PROGRAMME:

The B Tech. (Agril. Engg.) Degree program is offered since the establishment of college in 1984. The Department of Irrigation & Draianage Engineering has been established since 2017-18. The M Tech. (Agril. Engg.) in the disciplines of Irrigation and Drainage Engineering (IDE) was started since 2022-23. The primary aim of the degree program is to strengthen the Agricultural Engineering faculty to carry out teaching, research and extension activities in the fields of irrigation technologies *viz*. surface irrigation methods namely border, furrow, surge irrigation etc., MISs namely Drip, Sprinkler Mini sprinkler, Micro sprinkler, Subsurface drip/oozing pipe, Rain gun irrigation, fertigation schedules of various crops etc, groundwater, water conveyances, pumping machineries as well as surface/subsurface drainage systems.

In essence, **irrigation and drainage engineering** bridges **agriculture**, **hydrology**, soil hydrodynamics and **environmental science** to ensure water is used wisely and sustainably in farming.

OBJECTIVES

1. To provide comprehensive education and practical training in modern irrigation and drainage engineering technologies to undergraduate, master and Ph.D. students, developing skilled and qualified professionals in the field of irrigation and drainage engineering.
2. To conduct region-specific research and develop innovative, sustainable irrigation and drainage technologies for farmers and policymakers, utilizing modern techniques and concepts such as irrigation automation to enhance water use efficiency and increase agricultural productivity in Gujarat.
3. To impart training to rural youth, farmers, farm women, line departments, and NGOs, promoting the adoption of modern technologies related to irrigation and drainage engineering.
4. To collaborate with farmer's groups, FPOs and industry partners for the practical application of research innovations, ensuring continuous improvement and adaptation of irrigation and drainage technologies in Gujarat state.

FACILITIES AND SERVICES:

DEPARTMENT FACILITIES

The department has 02 office/Room for HoD, 1 Room for Steno/PA, 1 Room for Administrative staff and 8 Office/Rooms for the Faculty/Technical staff/Supportive staff in main building. It has well equipped 8 Laboratories in department, 1 classroom and 1 seminar hall. The department has also high tech MIS Park with MIS automations based on time, volume, soil moisture sensors and climate. The park is well equipped with auto cleaning sand filters, auto cleaning screen filters and auto cleaning disc filters. The hydraulic park is well equipped with auto pumping unit, all water flow measuring structures and groundwater recharge filter testing set-ups. The 50 KW solar plant is established as part green energy initiatives. The roof top water harvesting measures are adopted with sunken pond and tube well recharge system. The department library has 325 Text/Reference books on Fluid Mechanics, Soil Mechanics, Watershed Hydrology, Irrigation Engineering, Sprinkler and Micro Irrigation System, Water Harvesting and Soil Conservation Structures, Watershed management & Modelling, Drainage Engineering, Groundwater Engineering, Water Wells and Pumps, Remote Sensing & GIS Applications, Open Channel Flow along with Practical manual, technical bulletins, Annual reports etc.

Table 15. Infrastructure Facilities

SN	Facilities	Size	Nos.
1	Office/Room for HoD with computer, printer and required peripherals	6.10m x 5.6m	01
2	PA Steno Office/Room with computer, printer and required peripherals	5.60m x 3.10m	01
3	Administrative Office/Room	5.60m x 3.10m	01
4	Office/Chamber/Room separate for each faculty/staff with computer, printer and required peripherals.	5.60m x 3.10m	09
5	Department Library	7.5m x 5.6m	01
6	Laboratories in Department	Given Lab list	08
7	Field Laboratory	Given Lab list	02

FARM FACILITIES

The CAET Instructional farm is managed by Soil and Water Conservation Engineering Department of this college. It has total 35.50 ha area, out of which 25.20 ha area is under cultivation and rest of the area is covered under road, building, nallah etc. The area under

horticultural crops are 10.40 ha like mango (1.95 ha), sapota (3.85 ha), coconut (0.85), Jamun (1.40 ha), custard apple (1.25 ha) and lemon (1.10 ha). The rest of the cultivation area i.e. 14.66 ha is under field crops to produce breeder seed, certified seed and truthful seeds. Entire cultivated area of the farm is commanded by different micro irrigation systems. The farm has 2 open wells and 4 tube wells having potential of enough groundwater pumping. It has also 3 water harvesting structures from which the harvested water is used for life saving/supplemental irrigation to monsoon crops as well as few irrigations to winter crops too. It also helps to augment the groundwater resources.

The farm owns entire series of all farm equipment/implements with 2 tractors for primary /secondary tillage operations, 2 mini tractors for sowing/inter-culturing operations, thresher/ winnower etc.

Beside this, various soil and water conservation structures such as drop inlet spillway, drop spillway, check dams, runoff- soil erosion measurement structures and well recharge structure with filter are constructed on farm for demonstration purpose. The unique demonstration on tube well recharge using overflowing water from check dam spillway through connector well technique is also demonstrated. The process is going on to develop as a fully mechanized modern farm including fully automated drip irrigation system.

The B. Tech.(Agril. Engg.) as well as M. Tech./Ph.D.(Agril. Engg.) students' practical / their research experiments, departmental research experiments as well as AICRP experiments are undertaken in the instructional farm.

ACCOMPLISHMENTS:

M. Tech.(Agril. Engg.) students' research outcomes which are helpful for the Farming community and further research are highlighted in Table 16 below.

Table 16. Students' research topics linked with staff research projects

SN	Title of Thesis	Name of Student	Name of Guide	Month/Year of submission
	M Tech (Agril. Engg.) - Soil and Water Engineering Thesis			
1	Techno-economic evaluation of solar pump using surface and subsurface drip fertigation in brinjal (Solanum melongena L.) crop	Gevariya siddharth atulkumar	H D Rank	Oct-2020

SN	Title of Thesis	Name of Student	Name of Guide	Month/Year of submission
2	Hydraulic Performance Evaluation of Rain Pipe Irrigation System Under Solar Pump	Kathiriya Gaurav Rameshbhai	G V Prajapati	Nov-2020
3	Protected Cultivation of Cauliflower in off-season	Dobariya Sagar Arvindbhai	R M Satasiya	Dec-2020
4	Development of Automatic Ring Infiltrometer	Kardani Hiralben Mukeshbhai	H H Mashru	Feb-2021
5	Development of a Computer Based Closed-End Border Irrigation System Design for Small and Medium Farm Holdings	Zalavadiya Umangkumar Bharatbhai	H R Vadar	Sept.-2021
6	Development of Low Cost Soil Moisture Sensor and Smart Irrigation Controller	Bagada Pravin J	R J Patel	Oct.-2024

EXTERNAL FUNDED PROJECTS

Table 17. Completed projects/schemes.

Sr No	Name of the project/scheme	Date of start	Date of termination	Sponsoring Agency
1	Studies on techno economic feasibilities of drip irrigation for summer groundnut crop and its comparison with sprinkler and border irrigation (B. H. 2084-3)	01/10/1997	30/09/2002	ICAR, Adhoc Scheme
2	Demonstration cum research center for petroleum conservation	01/04//1998	31/03/1999	PCRA
3	Development of models for water management in groundnut based cropping systems (B.H. 2044-8)	01/10/1999	30/09/2003	ICAR, Adhoc Scheme
4	Determination of the relationship between root and plant, soil properties and the discharge for the optimal design and operation of drip irrigation system, (B. H. 2044-9)	01/12/1999	30/11/2003	ICAR, Adhoc Scheme
5	Smart Farming for Increasing Agricultural Production in Sodic Soils of Coastal Area of Saurashtr. Rashtriya Krushi Vikas Yojana (RKVY):	01/04/2010	31/03/2014	GoI
6	National Initiative for Climatic Resilient Agriculture (NICRA), ICAR Project	01/01/2011	31/03/2017	ICAR

Table 18. Ongoing projects/schemes.

SN	Name of the Project / Scheme	Starting Year
1	All India Coordinated Research Project (AICRP) on Groundwater Utilization, now renamed as AICRP on Irrigation Water Management (IWM) since 2013. AICRP on IWM, Junagadh Agricultural University, and Junagadh centre is conducting research on different aspects of groundwater potential, recharge, quality assessment and its efficient utilization in Saurashtra region of Gujarat. The head quarter of the project is ICAR-Indian Institute of Water Management, ICAR, Bhubaneswar (Odisha).	2004-05

6.4.2. FACULTY STRENGTH:

Table 19. Faculty strength

SN	Sanctioned Faculty	Faculty in Place	Vacant position	Faculty recommended by ICAR	Deviations from ICAR recommendations	Remarks
Department of Irrigation and Drainage Engineering						
1	Professor	2	0	1	1	-
2	Associate Professor	1	0	2	-1	-
3	Assistant Professor	2	2	4	-2	-
AICRP on Irrigation Water Management						
4	Research Engineer	0	1	1	-	-
5	Assistant Professor	1	0	1	-	-
Services of faculties from other department to carry out courses and guidance to the PG students.						
8	Associate Professor, IT Cell, JAU, Junagadh	1	0	-	-	-
9	Associate Professor, AICRP on PEASEM, CAET, JAU, Junagadh	1	0	-	-	-
10	Assistant Professor, PGIABM, JAU, Junagadh	1	0	-	-	-

SN	Sanctioned Faculty	Faculty in Place	Vacant position	Faculty recommended by ICAR	Deviations from ICAR recommendations	Remarks
11	Assistant Professor, SWCE, JAU, Junagadh	1	0	-	-	-
12	Assistant Professor,IT Cell, JAU, Junagadh	1	0	-	-	-

6.4.3. TECHNICAL AND SUPPORTING STAFF:

Table 20. Supporting staff position

SN	Sanctioned Faculty	Staff in place	Vacant position	Staff recommended by ICAR/UGC/VCI/Other regulatory bodies	Deviations from ICAR recommendations	Remarks
Department of Irrigation and Drainage Engineering						
1	Jr. Clerk	1*	0	1	-	*on contractual
2	Messenger/ Peon	1*	0	1	-	-
3	Jeep driver	1*	0	1	-	
AICRP on Irrigation Water Management						
4	Stenographer	0	1	1	-	-
5	Field/ Tehc Assistant	1	0	1	-	-
6	Field/Lab Assistant	1	0	1	-	-
7	Lab Attendant	0	1	1	-	-

Apart from this 3 persons are working on contractual basis, which includes 1 Jr. Clerk, 1 peon and 1 deep driver.

6.4.4. CLASSROOMS AND LABORATORIES:

Table 21. Classroom/Seminar hall

Sr. No	Classroom	Area (m x m)	Seating capacity	Other facilities
1	Seminar Hall	12.20 X 9.10	60	Display system-1, Plasma Screen-1 Computer-1 Furniture

Sr. No	Classroom	Area (m x m)	Seating capacity	Other facilities
2	Classroom	17.20 x 8.30	60	LCD Projector-1 Computer-1 Furniture

Table 22. Major laboratories

SN	Name of laboratory	Area (m x m)	Working capacity
1	Irrigation Systems Laboratory	15.80 X 7.60	50
2	Pump Testing Laboratory	12.35 X 7.60	50
3	Wells and Pumps Engineering Laboratory	12.20 x 7.50	50
4	Fluid Mechanics Laboratory	12.20 x 9.10	50
5	Soil Mechanics Laboratory	12.20 x 7.50	50
6	Drainage laboratory	7.75 m x 8.30 m	50
7	Water Quality analysis Laboratory,	12.20 x 7.60	50
8	Incubation center on advanced irrigation technologies	17.20 m x 8.30m	100
9	High Tech MIS Park	25.0 m x 20.0 m	50
10	Hydraulic park	34.50 x 32.0	50

Table 23. List of major equipment

SN	Equipment Name	No.
1	Tensiometer	3
2	Ventury meter	2
3	Hot air oven	3
4	Submersible pump	1
5	Submersible K type pump	1
6	Micro controller based UV-VIS Spectrophotometer	1
7	Digital flame photometer	1
8	Rotary Flask shaker	1
9	Water and soil analysis kit	1
10	Pump testing set up	1
11	Submersible pump (6 HP 4 Stage as Per Indian STD ISI)	1
12	Submersible pump (7.5 HP 10 stage as Per Indian ISI)	1
13	Oil Sealed rotary Vacuum pump	1
14	Micro control based BOD Incubator with Shaker	1
15	Research centrifuge Model TC 8100	1

16	COD digester	1
17	M.S.Fler Fault valve stand	1
18	Lysimeter	1
19	Micro gopher	1
20	Total Survey station	2
21	Digital balance	2
22	Rpm frequency meter	1
23	Geometic Total Education Suits ver.10.0	1
24	Digital camera	2
25	Digital titration burette 50 ml	1
26	E-studio digital copier	1
27	Hydraulic ram test ring	1
28	Drip Irrigation filter testing ring	1
29	Hydrostatic pressure testing	1
30	Automatic water level recorder	1
31	Pump testing digital panel board	1
32	Well logger with data logger	1
33	Ground water sampler	1
34	Signal stacking resistivity meter	1
35	Flow measurement apparatus	1
36	Impact of Jet Apparatus	1
37	Jayant test sieves 8"	11
38	Reynolds apparatus	1
39	Digital manometer	6
40	Sand replacement cylinder	3
41	Digital pressure gauge with adapter	1
42	Manometer	4
43	Pelton turbine	1
44	Permeability apparatus	1
45	Bernoulli' s theorem apparatus	4
46	Core cutter apparatus set	4
47	Digital current meter	1
48	Electrically analogy apparatus	1
49	Metacentric Height of ship model	8
50	Manning's Roughness coefficient determination apparatus	1

51	Pipe friction Apparatus	2
52	Friction loss Apparatus	5
53	Automation Pumping System	1
54	Orifice and mouthpieces app.	1
55	Notch apparatus	1
56	Online UPS 5kva	1
57	Tensiometer Gauge Type Size:15, 30, 45 cm	1
58	Data retrieval system	1
59	Digital Soil Moisture meter	2
60	Water mark soil moisture (suction) sensor	28
61	Cut model of MIS filter	1
62	Sieve shaker	6
63	Darcy's law appratus	2
64	Screen filter	1
65	Gravel filter	1
66	Soil moisture meter	1
67	Soil auger	10
68	Clear transparent glass soil thermometer	20
69	Pycnometer Comprises 1 Kg glass Jar with Brass Cone	20
70	Emitter testing rig	1
71	Shrinkage limit set	5
72	Plastic limit set	5
73	Sap flow meter	1
74	Portable TDR soil moisture meter	1
75	Water meter	10
76	Digital soil moisture meter	1
77	Electronic water level indicator	5
78	Canopy chamber	1
79	Water level indicator	3
80	Direct shear test apparatus	3
81	Automation fertigation system	1
82	Sensors for irrigation	2
83	Manning's apparatus	7
84	Permeability apparatus	18
85	Ground water level indicator 100 mt	11

86	Ground water level indicator 200 mt	14
87	Different types of Automatic Filters	1
88	Centrifugal pump Test Rig	6

CIVIL STRUCTURE DEVELOPED FOR RESEARCH AT INSTRUCTION FARM, CAET AT JUNAGADH

Different civil structures have been developed at the instruction farm for the PG research work includes Soil conservation field laboratory (Runoff-Soil Erosion Measurement plots), water harvesting structures, farm godown, Irrigation facilities including, etc.

P.G RESEARCH FACILITY AVAILABILITY:

Research facilities like inputs (Seeds, fertilizers, irrigation and pesticides) and workforce required for conducting PG (M. Tech.) research are facilitated.

WORKSHOPS:

The required fabrication works are carried out in workshop available in Farm Machinery and Power Engineering Department of the college.

The department is facilitated with the equipment's which are sufficient to carry out the PG students' research. The field related equipment's, the land requirement for conducting the research work is also sufficient. The faculty members are well qualified to guide, mentor and handle the courses of PG (M. Tech.) students to fulfill the course curriculum of supporting courses.

GLIMPSE OF DEPARTMENT



Seminar Hall



Classroom




Department Library




Irrigation Systems Laboratory | Pump Testing Laboratory




Wells and Pumps Engineering Laboratory | Fluid Mechanics Laboratory




Soil Mechanics Laboratory | Drainage laboratory



Water Quality analysis Laboratory



Incubation Center on Advanced Irrigation technologies



Hydraulic park



High Tech MIS Park





High Tech MIS Park Control Unit

6.4.5. CONDUCT OF PRACTICAL AND HANDS-ON-TRAINING

Students receive comprehensive hands-on training in watershed survey using advanced instruments such as Total Station (TS), Differential GPS (DGPS), and GPS. They learn contour mapping, and the planning and design of various soil and water conservation structures, as well as micro-irrigation systems (MIS), including their installation, operation, and maintenance; all conducted at a well-developed 35.50 hectare instructional farm.

Additionally, practical training in water flow measurement is provided at the High-Tech Hydraulic Park equipped with automated pumping systems. Students also engage in field experiments to measure runoff and soil erosion using runoff-sediment measurement structures on the farm.

Laboratory sessions are conducted in well-equipped modern facilities, where students analyze performance characteristics of various pumps in the pump testing laboratory and evaluate automated MIS systems at the High-Tech MIS Park. Mapping and spatial analysis are performed using field survey data and satellite imagery in state-of-the-art Remote Sensing and GIS laboratories.













6.4.6. SUPERVISION OF STUDENTS IN PG PROGRAMMES

Each M.Tech. student is assigned an Advisory Committee comprising a Major Guide, a Minor Guide, and two members—one from the student's major field of specialization and the other from the discipline of Statistics or Mathematics. Additional members may be included with the approval of the Dean, Postgraduate Studies, if necessary.

The research problem is identified based on the needs of farmers, existing field challenges, and areas of basic, strategic, or applied research. Students are required to present their research proposal in a synopsis seminar attended by the Advisory Committee and faculty members from the major field. Feedback and suggestions received during the seminar are duly considered and incorporated by the student before final submission of the synopsis to the Advisory Committee.

The Programme of Research is proposed by the Advisory Committee, endorsed by the PG Coordinator and the Dean, Faculty of Agricultural Engineering, and subsequently approved by the Director of Research and the Dean of Postgraduate Studies. The student conducts the research under the supervision of the Advisory Committee.

Currently, 4 students are enrolled in the M.Tech. (Agricultural Engineering) - IDE programme for the academic year 2024-25. Their research focuses on key areas such as

water conservation, an applications of AI and IoT for irrigation water management, remote sensing & GIS, and climate change.

Table 24. Student Intake and Student to teacher ratio of the Department

Year	No. of PG recognized teachers	Intake of students	Student Teacher ratio	
		M Tech	Theory	Practical
2020-21	-	-	-	-
2021-22	-	-	-	-
2022-23	07	1	0.14	0.14
2023-24	07	0	-	-
2024-25	07	4	0.57	0.57

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.)

Feedback from stakeholders is collected through various channels such as personal interactions, visitor registers, emails, and other means. A summary of selected feedback received from different stakeholders is presented in Table 25, with supporting documentary evidence provided in Annexure-III.

Table 25. Feedbacks received from stakeholders

Feedback details	*Excellent*	*Very Good*	*Good*	*Average*
How do you rate the sequence and syllabus of the Courses studied in the previous semester?	75.00	25.00	0.00	0.00
How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?	75.00	25.00	0.00	0.00
How do you rate the relevance of the units in the Syllabus relevant to the course?	100.00	0.00	0.00	0.00
How do you rate the sequence of the units in the course?	75.00	25.00	0.00	0.00
How do you rate the allocation of the credits to the courses?	100.00	0.00	0.00	0.00
How do you rate the distribution of the contact hours among the course components (L-T-P)?	100.00	0.00	0.00	0.00

Feedback details	Excellent	Very Good	Good	Average
How do you rate the electives offered regarding their relevance to the specialization streams?	100.00	0.00	0.00	0.00
Rate the courses in terms of extra learning or self-learning considering the design of the courses.	75.00	25.00	0.00	0.00
Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.	100.00	0.00	0.00	0.00
How do you Rate the loading of the courses in a semester?	75.00	25.00	0.00	0.00
How was the evaluation/exam pattern of the courses?	100.00	0.00	0.00	0.00
How do you rate the objectives stated for each of the courses?	75.00	25.00	0.00	0.00
How do you rate the skill improvement from the courses?	75.00	25.00	0.00	0.00
How do you rate the practical exposure from the courses?	75.00	25.00	0.00	0.00
How do you rate the experiments about the real-life Applications?	75.00	25.00	0.00	0.00

6.4.8. STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS

Table 26. Details of student intake and attrition in the programme for last five years

Year	Sanctioned seats	Actual intake	Attrition	% Attrition
	M Tech	M Tech	M Tech	M Tech
2020-21	-	-	-	-
2021-22	-	-	-	-
2022-23	8	1	1	100
2023-24	10	0	0	0
2024-25	09	4	0	0

Note: *Students who either got job in government sector or opted for competitive examinations had left the studies.*

6.4.9. ICT APPLICATION IN CURRICULA DELIVERY

(A) UG/PG Admission system

Junagadh Agricultural University (JAU) participates in a centralized Common Admission Portal, jointly managed by all four State Agricultural Universities (SAUs) of Gujarat, for the streamlined administration of admissions to diploma, undergraduate, postgraduate, and doctoral programmes. The portal enables prospective students to register, submit applications, pay fees online, track application status, and access rank lists. Additionally, applicants receive real-time SMS notifications regarding important updates such as entrance exams schedule and admission rounds.

On the administrative side, the portal supports several backend operations including application verification, eligibility validation, rank list generation, and programme allotment, thereby ensuring a uniform, transparent, and efficient admission process across all SAUs. Candidates can select their preferred colleges and degree programmes, and the system automatically allocates admissions based on merit and preference. The entire process, including the publication of merit lists and category-wise vacancy matrices, is conducted online to ensure accessibility, fairness, and transparency.

(B) Online Fees collection system

College students pay their semester fees online through the dedicated portal http://online.jau.in/student_fees/, which is accessible via the Student Corner on the official university website. The system supports multiple payment modes, including UPI, credit/debit cards, and net banking, providing a convenient and secure method for fee transactions during subsequent semesters of various degree programmes.

The collected fees are directly deposited into the respective college's bank account, ensuring accuracy and transparency in financial management. Additionally, college administrators have access to real-time fee collection reports through the system, enabling effective monitoring and record maintenance.

(C) Academic activities

Simultaneously, the Academic Information Management System (AIMS) enhances curriculum delivery and monitoring by providing a dynamic digital interface for faculty and students. Through AIMS, instructors upload and share lecture notes, assignments, class materials, and video lectures, ensuring round-the-clock access to learning resources. The platform also supports online assessments, attendance tracking, and real-time academic

monitoring, including faculty feedback and progress reports. These ICT-enabled features promote interactive learning, strengthen academic accountability, and create a personalized, student-focused educational environment at JAU.

(D) Teaching through ICT tools

Teaching is made by using PPT, videos, visual, animations and smart boards. During COVID-19 pandemic s, all classes are conducted online using the various platforms viz. Zoom, Google Meet through Google Classroom and WhatsApp applications during academic year 2020-21 and 2021-22. The teachers are taking live lectures as well as supplying the teaching materials using these platforms. The teachers are performing live practical on Zoom or Google Meet through Google Classroom platforms online for the students. The examinations are also conducted online using the Online Examinations Management Software (OEMS) and a proper evaluation is made to justify the students' efforts.

The faculty members are involved in preparing the virtual lectures in the well-developed virtual classroom facility in the university which is appreciated by the ICAR also.

(E) Examination Management system

The JAU Examination Management System (JEMS) is a comprehensive ICT-based platform that efficiently manages academic and examination-related activities for undergraduate and postgraduate students. It facilitates the entry of internal and external marks and streamlines critical postgraduate processes such as online submission of campus forms, synopsis, preliminary proposals, exam results, thesis evaluation and examination panel selection, and final viva voce outcomes. Each stage - from submission by the major advisor to review by the Head of Department and Dean of the respective faculty, and final approval by the Dean of Postgraduate Studies and the Registrar - is conducted digitally through the JEMS portal. This robust system ensures timely tracking of student progress, adherence to academic timelines, and transparent, paperless record management

(F) Online Alumni Portal

The College of Agricultural Engineering and Technology (CAET) offers an online Alumni Portal where graduated students can register themselves and stay connected with the institution. The portal includes features such as searching alumni from other batches, viewing current city/location, and the ability to update personal profiles at any time throughout the year. This platform serves as a valuable tool for fostering professional networking, maintaining alumni engagement, and strengthening the bond between alumni and the institution.

(G) E-library

E-library for all the constituent colleges of the JAU is managed by the University Campus Library, established in the year 1978. The two storied new Building is located at the eastern side in the main campus. The Library with ICT platform is one of the most important centers of the University, which facilitates the teaching, research and extension program. Both students and faculty extensively use the facility. The Junagadh Agricultural University has given key prominence to the development of the library facilities at the headquarters as well as the constituent colleges and research stations.

Our library provides services students/faculties to constituent colleges, which come under Junagadh Agricultural University, viz., 5 at Junagadh campus like College of Agriculture, College of Agriculture Engineering & Technology, College of Horticulture, Junagadh, Post Graduate Institute of Agri. Business Management and College of Agriculture(Morbi, presently at Junagadh), 3 College of Agriuclture, at Khapat, Mota Bhandariya and Targhadiya, 3 Different Polytechnics of Agro Processing & Food Technology, Agriculture, Horticulture in the Junagadh campus, 3 Polytechnics of Agriuclture at Amreli, Dhari and Halvad and 1 Polytechnic of Agriucltural Engineering at Targhadiya.

Many knowledge-based services like that of Reference, Bibliography, INFLIBNET service. CD-ROM Databases, Internet browsing and e-services are provided by the library for its users.

Under Automation, library has RFID for the library circulation and security of library material along with OPAC through KOHA, thus the library is fully automized. Post Graduate and Doctorate theses of research scholars of different faculties and rare or important books and documents are digitized in the university library through the digitization camera available in the library. The library circulation section works with KOHA as well as LIBSYS library software.

Books, periodicals, theses, reports, maps and encyclopedia relevant to the mandate areas of the university have been stocked in the University Library and its constituent center. University Library is well equipped with 59509 text as well as reference books, 80 research journals/periodicals, 3982 thesis, 14000 bound volumes, 1037 e-books, 2 e-journals, various reports, maps and encyclopedia relevant to teaching, research and extension activities of the university. The library has offline database in the form of CAB, Agris, and Agricola as well as online database is available at e-library tab on university website. University Library subscribes 10 newspapers to acquaint users with daily news.

The university library renders its services to users from 8:00 to 18:10 h. A separate air conditioned reading room is developed with the best facilities as well as good ventilation and aeration. This AC reading room accommodates approximately 150 students. The Reading Room remains open for its users from 8.00 to 23.00 hours on working days whereas 8.00 to 14.00 hours on holidays.

(H) Internet

The College Cyberary, equipped with high-speed internet connectivity, provides students and faculty with seamless access to a wide range of online journals and academic databases. Key databases such as CABI, AGRIS, and AGRICOLA are available in CD-ROM format, while resources like INDIAN HARVEST are accessible as online databases. To enhance user experience, the library uses WinSPIRS, a Windows-based client interface, for efficient access to the various subscribed databases. This digital infrastructure supports academic research and learning by ensuring convenient and reliable access to global and national scientific literature.

The Library is equipped with 40 computer workstations with internet connectivity, along with scanning and CD writing facilities, all of which are extensively utilized by both students and faculty members for academic and research purposes. To support academic learning, the library also offers a Book Bank facility, through which students are provided with textbooks related to their respective subjects and semesters. This initiative ensures that students have easy access to essential learning resources throughout their academic journey.

(I) Wi-fi facility

The University provides 24x7 Wi-Fi connectivity across key areas of the campus, including the library, departments, and hostels, with secure login-based authentication to ensure safe and reliable access. In addition, the main campus is connected through an IP-based network, allowing students and faculty members to access the internet seamlessly from their respective hostels and departments. This connectivity enables users to browse scholarly resources, access previous literature, stay updated with recent advancements, and enhance their academic and research pursuits.

The e-library is having following online access facilities:

J-Gateplus (Complete):

J-Gate is a comprehensive online indexing and access gateway to global e-journal literature. It has indexes more than 58 million journal articles from over 58,000 journals, covering multiple disciplines including science, technology, medicine, social sciences, and humanities.

J-Gate is highly useful in the agricultural discipline for researchers, students, faculty, and professionals by providing streamlined access to a wide range of scholarly literature. J-Gate indexes thousands of journals, including many in the field of agriculture such as: Agronomy, Soil Science, Horticulture, Agricultural Engineering, Plant Pathology, Crop Science and Animal Husbandry. J-Gate allows searches using: Keywords, Author names, Journal titles & Subject categories. This helps agriculture researchers find specific articles or trends efficiently. Junagadh Agricultural University use J-Gate through consortia like: CeRA (Consortium for e-Resources in Agriculture) by ICAR.

CeRA :

CeRA (Consortium for e-Resources in Agriculture) plays a vital role in agriculture by providing **access to a wide range of electronic journals and research resources** to Junagadh Agricultural university. CeRA is the ICAR Consortium of e-resources in Agriculture. This covers more than 3000 scholarly journals pertaining to the Agriculture and allied sciences which are available in full text. Its main functions include:

Facilitating access to scholarly literature for scientists, researchers, and students in agriculture and allied sciences. **Promoting information sharing** among ICAR institutes and State Agricultural Universities (SAUs). **Supporting research and innovation** by offering timely and comprehensive digital resources. Overall, CeRA enhances the **quality and reach of agricultural research and education** in India.

ASTRAL :

Junagadh Agricultural University have purchased 630 e-books from Astral International (P) Ltd. These e-books are related to agriculture and allied sciences.

ScienceDirect :

Junagadh Agricultural University has subscription of ScienceDirect, a leading full-text scientific database from Elsevier, is highly valuable in agricultural research and

education. It provides access to peer-reviewed journals, book chapters, and research articles.

KrishiKosh:

KrishiKosh is a digital repository of agricultural knowledge in India, developed and maintained by the Indian Council of Agricultural Research (ICAR). ICAR have provided access to all the State Agricultural University of India. These digital repositories include theses, research papers, reports, books, journals, and other academic resources in agriculture and allied sciences.

Krishikosh is a database of theses submitted to the Agriculture universities and ICAR institutions are freely accessible by students. The JAU Library is member for Krishikosh and all the theses submitted to the JAU are being uploaded regularly.

EBSCOhost:

Junagadh Agricultural University has subscription of is also powerful online research platform provided by EBSCO Information Services that gives access to a wide range of academic, scientific, and professional databases. **EBSCOhost** is offering access to : Scholarly journals, E-books, Magazines, Research articles, Conference papers across multiple disciplines including **agriculture** and allied sciences.

NIPAERS:

The JAU has access to 204 e-books.

e-KrishiShiksha:

e-KrishiShiksha is the ICAR e-learning portal on agricultural education.

Art & Science Academic Publications (ASAP):

ASAP is providing access of e-books from more than 51 publishers across the globe in various fields to JAU based on IP and Login.

Commodities:

The recent news on agricultural commodities is published on this platform. The university has acceptance of the usage agreement & privacy policy with Centre for Monitoring Indian Economy Pvt. Ltd.

6.4.10. CERTIFICATE

I the Dean, College of Agricultural Engineering & Technology, Junagadh Agricultural University, Junagadh, hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college and degree awarding university.

July 16, 2026

(K . C. Patel)
Principal & Dean
College of Agril. Engg. & Tech.
JAU, Junagadh

SELF STUDY REPORT FOR
M.TECH. (AGRIL. ENGG.)
PROGRAMME IN THE DISCIPLINE OF
FARM MACHINERY & POWER ENGINEERING

6.4. SELF STUDY REPORT FOR THE M.TECH. (AGRIL. ENGG.) IN DISCIPLINE OF FARM MACHENERY AND POWER ENGG. (FMPE) DEGREE PROGRAMME

6.4.1. BRIEF HISTORY OF THE DEGREE PROGRAMME

EVOLUTION OF THE P.G. PROGRAMME:

The B Tech. (Agril. Engg.) Degree program is offered since the establishment of college in 1984. Post-graduation degree programme leading to the degree M.Tech. (Agril. Engg.) in discipline of Farm Machinery and Power Engg. (FMPE) was started 1994-95. The primary aim of the degree program is to strengthen the Agricultural Engineering faculty to carry out teaching, research and extension activities in the fields of farm machinery and equipment's *viz*. tillage, sowing, plant protection, harvesting, threshing etc.

OBJECTIVES

- To encourage the undergraduate students to come forward to acquire knowledge of higher level in the same discipline.
- To promote a supportive environment for life through implementing continuous learning programmes.
- To provide quality engineers with higher education in the field of Agril. Engg. to the nation for reaping the benefits of higher qualification.
- To create and nourish a stimulating learning environment that ensures a globally relevant education based on Eternal human values.
- To promote a supportive learning environment for life through implementing continuous learning programmes.

FACILITIES & SERVICES:

- Department of Farm Machinery & Power Engineering is having 2 ha of land for the purpose of practical training, conducting experiments on research, testing of implements, etc.
- Different laboratories like Drawing Laboratory, Tillage & Traction Laboratory, Thresher Laboratory, Plant Protection Laboratory, Cut Model Laboratory, CAD-CAM Laboratory, FIM Laboratory, Fitting Shop, Mechanical Laboratory, Carpentry Shop, Machine Shop and Welding Shop with a capacity to conduct practical classes for 35 students at under graduate and post graduate levels too.

- The department do have AICRP on FIM from 2015 onwards the total grant sanctions for same is Rs. 315.14 lakhs. It also have the facility of fabrication related to research projects.

- The department also have the All India level Testing and Training Center of farm machinery established in August 2008 financially supported from central Government under Rastriya Krushi Vikas Yojana having total outlay of the project as Rs. 535.00 lakhs. This center is one of the thirty six approved centers by the Department of Agriculture & Co-operation, Ministry of Agriculture, and Government of India. Which has collected a revenue of Rs. 1404.25 lakhs till 31st March, 2025.

ACCOMPLISHMENTS:

M. Tech. (Agril. engg.)-FMPE students' research outcomes which are helpful for the Farming community and further research are highlighted in Table 27 below.

Table 27. P.G. students' research topics linked with staff research projects

SN	Title of Thesis	Name of Student	Name of Guide	Month/Year of submission
1	Development of Mini Tractor operated Rotary Weeder cum Fertilizer Drill	Regatti Venkat	Dr. Pramod Mohnot	October-2020
2	Development and performance evaluation of manually operated single row cotton planter	Dharmendra	Dr. R. K. Kathiria	October-2020
3	Development and performance evaluation of mini tractor mounted sweep type weeding tools	Hirpara R. V.	Prof. V. R.Vagadia	October-2020
4	Development and performance evaluation of mini tractor operated groundnut digger elevator cum heap formater	Kavad Anilbhai M.	Dr. R. Yadav	October-2020
5	Development of manually drawn Engine powered fodder crop harvester	Jalu Mayur V.	Dr. V. K. Tiwari	October-2020
6	Development of solar operated walking type power weeder	Kachhot Ajaybhai Ramsinhbhai	Dr. M. S. Dulawat	December-2020
7	Development of Tractor operated Farm yard Manure Spreader	Savaliya Lalit Dineshbhai	Dr. T. D. Mehta	February-2021
8	Development and Performance Evaluation of Battery Operated Portable Tree Pruning Device	Chaudhari Krunalkumar Mohanbhai	Dr. K.B. Jhala	March-2021

9	Development and performance evaluation of flame weeder.	Abhishek Upadhyay	Dr. K.B. Jhala	Nov. - 2021
10	Development of monitoring system of chocking of boot of bullock drawn planter for Groundnut crop.	Rathod Jigar D	Dr. R. K. Kathiria	Nov.-2021
11	Development and performance evaluation of mulching machine as an attachment to a tractor operated rotavator.	Pawar Akash T.	Dr. V.K. Tiwari	Nov.-2021
12	Development and performance evaluation of 3-jaw manual vegetable transplanter.	Chavda Hardik R.	Prof. V. R. Vagadia	Nov.-2021
13	Development of solar powered automatic weeder for field crops	Galchar Vijay G.	Dr. M. S. Dulawat	July-2022
14	Development and performance evaluation of lucerne harvesting machine	Nandaniya Jaydipkumar V.	Dr. T.D. Mehta	July-2022
15	Tractor workplace Design Compatability : A stuy on mini tractor	Vala Ravi	Dr. R. Yadav	July-2022
16	Development and performance evaluation of mini tractor operated sprayer cum weeder	Ambaliya Pravina S.	Dr. V.K. Tiwari	Sept.-2022
17	Development of Picking Mechanism for Knapsack Cotton Picker	Khanpara Brijesh M.	Dr. R. K. Kathiria	Sept.-2022
18	Development and Performance Evaluation of Shelling Unit of Power Operated Groundnut Decorticator	Lakhani Aanand L.	Prof. V. R. Vagadia	Sept.-2022
19	Development and Performance Evaluation of Mini Tractor Operated Two Row Cotton Planter cum Fertilizer Applicator	Abhishek Pandey	Prof. A.L. Vadher	Oct.-2022
20	Development and Performance Evaluation of Manually Operated Finger Weeder	Jagriti Choudhary	Dr. T.D. Mehta	Oct.-2022
21	Development and Performance Evaluation of Battery Operated Push type Pegeaon Pea Stem Cutter	Gaikwad Shibham A.	Dr. K.B. Jhala	Oct.-2022
22	Development of Plant Inversion attachment to the existing Groundnut Digger	Sinhar Anantkumar A.	Dr. P. P. Gajjar	Apr.-2023
23	Performance evaluation of CI engine using palm oil biodiesel blend	Gajera Mayankumar N.	Prof. A.L. Vadher	Aug.-2023
24	Design and performance evaluation of a mini tractor operated clod crusher	Ms. Jishna K P	Prof. V. R. Vagadia	Aug.-2023
25	Performance Evaluation of Ride on Self Propelled Multipurpose Tool Carrier	Ms. Nakka Leelavthi	Prof. A.L. Vadher	Sept.-2024

26	Assessment of Farm Mechanization level for Groundnut crop in Junagadh District	Ms. Monika Verma	Dr. R. K. Kathiria	Jan.-2025
27	Optimization of operational Parameters of Sprying Drone for Different Cropping System	Bharad Niraj B.	Prof. V. R. Vagadia	Jan.-2025
28	Performance evalutionof single action disc harrow and rotary disc harrow	Geetanjali Mathpal	Prof. A.L. Vadher	July-2025
29	Design and development of a manually operated castor spike harvesting tool	Tumma Venkata Sai	Dr. P. P. Gajjar	July-2025

EXTERNAL FUNDED PROJECTS

Table 28. Completed projects/schemes

Sr. No.	Project	Date of Start	Date of Completion	Sponsoring Agency
1	ICAR sponsored Adhoc research scheme on "Anthropometric survey and Ergonomic studies on Agricultural workers of Gujarat for efficient and safe design of Agricultural Equipment's"	2000	2004	ICAR

Table 29. Ongoing projects/schemes

Sr. No.	Name of the Project / Scheme	Starting Year
1	Rastriya Krushi Vikas Yojana Scheme – "Testing & Training Center on Farm Machinery"	2008
2	All India Coordinated Research Project (AICRP) on Farm Implements and Machinery: AICRP (FIM), Junagadh Agricultural University, Junagadh centre is conducting Research and Development of different machinery related to farming operations, their Prototype Feasibility Testing on University as well as on farmer's field and the Front Line Demonstrations to the farmers. The head quarter of the project is CIAE, ICAR, Bhopal (M.P) (B.H. 2258-D)	2015-16
3	Agril. Drone Project – Approved by Director, Agriculture Technology Application Research Institute, ICAR, Pune.	2022
4	Rastriya Krushi Vikas Yojana Scheme – Establishment of DGCA Approved Remote Pilot Training Organization (RPTO)	2025

6.4.2. FACULTY STRENGTH:

Table 30. Faculty strength

Sr. No	Sanctioned Faculty	Faculty in Place	Vacant position	Faculty recommended by ICAR	Deviations from ICAR recommendations	Remarks
1	Professor	0	1	1	-	-
2	Associate Professor	2	0	2	-	-
3	Assistant Professor	4	0	4	-	-
AICRP on Farm Implements & Machinery						
4	Research Engineer	1	-	1	NA	-
5	Assistant Professor	1	-	1	NA	-
Services of Assistant professors from other department to carry out courses and guidance to the PG students.						
6	Assistant Professor of Dept. of Agri.Engg., CoA, JAU, Junagadh	1	-	-	-	-
7	Assistant Professor, DR Office, JAU, Junagadh	1	-	-	-	-
8	Asstt. Professor, CoA, JAU, Amreli	1	-	-	-	-
9	Assistant Professor of Poly. in Agril.Engg., JAU, Targhadia	1	-	-	-	-
10	Assistant Professor of Poly. in Agril., JAU, Halvad	1	-	-	-	-

6.4.3. TECHNICAL AND SUPPORTING STAFF:

Table 31. Supporting staff position

Sl. No.	Sanctioned Faculty	Faculty in place	Vacant position	Faculty recommended by ICAR/UGC/VCI/Other regulatory bodies	Deviations from ICAR recommendations
1	Technical Assistant	1	0	0	0
2	Laboratory Technician (Mech.)	1	0	2	-1
3	Assistant Instructor	1	0	1	0
4	Engine Driver	1	0	1	0
5	Welder	0	0	1	-1
6	Laboratory Boy	1	0	1	0
AICRP on Farm Implements & Machinery					
7	Draftsman/ Senior Technician	0	1	1	0
8	Technician T-1	1	0	1	0
9	Technician T-1	1	0	1	0
10	Technician T-1	0	1	1	0

Apart from these 14 persons are working in the department on contractual basis out of which 2 persons are Agricultural Engineers (1 Ph.D., 1 M.Tech.) as RF, 1 person (Ph.D.) as YP1, 1 persons are as Office Assistant, 1 as Tractor Driver cum Mechanic, 2 as Tractor Driver, 2 as Skilled Labour, 2 Unskilled Labour & 2 as Peons.

6.4.4. CLASSROOMS AND LABORATORIES:

Table 32. Seminar Hall and classrooms

Sr. No	Classroom	Area (m x m)	Seating capacity	Other facilities
1	PG Study room	6 x 8	20	-
2	Seminar Hall	6 x 8	25	LED Television with Laptop and Sound System
3	Training Hall	12 x 8	75	LCD infrared optical interactive panel, Computer and Audio-Visual System

Table 33. Major Laboratories

Sr. No	Name of laboratory	Area (m x m)	Working capacity
1	Fitting Shop	15 x 13	15
2	Mechanical Laboratory	19 x 8	50
3	Carpentry Shop	12 x 9	15
4	Machine Shop	22 x 13	30
5	Welding Shop	12 x 12	15
6	Cut Model Laboratory	6 x 12	10
7	Drawing Laboratory	22 x 10	100
8	Tillage & Traction Laboratory	12 x 19	35
9	Thresher Laboratory	12 x 16	35
10	Plant Protection Laboratory	12 x 6	35
11	Tractor Room	12 x 15	40
12	CAD CAM Laboratory	9 x 9	30
13	FIM Laboratory	12x 12	50
14	Incubation centre and Precision Mechanisation	12 x 6	35
15	AI and Robotic lab	12 x 19	50

Table 34. List of major equipment

Sr. No.	Item Name	Qty.
1	Power weeder	1
2	Power tiller	1
3	Blade harrow cum land leveler – Tractor drawn	1
4	Disc plough - tractor operated (2 Disc) and (3 Disc)	3
5	Power sprayer	1
6	Power duster	1
7	Reversible M.B. plough (2+2 bottom)	2
8	M. B. plough tractor operated (2 bottom) and (3 bottom)	2
9	Multipurpose bullock drawn pipe implement	2
10	Single bullock drawn pipe frame implement	1
11	Ground nut digger - bullock drawn & tractor operated	2
12	Rotavator - tractor operated 4 ft, 6 ft	1
13	Planter - bullock drawn implement mounted & tractor operated	2
14	Tractor operated post hole digger	1
15	Subsoiler – tractor operated	1
16	Engine : VST shakti Z- 170F, 5 – HP, 8- HP. 10 HP	3
17	Trailer, 4-wheel	1
18	Ground nut & Caster decorticator	2
19	Cotton shredder, 5 – HP/ electric motor operated	1
20	Jettrofa decorticator	1
21	Measuring & Display unit of Dynamometer for bullock drawn & tractor drawn implement	2
22	Cultivator – tractor operated (9 tyne, 7 tyne, 5 tyne)	3

23	Integrated vibration & noise meter (vibration meter, noise meter & for multiple channels common retrieving unit)	9
24	Noise level Recorder (portable)	1
25	Dust level Recorder (portable)	1
26	Vibration Meter (portable)	1
27	Cotton shredder – tractor operated	1
28	Front end loader (for mini tractor)	
29	Front mounted dozer with M.B. plough	1
30	Green groundnut thresher	1
31	Ridger – tractor drawn	1
32	Cultivator cum rotary tiller	1
33	Disc harrow 12 disc, 8 disc	2
34	Reaper Harvester & Reaper Binder & Power reaper	3
35	Rice Transplanter	1
36	Thermo anemometer	5
37	Digital vacuum gauge	3
38	Digital multi meter, Digital LUX meter	7
39	Hand pallet truck, Manual Stacker Plate form hand trolley	3
40	Grain moisture meter	3
41	Hardness tester	3
42	Universal Testing Machine (UTM)	1
43	UTM Hydraulic unit with comp. acc.	1
44	Combine Harvester-Tractor mounted/ Self Propelled	2
45	Straw Combine-Tractor Drawn	1
46	Seed Germinator	1
47	Digital Bomb Calorimeter with Oxygen Cylinder	1
48	Digital ultra low temperature meter	1
49	Standard Penetrometer, Flow Cup Viscometer, Bulk Density Apparatus, Universal Moisture Meter Moag-U, Digital Moisture Meter AG-3, Digital Flow Anemometer, Outside Micrometer, Digital Micrometer, IR Non Contact Thermo (2 Nos).	10
50	Chaff Cutter	1
51	Mobile Chopper & Mobile Shredder	3
52	Grass Trimmer & Aqua Power Cleaner	2
53	Dust Level Recorder	1
54	Exhaust Gas Analyzer	1
55	Hardness Testing M/C	1
56	Seed Uniformity Test Setup	1
57	Heart Rate Monitor, Anthropometer	1
58	Single Cylinder Diesel Engine Test Rig.	1
59	Potato Planter Tractor Ope. & Potato Digger Tractor Ope.	2
60	Centrifugal Ceramic Process Pump, Self Priming Multistage Boiler Feed Pump, Submersible Dewatering Pump, Cross Section Of Self-Priming Mud Sewage Pump, Cross Section Of Process Pump, Submersible Mono Pumpset, ASPEE HTP sprayer pump	7
61	Fully Automatic Potato Planter Tractor Operated	1
62	Manual Muscle Tester	1
63	Displacement Measu. Tutor Using LVDT, Load Measu. Tutor Using Loadcell, Pressure Measu. Tutor Using Pressure Transducer, Strain Measu. Tutor Using Strain Cantilever Beam, Torque Measu. Tutor Using Torque Transducer, Temp. Measu. Tutor Using Thermister, Speed Measu. Tutor Using Elec. Magnetic, Angular	9

	Measu. Tutor Using Angular Sensor, Digital Wattmeter	
64	Laser Guided Land Leveller	1
65	Digital Smoke Meter	1
66	Aero Blast Sprayer Model	1
67	Tractor Operated/Mounted 2 Disc Ridger Tractor Operated Ridge & Furrow Making Implement 2 In 1 Hand Operated Chaff Cutter	1 1 1
68	Tractor Operated Rotary Plough	1
69	Tractor Operated Mower	1
70	Spectrometer	1
71	Groundnut Digger Shaker	2
72	Fuel Pump & Fuel Filter Test Set-Up	2
73	Test Apparatus For Determination of Fatigue Failures In Compression Sprayer Tanks	1
74	Test Apparatus For Power Efficiency Measurement Of Power Operated Hydraulic Sprayers	1
75	Rig For Conducting Pump Performance And Endurance Test On Various Agricultural Sprayers	1
76	Microscope For Droplet Size (Agricultural Sprayer's Nozzles) Analysis	1
77	Cut Off Machine Heavy Duty	1
78	Spring Test Rig	1
79	Electronic Penetrologger Set	1
80	Patternator	1
81	Digital Vernier Caliper (150 Mm) With NABL Accredited Calibration Certificate	4
82	Thread Pitch (Screw Pitch) Gauge With NABL Accredited Calibration Certificate	2
83	Standard Wire Gauge With NABL Accredited Calibration Certificate	2
84	Digital Micrometer (0-25 Mm) With NABL Accredited Calibration Certificate	2
85	Stainless Steel Degree Protector With NABL Accredited Calibration Certificate	2
86	Stop Watch With NABL Accredited Calibration Certificate	2
87	Tachometer (Mechanical) With NABL Accredited Calibration Certificate	2
88	Tachometer (Contact Type Digital, Non-Contact Digital) With NABL Accredited Calibration Certificate	4
89	Dampened Pressure Gauge With NABL Accredited Calibration Certificate	2
90	Self Propelled (3-Wheeld) Multipurpose Farm Implement	1
91	Test Set Up (Patternator) For Spray Distribution For Boom Of Power Operated Hydraulic Sprayer's Nozzles	1
92	Laser Leveler Test Rig	1
93	Digital Dynamometer (Capacity: 2 Ton/100 G, 1 Ton/50 G)	1
94	Electric Seed Cum Fertilizer Drill Test Rig Set Up	1
95	Welding Machine	1
96	Power Thresher	1
97	Sieve Shaker (Gyratory)	1
98	Axial Compensated Load Cell	1
99	Portable Load Meter	1
100	Digital Cone Penetrometer	1
101	Tractor operated deep furrow sugarcane cutter planter	1

102	Tractor operated phule two row forward reverse rotavator for sugarcane crop	1
103	Hand tachometer chronometric	1
104	Soil bulk density measurement	1
105	Digital telemetry system for rotary torque measurement	1
106	Cut model of tractor steering assembly & clutch assembly	2
107	Tractor cut model	1
108	Post hole digger	1
109	Zero till drill, CIAE Tractor drawn precision drill, Tractor drawn seed cum fertilizer drill, Mini tractor operated rotary weeder cum fertilizer drill, Tractor operated multi crop seed cum fertilizer drill, Bullock drawn pipe frame seed drill	6
110	Engine operated portable post hole digger	1
111	Rotavtor/ Rotary tiller	1
112	Thresher cum cleaner cum grader	2
113	Castor/Jetropha Decorticator	1
114	variable frequency drive	1
115	Lazor leveler FRP case	1
116	Portable vibration analyser	1
117	Multiple human vibration analyzer with sensor	1
118	Precision vegetable seed planter	1
119	Horizontal diesel engine, 5 HP, 2.5 HP	2
120	Plastic mulch machine	1
121	Manually drawn Engine operated fooder crop harvester	1
122	Single row cotton planter	1
123	Mini tractor operated Groundnut digger elevator cum heap formator	1
124	self-propelled weeder & Solar operated power weeder	2
125	Remote operated sprayer	1
126	Sprayer calibrator	1
127	Combiened test ring for trigger type cut off device sprayer lance pressure test	1
128	Walking type battery operated boom sprayer cum weeder	1
129	Mulching machine attachment of rotavator	1
130	LCD dispay calipers, Digital Varniar calipers	2
131	Hydraulics motor operated bush cutter	1
132	Carrot harvesting machine	1
133	Remote controlled precision planter	1
134	Mini tractor operated two row cotton planter	1
135	Solar powered remote controlled sprayer	1
136	Self prpeeled riding type cheakpea harvester	1
137	Chilli transplanter	1
138	Onion digger cum detopper	1
139	Mini tractor operated groundnut digger cum inverter	1
140	Media mixture machine for horticultural crop	1
141	Warm and warm wheel	3
142	Parallelogram of force apparatus	3
143	Planimeter	2
144	Parallel ruler soil brass bridge wheel and pupets steel	5

145	Edge binding machine	1
146	Drawing Board (815x585)	20
147	Set of model of penetration 1. Two cylinder penetrating at right angle. 2. Two cylinder with oblique penetration. 3. Cylinder-cone with oblique penetration. 4. Cylinder-cone with penetrating at right angle. 5. Two cone at right angle. 6. Two square prism at right angle. 7. Two square prism at oblique angle. 8. Spear and cone at center. 9. Engineering drawing model (cylinder cube, triangular prism, hexagonal prism, triangular pyramid)	 1 1 1 1 1 1 1 1 1
148	Slide crank mechanism (a) Reciprocating engine mechanism (b) Oscillating cylinder mechanism (c) White worth quick return mechanism	 1 1 1
149	Petrol Engine Model 4-stroke & Diesel Engine Model 2-stroke	2
150	Spring Dynamometer (Spring system based load sell type (0-500) kg Hydraulic Dynamometer (Hydraulic system based load cell type, 0-1000kg)	3
151	Motorized Gyroscope	1
152	Static & Dynamic Balance Apparatus	1
153	Air Conditioning Tutor	1
154	Moment of Inertia of Flywheel 15 cm, 20 cm, 25 cm dia.	3
155	Window Air Condition Cycle Test Rig	1
156	Ice Plant Tutor-30Kg	1
157	Computerized Multi-Fuel Research Engine Test Setup	1
158	Water cooler test ring	1
159	Experimental cold storage trainer	1
160	Cut section model of compressor	1
161	Workshop apparatus : Fitting vice 3” bench vice, Lag vice 6”, Pipe vice 2”, Universal marking gauge 9”, Surface plate 8”x12”, Smith hurth 24”x30”x6”, Anvil 1.5 wt (London pattern), Earn steel 7”x7”x12”, Swage block 12”x12”, Metal lathe mate true chuck 9”, Refractory Furness 9”x4”x4” 1200 C,	5
162	Lathe machine 1370 mm bed length S.S. & S.C. V-belt driven, fitted with Norton gearbox	2
163	Sand mixture capacity 3 kg	1
164	Wood surface planner 9”x48”(sarswati brand) with accessory	1
165	Fobars digital micrometer M 0-25	1
166	Contech Electonic Balance Model CP-2T/500 Capacity-2Ton, Accuracy-500gm. Platform Size-1200x1200mm	1
167	CNC Turning Center Model DX 200 with Isolation Transformer and with all standard accessories and electricals Lathe Machine 4.5” size 8” through chuck Lath machine (1000x300)	1 4 2
168	Variable speed gear boxes	7
169	Digital Techometer 0to10000 RPM	1
170	Wood working machine, Hacksaw machine	2
171	Mechanical starrer	1
172	Barbed wire making Machine	2
173	Shaping Machine	1

174	MIG (250) Welding Machine	1
175	Milling machine	1
176	S.E.W. Brand Pllar Drilling Machine.	1
177	All Geared type Shaping machine	2
178	Bench Grinder, Hand grinding machine 715 watt, 1200 rpm	2
179	Lawn mover Make/Model: Makita EL4110	1
180	Portable Welding Machine(ESSAB), Rocker arm Spot Welding Machine	2
181	Smith Hearth With Blower	1
182	Chain link Fence making machine	1
183	Vertical Milling machine	1



Engine System Models laboratory



Machine Shop



FIM lab (Workshop)



RKVY Instrument lab



Harvesting & Threshing lab



Testing plot



Machine Shop (Weleding Robot)



Engine System Models Lab (Cut model)



Auto CAD lab



RKVY Spraying Lab



Welding shop



Black-smithy shop



Fitting Shop



Carpentry shop



Implement lab



Post Tillage equipments lab



Field Demonstration of sugarcane planter



Field Demonstration of cotton picker

FARM FACILITIES

Agricultural land of 2 ha near by the department is provided for practical training to students on tractors and implements, testing of implements received for test reports for govt. approval under subsidy schemes etc.

Table 35. Farm facilities

Sl. No.	Name of the Department	Farm area	Irrigated/ Non-irrigated	Remarks
1	Department of Farm Machinery & Power Engineering (Open Land)	2 Ha	Irrigated	Specially meant for testing of implements/ equipment developed in the department as well as received for Testing.

TRACTORS AVAILABILITY

Total number of tractors under the department of FMPE are 10 and as detailed in Table 36 below.

Table 36. Tractors Available in the Department

Sr. No.	Particular	Quantity
1	Mahindra & Mahindra, 47 – HP	1
2	Mahindra & Mahindra , 67.94 - HP	1
3	Mahindra & Mahindra, 60.08 HP	1
4	Mahindra & Mahindra, 37.01 HP	1
5	Tractor John Deere-5050	1
6	Power tiller, 14.3 HP	1
7	Mahindra Yuvraj Mini Tractor	1
8	Captain Mini tractor, 25 – HP	1
9	New Holland, 71.35 – HP	1
10	HMT Tractor, 25 – HP	1

P.G RESEARCH FACILITY AVAILABILITY:

Research facilities as mentioned below in the table and workforce required for conducting PG research are available in the department itself.

Table 37. List of Equipment

Sr. No.	Name of Equipment
1	Rig for conducting pump performance & endurance test on sprayers
2	Test apparatus for deter. of fatigue failures in comp. sprayer tanks
3	Test apparatus. for power efficiency measure. power ope. hy. sprayers
4	Microscope for droplet size (agricultural sprayer's nozzles)
5	Spring test rig
6	Engine testing rig
7	Electronic Penetrologger Set
8	Nozzle spray angle measurement set up
9	Sprayer belt (strap) test set up
10	Torque (required for trigger actuation) measurement device
11	Test set up (Patternator) for spray distribution for Boom of Power operated Hydraulic sprayer's nozzles
12	Laser Leveler Test Rig
13	Digital Dynamometer (Capacity: 1 ton/50 g & 2 ton/100 g)
14	
15	Electronic Seed cum fertilizer drill test rig set up
16	Sticky belt set up
17	Soil bin set up

The All India level Testing & Training center of Farm Machinery is operating under the department and therefore, new invented for newly designed equipment and machinery

are received at the center. This creates a good amount of exposure for the staff as well as students.

WORKSHOP

The required fabrication works are carried out in workshop available Farm Machinery and Power Engineering Department of the college.

A full-fledged workshop is operating under department having the facility of carpentry, foundry, black smithy, machining and welding for acquaintance /practice to the students. The major fabrication work of the research projects of UG as well as PG students is carried out in the workshop.

A separate facility for minor fabrication work under the AICRP on FIM is also operating under the department. The area of the lab is 2000 Sq. ft.

The department is facilitated with the equipment's which are sufficient to carry out the PG students' research. The field related equipment's, the land requirement for conducting the research work is also sufficient. The faculty members are well qualified to guide, mentor and handle the courses of PG students to fulfill the course curriculum of supporting courses.

6.4.5. CONDUCT OF PRACTICAL AND HANDS-ON-TRAINING

The department is equipped with 2 wings (D & E) and a building of Testing Centre along with 2.5 ha of farm land in which the testing of implements and training to students is provided. The department is having 13 different laboratories equipped with required instruments/ machines for conducting UG/PG level practical classes as well as training to farmers/tractor operators. All the three buildings are having the facility of LAN and Wi-Fi internet connection. Majority of the labs and personal chambers are also connected with internet connection. In addition to this, department is having seminar room/PG classroom and training hall with Audio-Visual aid and having seating capacity of 50 and 15 persons respectively. The department is also having well-furnished and equipped with sophisticated computer facility in which the practical classes of CAD/CAM and Creo software are conducted. Here, the UG/PG students are provided with the practical hands on training and practice on Agricultural Implements and different machines for different farm operations.

6.4.6. SUPERVISION OF STUDENTS IN PG PROGRAMMES

Each and every students admitted to M.Tech. (FMPE) are placed under one of faculty in the department. The faculty termed as Major Advisor proposes an advisory committee (3 members for M. Tech.) for a particulars student to the Dean, PG Studies. After the approval

of Dean, PG Studies all the committee members look after the finalizing synopsis preparation the research proposal for dissertation, analysis of data, Results and interpretations and finally the thesis writing. As on today 106 no. of students have obtained their M.Tech. Degree from the inception. The year wise M.Tech. Students admitted are as shown in table.

Table 38. Student Intake and Student to teacher ratio of the Department

Year	No. of PG recognized teachers	Intake of students	Student to teacher ratio
2020-21	11	11	1:1
2021-22	11	10	1:0.91
2022-23	11	07	1:0.64
2023-24	09	06	1:0.67
2024-25	07	06	1:0.86
2025-26	12	09	1:0.75

The research proposal in the form of synopsis is submitted to Dean, PG Studies for approval and then the work is initiated.

Table 39. Details of PG students' guidance.

SN	Title of Thesis	Name of Student	Name of Advisor	Remarks/ achievement
2020-21				
1	Development and performance evaluation of flame weeder.	Abhishek Upadhyay (2050219001)	Dr. K.B. Jhala	-
2	Development of monitoring system of chocking of boot of bullock drawn planter for Groundnut crop.	Rathod Jigar D (2050219015)	Dr. R. K. Kathiria	-
3	Development and performance evaluation of mulching machine as an attachment to a tractor operated rotavator.	Pawar Akash T. (2050219013)	Dr. V.K. Tiwari	-
4	Development and performance evaluation of 3-jaw manual vegetable transplanter.	Chavda Hardik R. (2050219003)	Prof. V. R. Vagadia	-
5	Development and performance evaluation of flame weeder.	Abhishek Upadhyay (2050219001)	Dr. K.B. Jhala	-
6	Development of solar powered automatic weeder for field crops	Galchar Vijay G. (2050219006)	Dr. M. S. Dulawat	-
7	Development and performance evaluation of lucerne harvesting machine	Nandaniya Jaydipkumar V. (2050219011)	Dr. T.D. Mehta	-

8	Tractor workplace Design Compatability : A stuy on mini tractor	Vala Ravi (2050219019)	Dr. R. Yadav	-
2021-22				
9	Development and performance evaluation of mini tractor operated sprayer cum weeder	Ambaliya Pravina S. (2050220002)	Dr. V.K. Tiwari	-
10	Development of Picking Mechanism for Knapsack Cotton Picker	Khanpara Brijesh M. (2050220009)	Dr. R. K. Kathiria	-
11	Development and Performance Evaluation of Shelling Unit of Power Operated Groundnut Decorticator	Lakhani Aanand L. (2050220011)	Prof. V. R. Vagadia	-
12	Development and Performance Evaluation of Mini Tractor Operated Two Row Cotton Planter cum Fertilizer Applicator	Abhishek Pandey (2050220001)	Prof. A.L. Vadher	-
13	Development and Performance Evaluation of Manually Operated Finger Weeder	Jagriti Choudhary (2050220007)	Dr. T.D. Mehta	-
14	Development and Performance Evaluation of Battery Operated Push type Pegeaon Pea Stem Cutter	Gaikwad Shibham A. (2050220005)	Dr. K.B. Jhala	-
15	Development of Plant Inversion attachment to the existing Groundnut Digger	Sinhar Anantkumar A. (2050220015)	Dr. P. P. Gajjar	-
2022-23				
16	Performance evaluation of CI engine using palm oil biodiesel blend	Gajera Mayankumar N. (2050221003)	Prof. A.L. Vadher	-
17	Design and performance evaluation of a mini tractor operated clod crusher	Ms. Jishna K P (2050221008)	Prof. V. R. Vagadia	-
2023-24				
18	Performance Evaluation of Ride on Self Propelled Multipurpose Tool Carrier	Ms. Nakka Leelavthi (2050222010)	Prof. A.L. Vadher	-
19	Assessment of Farm Mechanization level for Groundnut crop in Junagadh District	Ms. Monika Verma (2050222009)	Dr. R. K. Kathiria	-
20	Optimization of operational Parameters of Sprying Drone for Different Cropping System	Bharad Niraj B. (2050222003)	Prof. V. R. Vagadia	-
2024-25				
21	Performance evalutionof single action disc harrow and rotary disc harrow	Geetanjali Mathpal (2050223008)	Prof. A.L. Vadher	-

22	Design and development of a manually operated castor spike harvesting tool	Tumma Venkata Sai (2050223009)	Dr. P. P. Gajjar	-

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.)

Feedbacks are collected from the respective stakeholders through various mechanisms like personal contacts, visitors register, emails, etc. The few of the feedbacks as received from the different stakeholders are appended in the Table 40 and the documentary evidences are provided in the Annexure-IV.

Table 40. Feedbacks received from stakeholders

Feedback detail	Excellent	Very good	Good	Average
How do you rate the sequence and syllabus of the Courses studied in the previous semester?	44.44	55.56	0.00	0.00
How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?	44.44	44.44	11.11	0.00
How do you rate the relevance of the units in the Syllabus relevant to the course?	88.89	11.11	0.00	0.00
How do you rate the sequence of the units in the course?	55.56	22.22	22.22	0.00
How do you rate the allocation of the credits to the courses?	44.44	55.56	0.00	0.00
How do you rate the distribution of the contact hours among the course components (L-T-P)?	55.56	22.22	11.11	11.11
How do you rate the electives offered regarding their relevance to the specialization streams?	55.56	33.33	11.11	0.00
Rate the courses in terms of extra learning or self-learning considering the design of the courses.	33.33	55.56	11.11	0.00
Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.	66.67	22.22	11.11	0.00
How do you Rate the loading of the courses in a semester?	55.56	33.33	0.00	11.11
How was the evaluation/exam pattern of the courses?	33.33	66.67	0.00	0.00
How do you rate the objectives stated for each of the courses?	55.56	33.33	11.11	0.00
How do you rate the skill improvement from the courses?	66.67	22.22	11.11	0.00
How do you rate the practical exposure from the courses?	55.56	22.22	22.22	0.00
How do you rate the experiments about the real-life Applications?	33.33	66.67	0.00	0.00

6.4.8. STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS

Table 41. Details of student intake and attrition in the programme for last five years

Year	Sanctioned seats	Actual intake	Attrition	% Attrition
2020-21	11	7	0	0
2021-22	10	2	0	0
2022-23	07	3	0	0
2023-24	06	2	0	0
2024-25	06	3	0	0
2025-26	09	4	0	0
Total	49	21	0	0

Note Students selected for job in government sector or opted for competitive examinations had left the studies.

6.4.9. ICT APPLICATION IN CURRICULA DELIVERY

(A) UG/PG Admission system

Junagadh Agricultural University (JAU) participates in a centralized Common Admission Portal, jointly managed by all four State Agricultural Universities (SAUs) of Gujarat, for the streamlined administration of admissions to diploma, undergraduate, postgraduate, and doctoral programmes. The portal enables prospective students to register, submit applications, pay fees online, track application status, and access rank lists. Additionally, applicants receive real-time SMS notifications regarding important updates such as entrance exams schedule and admission rounds.

On the administrative side, the portal supports several backend operations including application verification, eligibility validation, rank list generation, and programme allotment, thereby ensuring a uniform, transparent, and efficient admission process across all SAUs. Candidates can select their preferred colleges and degree programmes, and the system automatically allocates admissions based on merit and preference. The entire process, including the publication of merit lists and category-wise vacancy matrices, is conducted online to ensure accessibility, fairness, and transparency.

(B) Online Fees collection system

College students pay their semester fees online through the dedicated portal http://online.jau.in/student_fees/, which is accessible via the Student Corner on the official university website. The system supports multiple payment modes, including UPI,

credit/debit cards, and net banking, providing a convenient and secure method for fee transactions during subsequent semesters of various degree programmes.

The collected fees are directly deposited into the respective college's bank account, ensuring accuracy and transparency in financial management. Additionally, college administrators have access to real-time fee collection reports through the system, enabling effective monitoring and record maintenance.

(C) Academic activities

Simultaneously, the Academic Information Management System (AIMS) enhances curriculum delivery and monitoring by providing a dynamic digital interface for faculty and students. Through AIMS, instructors upload and share lecture notes, assignments, class materials, and video lectures, ensuring round-the-clock access to learning resources. The platform also supports online assessments, attendance tracking, and real-time academic monitoring, including faculty feedback and progress reports. These ICT-enabled features promote interactive learning, strengthen academic accountability, and create a personalized, student-focused educational environment at JAU.

(D) Teaching through ICT tools

Teaching is made by using PPT, videos, visual, animations and smart boards. During COVID-19 pandemic s, all classes are conducted online using the various platforms viz. Zoom, Google Meet through Google Classroom and WhatsApp applications during academic year 2020-21 and 2021-22. The teachers are taking live lectures as well as supplying the teaching materials using these platforms. The teachers are performing live practical on Zoom or Google Meet through Google Classroom platforms online for the students. The examinations are also conducted online using the Online Examinations Management Software (OEMS) and a proper evaluation is made to justify the students' efforts.

The faculty members are involved in preparing the virtual lectures in the well-developed virtual classroom facility in the university which is appreciated by the ICAR also.

(E) Examination Management system

The JAU Examination Management System (JEMS) is a comprehensive ICT-based platform that efficiently manages academic and examination-related activities for undergraduate and postgraduate students. It facilitates the entry of internal and external marks and streamlines critical postgraduate processes such as online submission of campus forms, synopsis, preliminary proposals, exam results, thesis evaluation and examination

panel selection, and final viva voce outcomes. Each stage - from submission by the major advisor to review by the Head of Department and Dean of the respective faculty, and final approval by the Dean of Postgraduate Studies and the Registrar - is conducted digitally through the JEMS portal. This robust system ensures timely tracking of student progress, adherence to academic timelines, and transparent, paperless record management

(F) Online Alumni Portal

The College of Agricultural Engineering and Technology (CAET) offers an online Alumni Portal where graduated students can register themselves and stay connected with the institution. The portal includes features such as searching alumni from other batches, viewing current city/location, and the ability to update personal profiles at any time throughout the year. This platform serves as a valuable tool for fostering professional networking, maintaining alumni engagement, and strengthening the bond between alumni and the institution.

(G) E-library

E-library for all the constituent colleges of the JAU is managed by the University Campus Library, established in the year 1978. The two storied new Building is located at the eastern side in the main campus. The Library with ICT platform is one of the most important centers of the University, which facilitates the teaching, research and extension program. Both students and faculty extensively use the facility. The Junagadh Agricultural University has given key prominence to the development of the library facilities at the headquarters as well as the constituent colleges and research stations.

Our library provides services students/faculties to constituent colleges, which come under Junagadh Agricultural University, viz., 5 at Junagadh campus like College of Agriculture, College of Agriculture Engineering & Technology, College of Horticulture, Junagadh, Post Graduate Institute of Agri. Business Management and College of Agriculture(Morbi, presently at Junagadh), 3 College of Agriuclture, at Khapat, Mota Bhandariya and Targhadiya, 3 Different Polytechnics of Agro Processing & Food Technology, Agriculture, Horticulture in the Junagadh campus, 3 Polytechnics of Agriuclture at Amreli, Dhari and Halvad and 1 Polytechnic of Agriucltural Engineering at Targhadiya.

Many knowledge-based services like that of Reference, Bibliography, INFLIBNET service. CD-ROM Databases, Internet browsing and e-services are provided by the library for its users.

Under Automation, library has RFID for the library circulation and security of library material along with OPAC through KOHA, thus the library is fully automized. Post Graduate and Doctorate theses of research scholars of different faculties and rare or important books and documents are digitized in the university library through the digitization camera available in the library. The library circulation section works with KOHA as well as LIBSYS library software.

Books, periodicals, theses, reports, maps and encyclopedia relevant to the mandate areas of the university have been stocked in the University Library and its constituent center. University Library is well equipped with 59509 text as well as reference books, 80 research journals/periodicals, 3982 thesis, 14000 bound volumes, 1037 e-books, 2 e-journals, various reports, maps and encyclopedia relevant to teaching, research and extension activities of the university. The library has offline database in the form of CAB, Agris, and Agricola as well as online database is available at e-library tab on university website. University Library subscribes 10 newspapers to acquaint users with daily news.

The university library renders its services to users from 8:00 to 18:10 h. A separate air conditioned reading room is developed with the best facilities as well as good ventilation and aeration. This AC reading room accommodates approximately 150 students. The Reading Room remains open for its users from 8.00 to 23.00 hours on working days whereas 8.00 to 14.00 hours on holidays.

(H) Internet

The College Cyberary, equipped with high-speed internet connectivity, provides students and faculty with seamless access to a wide range of online journals and academic databases. Key databases such as CABI, AGRIS, and AGRICOLA are available in CD-ROM format, while resources like INDIAN HARVEST are accessible as online databases. To enhance user experience, the library uses WinSPIRS, a Windows-based client interface, for efficient access to the various subscribed databases. This digital infrastructure supports academic research and learning by ensuring convenient and reliable access to global and national scientific literature.

The Library is equipped with 40 computer workstations with internet connectivity, along with scanning and CD writing facilities, all of which are extensively utilized by both students and faculty members for academic and research purposes. To support academic learning, the library also offers a Book Bank facility, through which students are provided with textbooks related to their respective subjects and semesters. This initiative ensures

that students have easy access to essential learning resources throughout their academic journey.

(I) Wi-fi facility

The University provides 24x7 Wi-Fi connectivity across key areas of the campus, including the library, departments, and hostels, with secure login-based authentication to ensure safe and reliable access. In addition, the main campus is connected through an IP-based network, allowing students and faculty members to access the internet seamlessly from their respective hostels and departments. This connectivity enables users to browse scholarly resources, access previous literature, stay updated with recent advancements, and enhance their academic and research pursuits.

The e-library is having following online access facilities:

J-Gateplus (Complete):

J-Gate is a comprehensive online indexing and access gateway to global e-journal literature. It has indexes more than 58 million journal articles from over 58,000 journals, covering multiple disciplines including science, technology, medicine, social sciences, and humanities.

J-Gate is highly useful in the agricultural discipline for researchers, students, faculty, and professionals by providing streamlined access to a wide range of scholarly literature. J-Gate indexes thousands of journals, including many in the field of agriculture such as: Agronomy, Soil Science, Horticulture, Agricultural Engineering, Plant Pathology, Crop Science and Animal Husbandry. J-Gate allows searches using: Keywords, Author names, Journal titles & Subject categories. This helps agriculture researchers find specific articles or trends efficiently. Junagadh Agricultural University use J-Gate through consortia like: CeRA (Consortium for e-Resources in Agriculture) by ICAR.

CeRA :

CeRA (Consortium for e-Resources in Agriculture) plays a vital role in agriculture by providing **access to a wide range of electronic journals and research resources** to Junagadh Agricultural university. CeRA is the ICAR Consortium of e-resources in Agriculture. This covers more than 3000 scholarly journals pertaining to the Agriculture and allied sciences which are available in full text. Its main functions include:

Facilitating access to scholarly literature for scientists, researchers, and students in agriculture and allied sciences. **Promoting information sharing** among ICAR institutes

and State Agricultural Universities (SAUs). **Supporting research and innovation** by offering timely and comprehensive digital resources. Overall, CeRA enhances the **quality and reach of agricultural research and education** in India.

ASTRAL :

Junagadh Agricultural University have purchased 630 e-books from Astral International (P) Ltd. These e-books are related to agriculture and allied sciences.

ScienceDirect :

Junagadh Agricultural University has subscription of ScienceDirect, a leading full-text scientific database from Elsevier, is highly valuable in agricultural research and education. It provides access to peer-reviewed journals, book chapters, and research articles.

KrishiKosh:

KrishiKosh is a digital repository of agricultural knowledge in India, developed and maintained by the Indian Council of Agricultural Research (ICAR). ICAR have provided access to all the State Agricultural University of India. These digital repositories include theses, research papers, reports, books, journals, and other academic resources in agriculture and allied sciences.

Krishikosh is a database of theses submitted to the Agriculture universities and ICAR institutions are freely accessible by students. The JAU Library is member for Krishikosh and all the theses submitted to the JAU are being uploaded regularly.

EBSCOhost:

Junagadh Agricultural University has subscription of is also powerful online research platform provided by EBSCO Information Services that gives access to a wide range of academic, scientific, and professional databases. **EBSCOhost** is offering access to: Scholarly journals, E-books, Magazines, Research articles, Conference papers across multiple disciplines including **agriculture** and allied sciences.

NIPAERS:

The JAU has access to 204 e-books.

e-KrishiShiksha:

e-KrishiShiksha is the ICAR e-learning portal on agricultural education.

Art & Science Academic Publications (ASAP):

ASAP is providing access of e-books from more than 51 publishers across the globe in various fields to JAU based on IP and Login.

Commodities:

The recent news on agricultural commodities is published on this platform. The university has acceptance of the usage agreement & privacy policy with Centre for Monitoring Indian Economy Pvt. Ltd.

6.4.10. CERTIFICATE

I the Dean, College of Agricultural Engineering & Technology, Junagadh Agricultural University, Junagadh, hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college and degree awarding university.

July 16, 2026

(K . C. Patel)
Principal & Dean
College of Agril. Engg. & Tech.
JAU, Junagadh

SELF STUDY REPORT FOR

M.Tech. (AGRIL. ENGG.)

PROGRAMME IN THE DISCIPLINE OF

PROCESSING & FOOD ENGINEERING

6.4. SELF STUDY REPORT FOR THE M.TECH. (AGRIL. ENGG.) IN DISCIPLINE OF PROCESSING AND FOOD ENGG. (PFE) DEGREE PROGRAMME

6.4.1. BRIEF HISTORY OF THE DEGREE PROGRAMME

EVOLUTION OF THE P.G. PROGRAMME:

Realizing the importance of food processing based on cereals, pulses, oilseeds, spices, fruits, vegetables, milk etc. in the Gujarat State, the then Gujarat Agricultural University (now Junagadh Agricultural University) felt to start M. Tech. (Agril. Engg.) in the then Agricultural Processing and Food Engineering and now Processing and Food Engineering, at College of Agricultural Engineering and Technology, Junagadh as one of the core subject through which, the farmers and industrial problems can be tackled by conducting research through the students and faculty as the required staff was available to start the master's degree programme in Agricultural Processing and Food Engineering and now Processing and Food Engineering. More ever many B. Tech. (Agril. Engg.) graduates of the university were interested to continue their research career in the field of food processing. In this context, the university started M. Tech. (Agril. Engg.) in the then Agricultural Processing and Food Engineering and now Processing and Food Engineering, at College of Agricultural Engineering and Technology, Junagadh.

The M. Tech. Programme in Processing & Food Engineering discipline started from June, 1994.

OBJECTIVES

- To provide trained man power to food processing industry.
- To develop new technology with respect to food processing.
- To conduct research and development of low cost technology for food processing.
- To provide consultancy service to farmers through phone, discussion, demonstration and field visit.
- To create entrepreneur for development of Agro processing Centres in rural areas.

FACILITIES AND SERVICES:

The Department of Processing and Food Engineering is one of the departments of the College of Agricultural Engineering and Technology established in June, 1984. The Department of Processing and Food Engineering has undertaken various research projects in addition to its teaching activities at Under Graduate and Post Graduate levels. The

department is offering 41 credit hours course work at B. Tech. level and also offering post graduate course leading to M. Tech. and Ph. D. degree with the specialization in Processing and Food Engineering. The total numbers of M. Tech. thesis submitted since 1994 to 2021 on different aspects of Processing and Food Engineering are 90, with the goal to train required technical man power in the field of Processing and Food Engineering suitable for research and education and also to assist farmers, processors & entrepreneurs in reduction of post-harvest losses and value addition through processing. The important areas of research work are,

(i) Engineering properties of biological materials
(ii) Drying and dehydration of fruits and vegetables
(iii) Processing of oilseeds
(iv) Development of process technology
(v) Storage of food products and
(vi) Development of processing machineries.

ACCOMPLISHMENTS:

M. Tech. (Agril. Engg.)-PFE student's research outcomes which are helpful for the Farming community and further research are highlighted in Table 42 below.

Table 42. Students' research topics linked with staff research projects

SN	Title of Thesis	Name of Student	Name of Guide	Month/Year of submission
	M Tech (Agril. Engg.)-Processing andFood Engineering Thesis			
1	Foam Mat Drying of Papaya Pulp for Preparation of Papaya Powder	Parmar Arjun Ranmalbhai	Dr. P.R. Davara	October, 2020
2	Foam Mat Drying of Prickly Pear (Opuntia elatior Mill.) Pulp for Preparation of Good Quality Powder	Chougale Bhaskar Dadaso	Dr. V.P. Sangani	November, 2020
3	Design and Development of Three Pan Jaggery Making Furnace for Sugarcane Juice	Barad Tejas Haribhai	Dr. V.K. Chandegara	December, 2020
4	Low Temperature Grinding of Fenugreek (Trigonellafoenum-graecum) Seeds	Sirwani Prakash Mukesh	Dr. M.N. Dabhi	January, 2021
5	Study on Storage Stability of Dragon Fruit (*Hylocereus polyrhizus*) Juice and Concentrate	Bablu Kumar	Dr. N.K. Dhamsaniya	June, 2021
6	Development of Muffins Incorporated With Plant Based Functional Ingredients	Sabhadiya Himanshi Rameshbhai	Dr. V.P. Sangani	February, 2022

7	Optimization of Process Parameters for the Preparation of Peanut Sauce Using Acid Hydrolysis Method	Kothadiya Udaykumar Vallabhbhai	Dr. P.R. Davara	March, 2022
8	Effect of Pretreatment and Drying Methods on Quality of Turmeric Rhyzomes (Curcuma Longa)	Ms. Parmar Ravinaben Girishbhai	Dr. M.N. Dabhi	August, 2022
9	Development of Gluten Free Pizza Base Using Barnyyard Millet and Soy Flour	Ms. Thaker Brinda Ashvinbhai	Dr. V.K. Chandegara	September, 2022
10	Extraction of Pectin from Custard Apple (Annona Squamosa L.) Peel and Its Utilization in Preparation of Jelly	Rohan Kumar Sahu	Dr. V.K. Chandegara	November, 2022
11	Development of protein enriched extruded product suitable for fasting	Vora Premal P.	Dr. S. P. Cholera	March, 2023
12	Optimization of process parameters of peanut sauce through fermentation technology	Vyas Vaibhav S.	Dr. P.R. Davara	May, 2023
13	Study of packaging and storage of tender coconut water	B. Hemalatha	Dr. V.K. Chandegara	October, 2023
14	Development of extruded products from pearl millet flour blended with chickpea flour	Naghera Kuldeep P.	Dr. M.N. Dabhi	October, 2023
15	Drying of turmeric (Curcuma Long) in solar tunnel dryer	Patidar Pradip	Dr. S. P. Cholera	December, 2023
16	Development of malted and fermented finger millet based beverages blended with beetroot and carrot juices	Diwate Poornima	Dr. V.K. Chandegara	August, 2024
17	Optimization of processing parameters for preparaton of extruded product using pearl millet flour blended with defatted peanut flour	Chocha Dhruv 2050222005	Dr. P.R. Davara	August, 2024
18	Effect of microwave treatment, antioxidant and packaging materials on shelf life of pearl millet flour	Vidhya V.	Dr. V.P. Sangani	August, 2024

EXTERNAL FUNDED PROJECTS:

Table 43. External Funded Projects list

Sr No	Name of the project/scheme	Date of start	Date of termination	Sponsoring Agency
1	AICRP on PHET	01/04/1980	Continue	ICAR
2	Assessment of Harvest and Post Harvest Losses of Major Crops and Commodities in India	01/04/2012	31/03/2015	Ministry of Food Processing Indusries, New Delhi (Collaborative Project for AICRP on PHET with

				100% grant from MoFPI) Junagadh was one of Centre)
3	Study on determining storage losses of food grains in FCI and CWC warehouses and to recommend norms for storage losses in efficient warehouse management	01/04//2013	31/03/2016	Food Corporation of Inida, New Delhi (Collaborative Project for AICRP on PHET with 100% grant from FCI Junagadh is one of Centre)
4	Enzymatic pretreatment for processing of pigeon pea	01/04/2014	31/03/2017	Ministry of Agriculture and Farmers welfare
5	Development of Protocols for Shelf Life Safe Storage, Milling Outturn of Major Pulses	01/04/2019	01/03/2021	Department of Consumars Affairs, Ministry of Consumer Affairs, New Delhi (Collaborative Project for AICRP on PHET with 100% grant from DoCA Junagadh is one of Centre)

6.4.2. FACULTY STRENGTH

Table 44. Faculty strength

Sr. No.	Sanctioned Facultry	Faculty in place	Vacant position	Faculty recommended by the ICAR	Deviation from ICAR recommendation
Department of Processing and Food Engineering					
1	Professor	1	0	1	-
2	Associate Professor	1	1	2	-1
3	Assistant Professor	4	0	4	-
AICRP on Post Harvest Engineering and Technology					
4	Research Engineer	1*	0	0	+1
5	Assistant Research Engineer	1	0	0	+1
6	Assistant Process Engineer	1	0	0	+1
7	Assistant Professor (Biochemistry)	0	1	0	-
8	Assistant Professor (Entomology)	0	1	0	-
9	Assistant Professor (Microbiology)	1	0	0	-

Faculty from office of the Director of Research					
10	Associate Professor	1	0	0	+1
Faculty from Polytechnic in Agro Processing					
11	Associate Professor	1	0	0	+1
	Assistant Professor	2	0	0	+2
Faculty from Renewable Energy Department					
12	Assistant Professor	2	0	0	+2

*On pool at Aspee College of Agriculture, JAU, Khapat, Porbandar

6.4.3. TECHNICAL AND SUPPORTING STAFF:

Table 45. Details of technical and supporting staff

Sr. No.	Sanctioned Faculty	Faculty in place	Vacant position	Faculty recommended by ICAR	Deviations from ICAR recommendations
Department of Processing and Food Engineering					
1	Laboratory Technician	1	0	2	-1
2	Technical Assistant	0	2	2	-2
AICRP on Post Harvest Engineering and Technology					
3	Technical Assistant	1	1	0	+1
4	Draftman mecheanic	1	0	0	+1
5	Craftman	1+1*	0	0	+1
6	Senior mechanic	1**	0	0	+1

*On pool at RTTC, JAU, Junagadh
**On pool at Department of SWCE, CAET, JAU, Junagadh

Apart from the staff filled on regular basis, the department is engaging on contractual basis 04 persons. At present, computer operator 1, clerk 1, peon 1, driver 1 is working on contractual basis.

6.4.4. CLASSROOMS AND LABORATORIES:

CLASSROOMS

Department have a PG Classroom of 12 m x 10 m with seating capacity of 50 students. Classroom have white board, LCD projector, computer and Air condition. Wall panelling and fall sealing is provided in classroom for better environment.

Table 46. Major laboratories

Sr. No.	Name of Laboratory	Area (m x m)	Working capacity (No.)
1	Biochemistry laboratory	15 x 8	50
2	Drying laboratory	12 x 8	50
3	Engineering Properties laboratory	12 x 8	50
4	Size Reduction laboratory	12 x 8	50
5	Storage laboratory	12 x 8	50
6	Electrical Engineering Laboratory	12 x 9	50
7	Crop Process Engineering Laboratory	12 x 9	50
8	Workshop	12 x 10	50
9	Mango Canning Plant	24 x 10	50
10	Pulse Milling Plant	20 x 5	50

Table 47. List of major equipment

Sr. No.	Equipment Name	No. of equipment
1	Electronic top loading Balance	1
2	Specific gravity Separator	1
3	Deck Assembly for large seed	1
4	Deck Assembly For small seed	1
5	Stoner Deck Assembly	1
6	Hot air Oven	1
7	Seed huller	1
8	Tablet hardness tester	1
9	Weighing scale 10 kg capacity	1
10	Digital anemometer	1
11	Fluid type bed dryer	1
12	Tray dryer	1
13	Digital electronic dial vernier calliper	1

14	Bulk density apparatus	1
15	Digital stroke counter with reset and alarm system	1
16	Fruit and vegetable slicer	1
17	Muffle Furness	1
18	Penetrometer	1
19	Microwave oven	1
20	Data Logger	1
21	Data logger system with data receiving unit and printing device	1
22	Mango canning plant	1
23	Digital Electonic Top Loading Balance	1
24	Digital constant temperature water bath capacity 30 liter	1
25	Digital fruit firmness	1
26	Milk analyser	1
27	Tomato processing plant	1
28	Dehydration plant with Sorting Table (Belt Conveyor), Rotary Fruit & Vegetable Washing Machine, Blancher, Dicing & Cubing Machine, Dehydrator	1
29	Pre-cooling room walk in Cooler Room Size 3.65m x 2 3.65m x 23.05 m (H), capacity 2.5 tonmes	1
30	Cold storage room Size 7.01 m x 23.35m x 23.3528, capacity 20 tonnes	1
31	LCD Projector	1
32	Microscope	1
33	Laminar flow cabinet with SS table accessories for laminar flow, Transparent front door, static manometer, UV light for laminar flow, cock for gas or vacuum line	1
34	Ripening chamber	2
35	Pulper	1
36	Homogenizer	1
37	Groundnut pod grader model	1
38	Cumin cleaner cum grader model	1
39	Fruit grader model	1
40	Aloe Vera gel extractor machine model	1
41	Multicrop cleaner cum grader model	1
42	Onion grader model	1
43	Digital humidity temperature meter with infrared thermometer	2

44	Digital portable hand refractometer 0-55 brix	2
45	Digital portable hand refractometer 58-92 brix	1
46	Digital portable hand refractometer 0-70 brix	1
47	Ph meter	1
48	Ribbon blender	1
49	PDKV Mini Dall Mill	1
50	Pulse milling plant	1
51	Incubator cum mixer	1
52	Digital vernier caliper 0-200 mm LC 0.02	1
53	Digital vernier caliper 0-300 mm LC 0.02	3
54	Grain moisture meter	1
55	Spectrophotometer	1
56	Machine vision based colour sorting system machine vision	1
57	Three pan jaggary making machine	1
58	Desktop work station	1
59	Digital thermo hygrometer	2
60	Digital GSM tester	5
61	Digital thickness gauge	5
62	Drop tester	1
63	Forced convection apparatus brass tube	1
64	Fruit penetrometer	2
65	Fruit juice extractors	2
66	Stem jacketed kettle	1
67	Precision circulation waterbath	2
68	Continuous microwave dryer	1
69	Vapour absorption test apparatus	1
70	Thermal conductivity of liquid	1
71	Thermal conductivity measuring apparatus for metal rod.	1
72	Thermal conductivity measuring apparatus for powder	1
73	Automatic mild steel sieve shaker	1
74	Indented cylinder grader	1
75	Peanut flour base thabdi penda machine	1
76	Ultraviolet C Chamber for sapota	1
77	Vacuum packaging machine	1
78	Texture analyzer	1
79	Freeze dryer	1

80	Deep Freeze	1
81	Vacuum Heat Air Dryer	1

WORKSHOP:

The department is facilitated with workshop with sufficient staff and equipment to fabricate and repairing of processing machineries under PG research.

6.4.5. CONDUCT OF PRACTICAL AND HANDS-ON-TRAINING

Students conduct their practical in well-developed laboratories with modern equipment. They also under go Hands-on-Training for Mango Canning, Pulse Processing and Dehydration of vegetables as the Department possess Mango Canning Plant, Pulse Processing Plant and Dehydration Plant.






Hands on training for mango canning





Hands on training for potato processing










Practicals in laboratory

6.4.6. SUPERVISION OF STUDENTS IN PG/PHD PROGRAMMES

Every student shall have Student Advisory Committee to guide the student during the study programme. The advisory committee for PG scholar shall comprise of a Major Guide, Minor Guide and members. One members will be from other related field of thesis research. If the topics involve more of inter-disciplinary approach, the number of advisory committee members from other disciplines may be increased by one with prior approval of the Dean, PG studies. Only recognized teachers are eligible for teaching and guiding PG students. The research problem will be selected as per the need of the farmers, existing problems including basic, strategic and applied research. Programme of Research proposed by the Advisory Committee and approved by the Dean, PG studies will be carried out by the student under the supervision of Advisory Committee. Total 105 M. Tech. students are passed out from the Department of Processing and Food Engineering, 8 M. Tech. from Agricultural Product Process Engineering Department, Anand, 2 M. Tech. from Renewable Energy and Rural Engineering Department, SK Nagar and received degree from this department.

Table 48. Student Intake and Student to teacher ratio of the Department

Year	Theory	Practical	Project
2020-21	0.86:1	0.86:1	0.86:1
2021-22	1:1	1:1	1:1
2022-23	1:1	1:1	1:1
2023-24	1:1	1:1	1:1
2024-25	1.14:1	1.14:1	1.14:1

Table 49. Details of PG students' guidance.

SN	Title of Thesis	Name of Student	Name of Advisor	Remarks/ achievement
	2020-21			
1	Foam Mat Drying of Papaya Pulp for Preparation of Papaya Powder	Parmar Arjun Ranmalbhai	Dr. P.R. Davara	-
2	Foam Mat Drying of Prickly Pear (Opuntia elatior Mill.) Pulp for Preparation of Good Quality Powder	Chougale Bhaskar Dadaso	Dr. V.P. Sangani	-
3	Design and Development of Three Pan Jaggery Making Furnace for Sugarcane Juice	Barad Tejas Haribhai	Dr. V.K. Chandegara	-
4	Low Temperature Grinding of Fenugreek (Trigonellafoenum-graecum) Seeds	Sirwani Prakash Mukesh	Dr. M.N. Dabhi	-
	2021-2022			
1	Study on Storage Stability of Dragon Fruit (*Hylocereus polyrhizus*) Juice and Concentrate	Bablu Kumar	Dr. N.K. Dhamsaniya	-
2	Development of Muffins Incorporated With Plant Based Functional Ingredients	Sabhadiya Himanshi Rameshbhai	Dr. V.P. Sangani	-
3	Optimization of Process Parameters for the Preparation of Peanut Sauce Using Acid Hydrolysis Method	Kothadiya Udaykumar Vallabhbhai	Dr. P.R. Davara	-

2022-23				
1	Effect of Pretreatment and Drying Methods on Quality of Turmeric Rhyzomes (Curcuma Longa)	Ms. Parmar Ravinaben Girishbhai	Dr. M.N. Dabhi	-
2	Development of Gluten Free Pizza Base Using Barnyyard Millet and Soy Flour	Ms. Thaker Brinda Ashvinbhai	Dr. V.K. Chandegara	-
3	Extraction of Pectin from Custard Apple (Annona Squamosa L.) Peel and Its Utilization in Preparation of Jelly	Rohan Kumar Sahu	Dr. V.K. Chandegara	-
4	Development of protein enriched extruded product suitable for fasting	Vora Premal P.	Dr. S. P. Cholera	-
5	Optimization of process parameters of peanut sauce through fermentation technology	Vyas Vaibhav S.	Dr. P.R. Davara	-
	2023-24			
1	Study of packaging and storage of tender coconut water	B. Hemalatha	Dr. V.K. Chandegara	-
2	Development of extruded products from pearl millet flour blended with chickpea flour	Naghera Kuldeep P.	Dr. M.N. Dabhi	-
3	Drying of turmeric (Curcuma Long) in solar tunnel dryer	Patidar Pradip	Dr. S. P. Cholera	-
	2024-25			
1	Development of malted and fermented finger millet based beverages blended with beetroot and carrot juices	Diwate Poornima	Dr. V.K. Chandegara	-
2	Optimization of processing parameters for preparaton of extruded product using pearl millet flour blended with defatted peanut flour	Chocha Dhruv	Dr. P.R. Davara	-
3	Effect of microwave treatment, antioxidant and packaging materials on shelf life of pearl millet flour	Vidhya V.	Dr. V.P. Sangani	-

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.)

Feedbacks are collected from the respective stakeholders through various mechanisms like personal contacts, visitors register, emails, etc. The few of the feedbacks as received from the different stakeholders are appended in the Table 50 and the documentary evidences are provided in the Annexure-V.

Table 50. Feedback received from stakeholders

Feed back detail	Excellent	Very good	Good	Average
How do you rate the sequence and syllabus of the Courses studied in the previous semester?	27.27	63.64	9.09	0.00
How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?	36.36	36.36	27.27	0.00
How do you rate the relevance of the units in the Syllabus relevant to the course?	27.27	63.64	9.09	0.00
How do you rate the sequence of the units in the course?	27.27	63.64	9.09	0.00
How do you rate the allocation of the credits to the courses?	27.27	45.45	27.27	0.00
How do you rate the distribution of the contact hours among the course components (L-T-P)?	36.36	27.27	36.36	0.00
How do you rate the electives offered regarding their relevance to the specialization streams?	18.18	36.36	45.45	0.00
Rate the courses in terms of extra learning or self-learning considering the design of the courses.	27.27	45.45	18.18	9.09
Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.	18.18	54.55	27.27	0.00
How do you Rate the loading of the courses in a semester?	27.27	45.45	18.18	9.09
How was the evaluation/exam pattern of the courses?	45.45	27.27	27.27	0.00
How do you rate the objectives stated for each of the courses?	36.36	27.27	36.36	0.00
How do you rate the skill improvement from the courses?	18.18	54.55	27.27	0.00
How do you rate the practical exposure from the courses?	27.27	9.09	54.55	9.09
How do you rate the experiments about the real-life Applications?	18.18	45.45	27.27	9.09

6.4.8. STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS

Table 51. Details of student intake and attrition in the programme for last five years

Year	Sanctioned seats	Actual intake	Attrition	% Attrition
2020-21	6	6	2	33.33
2021-22	7	4	1	25
2022-23	7	3	0	0
2023-24	7	4	1	25
2024-25	8	7	0	0

6.4.9. ICT APPLICATION IN CURRICULA DELIVERY

(A) UG/PG Admission system

Junagadh Agricultural University (JAU) participates in a centralized Common Admission Portal, jointly managed by all four State Agricultural Universities (SAUs) of Gujarat, for the streamlined administration of admissions to diploma, undergraduate, postgraduate, and doctoral programmes. The portal enables prospective students to register, submit applications, pay fees online, track application status, and access rank lists. Additionally, applicants receive real-time SMS notifications regarding important updates such as entrance exams schedule and admission rounds.

On the administrative side, the portal supports several backend operations including application verification, eligibility validation, rank list generation, and programme allotment, thereby ensuring a uniform, transparent, and efficient admission process across all SAUs. Candidates can select their preferred colleges and degree programmes, and the system automatically allocates admissions based on merit and preference. The entire process, including the publication of merit lists and category-wise vacancy matrices, is conducted online to ensure accessibility, fairness, and transparency.

(B) Online Fees collection system

College students pay their semester fees online through the dedicated portal http://online.jau.in/student_fees/, which is accessible via the Student Corner on the official university website. The system supports multiple payment modes, including UPI,

credit/debit cards, and net banking, providing a convenient and secure method for fee transactions during subsequent semesters of various degree programmes.

The collected fees are directly deposited into the respective college's bank account, ensuring accuracy and transparency in financial management. Additionally, college administrators have access to real-time fee collection reports through the system, enabling effective monitoring and record maintenance.

(C) Academic activities

Simultaneously, the Academic Information Management System (AIMS) enhances curriculum delivery and monitoring by providing a dynamic digital interface for faculty and students. Through AIMS, instructors upload and share lecture notes, assignments, class materials, and video lectures, ensuring round-the-clock access to learning resources. The platform also supports online assessments, attendance tracking, and real-time academic monitoring, including faculty feedback and progress reports. These ICT-enabled features promote interactive learning, strengthen academic accountability, and create a personalized, student-focused educational environment at JAU.

(D) Teaching through ICT tools

Teaching is made by using PPT, videos, visual, animations and smart boards. During COVID-19 pandemic s, all classes are conducted online using the various platforms viz. Zoom, Google Meet through Google Classroom and WhatsApp applications during academic year 2020-21 and 2021-22. The teachers are taking live lectures as well as supplying the teaching materials using these platforms. The teachers are performing live practical on Zoom or Google Meet through Google Classroom platforms online for the students. The examinations are also conducted online using the Online Examinations Management Software (OEMS) and a proper evaluation is made to justify the students' efforts.

The faculty members are involved in preparing the virtual lectures in the well-developed virtual classroom facility in the university which is appreciated by the ICAR also.

(E) Examination Management system

The JAU Examination Management System (JEMS) is a comprehensive ICT-based platform that efficiently manages academic and examination-related activities for undergraduate and postgraduate students. It facilitates the entry of internal and external marks and streamlines critical postgraduate processes such as online submission of campus forms, synopsis, preliminary proposals, exam results, thesis evaluation and examination

panel selection, and final viva voce outcomes. Each stage - from submission by the major advisor to review by the Head of Department and Dean of the respective faculty, and final approval by the Dean of Postgraduate Studies and the Registrar - is conducted digitally through the JEMS portal. This robust system ensures timely tracking of student progress, adherence to academic timelines, and transparent, paperless record management

(F) Online Alumni Portal

The College of Agricultural Engineering and Technology (CAET) offers an online Alumni Portal where graduated students can register themselves and stay connected with the institution. The portal includes features such as searching alumni from other batches, viewing current city/location, and the ability to update personal profiles at any time throughout the year. This platform serves as a valuable tool for fostering professional networking, maintaining alumni engagement, and strengthening the bond between alumni and the institution.

(G) E-library

E-library for all the constituent colleges of the JAU is managed by the University Campus Library, established in the year 1978. The two storied new Building is located at the eastern side in the main campus. The Library with ICT platform is one of the most important centers of the University, which facilitates the teaching, research and extension program. Both students and faculty extensively use the facility. The Junagadh Agricultural University has given key prominence to the development of the library facilities at the headquarters as well as the constituent colleges and research stations.

Our library provides services students/faculties to constituent colleges, which come under Junagadh Agricultural University, viz., 5 at Junagadh campus like College of Agriculture, College of Agriculture Engineering & Technology, College of Horticulture, Junagadh, Post Graduate Institute of Agri. Business Management and College of Agriculture(Morbi, presently at Junagadh), 3 College of Agriuclture, at Khapat, Mota Bhandariya and Targhadiya, 3 Different Polytechnics of Agro Processing & Food Technology, Agriculture, Horticulture in the Junagadh campus, 3 Polytechnics of Agriuclture at Amreli, Dhari and Halvad and 1 Polytechnic of Agriucltural Engineering at Targhadiya.

Many knowledge-based services like that of Reference, Bibliography, INFLIBNET service. CD-ROM Databases, Internet browsing and e-services are provided by the library for its users.

Under Automation, library has RFID for the library circulation and security of library material along with OPAC through KOHA, thus the library is fully automized. Post Graduate and Doctorate theses of research scholars of different faculties and rare or important books and documents are digitized in the university library through the digitization camera available in the library. The library circulation section works with KOHA as well as LIBSYS library software.

Books, periodicals, theses, reports, maps and encyclopedia relevant to the mandate areas of the university have been stocked in the University Library and its constituent center. University Library is well equipped with 59509 text as well as reference books, 80 research journals/periodicals, 3982 thesis, 14000 bound volumes, 1037 e-books, 2 e-journals, various reports, maps and encyclopedia relevant to teaching, research and extension activities of the university. The library has offline database in the form of CAB, Agris, and Agricola as well as online database is available at e-library tab on university website. University Library subscribes 10 newspapers to acquaint users with daily news.

The university library renders its services to users from 8:00 to 18:10 h. A separate air conditioned reading room is developed with the best facilities as well as good ventilation and aeration. This AC reading room accommodates approximately 150 students. The Reading Room remains open for its users from 8.00 to 23.00 hours on working days whereas 8.00 to 14.00 hours on holidays.

(H) Internet

The College Cyberary, equipped with high-speed internet connectivity, provides students and faculty with seamless access to a wide range of online journals and academic databases. Key databases such as CABI, AGRIS, and AGRICOLA are available in CD-ROM format, while resources like INDIAN HARVEST are accessible as online databases. To enhance user experience, the library uses WinSPIRS, a Windows-based client interface, for efficient access to the various subscribed databases. This digital infrastructure supports academic research and learning by ensuring convenient and reliable access to global and national scientific literature.

The Library is equipped with 40 computer workstations with internet connectivity, along with scanning and CD writing facilities, all of which are extensively utilized by both students and faculty members for academic and research purposes. To support academic learning, the library also offers a Book Bank facility, through which students are provided with textbooks related to their respective subjects and semesters. This initiative ensures

that students have easy access to essential learning resources throughout their academic journey.

(I) Wi-fi facility

The University provides 24x7 Wi-Fi connectivity across key areas of the campus, including the library, departments, and hostels, with secure login-based authentication to ensure safe and reliable access. In addition, the main campus is connected through an IP-based network, allowing students and faculty members to access the internet seamlessly from their respective hostels and departments. This connectivity enables users to browse scholarly resources, access previous literature, stay updated with recent advancements, and enhance their academic and research pursuits.

The e-library is having following online access facilities:

J-Gateplus (Complete):

J-Gate is a comprehensive online indexing and access gateway to global e-journal literature. It has indexes more than 58 million journal articles from over 58,000 journals, covering multiple disciplines including science, technology, medicine, social sciences, and humanities.

J-Gate is highly useful in the agricultural discipline for researchers, students, faculty, and professionals by providing streamlined access to a wide range of scholarly literature. J-Gate indexes thousands of journals, including many in the field of agriculture such as: Agronomy, Soil Science, Horticulture, Agricultural Engineering, Plant Pathology, Crop Science and Animal Husbandry. J-Gate allows searches using: Keywords, Author names, Journal titles & Subject categories. This helps agriculture researchers find specific articles or trends efficiently. Junagadh Agricultural University use J-Gate through consortia like: CeRA (Consortium for e-Resources in Agriculture) by ICAR.

CeRA:

CeRA (Consortium for e-Resources in Agriculture) plays a vital role in agriculture by providing **access to a wide range of electronic journals and research resources** to Junagadh Agricultural university. CeRA is the ICAR Consortium of e-resources in Agriculture. This covers more than 3000 scholarly journals pertaining to the Agriculture and allied sciences which are available in full text. Its main functions include:

Facilitating access to scholarly literature for scientists, researchers, and students in agriculture and allied sciences. **Promoting information sharing** among ICAR institutes

and State Agricultural Universities (SAUs). **Supporting research and innovation** by offering timely and comprehensive digital resources. Overall, CeRA enhances the **quality and reach of agricultural research and education** in India.

ASTRAL:

Junagadh Agricultural University have purchased 630 e-books from Astral International (P) Ltd. These e-books are related to agriculture and allied sciences.

ScienceDirect:

Junagadh Agricultural University has subscription of ScienceDirect, a leading full-text scientific database from Elsevier, is highly valuable in agricultural research and education. It provides access to peer-reviewed journals, book chapters, and research articles.

KrishiKosh:

KrishiKosh is a digital repository of agricultural knowledge in India, developed and maintained by the Indian Council of Agricultural Research (ICAR). ICAR have provided access to all the State Agricultural University of India. These digital repositories include theses, research papers, reports, books, journals, and other academic resources in agriculture and allied sciences.

Krishikosh is a database of theses submitted to the Agriculture universities and ICAR institutions are freely accessible by students. The JAU Library is member for Krishikosh and all the theses submitted to the JAU are being uploaded regularly.

EBSCOhost:

Junagadh Agricultural University has subscription of is also powerful online research platform provided by EBSCO Information Services that gives access to a wide range of academic, scientific, and professional databases. **EBSCOhost** is offering access to : Scholarly journals, E-books, Magazines, Research articles, Conference papers across multiple disciplines including **agriculture** and allied sciences.

NIPAERS:

The JAU has access to 204 e-books.

e-KrishiShiksha:

e-KrishiShiksha is the ICAR e-learning portal on agricultural education.

Art & Science Academic Publications (ASAP):

ASAP is providing access of e-books from more than 51 publishers across the globe in various fields to JAU based on IP and Login.

Commodities:

The recent news on agricultural commodities is published on this platform. The university has acceptance of the usage agreement & privacy policy with Centre for Monitoring Indian Economy Pvt. Ltd.

6.4.10. CERTIFICATE

I the Dean, College of Agricultural Engineering & Technology, Junagadh Agricultural University, Junagadh, hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college and degree awarding university.

July 16, 2026

(K . C. Patel)
Principal & Dean
College of Agril. Engg. & Tech.
JAU, Junagadh

SELF STUDY REPORT FOR
M.Tech. (AGRIL. ENGG.)
PROGRAMME IN THE DISCIPLINE OF

RENEWABLE ENERGY ENGINEERING

6.4. SELF STUDY REPORT FOR THE M.TECH. (AGRIL. ENGG.) IN DISCIPLINE OF RENEWABLE ENERGY ENGG. (REE) DEGREE PROGRAMME

6.4.1. BRIEF HISTORY OF THE DEGREE PROGRAMME

EVOLUTION OF THE P.G. PROGRAMME:

Since inception of the College of Agricultural Engineering & Technology, the department is functioning. In beginning, the department was known as Agricultural engineering to take care of Basic Science and Engg. subjects in B.Tech. (Ag. Engg.) programme. However, later realizing the importance and potential of renewable energy of the region, the department was renamed as Renewable Energy & Rural Engineering in year 1992. The M Tech. (Agril. Engg.) in the disciplines of Renewable Energy Management was started in year 1994 and later the nomenclature of the degree was changed to Renewable Energy Engineering in year 2001 whereas the Ph.D. was started from year 2005. The main aim of the department is to strengthen the Agricultural Engineering Faculty by carrying out teaching in the areas of Renewable Energy Engineering. The department is also offering UG teaching in Civil Engineering and Basic Sciences & Humanities as well as research and extension activities in the areas of Renewable Energy Engineering.

OBJECTIVES

- To develop department as a center of excellence in the area of renewable energy, imparting quality education, generating competent and skilled human power to face the scientific, technological, managerial and social challenges with high degree of credibility, integrity, ethical standards and social concern.
- To undertake R & D activities in the areas of Renewable Energy in Agriculture viz. solar thermal energy, Solar PV technology, Biomass gasification, Biogas technology, Biofuel technology, Wind energy and Energy Conservation in agro industries along with Plasticulture Engg. & Technology area for helping the farmers.
- To carry out short term and vocational training and other extension activities in the above areas for transfer & popularization of technology.

FACILITIES AND SERVICES:

The Department has 2 wings (C & G) with different teaching/research Labs having full facilities of instruments and equipment required to teach UG/PG level courses. Both the wings of the department are having LAN and Wi-Fi internet connection. Additionally,

both the department has 01 office/Room for HoD, 01 Rooms for administrative staff and 15 Office/Rooms for the Faculty/Technical staff/Supportive staff in main building. It has well equipped 10 Laboratories in department, 2 Fields (Renewable energy park, plasticulture farm), 1 training hall. 1 PG classroom and 1 seminar hall. The approx 20 KW solar plant is established as part green energy initiatives inform of agrivoltaic and hybrid type SPV plants. The department library contains several Text/Reference books on Solar energy, bioenergy, wind energy, thermochemical conversion of biomass, waste management, biochemical conversion of biomass, basic science along with Practical manual, technical bulletins, Annual reports etc. Apart from the Labs facilities, the department has common facilities like A/C lecture room of 40 seating capacity with LCD multimedia display system, PG lecture cum seminar hall, Departmental Library, A/C Computer Room for Faculty & PG Students, clean drinking water facilities for Faculty & Students, Greenhouses & Net houses complex, Well-furnished faculty rooms with Internet connection. The UG/PG practicals, departmental research experiments, AICRP experiments, as well as UG/PG research experiments, are undertaken in the renewable energy farm. The renewable energy park is also having demonstration of different types of greenhouses, windmills, Agri-voltaic system, Thermochemical & Biochemical Conversion systems, Hybrid and On-grid SPV plants etc.

Table 52. Infrastructure Facilities

SN	Facilities	Size	Nos.
1	Office/Room for HoD with computer, printer and required peripherals	4.8 m x 4.6 m	01
2	Administrative office/room	4.5 m x 4.6 m	01
3	Office/chamber/Room separate for each faculty/staff with computer, printer and required peripherals.	5.0 m x 3.0 m	15
4	Department library	5.6 m x 3.9 m	01
5	Laboratories in department	Given Lab list	10
6	Departmental farm	Given farm facilities list	02

ACCOMPLISHMENTS:

M. Tech. (Agril. Engg.)-REE student's research outcomes which are helpful for the farming community and further research are highlighted in Table 53 below.

Table 53. Students' research topics linked with staff research projects

SN	Title of Thesis	Name of Student	Name of Guide	Month/Year of submission
	M Tech (Agril. Engg.)-Renewable Energy Engineering Thesis			
1	Techno-Economic performance study of solar water pumps installed in Junagadh district	Dhanawade Abhinay Dattatray	Dr. P. M. Chauhan	January, 2021
2	Techno-Economic performance of the agrivoltic system for cultivation of cucumber	Bhuva Dhara Mansukhbhai	Dr. P. M. Chauhan	June, 2021
3	Design and development of solar farm rickshaw	Pranay Lanjekar	Dr. M. S. Dulawat	October, 2021
4	Soilless cultivation of cucumber in poly-carbonate greenhouse	Yash Modhvadiya	Prof. M. J. Gojiya	October, 2022
5	Performance study of solar tunnel dryer for medicinal plants	Anisha Pradhan	Dr. P. M. Chauhan	October, 2022
6	Development and performance evaluation of solar powered weeder and boom sprayer	Raju Gouda	Dr. M. S. Dulawat	December, 2023
7	Production of activated biochar using physical and chemical activation from cotton and pigeon pea feed stalk	Faldu Dhruvkumar J.	Prof. M. J. Gojiya	May, 2024
8	Application of activated biochar as an adsorber for removing contaminants of dairy processing plant wastewater	Barad Ankitkumar Keshurbhai	Dr. M. S. Dulawat	November, 2024
9	Drying performance of solar tunnel dryer for fenugreek and curry leaves	Bhogesara Asmita V.	Prof. M. J. Gojiya	November, 2024
10	Enhancement of coconut shell and mesquite wood biochar properties by chemical activation	Bambhaniya Vijay U.	Prof. M. J. Gojiya	October, 2025

EXTERNAL FUNDED PROJECTS

Table 54. Completed projects/schemes

SN	Name of the project/scheme	Date of start	Date of termination	Sponsoring Agency
1	ICAR Adhoc Research Project: Soil Solarization for Nursery Raising	2000	2003	ICAR, Adhoc Scheme
2	Establishment of Energy Park	1996	1999	MNRE, GoI

Table 55. Ongoing projects/schemes

SN	Name of the Project / Scheme	Starting Year
1	AICRP on Plasticulture Engineering in Agriculture Structure and Environment Management (ICAR) (BH. 2258-B)	2004
2	State Govt. Plan Scheme on Strengthening of Department of Renewable Energy & Rural Engg. (BH. 12121)	2013-14
3	Consortia Research Platforms (CRPs) on Energy from Agriculture (BH. 2260)	2015-16

6.4.2 FACULTY STRENGTH

Table 56. Faculty strength

S N	Sanctioned Faculty	Faculty in Place	Vacant position	Faculty recommended by ICAR	Deviations from ICAR recommendations	Remarks
Department of Renewable Energy Engineering (REE)						
1	Professor (REE)	0	1	1	-1	--
2	Associate Professor (REE)	1	1	2	-1	--
3	Assistant Professor (REE)	2	2	4	-2	--
Strethening of Dept. of Renewable energy Engineering (BH 12121)						
4	Assistant Professor (REE)	1	1	--	+1	--
Basic Engineering and Applied Science (BEAS)						
5	Associate Professor (BEAS)	0	2	2	-2	--
6	Assistant Professor (BEAS)	5	0	3	+2	1-REE, 2-PFE, 1-FMPE, 1-DSW
Services of Assistant professors from other department to carry out courses and guidance to the PG students.						

7	Assistant Professor of Ag. Engg., CoA, JAU, Junagadh	1	0	-	-	-
8	Assistant Professor of Office of DR, JAU, Junagadh	1	0	-	-	-
AICRP on Plastic Engineering in Agriculture Structure and Environment Management						
9	Research Engineer (Assoc. Prof.)	0	1	--	--	--
10	Post-harvest Engineer (Asst. Prof.)	1	1	--	--	--
	Total	**12**	**09**	**12**	**-3**	

6.4.3. TECHNICAL AND SUPPORTING STAFF:

Table 57. Technical/Supporting staff position

SN.	Sanctioned Staff	Staff in place	Vacant position	Staff recommended by ICAR/UGC/VCI/Other regulatory bodies	Deviations from ICAR recommendations
Department of Renewable Energy Engineering					
1	SRA / Tech.Asst.	2	0	2	0
2	Lab. Technician	1	1	2	-1
3	Draftsman (Civil)	0	1	1	-1
4	Messenger/ Peon	1	0	--	--
***AICRP on* Plasticulture Engineering & Technology**					
5	SRA / Tech.Asst.	0	1	1	-1
Contractual Basis					
6	Jr. Clerk	1	--	--	--
7	Peon	1	--	--	--
	Total	**6**	**3**	**6**	**-3**

Note: *Besides the above, the department has 1 SRF, One YP-2 working in ICAR projects*

6.4.4. CLASSROOMS AND LABORATORIES:



Department of Renewable Energy Engineering

Department with the facilities:

- Departmental Library
- Smart PG lecture room and seminar hall
- Departmental laboratories
- Computer Room with Xerox facility
- Hybrid solar power plant with the capacity of 10 kW for power backup
- Agrivoltaic plant with capacity of 13.5 kW power supply
- Informative educational charts
- Individual faculty chambers with computers and printers
- Workshop facility

WELL-FURNISHED TRAINING HALL, SEMINAR HALL AND CLASSROOM EQUIPPED WITH AUDIO-VISUAL AIDS

A well-furnished training hall was developed with the capacity of 60 students. The hall is equipped with audio-visual aids, multimedia projector with screen, white board and computer with tables and cushioned chair. Similarly, seminar hall and PG lecture room with the capacity of 15 and 40 respectively have been available in department.

Table 58. Seminar Hall and classroom

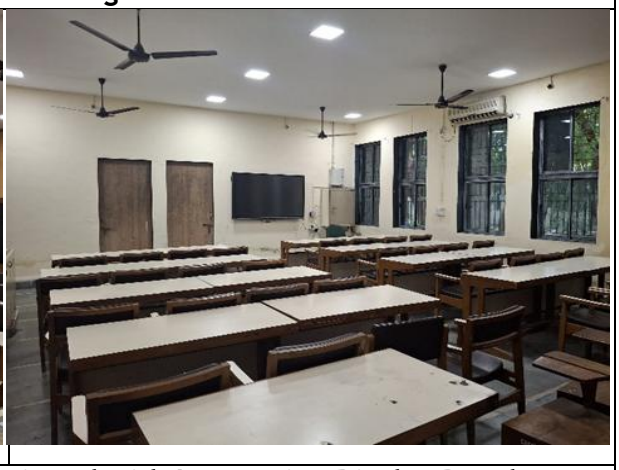
Sr. No	Classroom	Area (m x m)	Seating capacity	Other facilities
1	Training Hall	12.20 X 9.10	60	LCD Projector-1 Plasma Screen-1 Computer-1 Furniture (Tables with cushioned chair)
2	Seminar Hall	6.6 X 4.5	15	Interactive Display Panel -1 Furniture (Tables with cushioned chair) AC-1
3	PG Lecture Room	9.2 X 7.4	40	Interactive Display Panel -1 Furniture (Tables with cushioned chair)




Well-furnished training hall equipped with multimedia projector




Well-furnished Seminar Hall equipped with Interactive Display Panel, Cam, Sound for Online meeting

Well-furnished PG Lecture room equipped with Interactive Display Panel

Table 59. MajorLaboratories

S.No.	Name of laboratory	Area (m x m)	Working capacity
1	Biomass Gasification Lab.	15.0 x 8.0	50
2	Solar Energy Lab.	9.60 x 7.60	50
3	Bioenergy Lab.	9.20 x 7.60	50

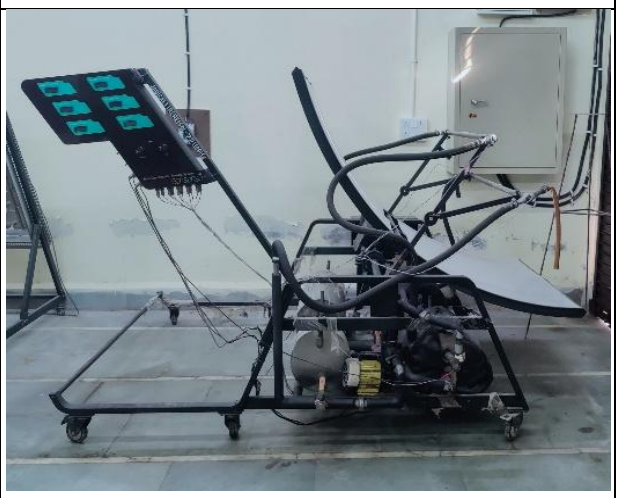
4	Wind Energy Lab.	15.25 x 7.60	50
5	Physics lab.	12.15 x 7.60	50
6	Chemistry lab.	12.30 x 7.60	50
7	Civil Engg. Lab.	7.60 x 9.10	50
8	Ultramorden Communication Lab. (Language Lab.)	7.60 x 9.10	50
9	Experiential learning for production and management of RSE lab.	7.60 x 9.10	50
10	AICRP on PEASEM Lab.	12.15 x 7.60	50

Table 60. List of major equipment

SN	Equipment Name	No. of Equipment
1	Sunshine recorder	1
2	Biomass gasifier plant (down draft)	1
3	Rockwell hardness testing machineSurveying equipment	1
4	Wind pump	1
5	Hot air oven	1
6	Precooler	1
7	L. C. D. projector	2
8	Plate bending machine	1
9	Shearing machine	1
10	Precision lathe machine	1
11	Modern workshop facility for fabrication of solar appliances	1
12	Modified atmosphere packaging machine	1
13	Shrink wrapping machine	1
14	Muffle furnace	2
15	Solar precision pyranometer with data logger	2
16	Solar PV pump	1
17	Zener characteristic circuit	1
18	B.O. D. incubator	1
19	Dissolved oxygen meter	1
20	C.O.D. digestion apparatus	1
21	Water bath	1
22	Computerized UTM 100-ton capacity	1

23	Horizontal wind turbine	1
24	Gas Chromatograph	1
25	Solar PV Trainer	1
26	Biogas plant with burners	1
27	Solar Thermal Training System	1
28	Biogas Analyser	1
29	Pore Point Apparatus	1
30	Digital Gas flowmeter	1
31	Biogas flow meter	1
32	Wind turbine Emulator	1
33	Wind Energy Training System	1
34	Biomass Briquetting Machine	1
35	Pyrheliomter with datalogger	1
36	Solar Concentrator Training system	1
37	E/M apparatus	1
38	LCR circuit	1
39	Biomass gasifiers	4
40	50 kW solar power plant	2
41	Bomb calorimeter	2
42	Junker's calorimeter	2
43	Lab-scale Biodiesel plant with major properties measurement apparatus (Flash point, Density, Viscocity etc.)	1
44	JAU Model Agri-voltaic System (13.5 kW)	1
45	load testing machine (electronic)	1
46	Willy mill	1
47	10 kW Solar Hybrid Inverter	1
48	Pellet making machine	1
49	Hybrid Solar PV plant (6.2 kW)	1
50	Solar Tracking Robot	1
51	Portable I-V checker for SPV plant	1
52	Vertical wind turbine	2
53	Spectrum-Temperature/Humidity Model No. 1250	2
54	Plant Growth Station	1
55	Automatic Methane potential test system	1
56	Compact Weather Station	1
57	Interactive Display Panel	2

PHOTOGRAPHS OF THE DIFFERENT MAJOR INSTRUMENTS OF THE LABORATORIES WITH DEVELOPED TECHNOLOGIES

	
Solar Tracking Robot	**Lab-scale Biodiesel plant**
	
Solar Thermal Training System	**Solar Concentrator Training System**
	
SPV Plant	**Open-core Down Draft Gasifier System**

	
Polycarbonate Greenhouse	Agri-voltaic system
	
Biomass Briquetiing Machine	Biomass Pelleting Machine
	
Automatic Methane Potential Test System	Solar tunnel dryer

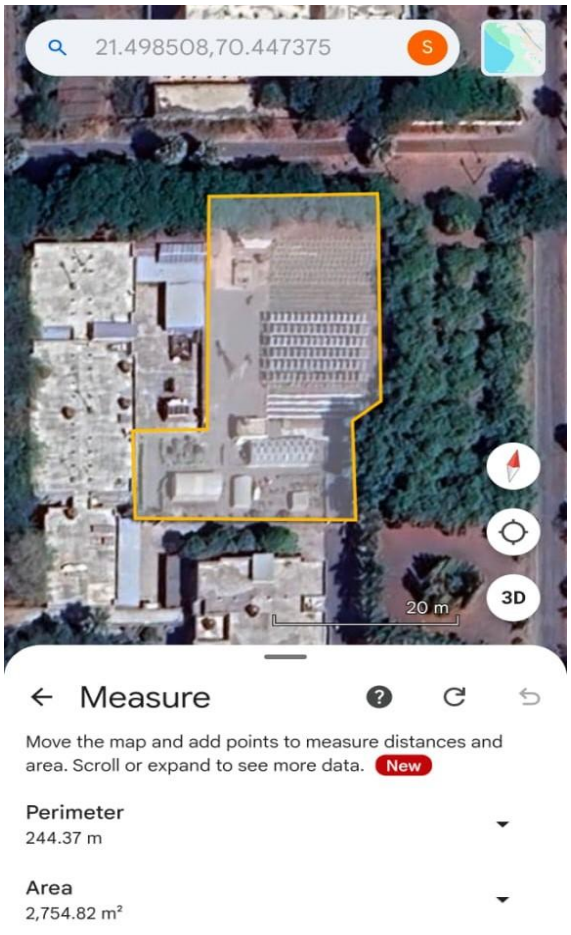
	
Evaporative cooling system	Agrivoltaic greenhouse
	
Water gas shift Reactor	Solar powered tractor
	
Fixed dome type biogas plant	Floating drum type biogas plant

	
Gas chromatograph	Solar rikshaw
	
Furnace	Automatic bomb calorimeter
	
Viscometer	Hot air oven

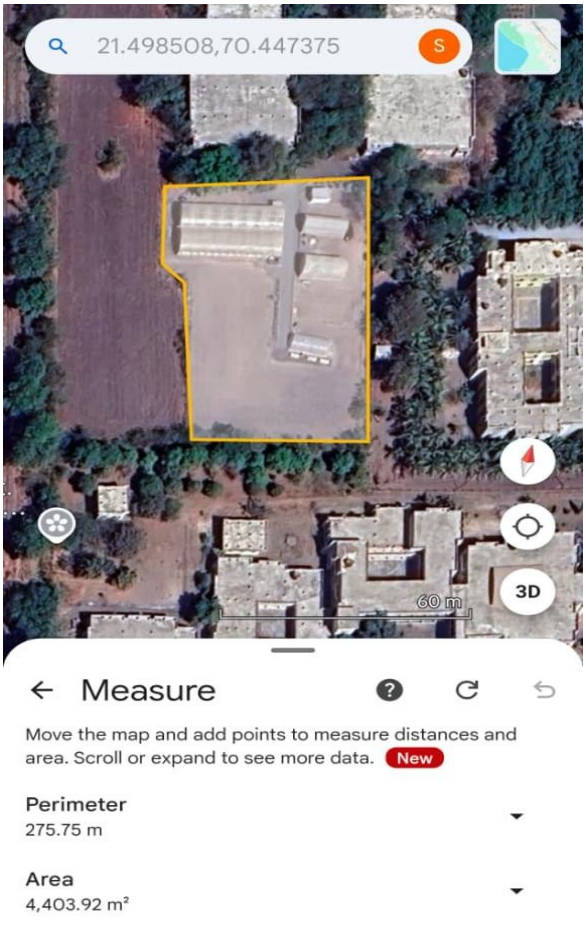
Table 61. Farm facilities

SN	Name of the Department	Farm area	Irrigated/ Non-irrigated	Crops grown
1	**Renewable Energy Park** • Agri-voltaic Greenhouse • Agri-voltaic system (13.5 kW) • Roof top solar Power plant • Wind pump • Solar water Pump • Biomass Shed • Horizontal and Vertical Wind turbine • Biogas Plant • Poly cum Shade-net House • Walk-in type Tunnel House • Net House	2755 sq. m	Irrigated	Crops as per objectives of the experiment
2	**Plasticulture park** • Polycarbonate greenhouse • Naturally ventilated greenhouse • Shade net greenhouse • Fan-pad greenhouse • Solar Tunnel dryer	4404 sq.m	Irrigated	Crops as per objectives of the experiment

Renewable Energy Park



Plasticulture park



P.G RESEARCH FACILITIES:

Research facilities available (Solar Photovoltaic, Solar Thermal sensors, Biomass, Biomass waste management, Bio energy, Thermochemical and bio chemical conversion of biomass, etc.) and workforce required for conducting PG research are facilitated.

WORKSHOP:

The required fabrication works and ELP's hands on training works are carried out in workshop available at Dept. of REE (C wing) of the college.

The department is facilitated with the equipment's which are sufficient to carry out the PG and PhD students' research. The field related equipment's, the land requirement for conducting the research work is also sufficient. The faculty members are well qualified to guide, mentor and handle the courses of PG and Ph.D. students to fulfil the course curriculum of supporting courses. Various hand tools and following machines were procured for training purpose and fabrication.

		
Power Shearing Machine	**Mechanical press brake**	**Plate Bending Machine**
		
Hack show, Drill and shearing machine	**Precision lathe machine**	**Surfacer, thicknesser, circular saw with blade grinder**

	
View of the installed machines in the workshop	View of the Installed machines and tools in the workshop

		
Tig welding, welding rectifier, arc welding transformer & compressor	Hand cut-off machine and wooden vice	Grinding Machine

6.4.5. CONDUCT OF PRACTICAL AND HANDS ON TRAINING

The Department has 2 wings (C & G) with different teaching/research Labs having full facilities of instruments and equipment required to conduct UG/PG level practices and training purposes. Both the wings of the department are having LAN and Wi-Fi internet connection

Students conduct their practicals in well-equipped laboratories featuring modern renewable energy systems and instrumentation. They undergo hands-on training in solar resource assessment using advanced tools such as pyranometers, PV analyzers, data loggers, and solar tracker. Practical exposure is also provided in the design, installation, and performance evaluation of solar photovoltaic and solar thermal systems.

Students receive specialized training in biomass energy through feedstock characterization, biogas/CBG plant operation, pyrolyser and gasifiers. They also gain experience in wind energy systems and its wind energy assessment using anemometers and data acquisition systems.

The department also offering minor courses in Renewable energy for the department of SWCE, FMPE and PFE.

	
Practical on biodiesel production and application	Practical on biogas plant
	
Practical on various solar appliances	Practical on biomass pyrolyzer
	
Practical on solar PV and concept of agrivoltaics	Practical on greenhouse and its benefits

6.4.6. SUPERVISION OF STUDENTS IN PG PROGRAMMES

Every M. Tech. student has an Advisory Committee with a Major Guide and at least three members among whom two members are from outside the major field of specialization. An Advisory Committee for Ph.D. student consists of a Major Guide and at least four members of whom 2 are from outside the major field of specialization. The

research problem is selected as per the need of the farmers, existing problems including basic, strategic and applied research. The student has to present the research proposal in seminar in the presence of an advisory committee as well as faculties of Major field. The suggestions/critics are considered by student before submitting the advisory committee proposes the synopsis to the advisory committee. The Programme of Research and recommended by PG Coordinator, Dean, Faculty of Agricultural Engineering and approved by the Dean, Director of Research & Dean, Post Graduate Studies. The Research work is carried out by the student under the supervision of Advisory Committee. Totally 10 M.Tech. (Agril. Engg.)-REE and 3 Ph.D. (Agril. Engg.)-REE doctoral students are passed out from the Department of Renewable Energy Engineering from academic year 2020-21 to 2025-26. The research is carried out by students is in renewable energy engineering like bio-chemical/thermo-chemical conversion technology, solar photo-voltaic and greenhouse technology etc.

Table 62. Student Intake and Student to teacher ratio of the Department

Year	No. of PG recognized teachers	Intake of students	Student to teacher ratio
		M Tech	
2020-21	3	1	1:3
2021-22	3	2	1:1.5
2022-23	3	2	1:1.5
2023-24	3	1	1:3
2024-25	4	2	1:2

Table 63. Details of PG students' guidance.

SN	Title of Thesis	Name of Student	Name of Advisor	Remarks/ achievement
2020-21				
1	Techno-Economics Performance Study of Solar Water Pumps Installed in Junagadh District	Dhanawade Abhinay Dattatray	Dr. P.M. Chauhan	-
2	Techno-Economic performance of the agrivoltic system for cultivation of cucumber	Bhuva Dhara Mansukhbhai	Dr. P.M. Chauhan	-
2021-22				
3	Design and development of solar farm rickshaw	Pranay Lanjekar	Dr. M. S. Dulawat	-

2022-23				
4	Soilless cultivation of cucumber in poly-carbonate greenhouse	Yash Modhvadiya	Prof. M. J. Gojiya	-
5	Performance study of solar tunnel dryer for medicinal plants	Anisha Pradhan	Dr. P. M. Chauhan	-
2023-24				
6	Development and Performance Evaluation of Solar Powered Weeder and Boom Sprayer	Raju Gouda	Dr. M. S. Dulawat	-
7	Production of activated biochar using physical and chemical activation from cotton and pigeon pea feed stalk	Faldu Dhruvkumar J.	Prof. M. J. Gojiya	-
2024-25				
8	Application of activated biochar as an adsorber for removing contaminants of dairy processing plant wastewater	Barad Ankitkumar Keshurbhai	Dr. M. S. Dulawat	-
9	Drying Performance of Solar Tunnel Dryer for Fenugreek and Curry Leaves	Bhogesara Asmita V.	Prof. M. J. Gojiya	-
10	Enhancement of coconut shell and mesquite wood biochar properties by chemical activation	Bambhaniya Vijay U.	Prof. M. J. Gojiya	-

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.)

Feedbacks are collected from the respective stakeholders through various mechanisms like personal contacts, visitors register, emails, etc. The few of the feedbacks as received from the different stakeholders are appended in the Table 64 and the documentary evidences are provided in the Annexure-VI.

Table 64. Feedbacks received from stakeholders

No.	Feedback detail	Excellent	Very Good	Good	Average	Poor
1	How do you rate the sequence and syllabus of the Courses studied in the previous semester?	10	60	30	0	0
2	How do you rate the syllabus of the courses that you have studied	0	60	40	0	0

	about the competencies expected out of the course?					
3	How do you rate the relevance of the units in the Syllabus relevant to the course?	0	40	60	0	0
4	How do you rate the sequence of the units in the course?	0	50	50	0	0
5	How do you rate the allocation of the credits to the courses?	10	50	40	0	0
6	How do you rate the distribution of the contact hours among the course components (L-T-P)?	10	70	20	0	0
7	How do you rate the electives offered regarding their relevance to the specialization streams?	10	50	40	0	0
8	Rate the courses in terms of extra learning or self-learning considering the design of the courses.	10	60	30	0	0
9	Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.	10	50	40	0	0
10	How do you Rate the loading of the courses in a semester?	20	40	40	0	0

11	How was the evaluation/exam pattern of the courses?	20	40	40	0	0
12	How do you rate the objectives stated for each of the courses?	0	60	40	0	0
13	How do you rate the skill improvement from the courses?	0	40	50	10	0
14	How do you rate the practical exposure from the courses?	0	60	30	10	0
15	How do you rate the experiments about the real-life Applications?	0	50	50	0	0
16	Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)	-	-	-		-

6.4.8. STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS

Table 65. Details of student intake and attrition in the programme for last five years

Year	Sanctioned seats	Actual intake	Attrition	% Attrition
	M.Tech.	M.Tech.	M.Tech.	M.Tech.
2020-21	3	1	0	0
2021-22	3	2	0	0
2022-23	2	2	0	0
2023-24	3	1	0	0
2024-25	2	2	0	0
Total	**13**	**8**	**0**	**0**

6.4.9. ICT APPLICATION IN CURRICULA DELIVERY

(A) UG/PG Admission system

Junagadh Agricultural University (JAU) participates in a centralized Common Admission Portal, jointly managed by all four State Agricultural Universities (SAUs) of Gujarat, for the streamlined administration of admissions to diploma, undergraduate, postgraduate, and doctoral programmes. The portal enables prospective students to register, submit applications, pay fees online, track application status, and access rank lists. Additionally, applicants receive real-time SMS notifications regarding important updates such as entrance exams schedule and admission rounds.

On the administrative side, the portal supports several backend operations including application verification, eligibility validation, rank list generation, and programme allotment, thereby ensuring a uniform, transparent, and efficient admission process across all SAUs. Candidates can select their preferred colleges and degree programmes, and the system automatically allocates admissions based on merit and preference. The entire process, including the publication of merit lists and category-wise vacancy matrices, is conducted online to ensure accessibility, fairness, and transparency.

(B) Online Fees collection system

College students pay their semester fees online through the dedicated portal http://online.jau.in/student_fees/, which is accessible via the Student Corner on the official university website. The system supports multiple payment modes, including UPI, credit/debit cards, and net banking, providing a convenient and secure method for fee transactions during subsequent semesters of various degree programmes.

The collected fees are directly deposited into the respective college's bank account, ensuring accuracy and transparency in financial management. Additionally, college administrators have access to real-time fee collection reports through the system, enabling effective monitoring and record maintenance.

(C) Academic activities

Simultaneously, the Academic Information Management System (AIMS) enhances curriculum delivery and monitoring by providing a dynamic digital interface for faculty and students. Through AIMS, instructors upload and share lecture notes, assignments, class materials, and video lectures, ensuring round-the-clock access to learning resources. The

platform also supports online assessments, attendance tracking, and real-time academic monitoring, including faculty feedback and progress reports. These ICT-enabled features promote interactive learning, strengthen academic accountability, and create a personalized, student-focused educational environment at JAU.

(D) Teaching through ICT tools

Teaching is made by using PPT, videos, visual, animations and smart boards. During COVID-19 pandemic s, all classes are conducted online using the various platforms viz. Zoom, Google Meet through Google Classroom and WhatsApp applications during academic year 2020-21 and 2021-22. The teachers are taking live lectures as well as supplying the teaching materials using these platforms. The teachers are performing live practical on Zoom or Google Meet through Google Classroom platforms online for the students. The examinations are also conducted online using the Online Examinations Management Software (OEMS) and a proper evaluation is made to justify the students' efforts.

The faculty members are involved in preparing the virtual lectures in the well-developed virtual classroom facility in the university which is appreciated by the ICAR also.

(E) Examination Management system

The JAU Examination Management System (JEMS) is a comprehensive ICT-based platform that efficiently manages academic and examination-related activities for undergraduate and postgraduate students. It facilitates the entry of internal and external marks and streamlines critical postgraduate processes such as online submission of campus forms, synopsis, preliminary proposals, exam results, thesis evaluation and examination panel selection, and final viva voce outcomes. Each stage - from submission by the major advisor to review by the Head of Department and Dean of the respective faculty, and final approval by the Dean of Postgraduate Studies and the Registrar - is conducted digitally through the JEMS portal. This robust system ensures timely tracking of student progress, adherence to academic timelines, and transparent, paperless record management

(F) Online Alumni Portal

The College of Agricultural Engineering and Technology (CAET) offers an online Alumni Portal where graduated students can register themselves and stay connected with the institution. The portal includes features such as searching alumni from other batches, viewing current city/location, and the ability to update personal profiles at any time throughout the year. This platform serves as a valuable tool for fostering professional

networking, maintaining alumni engagement, and strengthening the bond between alumni and the institution.

(G) E-library

E-library for all the constituent colleges of the JAU is managed by the University Campus Library, established in the year 1978. The two storied new Building is located at the eastern side in the main campus. The Library with ICT platform is one of the most important centers of the University, which facilitates the teaching, research and extension program. Both students and faculty extensively use the facility. The Junagadh Agricultural University has given key prominence to the development of the library facilities at the headquarters as well as the constituent colleges and research stations.

Our library provides services students/faculties to constituent colleges, which come under Junagadh Agricultural University, viz., 5 at Junagadh campus like College of Agriculture, College of Agriculture Engineering & Technology, College of Horticulture, Junagadh, Post Graduate Institute of Agri. Business Management and College of Agriculture(Morbi, presently at Junagadh), 3 College of Agriuclture, at Khapat, Mota Bhandariya and Targhadiya, 3 Different Polytechnics of Agro Processing & Food Technology, Agriculture, Horticulture in the Junagadh campus, 3 Polytechnics of Agriuclture at Amreli, Dhari and Halvad and 1 Polytechnic of Agriucltural Engineering at Targhadiya.

Many knowledge-based services like that of Reference, Bibliography, INFLIBNET service. CD-ROM Databases, Internet browsing and e-services are provided by the library for its users.

Under Automation, library has RFID for the library circulation and security of library material along with OPAC through KOHA, thus the library is fully automized. Post Graduate and Doctorate theses of research scholars of different faculties and rare or important books and documents are digitized in the university library through the digitization camera available in the library. The library circulation section works with KOHA as well as LIBSYS library software.

Books, periodicals, theses, reports, maps and encyclopedia relevant to the mandate areas of the university have been stocked in the University Library and its constituent center. University Library is well equipped with 59509 text as well as reference books, 80 research journals/periodicals, 3982 thesis, 14000 bound volumes, 1037 e-books, 2 e-journals, various reports, maps and encyclopedia relevant to teaching, research and extension activities of the university. The library has offline database in the form of CAB,

Agris, and Agricola as well as online database is available at e-library tab on university website. University Library subscribes 10 newspapers to acquaint users with daily news.

The university library renders its services to users from 8:00 to 18:10 h. A separate air-conditioned reading room is developed with the best facilities as well as good ventilation and aeration. This AC reading room accommodates approximately 150 students. The Reading Room remains open for its users from 8.00 to 23.00 hours on working days whereas 8.00 to 14.00 hours on holidays.

(H) Internet

The College Cyberary, equipped with high-speed internet connectivity, provides students and faculty with seamless access to a wide range of online journals and academic databases. Key databases such as CABI, AGRIS, and AGRICOLA are available in CD-ROM format, while resources like INDIAN HARVEST are accessible as online databases. To enhance user experience, the library uses WinSPIRS, a Windows-based client interface, for efficient access to the various subscribed databases. This digital infrastructure supports academic research and learning by ensuring convenient and reliable access to global and national scientific literature.

The Library is equipped with 40 computer workstations with internet connectivity, along with scanning and CD writing facilities, all of which are extensively utilized by both students and faculty members for academic and research purposes. To support academic learning, the library also offers a Book Bank facility, through which students are provided with textbooks related to their respective subjects and semesters. This initiative ensures that students have easy access to essential learning resources throughout their academic journey.

(I) Wi-fi facility

The University provides 24x7 Wi-Fi connectivity across key areas of the campus, including the library, departments, and hostels, with secure login-based authentication to ensure safe and reliable access. In addition, the main campus is connected through an IP-based network, allowing students and faculty members to access the internet seamlessly from their respective hostels and departments. This connectivity enables users to browse scholarly resources, access previous literature, stay updated with recent advancements, and enhance their academic and research pursuits.

The e-library is having following online access facilities:

J-Gateplus (Complete):

J-Gate is a comprehensive online indexing and access gateway to global e-journal literature. It has indexes more than 58 million journal articles from over 58,000 journals, covering multiple disciplines including science, technology, medicine, social sciences, and humanities.

J-Gate is highly useful in the agricultural discipline for researchers, students, faculty, and professionals by providing streamlined access to a wide range of scholarly literature. J-Gate indexes thousands of journals, including many in the field of agriculture such as: Agronomy, Soil Science, Horticulture, Agricultural Engineering, Plant Pathology, Crop Science and Animal Husbandry. J-Gate allows searches using: Keywords, Author names, Journal titles & Subject categories. This helps agriculture researchers find specific articles or trends efficiently. Junagadh Agricultural University use J-Gate through consortia like: CeRA (Consortium for e-Resources in Agriculture) by ICAR.

CeRA :

CeRA (Consortium for e-Resources in Agriculture) plays a vital role in agriculture by providing **access to a wide range of electronic journals and research resources** to Junagadh Agricultural university. CeRA is the ICAR Consortium of e-resources in Agriculture. This covers more than 3000 scholarly journals pertaining to the Agriculture and allied sciences which are available in full text. Its main functions include:

Facilitating access to scholarly literature for scientists, researchers, and students in agriculture and allied sciences. **Promoting information sharing** among ICAR institutes and State Agricultural Universities (SAUs). **Supporting research and innovation** by offering timely and comprehensive digital resources. Overall, CeRA enhances the **quality and reach of agricultural research and education** in India.

ASTRAL :

Junagadh Agricultural University have purchased 630 e-books from Astral International (P) Ltd. These e-books are related to agriculture and allied sciences.

ScienceDirect:

Junagadh Agricultural University has subscription of ScienceDirect, a leading full-text scientific database from Elsevier, is highly valuable in agricultural research and education. It provides access to peer-reviewed journals, book chapters, and research articles.

KrishiKosh:

KrishiKosh is a digital repository of agricultural knowledge in India, developed and maintained by the Indian Council of Agricultural Research (ICAR). ICAR have provided access to all the State Agricultural University of India. These digital repositories include theses, research papers, reports, books, journals, and other academic resources in agriculture and allied sciences.

Krishikosh is a database of theses submitted to the Agriculture universities and ICAR institutions are freely accessible by students. The JAU Library is member for Krishikosh and all the theses submitted to the JAU are being uploaded regularly.

EBSCOhost:

Junagadh Agricultural University has subscription of is also powerful online research platform provided by EBSCO Information Services that gives access to a wide range of academic, scientific, and professional databases. **EBSCOhost** is offering access to : Scholarly journals, E-books, Magazines, Research articles, Conference papers across multiple disciplines including **agriculture** and allied sciences.

NIPAERS:

The JAU has access to 204 e-books.

e-KrishiShiksha:

e-KrishiShiksha is the ICAR e-learning portal on agricultural education.

Art & Science Academic Publications (ASAP):

ASAP is providing access of e-books from more than 51 publishers across the globe in various fields to JAU based on IP and Login.

Commodities:

The recent news on agricultural commodities is published on this platform. The university has acceptance of the usage agreement & privacy policy with Centre for Monitoring Indian Economy Pvt. Ltd.

6.4.10. CERTIFICATE

I the Dean, College of Agricultural Engineering & Technology, Junagadh Agricultural University, Junagadh, hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college and degree awarding university.

July 16, 2026

(K . C. Patel)
Principal & Dean
College of Agril. Engg. & Tech.
JAU, Junagadh

SELF STUDY REPORT FOR

Ph. D. (AGRIL. ENGG.)

PROGRAMME IN THE DISCIPLINE OF

SOIL & WATER CONSERVATION ENGINEERING

6.4. SELF STUDY REPORT FOR THE PH. D. (AGRIL. ENGG.) IN DISCIPLINE OF SOIL AND WATER CONSERVATION ENGINEERING (SWCE) DEGREE PROGRAMME

6.4.1. BRIEF HISTORY OF THE DEGREE PROGRAMME

EVOLUTION OF THE P.G./PH.D. PROGRAMME:

The B. Tech. (Agril. Engg.) Degree program is offered since the establishment of college in 1984. The M Tech. (Agril. Engg.) in the disciplines of Soil and Water Engineering (SWE) was started since 1994-95. From the year 2001, Ph.D. programme has also been started in discipline of Soil & Water Engineering. The Soil and Water Engineering Department under CAET, JAU, Junagadh has been bifurcated into Soil & Water Conservation Engineering (SWCE) and Department of Irrigation & Drainage Engineering (IDE) from 2017-18 with the implementations of 5th Dean's committee recommendations approved by ICAR, New Delhi. The primary aim of the degree program was training the students and meeting the trained man power requirement in the sector of Soil & Water Conservation Engineering, Watershed hydrology, Watershed Planning and Management, Ground Water Engineering, Remote Sensing and GIS, Applications of ML/AI/IoT technologies in water management and allied fields.

OBJECTIVES

- To create and nourish a stimulating learning environment that ensures a globally relevant education based on Eternal human values.
- To provide the intellectually and trained human resource for the public and private sector to develop the strategies of soil conservation, water conservation, augmentation of surface and groundwater resources through rainwater management and artificial groundwater recharge, groundwater management, enhancing water productivities and irrigation acreage through irrigation water management technologies.
- To conduct the research on soil and water conservation, artificial groundwater recharge and irrigation water management strategies and fosters interactions and collaboration between faculty, researchers, industry and farmers.
- To promote a supportive learning environment for life through implementing continuous learning programmes.

FACILITIES AND SERVICES:

DEPARTMENT FACILITIES

The department has 1 office/Room for HoD, 1 Room for Steno/PA, 1 Room for Administrative staff and 9 Office/Rooms for the Faculty/Technical staff/Supportive staff in main building. It has well equipped 4 Laboratories in department, 1 Field laboratory, 1 Instrumental Cell, 1 classroom and 1 seminar hall. The hydraulic park is well equipped with auto pumping unit, all water flow measuring structures and groundwater recharge filter testing set ups. The 50KW solar plant is established as part green energy initiatives. The roof top water harvesting measures are adopted with sunken pond and tube well recharge system. The department library has 325 Text/Reference books on Water Harvesting and Soil Conservation Structures, Watershed management & Modelling, Remote Sensing & GIS Applications, Watershed Hydrology, Groundwater Engineering, Fluid Mechanics, Soil Mechanics, Irrigation Engineering, Sprinkler and Micro Irrigation System, Drainage Engineering, Water Wells and Pumps, Open Channel Flow along with Practical manual, technical bulletins, Annual reports etc.

Table 1. Infrastructure Facilities

SN	Facilities	Size	Nos.
1	Office/Room for HoD with computer, printer and required peripherals	4.45m x 4.4 m	01
2	PA Steno Office/Room with computer, printer and required peripherals	4.45 m x 3.1m	01
3	Administrative Office/Room	4.45 m x 3.10 m	01
4	Office/Chamber/Room separate for each faculty/staff with computer, printer and required peripherals.	4.6 m x 3.10 m	09
5	Department Library	7.5 m x 5.6 m	01
6	Instrumental Cell	7.5 m x 4.5 m	01
7	Laboratories in Department	Given Lab list	04
8	Field Laboratory	Given Lab list	01
9	Instructional Farm	35 ha	01

FARM FACILITIES

The CAET Instructional farm is managed Soil and Water Conservation Engineering Department has total 35 ha area, out of which 25.20 ha area is under cultivation and rest of the area is covered under road, building, nallah etc. The area under horticultural crops are 10.40 ha like mango (1.95 ha), sapota (3.85 ha), coconut (0.85), Jamun (1.40 ha), custard

apple (1.25 ha) and lemon (1.10 ha). The rest of the cultivation area i.e. 14.66 ha is under field crops to produce breeder seed, certified seed and truthful seeds. Entire cultivated area of the farm is commanded by different micro irrigation systems. The farm has 2 open wells and 4 tube wells having potential of enough groundwater pumping. It has also 3 water harvesting structures from which the harvested water is used for life saving/supplemental irrigation to monsoon crops as well as few irrigations to winter crops too. It also helps to augment the groundwater resources.

The farm owns entire series of all farm equipment/implements with 2 tractors for primary /secondary tillage operations, 2 mini tractors for sowing/inter-culturing operations, thresher/ winnower etc.

Beside this, various soil and water conservation structures such as drop inlet spillway, drop spillway, check dams, runoff- soil erosion measurement structures and well recharge structure with filter are constructed on farm for demonstration purpose. The unique demonstration on tube well recharge using overflowing water from check dam spillway through connector well technique is also demonstrated. The process is going on to develop as a fully mechanized modern farm including fully automated drip irrigation system.

The M. Tech./Ph.D.(Agril. Engg.) as well as B. Tech.(Agril. Engg.) students' practical/ their research experiments, departmental research experiments as well as AICRP experiments are undertaken in the instructional farm.

ACCOMPLISHMENTS:

Ph. D. (Agril. Engg.)-SWCE students' research outcomes which are helpful for the farming community and further research are highlighted in Table 2 below.

Table 2. Students' research topics linked with staff research projects

SN	Title of Thesis	Name of Student	Name of Guide	Month/Year of submission
1	Development of Automatic closed canopy chamber for evapotranspiration measurement	Deepak kumar	H D Rank	June-2021
2	Estimation of Water Harvesting and Groundwater Recharge potential of dhatar wadi river basin using remote sensing and GIS	Jayswal Priti Suryanathprasad	N K Gontia	Aug-2021
3	Simulating the water footprint of sweet corn (zea mays L.) crop response to irrigation water	Prasang Harji Rank	R M Satasiya	July-2022

SN	Title of Thesis	Name of Student	Name of Guide	Month/Year of submission
	management strategies using aquacrop model			
4	Broccoli Crop Yield Response To Deficit Irrigation Practices In Soilless Media Under Protected Cultivation	Sojitra Manojkumar Arvindbhai	R M Satasiya	Dec-2022
5	Development of Drought Forecasting Indices and Crop Yield Modeling Using Remote Sensing and GIS	Pandya Parthsarthi Ashokkumar	N K Gontia	Jan-2023
6	Spatiotemporal Analysis of soil Salinity and soil Moisture Modelling Using RS and GIS for Coastal Region of Devbhumi Dwarka	Gojiya Kashyapkumar M.	H D Rank	Nov-2023
7	Soil Moisture Modelling and water Management in Bhadar Canal Irrigation Command Using Remote Sensing	Vithlani Nipa S.	H V Parmar	Mach-2024
8	Simulating the Hydrological Behaviour of sihan River basin under various climate change scenarios	Hirapara Paras S	H D Rank	June-2024
9	Identification of Potential Groundwater Recharge Zones for Gujarat State	Baria Sonal Vechat	H D Rank	Oct-2024
10	An assessment of climate change impact on reference evapotranspiration and rainfall for Gujarat	Ananya Mishra	H D Rank	July-2025
11	Assesment of water quality status in the Bhadar river basin using remote sensing and GIS	Dhiraj kumar	Dr. G.V. Prajapati	July-2025

EXTERNAL FUNDED PROJECTS

Table 3. Completed projects/schemes

Sr No	Name of the project/scheme	Date of start	Date of termination	Sponsoring Agency
1	National watershed development project (B. H.18023-4)	April, 1996	March, 1999	Plan scheme, GOI
2	Modeling Water and Energy Fluxes Over Forested System (B.H.18246-96)	April, 2015	March, 2017	ISRO
3	River Flow Simulations Integrating Satellite Data in Forested Catchment (B.H.18246-91)	August, 2017	March, 2022	ISRO

Sr No	Name of the project/scheme	Date of start	Date of termination	Sponsoring Agency
4	Modeling of water fluxes and ground water discharge using 1D- 2D coupled model and in situ measurements in the Gir forest catchment (B.H. 18126-25)	October, 2021	March, 2024	ISRO

Table 4. Ongoing projects/schemes

SN	Name of the Project / Scheme	Starting Year
1	Establishment of Instructional Farm for College of Agricultural Engineering and Technology (BH 12127)	1992-93
2	Research on Watershed Management (BH: 12905)	2000-01
3	Strengthening of Instructional farm at college of Agricultural Engineering and Technology. (BH. 12120)	2012-13
4	Centre of Remote Sensing and Geoinformatics in Agriculture (BH: 12024)	2012-13

6.4.2. FACULTY STRENGTH:

Table 5. Faculty Strength

SN	Sanctioned Faculty	Faculty in Place	Vacant position	Faculty recommended by ICAR	Deviations from ICAR recommendations	Remarks
Department of Soil and Water Conservation Engineering						
1	Professor	0	1	1	-1	-
2	Associate Professor	0	2	2	-2	-
3	Assistant Professor	2	2	4	-2	-
Centre of Remote Sensing and Geoinformatics in Agriculture						
4	Associate Professor	1	0	0	+1	-
5	Assistant Professor	1	0	0	+1	-
Services of Faculty from other department to carry out courses and guidance to the PG students.						
6	Research Engineer, AICRP on IWM, IDE	1	0	0	0	-
7	Assistant Professor, AICRP on IWM, IDE	2	0	0	0	-

SN	Sanctioned Faculty	Faculty in Place	Vacant position	Faculty recommended by ICAR	Deviations from ICAR recommendations	Remarks
8	Associate Professor, Polytechnic in Agril. Engg., Targhadiya	1	0	0	0	-
9	Associate Professor, DFRS, Targhadiya	1	0	0	0	-
10	Associate Professor, College of Agriculture, Khapat	1	0	0	0	-
11	Assistant Professor, IT Cell, JAU, Junagadh	1	0	0	0	-
12	Assistant Professor, PGIABM, JAU, Junagadh	1	0	0	0	-
13	Assistant Professor, College of Agriculture, Mota Bhandariya	1	0	0	0	-

6.4.3. TECHNICAL AND SUPPORTING STAFF:

Table 6. Technical/Supporting staff position

SN	Sanctioned Faculty	Staff in place	Vacant position	Staff recommended by ICAR/UGC/VCI/ Other regulatory bodies	Deviations from ICAR recommendations	Remarks
Department of Soil and Water Conservation Engineering						
1	Jr. Clerk	-	1	1	-1	-
2	PA/Steno	-	1	1	-1	-
3	Messenger/ Peon	-	1	1	-1	-

SN	Sanctioned Faculty	Staff in place	Vacant position	Staff recommended by ICAR/UGC/VCI/ Other regulatory bodies	Deviations from ICAR recommendations	Remarks
Centre of Remote Sensing and Geoinformatics in Agriculture						
4	Senior Research Assistant/ Agriculture Officer	1	-	-	+1	-
5	Agriculture Assistant	1	-	-	+1	-
Strengthening of Instructional farm at CAET						
6	Technical Assistant	1	1	-	+1	-
7	Agriculture Assistant	1	1	-	+1	-

Apart from this four persons are working on contractual basis, which includes 1 Jr. Clerk, 1 Peon and 1 Driver.

6.4.4. CLASSROOMS AND LABORATORIES:

Table 7. Classroom/Seminar hall

Sr. No	Classroom	Area (m x m)	Seating capacity	Other facilities
1	Seminar Hall	12.20 X 9.10	60	Display system-1 Plasma Screen-1 Computer-1 Furniture
2	Classroom	11.15 X 8.30	60	LCD Projector-1 Computer-1 Furniture

Table 8. Major Laboratories

SN	Name of laboratory	Area (m x m)	Working capacity
1	Soil Conservation Laboratory	9.10 x 7.60	50
2	Hydrology laboratory	9.25 x 8.30	50
3	Remote sensing & GIS Laboratory	9.10 x 7.60	50
4	Precision Agriculture Laboratory	9.20 x 6.00	50
5	Soil conservation field Laboratory (Runoff- Soil erosion measurement structure)	1220 sq.m	50

SN	Name of laboratory	Area (m x m)	Working capacity
6	Instrumental Cell	7.50 m x 4.5 m	50

Table 9. Major Equipment

SN	Equipment Name	No. of Equipment
1	Water sediment sampler	2
2	Soil conservation models	11
3	Hydraulic flume	1
4	Data logger system	1
5	Digital Rainfall Recorder	1
6	Water level recorder	1
7	Turbidity meter	1
8	Sediment sampler	4
9	Digital cone pentrometer	1
10	Core cutter apparatus set	5
11	Porometer	1
12	Pressure bomb apparatus	1
13	GPS	1
14	Scanner cum Plotter	1
15	Data logger with sensor	1
16	Digital evaporation recorder	1
17	Temp/RH Meter	4
18	LCD multimedia projector	1
19	ESRI ArcGIS Arc view software with single license	1
20	PCI Geomatica (5-user license) software	1
21	DHI Software Mike SHE, Temporal analyst Software	1
22	Boss Storm Net Software	1
23	Boss River CAD XP Complete Package	1
24	Surfer Software	1
25	Grapher Software	1
26	Aquachem Software	1
27	FEFLOW 5.3 Software	1
28	Multislot deviser	3
29	Soil thermometer	3
30	Digital planimeter	1
31	Nano Drone	5
32	Ordinary rain gauge (Non recording)	6
33	River sediment sampler	1
34	Pan Evaporimeter	4
35	Siphon type raingauge	3
36	Non - recording raingauge	5
37	Coshocton wheel	5
38	Water stage Recorder	2
39	Portable TDR soil moisture meter	2
40	Drone Kit for Lab	3
41	Crop Surveying Drone with 4k camera	1
42	Data retrieval system	3
43	Drone with Visible Camera	1
44	Drone with NIR Camera	1
45	NDVI Meter	1

Table 10. Instructional farm facilities

SN.	Crops grown	Farm Area (ha)	Status of Irrigation
1	Area is covered under road, building, nallah etc.	10.3	-
2	Mango	1.95	Drip Irrigated
3	Sapota	3.85	Drip Irrigated
4	Coconut	0.85	Drip Irrigated
5	Jamun	1.40	Irrigated
6	Custard Apple	1.25	Drip Irrigated
7	Lemon	1.10	Drip Irrigated
8	Field Crop Area	6.66	Mini Sprinkler Irrigated
		8.00	Sprinkler Irrigated
9	Civil facilities Runoff-soil erosion measurement structures	0.14	Rain fed

CIVIL STRUCTURE DEVELOPED FOR RESEARCH AT INSTRUCTION FARM, CAET AT JUNAGADH

Different civil structures have been developed at the instruction farm for the PG research work includes Soil conservation field laboratory (Runoff-Soil Erosion Measurement plots), water harvesting structures, farm godown, Irrigation facilities including, etc.

P.G RESEARCH FACILITY AVAILABILITY:

Research facilities like runoff plots, water harvesting sites, runoff recharge, ground water measurement, inputs for field experiments (Seeds, fertilizers, irrigation and pesticides) and workforce required for conducting PG (Ph. D.) research are facilitated.

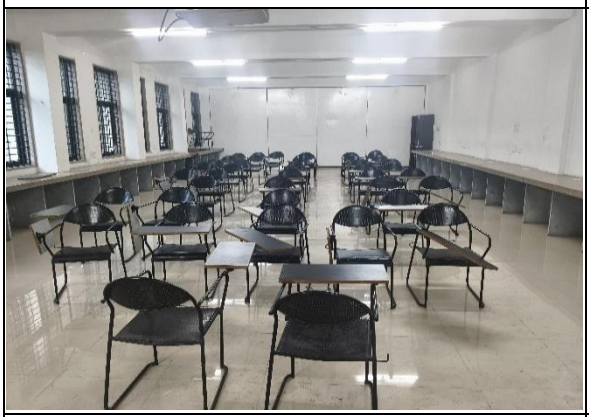
WORKSHOPS:

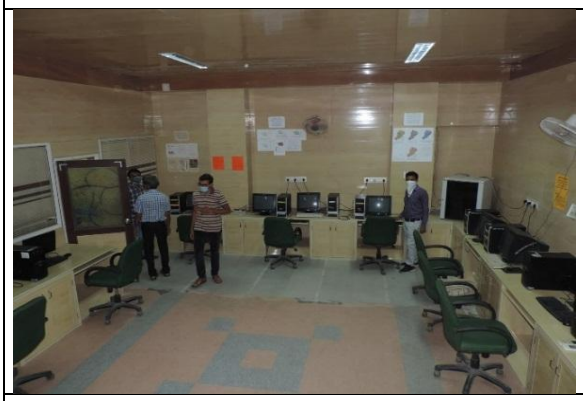
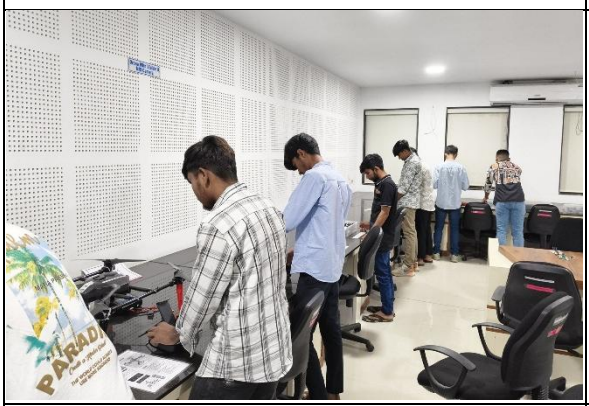
The required fabrication works are carried out in workshop available Farm Machinery and Power Engineering Department of the college.

The department is facilitated with the equipment's which are sufficient to carry out the PG and PhD students' research. The field related equipment's, the land requirement for conducting the research work is also sufficient. The faculty members are well qualified to

guide, mentor and handle the courses of PG and Ph.D students to fulfill the course curriculum of supporting courses.

GLIMPSE OF DEPARTMENT

	
Seminar Hall	**Seminar Hall**
	
Classroom	**Classroom**
	
Department Library	**Department Library**

	
Soil Conservation Laboratory	Soil Conservation Laboratory
	
Hydrology Laboratory	Hydrology Laboratory
	
Remote Sensing & GIS Laboratory	Remote Sensing & GIS Laboratory
	
Precision Agriculture Laboratory	Precision Agriculture Laboratory



Instrumental Cell



Instrumental Cell





Soil Conservation Field Laboratory (Runoff- Soil Erosion Measurement Structure)

6.4.5. CONDUCT OF PRACTICAL AND HANDS-ON-TRAINING

Students conduct their practical in well-developed laboratories with modern equipment. They also under go Hands-on-Training for watershed survey using modern instruments like TS, DGPS, GPS, contour mapping, planning, design of various soil and water conservation structures, etc at well-developed instructional farm of 35 ha land. They also take hands-on-training on water flow measurement at High Tech Hydraulic Park with automated pumping systems. They also performing practical on measurements of runoff and soil erosion under at runoff-sediment measurement structures at instructional farm. The mapping analysis is done using surveyed data, downloaded satellite data at well-developed remote sensing and GIS laboratories.










6.4.6. SUPERVISION OF STUDENTS IN PG/PHD PROGRAMMES

Every Ph. D.(Agril. Engg.)-SWCE student has an Advisory Committee with a Major Guide, a Minor guide and three members, among whom two members are from the major field of specialization and one from statistics or mathematics discipline. If necessary, additional members may be added with permission of the Dean, PG studies. The research problem is selected as per the need of the farmers, existing problems including basic, strategic and applied research. The student has to present the research proposal in seminar in the presence of an Advisory Committee as well as faculties of Major Field. The suggestions/critics are considered by student before submitting the synopsis to the advisory committee The Programme of Research is proposed by the Advisory Committee and recommended by PG Coordinator, Dean, and Faculty of Agricultural Engineering and approved by the Dean, Post Graduate Studies. The Research work is carried out by the student under the supervision of Advisory Committee. Totally 7 Ph.D.(Agril. Engg.)-SWE and 4 Ph.D.(Agril. Engg.)-SWCE doctoral students are passed out from the Department of Soil and Water Conservation Engineering from academic year 2020-21 to 2024-25. The research is carried out by students is in soil conservation, water conservation, hydrology, watershed management, irrigation water management, remote sensing & GIS and climate change etc.

Table 11. Student Intake and Student to teacher ratio of the Department

Year	No. of PG (Ph. D.) recognized teachers	Intake of students	Student Teacher ratio
		Ph.D.	Ph.D.
2020-21	3	5	1.66
2021-22	3	5	1.66
2022-23	3	5	1.66
2023-24	6	5	0.83
2024-25	6	7	1.16

Table 12. Details of PG students' guidance.

SN	Title of Thesis	Name of Student	Name of Advisor	Remarks/ achievement
2020-21				
1	Development of Automatic closed canopy chamber for evapotranspiration measurement	Deepak kumar	H D Rank	-
2021-22				
2	Estimation of Water Harvesting and Groundwater Recharge potential of	Jayswal Priti Suryanathprasad	N K Gontia	-

SN	Title of Thesis	Name of Student	Name of Advisor	Remarks/ achievement
	dhatar wadi river basin using remote sensing and GIS			
3	Simulating the water footprint of sweet corn (zea mays L.) crop response to irrigation water management strategies using aquacrop model	Prasang Harji Rank	R M Satasiya	-
2022-23				
4	Broccoli Crop Yield Response To Deficit Irrigation Practices In Soilless Media Under Protected Cultivation	Sojitra Manojkumar Arvindbhai	R M Satasiya	-
5	Development of Drought Forecasting Indices and Crop Yield Modeling Using Remote Sensing and GIS	Pandya Parthsarthi Ashokkumar	N K Gontia	-
2023-24				
6	Spatiotemporal Analysis of soil Salinity and soil Moisture Modelling Using RS and GIS for Coastal Region of Devbhumi Dwarka	Gojiya Kashyapkumar M.	H D Rank	-
7	Soil Moisture Modelling and water Management in Bhadar Canal Irrigation Command Using Remote Sensing	Vithlani Nipa S.	H V Parmar	-
8	Simulating the Hydrological Behaviour of sihan River basin under various climate change scenarios	Hirapara Paras S	H D Rank	-
2024-25				
9	Identification of Potential Groundwater Recharge Zones for Gujarat State	Baria Sonal Vechat	H D Rank	-
10	An assessment of climate change impact on reference evapotranspiration and rainfall for Gujarat	Ananya Mishra	H D Rank	-
11	Assesment of water quality status in the Bhadar river basin using remote sensing and GIS	Dhiraj kumar	Dr. G.V. Prajapati	-

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS AND FARMERS)

Feedbacks are collected from the respective stakeholders through various mechanisms like personal contacts, visitors register, emails, etc. The few of the feedbacks as received from the different stakeholders are appended in the Table 13 and the documentary evidences are provided in the Annexure-VII.

Table 13. Feedback received from stakeholders

No.	Feedback detail	Excellent	Very Good	Good	Average	Poor
1	How do you rate the sequence and syllabus of the Courses studied in the previous semester?	56	44	0	0	0
2	How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?	56	33	11	0	0
3	How do you rate the relevance of the units in the Syllabus relevant to the course?	45	44	11	0	0
4	How do you rate the sequence of the units in the course?	45	55	0	0	0
5	How do you rate the allocation of the credits to the courses?	78	11	11	0	0
6	How do you rate the distribution of the contact hours among the course components (L-T-P)?	45	44	11	0	0
7	How do you rate the electives offered regarding their relevance to the specialization streams?	33	45	22	0	0
8	Rate the courses in terms of extra learning or self-learning considering the design of the courses.	33	45	22	0	0
9	Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.	56	44	0	0	0
10	How do you Rate the loading of the courses in a semester?	66	34	0	0	0
11	How was the evaluation/exam pattern of the courses?	90	10	0	0	0
12	How do you rate the objectives stated for each of the courses?	78	22	0	0	0
13	How do you rate the skill improvement from the courses?	33	56	11	0	0
14	How do you rate the practical exposure from the courses?	22	33	45	0	0

15	How do you rate the experiments about the real-life Applications?	22	67	11	0	0
16	Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)	-	-	-	-	-

6.4.8. STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS

Table 14. Student intake and attrition in the programme for last five years

Year	Sanctioned seats	Actual intake	Attrition	% Attrition
2020-21	5	2	0	0
2021-22	5	1	0	0
2022-23	5	2	0	0
2023-24	5	2	0	0
2024-25	7	5	2	40
Total	**27**	**12**	**2**	**0**

Note : Students who either got job in government sector or opted for competitive examinations had left the studies.

6.4.9. ICT APPLICATION IN CURRICULA DELIVERY

(A) PG Admission system

Junagadh Agricultural University (JAU) participates in a centralized Common Admission Portal, jointly managed by all four State Agricultural Universities (SAUs) of Gujarat, for the streamlined administration of admissions to diploma, undergraduate, postgraduate, and doctoral programmes. The portal enables prospective students to register, submit applications, pay fees online, track application status, and access rank lists. Additionally, applicants receive real-time SMS notifications regarding important updates such as entrance exams schedule and admission rounds.

On the administrative side, the portal supports several backend operations including application verification, eligibility validation, rank list generation, and programme allotment, thereby ensuring a uniform, transparent, and efficient admission process across all SAUs. Candidates can select their preferred colleges and degree programmes, and the

system automatically allocates admissions based on merit and preference. The entire process, including the publication of merit lists and category-wise vacancy matrices, is conducted online to ensure accessibility, fairness, and transparency.

(B) Online Fees collection system

College students pay their semester fees online through the dedicated portal http://online.jau.in/student_fees/, which is accessible via the Student Corner on the official university website. The system supports multiple payment modes, including UPI, credit/debit cards, and net banking, providing a convenient and secure method for fee transactions during subsequent semesters of various degree programmes.

The collected fees are directly deposited into the respective college's bank account, ensuring accuracy and transparency in financial management. Additionally, college administrators have access to real-time fee collection reports through the system, enabling effective monitoring and record maintenance.

(C) Academic activities

Simultaneously, the Academic Information Management System (AIMS) enhances curriculum delivery and monitoring by providing a dynamic digital interface for faculty and students. Through AIMS, instructors upload and share lecture notes, assignments, class materials, and video lectures, ensuring round-the-clock access to learning resources. The platform also supports online assessments, attendance tracking, and real-time academic monitoring, including faculty feedback and progress reports. These ICT-enabled features promote interactive learning, strengthen academic accountability, and create a personalized, student-focused educational environment at JAU.

(D) Teaching through ICT tools

Teaching is made by using PPT, videos, visual, animations and smart boards. During COVID-19 pandemic s, all classes are conducted online using the various platforms viz. Zoom, Google Meet through Google Classroom and WhatsApp applications during academic year 2020-21 and 2021-22. The teachers are taking live lectures as well as supplying the teaching materials using these platforms. The teachers are performing live practical on Zoom or Google Meet through Google Classroom platforms online for the students. The examinations are also conducted online using the Online Examinations Management Software (OEMS) and a proper evaluation is made to justify the students' efforts.

The faculty members are involved in preparing the virtual lectures in the well-developed virtual classroom facility in the university which is appreciated by the ICAR also.

(E) Examination Management system

The JAU Examination Management System (JEMS) is a comprehensive ICT-based platform that efficiently manages academic and examination-related activities for undergraduate and postgraduate students. It facilitates the entry of internal and external marks and streamlines critical postgraduate processes such as online submission of campus forms, synopsis, preliminary proposals, exam results, thesis evaluation and examination panel selection, and final viva voce outcomes. Each stage - from submission by the major advisor to review by the Head of Department and Dean of the respective faculty, and final approval by the Dean of Postgraduate Studies and the Registrar - is conducted digitally through the JEMS portal. This robust system ensures timely tracking of student progress, adherence to academic timelines, and transparent, paperless record management

(F) Online Alumni Portal

The College of Agricultural Engineering and Technology (CAET) offers an online Alumni Portal where graduated students can register themselves and stay connected with the institution. The portal includes features such as searching alumni from other batches, viewing current city/location, and the ability to update personal profiles at any time throughout the year. This platform serves as a valuable tool for fostering professional networking, maintaining alumni engagement, and strengthening the bond between alumni and the institution.

(G) E-library

E-library for all the constituent colleges of the JAU is managed by the University Campus Library, established in the year 1978. The two storied new Building is located at the eastern side in the main campus. The Library with ICT platform is one of the most important centers of the University, which facilitates the teaching, research and extension program. Both students and faculty extensively use the facility. The Junagadh Agricultural University has given key prominence to the development of the library facilities at the headquarters as well as the constituent colleges and research stations.

Our library provides services students/faculties to constituent colleges, which come under Junagadh Agricultural University, viz., 5 at Junagadh campus like College of Agriculture, College of Agriculture Engineering & Technology, College of Horticulture, Junagadh, Post Graduate Institute of Agri. Business Management and College of

Agriculture(Morbi, presently at Junagadh), 3 College of Agriuclture, at Khapat, Mota Bhandariya and Targhadiya, 3 Different Polytechnics of Agro Processing & Food Technology, Agriculture, Horticulture in the Junagadh campus, 3 Polytechnics of Agriuclture at Amreli, Dhari and Halvad and 1 Polytechnic of Agriucltural Engineering at Targhadiya.

Many knowledge-based services like that of Reference, Bibliography, INFLIBNET service. CD-ROM Databases, Internet browsing and e-services are provided by the library for its users.

Under Automation, library has RFID for the library circulation and security of library material along with OPAC through KOHA, thus the library is fully automized. Post Graduate and Doctorate theses of research scholars of different faculties and rare or important books and documents are digitized in the university library through the digitization camera available in the library. The library circulation section works with KOHA as well as LIBSYS library software.

Books, periodicals, theses, reports, maps and encyclopedia relevant to the mandate areas of the university have been stocked in the University Library and its constituent center. University Library is well equipped with 59509 text as well as reference books, 80 research journals/periodicals, 3982 thesis, 14000 bound volumes, 1037 e-books, 2 e-journals, various reports, maps and encyclopedia relevant to teaching, research and extension activities of the university. The library has offline database in the form of CAB, Agris, and Agricola as well as online database is available at e-library tab on university website. University Library subscribes 10 newspapers to acquaint users with daily news.

The university library renders its services to users from 8:00 to 18:10 h. A separate air conditioned reading room is developed with the best facilities as well as good ventilation and aeration. This AC reading room accommodates approximately 150 students. The Reading Room remains open for its users from 8.00 to 23.00 hours on working days whereas 8.00 to 14.00 hours on holidays.

(H) Internet

The College Cyberary, equipped with high-speed internet connectivity, provides students and faculty with seamless access to a wide range of online journals and academic databases. Key databases such as CABI, AGRIS, and AGRICOLA are available in CD-ROM format, while resources like INDIAN HARVEST are accessible as online databases. To enhance user experience, the library uses WinSPIRS, a Windows-based client interface, for efficient access to the various subscribed databases. This digital infrastructure supports academic

research and learning by ensuring convenient and reliable access to global and national scientific literature.

The Library is equipped with 40 computer workstations with internet connectivity, along with scanning and CD writing facilities, all of which are extensively utilized by both students and faculty members for academic and research purposes. To support academic learning, the library also offers a Book Bank facility, through which students are provided with textbooks related to their respective subjects and semesters. This initiative ensures that students have easy access to essential learning resources throughout their academic journey.

(I) Wi-fi facility

The University provides 24x7 Wi-Fi connectivity across key areas of the campus, including the library, departments, and hostels, with secure login-based authentication to ensure safe and reliable access. In addition, the main campus is connected through an IP-based network, allowing students and faculty members to access the internet seamlessly from their respective hostels and departments. This connectivity enables users to browse scholarly resources, access previous literature, stay updated with recent advancements, and enhance their academic and research pursuits.

The e-library is having following online access facilities:

J-Gateplus (Complete):

J-Gate is a comprehensive online indexing and access gateway to global e-journal literature. It has indexes more than 58 million journal articles from over 58,000 journals, covering multiple disciplines including science, technology, medicine, social sciences, and humanities.

J-Gate is highly useful in the agricultural discipline for researchers, students, faculty, and professionals by providing streamlined access to a wide range of scholarly literature. J-Gate indexes thousands of journals, including many in the field of agriculture such as: Agronomy, Soil Science, Horticulture, Agricultural Engineering, Plant Pathology, Crop Science and Animal Husbandry. J-Gate allows searches using: Keywords, Author names, Journal titles & Subject categories. This helps agriculture researchers find specific articles or trends efficiently. Junagadh Agricultural University use J-Gate through consortia like: CeRA (Consortium for e-Resources in Agriculture) by ICAR.

CeRA :

CeRA (Consortium for e-Resources in Agriculture) plays a vital role in agriculture by providing **access to a wide range of electronic journals and research resources** to Junagadh Agricultural university. CeRA is the ICAR Consortium of e-resources in Agriculture. This covers more than 3000 scholarly journals pertaining to the Agriculture and allied sciences which are available in full text. Its main functions include:

Facilitating access to scholarly literature for scientists, researchers, and students in agriculture and allied sciences. **Promoting information sharing** among ICAR institutes and State Agricultural Universities (SAUs). **Supporting research and innovation** by offering timely and comprehensive digital resources. Overall, CeRA enhances the **quality and reach of agricultural research and education** in India.

ASTRAL :

Junagadh Agricultural University have purchased 630 e-books from Astral International (P) Ltd. These e-books are related to agriculture and allied sciences.

ScienceDirect :

Junagadh Agricultural University has subscription of ScienceDirect, a leading full-text scientific database from Elsevier, is highly valuable in agricultural research and education. It provides access to peer-reviewed journals, book chapters, and research articles.

KrishiKosh:

KrishiKosh is a digital repository of agricultural knowledge in India, developed and maintained by the Indian Council of Agricultural Research (ICAR). ICAR have provided access to all the State Agricultural University of India. These digital repositories include theses, research papers, reports, books, journals, and other academic resources in agriculture and allied sciences.

Krishikosh is a database of theses submitted to the Agriculture universities and ICAR institutions are freely accessible by students. The JAU Library is member for Krishikosh and all the theses submitted to the JAU are being uploaded regularly.

EBSCOhost:

Junagadh Agricultural University has subscription of is also powerful online research platform provided by EBSCO Information Services that gives access to a wide range of

academic, scientific, and professional databases. **EBSCOhost** is offering access to : Scholarly journals, E-books, Magazines, Research articles, Conference papers across multiple disciplines including **agriculture** and allied sciences.

NIPAERS:

The JAU has access to 204 e-books.

e-KrishiShiksha:

e-KrishiShiksha is the ICAR e-learning portal on agricultural education.

Art & Science Academic Publications (ASAP):

ASAP is providing access of e-books from more than 51 publishers across the globe in various fields to JAU based on IP and Login.

Commodities:

The recent news on agricultural commodities is published on this platform. The university has acceptance of the usage agreement & privacy policy with Centre for Monitoring Indian Economy Pvt. Ltd.

6.4.10. CERTIFICATE

I the Dean, College of Agricultural Engineering & Technology, Junagadh Agricultural University, Junagadh, hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college and degree awarding university.

July 16, 2026

(K . C. Patel)
Principal & Dean
College of Agril. Engg. & Tech.
JAU, Junagadh

SELF STUDY REPORT FOR
Ph. D. (AGRIL. ENGG.)
PROGRAMME IN THE DISCIPLINE OF

IRRIGATION AND DRAINAGE ENGINEERING

6.4. SELF STUDY REPORT FOR THE PH. D. (AGRIL. ENGG.) IN DISCIPLINE OF SOIL AND WATER ENGINEERING (SWE) DEGREE PROGRAMME

6.4.1. BRIEF HISTORY OF THE DEGREE PROGRAMME

EVOLUTION OF THE P.G./PH.D. PROGRAMME:

The B Tech. (Agril. Engg.) Degree program is offered since the establishment of college in 1984. The Department of Irrigation & Draianage Engineering has been established since 2017-18. The M Tech. (Agril. Engg.) in the disciplines of Irrigation and Drainage Engineering (IDE) was started since 2022-23. The primary aim of the degree program is to strengthen the Agricultural Engineering faculty to carry out teaching, research and extension activities in the fields of irrigation technologies *viz*. surface irrigation methods namely border, furrow, surge irrigation etc., MISs namely Drip, Sprinkler Mini sprinkler, Micro sprinkler, Subsurface drip/oozing pipe, Rain gun irrigation, fertigation schedules of various crops etc, groundwater, water conveyances, pumping machineries as well as surface/subsurface drainage systems.

In essence, **irrigation and drainage engineering** bridges **agriculture**, **hydrology**, and **environmental science** to ensure water is used wisely and sustainably in farming.

OBJECTIVES

1. To provide comprehensive education and practical training in modern irrigation and drainage engineering technologies to undergraduate, master and Ph.D. students, developing skilled and qualified professionals in the field of irrigation and drainage engineering.
2. To conduct region-specific research and develop innovative, sustainable irrigation and drainage technologies for farmers and policymakers, utilizing modern techniques and concepts such as irrigation automation to enhance water use efficiency, improve soil quality through drainage, and increase agricultural productivity in Gujarat.
3. To impart training to rural youth, farmers, farm women, line departments, and NGOs, promoting the adoption of modern technologies related to irrigation and drainage engineering.

4. To collaborate with farmer's groups, FPOs and industry partners for the practical application of research innovations, ensuring continuous improvement and adaptation of irrigation and drainage technologies in Gujarat state.

FACILITIES AND SERVICES:

DEPARTMENT FACILITIES

The department has 02 office/Room for HoD, 1 Room for Steno/PA, 1 Room for Administrative staff and 8 Office/Rooms for the Faculty/Technical staff/Supportive staff in main building. It has well equipped 8 Laboratories in department, 1 classroom and 1 seminar hall. The department has also high tech MIS Park with MIS automations based on time, volume, soil moisture sensors and climate. The park is well equipped with auto cleaning sand filters, auto cleaning screen filters and auto cleaning disc filters. The hydraulic park is well equipped with auto pumping unit, all water flow measuring structures and groundwater recharge filter testing set ups. The 50 KW solar plant is established as part green energy initiatives. The roof top water harvesting measures are adopted with sunken pond and tube well recharge system. The department library has 325 Text/Reference books on Fluid Mechanics, Soil Mechanics, Watershed Hydrology, Irrigation Engineering, Sprinkler and Micro Irrigation System, Water Harvesting and Soil Conservation Structures, Watershed management & Modelling, Drainage Engineering, Groundwater Engineering, Water Wells and Pumps, Remote Sensing & GIS Applications, Open Channel Flow along with Practical manual, technical bulletins, Annual reports etc.

Table 15. Infrastructure Facilities

SN	Facilities	Size	Nos.
1	Office/Room for HoD with computer, printer and required peripherals	6.10m x 5.6m	01
2	PA Steno Office/Room with computer, printer and required peripherals	5.60m x 3.10m	01
3	Administrative Office/Room	5.60m x 3.10m	01
4	Office/Chamber/Room separate for each faculty/staff with computer, printer and required peripherals.	5.60m x 3.10m	09
5	Department Library	7.5m x 5.6m	01
6	Laboratories in Department	Given Lab list	08
7	Field Laboratory	Given Lab list	02

FARM FACILITIES

The CAET Instructional farm is managed by Soil and Water Conservation Engineering Department has total 35.50 ha area, out of which 25.20 ha area is under cultivation and rest of the area is covered under road, building, nallah etc. The area under horticultural crops are 10.40 ha like mango (1.95 ha), sapota (3.85 ha), coconut (0.85), Jamun (1.40 ha), custard apple (1.25 ha) and lemon (1.10 ha). The rest of the cultivation area i.e. 14.66 ha is under field crops to produce breeder seed, certified seed and truthful seeds. Entire cultivated area of the farm is commanded by different micro irrigation systems. The farm has 2 open wells and 4 tube wells having potential of enough groundwater pumping. It has also 3 water harvesting structures from which the harvested water is used for life saving/supplemental irrigation to monsoon crops as well as few irrigations to winter crops too. It also helps to augment the groundwater resources.

The farm owns entire series of all farm equipment/implements with 2 tractors for primary /secondary tillage operations, 2 mini tractors for sowing/inter-culturing operations, thresher/ winnower etc.

Beside this, various soil and water conservation structures such as drop inlet spillway, drop spillway, check dams, runoff- soil erosion measurement structures and well recharge structure with filter are constructed on farm for demonstration purpose. The unique demonstration on tube well recharge using overflowing water from check dam spillway through connector well technique is also demonstrated. The process is going on to develop as a fully mechanized modern farm including fully automated drip irrigation system.

THE B. TECH.(AGRIL. ENGG.) AS WELL AS M. TECH./PH.D.(AGRIL. ENGG.) STUDENTS' PRACTICAL / THEIR RESEARCH EXPERIMENTS, DEPARTMENTAL RESEARCH EXPERIMENTS AS WELL AS AICRP EXPERIMENTS ARE UNDERTAKEN IN THE INSTRUCTIONAL FARM.

ACCOMPLISHMENTS:

Ph. D.(Agril. Engg.)-SWE students' research outcomes which are helpful for the farming community and further research are highlighted in Table 16 below.

Table 16. Students' research topics linked with staff research projects

SN	Title of Thesis	Name of Student	Name of Guide	Month/Year of submission
1	Development of Automatic Closed Canopy Chamber for Evapotranspiration Measurement	Deepak Kumar	H D Rank	Jun-2021

2	Estimation of Water Harvesting and Groundwater Recharge Potential of Dhatarwadi River Basin Using Remote Sensing and GIS	Jayswal Priti Suryanathprasad	N.K. Gontia	Aug.-2021
3	Simulating the Water Footprint of Sweet Corn (Zea mays L.) Crop Response to Irrigation Water Management Strategies Using Aqua crop Model	Rank Prasang Harji	R.M. Satasiya	July-2022
4	Broccoli Crop Yield Response to Deficit Irrigation Practices in Soilless Media under Protected Cultivation	Sojitra Manojkumar Arvindbhai	R.M. Satasiya	Dec.-2022
5	Development of Drought Forecasting Indices and Crop Yield Modeling Using Remote Sensing and GIS	Pandya Parthsarthi Ashokkumar	N.K. Gontia	Jan.-2023
6	Spatiotemporal Analysis of Soil Salinity and Soil Moisture Modelling Using Rs and GIS for Coastal Region of Devbhumi Dwarka	Gojiya Kashyapkumar Maldebhai	H.D. Rank	Nov.-2023
7	Soil Moisture Modelling and Water Management in Bhadar Canal Irrigation Command Using Remote Sensing	Vithlani Nipa Sunilbhai	H.V. Parmar	March-2024
8	Simulating the Hydrological Behaviour of Sihan River Basin Under Various Climate Change Scenarios	Hirapara Paraskumar Subhashbhai	H.D. Rank	June-2024
9	Identification of Potential Groundwater Recharge Zones for Gujarat State	Baria Sonalben V.	H D Rank	Oct.-2024

EXTERNAL FUNDED PROJECTS

Table 17. Completed projects/schemes

Sr No	Name of the project/scheme	Date of start	Date of termination	Sponsoring Agency
1	Studies on techno economic feasibilities of drip irrigation for summer groundnut crop and its comparison with sprinkler and border irrigation (B. H. 2084-3)	01/10/1997	30/09/2002	ICAR, Adhoc Scheme
2	Demonstration cum research center for petroleum conservation	01/04//1998	31/03/1999	PCRA
3	Development of models for water management in groundnut based cropping systems (B.H. 2044-8)	01/10/1999	30/09/2003	ICAR, Adhoc Scheme
4	Determination of the relationship between root and plant, soil properties and the discharge for the	01/12/1999	30/11/2003	ICAR, Adhoc Scheme

	optimal design and operation of drip irrigation system, (B. H. 2044-9)			
5	Smart Farming for Increasing Agricultural Production in Sodic Soils of Coastal Area of Saurashtr. Rashtriya Krushi Vikas Yojana (RKVY):	01/04/2010	31/03/2014	GoI
6	National Initiative for Climatic Resilient Agriculture (NICRA), ICAR Project	01/01/2011	31/03/2017	ICAR

Table 18. Ongoing projects/schemes

SN	Name of the Project / Scheme	Starting Year
1	All India Coordinated Research Project (AICRP) on Groundwater Utilization, now renamed as AICRP on Irrigation Water Management (IWM) since 2013. AICRP on IWM, Junagadh Agricultural University, and Junagadh centre is conducting research on different aspects of groundwater potential, recharge, quality assessment and its efficient utilization in Saurashtra region of Gujarat. The head quarter of the project is ICAR-Indian Institute of Water Management, ICAR, Bhubaneswar (Odisha).	2004-05

6.4.2. FACULTY STRENGTH:

Table 19. Faculty Strength

SN	Sanctioned Faculty	Faculty in Place	Vacant position	Faculty recommended by ICAR	Deviations from ICAR recommendations	Remarks
Department of Irrigation and Drainage Engineering						
1	Professor	2	0	1	1	-
2	Associate Professor	1	0	2	-1	-
3	Assistant Professor	2	2	4	-2	-
AICRP on Irrigation Water Management						
4	Research Engineer	0	1	1	-	-
5	Assistant Professor	1	0	1	-	-
Services of faculties from other department to carry out courses and guidance to the PG students.						
8	Associate Professor, IT Cell, JAU, Junagadh	1	0	-	-	-

9	Associate Professor, AICRP on PEASEM, CAET, JAU, Junagadh	1	0	-	-	-
10	Assistant Professor, PGIABM, JAU, Junagadh	1	0	-	-	-
11	Assistant Professor, SWCE, JAU, Junagadh	1	0	-	-	-
12	Assistant Professor,IT Cell, JAU, Junagadh	1	0	-	-	-

6.4.3. TECHNICAL AND SUPPORTING STAFF:

Table 20. Technical/Supporting staff position

SN	Sanctioned Faculty	Staff in place	Vacant position	Staff recommended by ICAR/UGC/VCI/Other regulatory bodies	Deviations from ICAR recommendations	Remarks
Department of Irrigation and Drainage Engineering						
1	Jr. Clerk	1*	0	1	-	*on contractual
2	Messenger/ Peon	1*	0	1	-	-
3	Jeep driver	1*	0	1	-	
AICRP on Irrigation Water Management						
4	Stenographer	0	1	1	-	-
5	Field Assistant	1	0	1	-	-
6	Field/Lab Assistant	1	0	1	-	-
7	Lab Attendant	1	0	1	-	-

Apart from this 3 persons are working on contractual basis, which includes 1 Jr. Clerk, 1 peon and 1 deep driver.

6.4.4. CLASSROOMS AND LABORATORIES:

Table 21. Classroom/Seminar hall

Sr. No	Classroom	Area (m)	Seating capacity	Other facilities
1	Seminar Hall	12.20 X 9.10	60	Display system-1 Plasma Screen-1 Computer-1 Furniture
2	Classroom	17.20 x 8.30	60	LCD Projector-1 Computer-1 Furniture

Table 22. Major laboratories

SN	Name of laboratory	Area (m x m)	Working capacity
1	Irrigation Systems Laboratory	15.80 X 7.60	50
2	Pump Testing Laboratory	12.35 X 7.60	50
3	Wells and Pumps Engineering Laboratory	12.20 x 7.50	50
4	Fluid Mechanics Laboratory	12.20 x 9.10	50
5	Soil Mechanics Laboratory	12.20 x 7.50	50
6	Drainage laboratory	7.75 m x 8.30 m	50
7	Water Quality analysis Laboratory,	12.20 x 7.60	50
8	Incubation center on advanced irrigation technologies	17.20 m x 8.30m	100
9	High Tech MIS Park	25.0 m x 20.0 m	50
10	Hydraulic park	34.50 x 32.0	50

Table 23. List of major equipment

SN	Equipment Name	No. of Equipment
1	Tensiometer	3
2	Venturymeter	2
3	Hot air oven	3
4	Submersible pump	1

5	Submersible K type pump	1
6	Micro controller based UV-VIS Spectrophotometer	1
7	Digital flame photometer	1
8	Rotary Flask shaker	1
9	Water and soil analysis kit	1
10	Pump testing set up	1
11	Submersible pump (6 HP 4 Stage as Per Indian STD ISI)	1
12	Submersible pump (7.5 HP 10 stage as Per Indian ISI)	1
13	Oil Sealed rotary Vacuum pump	1
14	Micro control based BOD Incubator with Shaker	1
15	Research centrifuge Model TC 8100	1
16	COD digester	1
17	M.S.Fler Fault valve stand	1
18	Lysimeter	1
19	Micro gopher	1
20	Total Survey station	2
21	Digital balance	2
22	Rpm frequency meter	1
23	Geometic Total Education Suits ver.10.0	1
24	Digital camera	2
25	Digital titration burette 50 ml	1
26	E-studio digital copier	1
27	Hydraulic ram test ring	1
28	Drip Irrigation filter testing ring	1
29	Hydrostatic pressure testing	1
30	Automatic water level recorder	1
31	Pump testing digital panel board	1
32	Well logger with data logger	1
33	Ground water sampler	1
34	Signal stacking resistivity meter	1
35	Flow measurement apparatus	1
36	Impact of Jet Apparatus	1
37	Jayant test sieves 8"	11
38	Reynolds apparatus	1
39	Digital manometer	6

40	Sand replacement cylinder	3
41	Digital pressure gauge with adapter	1
42	Manometer	4
43	Pelton turbine	1
44	Permeability apparatus	1
45	Bernoulli' s theorem apparatus	4
46	Core cutter apparatus set	4
47	Digital current meter	1
48	Electrically analogy apparatus	1
49	Metacentric Height of ship model	8
50	Manning's Roughness coefficient determination apparatus	1
51	Pipe friction Apparatus	2
52	Friction loss Apparatus	5
53	Automation Pumping System	1
54	Orifice and mouthpieces app.	1
55	Notch apparatus	1
56	Online UPS 5kva	1
57	Tensiometer Gauge Type Size:15, 30, 45 cm	1
58	Data retrieval system	1
59	Digital Soil Moisture meter	2
60	Water mark soil moisture (suction) sensor	28
61	Cut model of MIS filter	1
62	Sieve shaker	6
63	Darcy's law appratus	2
64	Screen filter	1
65	Gravel filter	1
66	Soil moisture meter	1
67	Soil auger	10
68	Clear transparent glass soil thermometer	20
69	Pycnometer Comprises 1 Kg glass Jar with Brass Cone	20
70	Emitter testing rig	1
71	Shrinkage limit set	5
72	Plastic limit set	5
73	Sap flow meter	1
74	Portable TDR soil moisture meter	1

75	Water meter	10
76	Digital soil moisture meter	1
77	Electronic water level indicator	5
78	Canopy chamber	1
79	Water level indicator	3
80	Direct shear test apparatus	3
81	Automation fertigation system	1
82	Sensors for irrigation	2
83	Manning's apparatus	7
84	Permeability apparatus	18
85	Ground water level indicator 100 mt	11
86	Ground water level indicator 200 mt	14
87	Different types of Automatic Filters	1
88	Centrifugal pump Test Rig	6

CIVIL STRUCTURE DEVELOPED FOR RESEARCH AT INSTRUCTION FARM, CAET AT JUNAGADH

Different civil structures have been developed at the instruction farm for the PG research work includes Soil conservation field laboratory (Runoff-Soil Erosion Measurement plots), water harvesting structures, farm godown, Irrigation facilities including, etc.

P.G RESEARCH FACILITY AVAILABILITY:

Research facilities like inputs (Seeds, fertilizers, irrigation and pesticides) and workforce required for conducting PG (M. Tech.) research are facilitated.

WORKSHOPS:

The required fabrication works are carried out in workshop available in Farm Machinery and Power Engineering Department of the college.

The department is facilitated with the equipment's which are sufficient to carry out the PG students' research. The field related equipment's, the land requirement for conducting the research work is also sufficient. The faculty members are well qualified to guide, mentor and handle the courses of PG (M. Tech.) students to fulfill the course curriculum of supporting courses.

GLIMPSE OF DEPARTMENT



Seminar Hall



Classroom





Department Library



Irrigation Systems Laboratory



Pump Testing Laboratory



Wells and Pumps Engineering Laboratory



Fluid Mechanics Laboratory



Soil Mechanics Laboratory



Drainage laboratory



Water Quality analysis Laboratory



Incubation Center on Advanced Irrigation technologies



Hydraulic park



High Tech MIS Park





High Tech MIS Park Control Unit

6.4.5. CONDUCT OF PRACTICAL AND HANDS-ON-TRAINING

Students under go Hands-on-Training for watershed survey using modern instruments like TS, DGPS, GPS, contour mapping, planning, design of various soil and water conservation structures, design of MISs, its installations, Operation and maintenance at well-developed instructional farm of 35ha land. They also take hands-on-training on water flow measurement at High Tech Hydraulic Park with automated pumping systems. They also performing practical on measurements of runoff and soil erosion under at runoff-sediment measurement structures at instructional farm. They conduct their practical in well-developed laboratories with modern equipment.The performance evaluation of automated MIS are assesses by students at High Tech MIS park. The practical on performance characteristics of various pumps are performed at pump testing laboratory. The mapping analysis is done using surveyed data, downloaded satellite data at well-developed remote sensing and GIS laboratories.
















6.4.6. SUPERVISION OF STUDENTS IN PG/PHD PROGRAMMES

Every Ph. D.(Agril. Engg.) student has an Advisory Committee with a Major Guide, a Minor guide and three members, among whom two members are from the major field of specialization and one from statistics or mathematics discipline. If necessary, additional members may be added with permission of the Dean, PG studies. The research problem is selected as per the need of the farmers, existing problems including basic, strategic and applied research. The student has to present the research proposal in seminar in the presence of an Advisory Committee as well as faculties of Major Field. The suggestions/critics are considered by student before submitting the synopsis to the advisory committee The Programme of Research is proposed by the Advisory Committee and

recommended by PG Coordinator, Dean, and Faculty of Agricultural Engineering and approved by the Dean, Post Graduate Studies. The Research work is carried out by the student under the supervision of Advisory Committee.

The admission will be started in PhD degree program in the discipline of Irrigation and Draianage Engineering from next academic year.

Table 24. Student Intake and Student to teacher ratio of the Department

Year	No. of PG (Ph. D.) recognized teachers	Intake of students Ph.D.	Student Teacher ratio Ph.D.
2020-21	-	-	-
2021-22	-	-	-
2022-23	2	0	0
2023-24	2	0	0
2024-25	2	0	0

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.)

In fact, no admission is started yet PhD degree program in the discipline of Irrigation and Draianage Engineering. However, its is planned to take feedback as per the various procedures stadarised by JAU, Junagadh through various channels such as personal interactions, visitor registers, emails, and other means.

6.4.8. STUDENT INTAKE AND ATTRITION IN THE Programme for last five years

The admission will be started in PhD degree program in the discipline of Irrigation and Draianage Engineering from next academic year.

6.4.9. ICT APPLICATION IN CURRICULA DELIVERY

(A) UG/PG Admission system

Junagadh Agricultural University (JAU) participates in a centralized Common Admission Portal, jointly managed by all four State Agricultural Universities (SAUs) of Gujarat, for the streamlined administration of admissions to diploma, undergraduate, postgraduate, and doctoral programmes. The portal enables prospective students to register, submit applications, pay fees online, track application status, and access rank lists. Additionally, applicants receive real-time SMS notifications regarding important updates such as entrance exams schedule and admission rounds.

On the administrative side, the portal supports several backend operations including application verification, eligibility validation, rank list generation, and programme allotment, thereby ensuring a uniform, transparent, and efficient admission process across all SAUs. Candidates can select their preferred colleges and degree programmes, and the system automatically allocates admissions based on merit and preference. The entire process, including the publication of merit lists and category-wise vacancy matrices, is conducted online to ensure accessibility, fairness, and transparency.

(B) Online Fees collection system

College students pay their semester fees online through the dedicated portal http://online.jau.in/student_fees/, which is accessible via the Student Corner on the official university website. The system supports multiple payment modes, including UPI, credit/debit cards, and net banking, providing a convenient and secure method for fee transactions during subsequent semesters of various degree programmes.

The collected fees are directly deposited into the respective college's bank account, ensuring accuracy and transparency in financial management. Additionally, college administrators have access to real-time fee collection reports through the system, enabling effective monitoring and record maintenance.

(C) Academic activities

Simultaneously, the Academic Information Management System (AIMS) enhances curriculum delivery and monitoring by providing a dynamic digital interface for faculty and students. Through AIMS, instructors upload and share lecture notes, assignments, class materials, and video lectures, ensuring round-the-clock access to learning resources. The platform also supports online assessments, attendance tracking, and real-time academic monitoring, including faculty feedback and progress reports. These ICT-enabled features promote interactive learning, strengthen academic accountability, and create a personalized, student-focused educational environment at JAU.

(D) Teaching through ICT tools

Teaching is made by using PPT, videos, visual, animations and smart boards. During COVID-19 pandemic s, all classes are conducted online using the various platforms viz. Zoom, Google Meet through Google Classroom and WhatsApp applications during academic year 2020-21 and 2021-22. The teachers are taking live lectures as well as supplying the teaching materials using these platforms. The teachers are performing live practical on Zoom or Google Meet through Google Classroom platforms online for the students. The examinations

are also conducted online using the Online Examinations Management Software (OEMS) and a proper evaluation is made to justify the students' efforts.

The faculty members are involved in preparing the virtual lectures in the well-developed virtual classroom facility in the university which is appreciated by the ICAR also.

(E) Examination Management system

The JAU Examination Management System (JEMS) is a comprehensive ICT-based platform that efficiently manages academic and examination-related activities for undergraduate and postgraduate students. It facilitates the entry of internal and external marks and streamlines critical postgraduate processes such as online submission of campus forms, synopsis, preliminary proposals, exam results, thesis evaluation and examination panel selection, and final viva voce outcomes. Each stage - from submission by the major advisor to review by the Head of Department and Dean of the respective faculty, and final approval by the Dean of Postgraduate Studies and the Registrar - is conducted digitally through the JEMS portal. This robust system ensures timely tracking of student progress, adherence to academic timelines, and transparent, paperless record management

(F) Online Alumni Portal

The College of Agricultural Engineering and Technology (CAET) offers an online Alumni Portal where graduated students can register themselves and stay connected with the institution. The portal includes features such as searching alumni from other batches, viewing current city/location, and the ability to update personal profiles at any time throughout the year. This platform serves as a valuable tool for fostering professional networking, maintaining alumni engagement, and strengthening the bond between alumni and the institution.

(G) E-library

E-library for all the constituent colleges of the JAU is managed by the University Campus Library, established in the year 1978. The two storied new Building is located at the eastern side in the main campus. The Library with ICT platform is one of the most important centers of the University, which facilitates the teaching, research and extension program. Both students and faculty extensively use the facility. The Junagadh Agricultural University has given key prominence to the development of the library facilities at the headquarters as well as the constituent colleges and research stations.

Our library provides services students/faculties to constituent colleges, which come under Junagadh Agricultural University, viz., 5 at Junagadh campus like College of Agriculture, College of Agriculture Engineering & Technology, College of Horticulture, Junagadh, Post Graduate Institute of Agri. Business Management and College of Agriculture(Morbi, presently at Junagadh), 3 College of Agriuclture, at Khapat, Mota Bhandariya and Targhadiya, 3 Different Polytechnics of Agro Processing & Food Technology, Agriculture, Horticulture in the Junagadh campus, 3 Polytechnics of Agriuclture at Amreli, Dhari and Halvad and 1 Polytechnic of Agriucltural Engineering at Targhadiya.

Many knowledge-based services like that of Reference, Bibliography, INFLIBNET service. CD-ROM Databases, Internet browsing and e-services are provided by the library for its users.

Under Automation, library has RFID for the library circulation and security of library material along with OPAC through KOHA, thus the library is fully automized. Post Graduate and Doctorate theses of research scholars of different faculties and rare or important books and documents are digitized in the university library through the digitization camera available in the library. The library circulation section works with KOHA as well as LIBSYS library software.

Books, periodicals, theses, reports, maps and encyclopedia relevant to the mandate areas of the university have been stocked in the University Library and its constituent center. University Library is well equipped with 59509 text as well as reference books, 80 research journals/periodicals, 3982 thesis, 14000 bound volumes, 1037 e-books, 2 e-journals, various reports, maps and encyclopedia relevant to teaching, research and extension activities of the university. The library has offline database in the form of CAB, Agris, and Agricola as well as online database is available at e-library tab on university website. University Library subscribes 10 newspapers to acquaint users with daily news.

The university library renders its services to users from 8:00 to 18:10 h. A separate air conditioned reading room is developed with the best facilities as well as good ventilation and aeration. This AC reading room accommodates approximately 150 students. The Reading Room remains open for its users from 8.00 to 23.00 hours on working days whereas 8.00 to 14.00 hours on holidays.

(H) Internet

The College Cyberary, equipped with high-speed internet connectivity, provides students and faculty with seamless access to a wide range of online journals and academic

databases. Key databases such as CABI, AGRIS, and AGRICOLA are available in CD-ROM format, while resources like INDIAN HARVEST are accessible as online databases. To enhance user experience, the library uses WinSPIRS, a Windows-based client interface, for efficient access to the various subscribed databases. This digital infrastructure supports academic research and learning by ensuring convenient and reliable access to global and national scientific literature.

The Library is equipped with 40 computer workstations with internet connectivity, along with scanning and CD writing facilities, all of which are extensively utilized by both students and faculty members for academic and research purposes. To support academic learning, the library also offers a Book Bank facility, through which students are provided with textbooks related to their respective subjects and semesters. This initiative ensures that students have easy access to essential learning resources throughout their academic journey.

(I) Wi-fi facility

The University provides 24x7 Wi-Fi connectivity across key areas of the campus, including the library, departments, and hostels, with secure login-based authentication to ensure safe and reliable access. In addition, the main campus is connected through an IP-based network, allowing students and faculty members to access the internet seamlessly from their respective hostels and departments. This connectivity enables users to browse scholarly resources, access previous literature, stay updated with recent advancements, and enhance their academic and research pursuits.

The e-library is having following online access facilities:

J-Gateplus (Complete):

J-Gate is a comprehensive online indexing and access gateway to global e-journal literature. It has indexes more than 58 million journal articles from over 58,000 journals, covering multiple disciplines including science, technology, medicine, social sciences, and humanities.

J-Gate is highly useful in the agricultural discipline for researchers, students, faculty, and professionals by providing streamlined access to a wide range of scholarly literature. J-Gate indexes thousands of journals, including many in the field of agriculture such as: Agronomy, Soil Science, Horticulture, Agricultural Engineering, Plant Pathology, Crop Science and Animal Husbandry. J-Gate allows searches using: Keywords, Author names, Journal titles & Subject categories. This helps agriculture researchers find specific

articles or trends efficiently. Junagadh Agricultural University use J-Gate through consortia like: CeRA (Consortium for e-Resources in Agriculture) by ICAR.

CeRA :

CeRA (Consortium for e-Resources in Agriculture) plays a vital role in agriculture by providing **access to a wide range of electronic journals and research resources** to Junagadh Agricultural university. CeRA is the ICAR Consortium of e-resources in Agriculture. This covers more than 3000 scholarly journals pertaining to the Agriculture and allied sciences which are available in full text. Its main functions include:

Facilitating access to scholarly literature for scientists, researchers, and students in agriculture and allied sciences. **Promoting information sharing** among ICAR institutes and State Agricultural Universities (SAUs). **Supporting research and innovation** by offering timely and comprehensive digital resources. Overall, CeRA enhances the **quality and reach of agricultural research and education** in India.

ASTRAL :

Junagadh Agricultural University have purchased 630 e-books from Astral International (P) Ltd. These e-books are related to agriculture and allied sciences.

ScienceDirect :

Junagadh Agricultural University has subscription of ScienceDirect, a leading full-text scientific database from Elsevier, is highly valuable in agricultural research and education. It provides access to peer-reviewed journals, book chapters, and research articles.

KrishiKosh:

KrishiKosh is a digital repository of agricultural knowledge in India, developed and maintained by the Indian Council of Agricultural Research (ICAR). ICAR have provided access to all the State Agricultural University of India. These digital repositories include theses, research papers, reports, books, journals, and other academic resources in agriculture and allied sciences.

Krishikosh is a database of theses submitted to the Agriculture universities and ICAR institutions are freely accessible by students. The JAU Library is member for Krishikosh and all the theses submitted to the JAU are being uploaded regularly.

EBSCOhost:

Junagadh Agricultural University has subscription of is also powerful online research platform provided by EBSCO Information Services that gives access to a wide range of academic, scientific, and professional databases. **EBSCOhost** is offering access to : Scholarly journals, E-books, Magazines, Research articles, Conference papers across multiple disciplines including **agriculture** and allied sciences.

NIPAERS:

The JAU has access to 204 e-books.

e-KrishiShiksha:

e-KrishiShiksha is the ICAR e-learning portal on agricultural education.

Art & Science Academic Publications (ASAP):

ASAP is providing access of e-books from more than 51 publishers across the globe in various fields to JAU based on IP and Login.

Commodities:

The recent news on agricultural commodities is published on this platform. The university has acceptance of the usage agreement & privacy policy with Centre for Monitoring Indian Economy Pvt. Ltd.

6.4.10. CERTIFICATE

I the Dean, College of Agricultural Engineering & Technology, Junagadh Agricultural University, Junagadh, hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college and degree awarding university.

July 16, 2026

(K . C. Patel)
Principal & Dean
College of Agril. Engg. & Tech.
JAU, Junagadh

SELF STUDY REPORT FOR

Ph. D. (AGRIL. ENGG.)

PROGRAMME IN THE DISCIPLINE OF

FARM MACHINERY & POWER ENGINEERING

6.4. SELF STUDY REPORT FOR THE PH.D. (AGRIL. ENGG.) IN DISCIPLINE OF FARM MACHINERY & POWER ENGINEERING (FMPE) DEGREE PROGRAMME

6.4.1. BRIEF HISTORY OF THE DEGREE PROGRAMME

EVOLUTION OF THE P.G./PH.D. PROGRAMME:

The B Tech. (Agril. Engg.) Degree program is offered since the establishment of college in 1984. Post-graduation degree programme leading to the degree M.Tech. (Agril. Engg.) in discipline of Farm Machinery and Power Engg. (FMPE) was started 1994-95. Department has started Ph. D. (Agril. Engg.) In discipline of Farm Machinery & Power Engineering (FMPE) in year 2001-02. The primary aim of the degree program is to strengthen the Agricultural Engineering faculty to carry out teaching, research and extension activities in the fields of farm machinery and equipment's *viz*. tillage, sowing, plant protection, harvesting, threshing etc.

OBJECTIVES

- To encourage the undergraduate students to come forward to acquire knowledge of higher level in the same discipline.
- To promote a supportive environment for life through implementing continuous learning programmes.
- To provide quality engineers with higher education in the field of Agril. Engg. to the nation for reaping the benefits of higher qualification.
- To create and nourish a stimulating learning environment that ensures a globally relevant education based on Eternal human values.
- To promote a supportive learning environment for life through implementing continuous learning programmes.

FACILITIES & SERVICES:

- Department of Farm Machinery & Power Engineering is having 2 ha of land for the purpose of practical training, conducting experiments on research, testing of implements, etc.
- Different laboratories like Drawing Laboratory, Tillage & Traction Laboratory, Thresher Laboratory, Plant Protection Laboratory, Cut Model Laboratory, CAD-CAM Laboratory, FIM Laboratory, Fitting Shop, Mechanical Laboratory, Carpentry Shop,

Machine Shop and Welding Shop with a capacity to conduct practical classes for 35 students at under graduate and post graduate levels too.

- The department do have AICRP on FIM from 2015 onwards the total grant sanctions for same is Rs. 315.14 lakhs. It also have the facility of fabrication related to research projects.

- The department also have the All India level Testing and Training Center of farm machinery established in August 2008 financially supported from central Government under Rastriya Krushi Vikas Yojana having total outlay of the project as Rs. 535.00 lakhs. This center is one of the thirty six approved centers by the Department of Agriculture & Co-operation, Ministry of Agriculture, and Government of India. Which has collected a revenue of Rs. 1404.25 lakhs till 31st March, 2025.

ACCOMPLISHMENTS: P.G./PH.D. STUDENTS' RESEARCH OUTCOMES WHICH ARE HELPFUL FOR THE FARMING COMMUNITY AND FURTHER RESEARCH:

Table 25. P.G. students' research topics linked with staff research projects

Sr. No.	Title of Thesis	Name of Student	Name of Guide	Month/Year of submission
1	Development of remote operated sprayer for field crop	Makwana Ajay D.	Dr. P. Mahnot	Feb.-2022
2	Development and performance evaluation of remote controlled mechatronics precision planter	Vala Vimalsinh S.	Dr. R. Yadav	Sep.-2022
3	Design and Development of Tractor drawn Carrot Crop Harvesting Machine	Gaadhe Sarmanbhai K.	Dr. V. K. Tiwari	Oct.-2022
4	Design and Development of Hydraulics Motor operated Bush Cutter	Chavda Shaktisinh K.	Dr. K. B. Jhala	Nov.-2022
5	Development and performance evaluation of mini Tractor operated automated inter and intra row rotary weeder cum sprayer	Balas Piyush R.	Dr. P. Mahnot	Nov.-2022
6	Development and Performance evaluation of walking type Battery operated Boom sprayer cum weeder	Sudhir Kumar Singh	Dr. R. K. Kathiria	Nov.-2022
7	Design and development of self propelled leafy crop harvester	Aswathi K.	Dr. V. K. Tiwari	Aug.-2023

8	Development and Evaluation of Solar Powered Remote Controlled Sprayer	Jalu Mayur V.	Dr. R. Yadav	Sep.-2023
9	Development and Tractor operated Pneumatic Groundnut Pod Collector	Kapil Verma	Dr. R. K. Kathiria	Jun.-2024
10	Development of self propelled riding type chickpea harvester	Delvadia Nandan P	Dr. R. K. Kathiria	Oct.-2024
11	Development and performance evaluation of chilli transplanter	Vipal Mansuriya	Dr. R. K. Kathiria	Apr.-2025
12	Optimization of Operational Parameters for spraying with Unmanned Aerial Vehicle (UAV) on cotton and groundnut crop	Chavda Dipeshkumar B.	Dr. T. D. Mehta	July-2025
13	Design and Development of Tractor Drawn Onion Digger cum Detopper	Khanpara Brijesh M	Dr. T. D. Mehta	July-2025
14	Design and Development of Dual Powered Media Mixture Machine for Horticultural Crop Nursery	Ambaliya Pravinaben S	Dr. T. D. Mehta	July-2025
15	Design and Development of Mini Tractor Operated Groundnut Digger cum Inverter	Lakhani Aanand L	Dr. R. K. Kathiria	July-2025

EXTERNAL FUNDED PROJECTS

Table 26. Completed projects/schemes

Sr. No.	Project	Date of Start	Date of Completion	Sponsoring Agency
1	ICAR sponsored Adhoc research scheme on "Anthropometric survey and Ergonomic studies on Agricultural workers of Gujarat for efficient and safe design of Agricultural Equipment's"	2000	2004	ICAR

Table 27. Ongoing projects/schemes

Sr. No.	Name of the Project / Scheme	Starting Year
1	Rastriya Krushi Vikas Yojana Scheme – "Testing & Training Center on Farm Machinery"	2008
2	All India Coordinated Research Project (AICRP) on Farm Implements and Machinery: AICRP (FIM), Junagadh Agricultural University, Junagadh centre is conducting Research and Development of different machinery related to farming operations, their Prototype Feasibility Testing on University as	2015-16

	well as on farmer's field and the Front Line Demonstrations to the farmers. The head quarter of the project is CIAE, ICAR, Bhopal (M.P) (B.H. 2258-D)	
3	Agril. Drone Project – Approved by Director, Agriculture Technology Application Research Institute, ICAR, Pune.	2022
4	Rastriya Krushi Vikas Yojana Scheme – Establishment of DGCA Approved Remote Pilot Training Organization (RPTO)	2025

6.4.2. FACULTY STRENGTH:

Table 28. Faculty Strength

Sr. No	Sanctioned Faculty	Faculty in Place	Vacant position	Faculty recommended by ICAR	Deviations from ICAR recommendations	Remarks
1	Professor	0	1	1	0	-
2	Associate Professor	2	0	2	0	-
3	Assistant Professor	4	0	4	0	-
AICRP on Farm Implements & Machinery						
4	Research Engineer	1	-	1	0	-
5	Assistant Professor	1	-	1	0	-
Services of Assistant professors from other department to carry out courses and guidance to the PG students.						
6	Assistant Professor of Dept. of Agri.Engg., CoA, JAU, Junagadh	1	0	0	0	-
7	Assistant Professor, DR Office, JAU, Junagadh	1	0	0	0	-
8	Asstt. Professor, CoA, JAU, Amreli	1	0	0	0	-
9	Assistant Professor of Poly. in Agril.Engg.,	1	0	0	0	-

	JAU, Targhadia					
10	Assistant Professor of Poly. in Agril., JAU, Halvad	1	0	0	0	-

6.4.3. TECHNICAL AND SUPPORTING STAFF:

Table 29. Technical/Supporting staff position:

Sl. No.	Sanctioned Faculty	Faculty in place	Vacant position	Faculty recommended by ICAR/UGC/VCI/Other regulatory bodies	Deviations from ICAR recommendations
1	Technical Assistant	1	0	0	0
2	Laboratory Technician (Mech.)	1	0	2	-1
3	Assistant Instructor	1	0	1	0
4	Engine Driver	1	0	1	0
5	Welder	0	0	1	-1
6	Laboratory Boy	1	0	1	0
AICRP on Farm Implements & Machinery					
7	Draftsman/ Senior Technician	0	1	1	0
8	Technician T-1	1	0	1	0
9	Technician T-1	1	0	1	0
10	Technician T-1	0	1	1	0

Apart from these 14 persons are working in the department on contractual basis out of which 2 persons are Agricultural Engineers (1 Ph.D., 1 M.Tech.) as RF, 1 person (Ph.D.) as YP1, 1 persons are as Office Assistant, 1 as Tractor Driver cum Mechanic, 2 as Tractor Driver, 2 as Skilled Labour, 2 Unskilled Labour & 2 as Peons.

6.4.4. CLASSROOMS AND LABORATORIES:

Table 30.Seminar Hall and classroom

Sr. No	Classroom	Area (ft)	Seating capacity	Other facilities
1	PG Study room	6 x 8	20	-
2	Seminar Hall	6 x 8	25	LED Television with Laptop and Sound System
3	Training Hall	12 x 8	75	LCD infrared optical intreractive panel, Computer and Audio-Visual System

Table 31. Major Laboratories

Sr. No	Name of laboratory	Area (ft)	Working capacity
1	Fitting Shop	15 x 13	15
2	Mechanical Laboratory	19 x 8	50
3	Carpentry Shop	12 x 9	15
4	Machine Shop	22 x 13	30
5	Welding Shop	12 x 12	15
6	Cut Model Laboratory	6 x 12	10
7	Drawing Laboratory	22 x 10	100
8	Tillage & Traction Laboratory	12 x 19	35
9	Thresher Laboratory	12 x 16	35
10	Plant Protection Laboratory	12 x 6	35
11	Tractor Room	12 x 15	40
12	CAD CAM Laboratory	9 x 9	30
13	FIM Laboratory	12x 12	50
14	Incubation centre and Precision Mechanisation	12 x 6	35
15	AI and Robotic lab	12 x 19	50

Table 32. List of major equipment

Sr. No.	Item Name	Qty.
1	Power weeder	1
2	Power tiller	1
3	Blade harrow cum land leveler – Tractor drawn	1
4	Disc plough - tractor operated (2 Disc) and (3 Disc)	3
5	Power sprayer	1

6	Power duster	1
7	Reversible M.B. plough (2+2 bottom)	2
8	M. B. plough tractor operated (2 bottom) and (3 bottom)	2
9	Multipurpose bullock drawn pipe implement	2
10	Single bullock drawn pipe frame implement	1
11	Ground nut digger - bullock drawn & tractor operated	2
12	Rotavator - tractor operated 4 ft, 6 ft	1
13	Planter - bullock drawn implement mounted & tractor operated	2
14	Tractor operated post hole digger	1
15	Subsoiler – tractor operated	1
16	Engine : VST shakti Z- 170F, 5 – HP, 8- HP. 10 HP	3
17	Trailer, 4-wheel	1
18	Ground nut & Caster decorticator	2
19	Cotton shredder, 5 – HP/ electric motor operated	1
20	Jettrofa decorticator	1
21	Measuring & Display unit of Dynamometer for bullock drawn & tractor drawn implement	2
22	Cultivator – tractor operated (9 tyne, 7 tyne, 5 tyne)	3
23	Integrated vibration & noise meter (vibration meter, noise meter & for multiple channels common retrieving unit)	9
24	Noise level Recorder (portable)	1
25	Dust level Recorder (portable)	1
26	Vibration Meter (portable)	1
27	Cotton shredder – tractor operated	1
28	Front end loader (for mini tractor)	
29	Front mounted dozer with M.B. plough	1
30	Green groundnut thresher	1
31	Ridger – tractor drawn	1
32	Cultivator cum rotary tiller	1
33	Disc harrow 12 disc, 8 disc	2
34	Reaper Harvester & Reaper Binder & Power reaper	3
35	Rice Transplanter	1
36	Thermo anemometer	5
37	Digital vacuum gauge	3
38	Digital multi meter, Digital LUX meter	7
39	Hand pallet truck, Manual Stacker Plate form hand trolley	3
40	Grain moisture meter	3
41	Hardness tester	3
42	Universal Testing Machine (UTM)	1
43	UTM Hydraulic unit with comp. acc.	1
44	Combine Harvester-Tractor mounted/ Self Propelled	2
45	Straw Combine-Tractor Drawn	1
46	Seed Germinator	1
47	Digital Bomb Calorimeter with Oxygen Cylinder	1
48	Digital ultra low temperature meter	1
49	Standard Penetrometer, Flow Cup Viscometer, Bulk Density Apparatus, Universal Moisture Meter Moag-U, Digital Moisture Meter AG-3, Digital Flow Anemometer, Outside Micrometer, Digital Micrometer, IR Non Contact Thermo (2 Nos).	10
50	Chaff Cutter	1
51	Mobile Chopper & Mobile Shredder	3

52	Grass Trimmer & Aqua Power Cleaner	2
53	Dust Level Recorder	1
54	Exhaust Gas Analyzer	1
55	Hardness Testing M/C	1
56	Seed Uniformity Test Setup	1
57	Heart Rate Monitor, Anthropometer	1
58	Single Cylinder Diesel Engine Test Rig.	1
59	Potato Planter Tractor Ope. & Potato Digger Tractor Ope.	2
60	Centrifugal Ceramic Process Pump, Self Priming Multistage Boiler Feed Pump, Submersible Dewatering Pump, Cross Section Of Self-Priming Mud Sewage Pump, Cross Section Of Process Pump, Submersible Mono Pumpset, ASPEE HTP sprayer pump	7
61	Fully Automatic Potato Planter Tractor Operated	1
62	Manual Muscle Tester	1
63	Displacement Measu. Tutor Using LVDT, Load Measu. Tutor Using Loadcell, Pressure Measu. Tutor Using Pressure Transducer, Strain Measu. Tutor Using Strain Cantilever Beam, Torque Measu. Tutor Using Torque Transducer, Temp. Measu. Tutor Using Thermister, Speed Measu. Tutor Using Elec. Magnetic, Angular Measu. Tutor Using Angular Sensor, Digital Wattmeter	9
64	Laser Guided Land Leveller	1
65	Digital Smoke Meter	1
66	Aero Blast Sprayer Model	1
67	Tractor Operated/Mounted 2 Disc Ridger Tractor Operated Ridge & Furrow Making Implement 2 In 1 Hand Operated Chaff Cutter	1 1 1
68	Tractor Operated Rotary Plough	1
69	Tractor Operated Mower	1
70	Spectrometer	1
71	Groundnut Digger Shaker	2
72	Fuel Pump & Fuel Filter Test Set-Up	2
73	Test Apparatus For Determination of Fatigue Failures In Compression Sprayer Tanks	1
74	Test Apparatus For Power Efficiency Measurement Of Power Operated Hydraulic Sprayers	1
75	Rig For Conducting Pump Performance And Endurance Test On Various Agricultural Sprayers	1
76	Microscope For Droplet Size (Agricultural Sprayer's Nozzles) Analysis	1
77	Cut Off Machine Heavy Duty	1
78	Spring Test Rig	1
79	Electronic Penetrologger Set	1
80	Patternator	1
81	Digital Vernier Caliper (150 Mm) With NABL Accredited Calibration Certificate	4
82	Thread Pitch (Screw Pitch) Gauge With NABL Accredited Calibration Certificate	2
83	Standard Wire Gauge With NABL Accredited Calibration Certificate	2
84	Digital Micrometer (0-25 Mm) With NABL Accredited Calibration Certificate	2

85	Stainless Steel Degree Protector With NABL Accredited Calibration Certificate	2
86	Stop Watch With NABL Accredited Calibration Certificate	2
87	Tachometer (Mechanical) With NABL Accredited Calibration Certificate	2
88	Tachometer (Contact Type Digital, Non-Contact Digital) With NABL Accredited Calibration Certificate	4
89	Dampened Pressure Gauge With NABL Accredited Calibration Certificate	2
90	Self Propelled (3-Wheeld) Multipurpose Farm Implement	1
91	Test Set Up (Patternator) For Spray Distribution For Boom Of Power Operated Hydraulic Sprayer's Nozzles	1
92	Laser Leveler Test Rig	1
93	Digital Dynamometer (Capacity: 2 Ton/100 G, 1 Ton/50 G)	1
94	Electric Seed Cum Fertilizer Drill Test Rig Set Up	1
95	Welding Machine	1
96	Power Thresher	1
97	Sieve Shaker (Gyratory)	1
98	Axial Compensated Load Cell	1
99	Portable Load Meter	1
100	Digital Cone Penetrometer	1
101	Tractor operated deep furrow sugarcane cutter planter	1
102	Tractor operated phule two row forward reverse rotavator for sugarcane crop	1
103	Hand tachometer chronometric	1
104	Soil bulk density measurement	1
105	Digital telemetry system for rotary torque measurement	1
106	Cut model of tractor steering assembly & clutch assembly	2
107	Tractor cut model	1
108	Post hole digger	1
109	Zero till drill, CIAE Tractor drawn precision drill, Tractor drawn seed cum fertilizer drill, Mini tractor operated rotary weeder cum fertilizer drill, Tractor operated multi crop seed cum fertilizer drill, Bullock drawn pipe frame seed drill	6
110	Engine operated portable post hole digger	1
111	Rotavtor/ Rotary tiller	1
112	Thresher cum cleaner cum grader	2
113	Castor/Jetropha Decorticator	1
114	variable frequency drive	1
115	Lazor leveler FRP case	1
116	Portable vibration analyser	1
117	Multiple human vibration analyzer with sensor	1
118	Precision vegetable seed planter	1
119	Horizontal diesel engine, 5 HP, 2.5 HP	2
120	Plastic mulch machine	1
121	Manually drawn Engine operated fooder crop harvester	1
122	Single row cotton planter	1
123	Mini tractor operated Groundnut digger elevator cum heap formator	1

124	self-propelled weeder & Solar operated power weeder	2
125	Remote operated sprayer	1
126	Sprayer calibrator	1
127	Combiened test ring for trigger type cut off device sprayer lance pressure test	1
128	Walking type battery operated boom sprayer cum weeder	1
129	Mulching machine attachment of rotavator	1
130	LCD dispay calipers, Digital Varniar calipers	2
131	Hydraulics motor operated bush cutter	1
132	Carrot harvesting machine	1
133	Remote controlled precision planter	1
134	Mini tractor operated two row cotton planter	1
135	Solar powered remote controlled sprayer	1
136	Self prpeeled riding type cheakpea harvester	1
137	Chilli transplanter	1
138	Onion digger cum detopper	1
139	Mini tractor operated groundnut digger cum inverter	1
140	Media mixture machine for horticultural crop	1
141	Warm and warm wheel	3
142	Parallelogram of force apparatus	3
143	Planimeter	2
144	Parallel ruler soil brass bridge wheel and pupets steel	5
145	Edge binding machine	1
146	Drawing Board (815x585)	20
147	Set of model of penetration 1. Two cylinder penetrating at right angle. 2. Two cylinder with oblique penetration. 3. Cylinder-cone with oblique penetration. 4. Cylinder-cone with penetrating at right angle. 5. Two cone at right angle. 6. Two square prism at right angle. 7. Two square prism at oblique angle. 8. Spear and cone at center. 9. Engineering drawing model (cylinder cube, triangular prism, hexagonal prism, triangular pyramid)	 1 1 1 1 1 1 1 1 1
148	Slide crank mechanism (a) Reciprocating engine mechanism (b) Oscillating cylinder mechanism (c) White worth quick return mechanism	 1 1 1
149	Petrol Engine Model 4-stroke & Diesel Engine Model 2-stroke	2
150	Spring Dynamometer (Spring system based load sell type (0-500) kg Hydraulic Dynamometer (Hydraulic system based load cell type, 0-1000kg)	3
151	Motorized Gyroscope	1
152	Static & Dynamic Balance Apparatus	1
153	Air Conditioning Tutor	1
154	Moment of Inertia of Flywheel 15 cm, 20 cm, 25 cm dia.	3
155	Window Air Condition Cycle Test Rig	1
156	Ice Plant Tutor-30Kg	1
157	Computerized Multi-Fuel Research Engine Test Setup	1
158	Water cooler test ring	1
159	Experimental cold storage trainer	1
160	Cut section model of compressor	1

161	Workshop apparatus : Fitting vice 3" bench vice, Lag vice 6", Pipe vice 2", Universal marking gauge 9", Surface plate 8"x12", Smith hurth 24"x30"x6", Anvil 1.5 wt (London pattern), Earn steel 7"x7"x12", Swage block 12"x12", Metal lathe mate true chuck 9", Refractory Furness 9"x4"x4" 1200 C,	5
162	Lathe machine 1370 mm bed length S.S. & S.C. V-belt driven, fitted with Norton gearbox	2
163	Sand mixture capacity 3 kg	1
164	Wood surface planner 9"x48"(sarswati brand) with accessory	1
165	Fobars digital micrometer M 0-25	1
166	Contech Electonic Balance Model CP-2T/500 Capacity-2Ton, Accuracy-500gm. Platform Size-1200x1200mm	1
167	CNC Turning Center Model DX 200 with Isolation Transformer and with all standard accessories and electricals Lathe Machine 4.5" size 8" through chuck Lath machine (1000x300)	1 4 2
168	Variable speed gear boxes	7
169	Digital Techometer 0to10000 RPM	1
170	Wood working machine, Hacksaw machine	2
171	Mechanical starrer	1
172	Barbed wire making Machine	2
173	Shaping Machine	1
174	MIG (250) Welding Machine	1
175	Milling machine	1
176	S.E.W. Brand Pllar Drilling Machine.	1
177	All Geared type Shaping machine	2
178	Bench Grinder, Hand grinding machine 715 watt, 1200 rpm	2
179	Lawn mover Make/Model: Makita EL4110	1
180	Portable Welding Machine(ESSAB), Rocker arm Spot Welding Machine	2
181	Smith Hearth With Blower	1
182	Chain link Fence making machine	1
183	Vertical Milling machine	1

FARM FACILITIES

Agricultural land of 2 ha near by the department is provided for practical training to students on tractors and implements, testing of implements received for test reports for govt. approval under subsidy schemes etc.

Table 33. Farm Facility

Sl. No.	Name of the Department	Farm area	Irrigated/ Non-irrigated	Remarks
1	Department of Farm Machinery & Power Engineering (Open Land)	2 Ha	Irrigated	Specially meant for testing of implements/ Equipment developed in the department as well as received for Testing.

TRACTORS AVAILABILITY

Total number of tractors under the department of FMPE are 10 and as Table 34 below.

Table 34. Tractors available in the department

Sr. No.	Particular	Quantity
1	Mahindra & Mahindra, 47 – HP	1
2	Mahindra & Mahindra , 67.94 - HP	1
3	Mahindra & Mahindra, 60.08 HP	1
4	Mahindra & Mahindra, 37.01 HP	1
5	Tractor John Deere-5050	1
6	Power tiller, 14.3 HP	1
7	Mahindra Yuvraj Mini Tractor	1
8	Captain Mini tractor, 25 - HP	1
9	New Holland, 71.35 – HP	1
10	HMT Tractor, 25 – HP	1

P.G RESEARCH FACILITY AVAILABILITY

Research facilities as mentioned in the table 35 with required manpower for conducting PG research are available in the department itself.

Table 35. P.G. Research Facility availabilty

Sr. No.	Name of Facility
1	Rig for conducting pump performance & endurance test on sprayers
2	Test apparatus for deter. of fatigue failures in comp. sprayer tanks
3	Test appara. for power efficiency measure. of power ope. hy. sprayers
4	Microscope for droplet size (agricultural sprayer's nozzles)
5	Spring test jig
6	Engine testing rig
7	Electronic Penetrologger Set
8	Nozzle spray angle measurement set up
9	Sprayer belt (strap) test set up
10	Torque (required for trigger actuation) measurement device
11	Test set up (Patternator) for spray distribution for Boom of Power operated Hydraulic sprayer's nozzles
12	Laser Leveler Test Rig
13	Digital Dynamometer (Capacity: 2 ton/100 g)

14	Digital Dynamometer (Capacity: 1 ton/50 g)
15	Electronic Seed cum fertilizer drill test rig set up
16	Sticky belt set up
17	Soil bin set up

The All India level Testing & Training center of Farm Machinery is operating under the department and therefore, new invented for newly designed equipment and machinery are received at the center. This creates a good amount of exposure for the staff as well as students.

WORKSHOPS

The required fabrication works are carried out in workshop available Farm Machinery and Power Engineering Department of the college.

A full-fledged workshop is operating under department having the facility of carpentry, foundry, black smithy, machining and welding for acquaintance /practice to the students. The major fabrication work of the research projects of UG as well as PG students is carried out in the workshop.

A separate facility for minor fabrication work under the AICRP on FIM is also operating under the department. The area of the lab is 2000 Sq. ft.

The department is facilitated with the equipment's which are sufficient to carry out the PG students' research. The field related equipment's, the land requirement for conducting the research work is also sufficient. The faculty members are well qualified to guide, mentor and handle the courses of PG students to fulfill the course curriculum of supporting courses.

6.4.5. CONDUCT OF PRACTICAL AND HANDS-ON-TRAINING

The department is equipped with 2 wings (D & E) and a building of Testing Centre along with 2.5 ha of farm land in which the testing of implements and training to students is provided. The department is having 13 different laboratories equipped with required instruments/ machines for conducting UG/PG level practical classes as well as training to farmers/tractor operators. All the three buildings are having the facility of LAN and Wi-Fi internet connection. Majority of the labs and personal chambers are also connected with internet connection. In addition to this, department is having seminar room/PG classroom and training hall with Audio-Visual aid and having seating capacity of 50 and 15 persons respectively. The department is also having well-furnished and equipped with sophisticated computer facility in which the practical classes of CAD/CAM and Creo software are

conducted. Here, the UG/PG students are provided with the practical hands on training and practice on Agricultural Implements and different machines for different farm operations.

6.4.6. SUPERVISION OF STUDENTS IN PG/PH.D. PROGRAMMES

Each and every students admitted to Ph.D. (FMPE) are placed under one of faculty in the department. The faculty termed as Major Advisor proposes an advisory committee (4 members for Ph.D.) for a particulars student to the Dean, PG Studies. After the approval of Dean, PG Studies all the committee members look after the finalizing synopsis preparation the research proposal for dissertation, analysis of data, Results and interpretations and finally the thesis writing. As on today 21 students have obtained their Ph.D. degree from the inception. The year wise Ph.D. students admitted are as shown in Table 36.

Table 36. Student Intake and Student to teacher ratio of the Department

Year	No. of PG recognized teachers	Intake of students	Student to teacher ratio
2020-21	04	4	1: 1.00
2021-22	04	4	1:1.00
2022-23	05	2	1:0.40
2023-24	05	2	1:0.40
2024-25	03	2	1:0.66
2025-26	03	3	1:1.00

Table 37. Details of PG students' guidance.

SN	Title of Thesis	Name of Student	Name of Advisor	Remarks/ achievement
2021-22				
1	Development of remote operated sprayer for field crop	Makwana Ajay D (1050218002)	Dr. P. Mahnot	
2	Development and performance evaluation of remote controlled mechatronics precision planter	Vala Vimalsinh S. (1050219002)	Dr. R. Yadav	Best poster award 2023 (IISF) Young Scientist award (2023) mother Teresa collge of Agri Best oral presentation (2025)

3	Design and Development of Tractor drawn Carrot Crop Harvesting Machine	Gaadhe Sarmanbhai K. (1050219004)	Dr. V. K. Tiwari	Excellence in Research (2023), SSDAT, Meerut
4	Design and Development of Hydraulics Motor operated Bush Cutter	Chavda Shaktisinh K. (1050219003)	Dr. K. B. Jhala	-
5	Development and performance evaluation of mini Tractor operated automated inter and intra row rotary weeder cum sprayer	Balas Piyush R. (1050219001)	Dr. P. Mahnot	-
6	Development and Performance evaluation of walking type Battery operated Boom sprayer cum weeder	Sudhir Kumar Singh (1050219011)	Dr. R. K. Kathiria	-
7	Design and development of self propelled leafy crop harvester	Aswathi K. (1050218001)	Dr. V. K. Tiwari	-
2022-23				
8	Development and Evaluation of Solar Powered Remote Controlled Sprayer	Jalu Mayur V. (1050220008)	Dr. R. Yadav	-
9	Development and Tractor operated Pneumatic Groundnut Pod Collector	Kapil Verma (1050221006)	Dr. R. K. Kathiria	-
10	Development of self propelled riding type chickpea harvester	Delvadia Nandan P (1050220006)	Dr. R. K. Kathiria	-
11	Development and performance evaluation of chilli transplanter	Vipal Mansuriya (1050221005)	Dr. R. K. Kathiria	-
12	Optimization of Operational Parameters for spraying with Unmanned Aerial Vehicle (UAV) on cotton and groundnut crop	Chavda Dipeshkumar B (1050220003)	Dr. T. D. Mehta	-
2023-24				
13	Design and Development of Tractor Drawn Onion Digger cum Detopper	Khanpara Brijesh M (1050220002)	Dr. T. D. Mehta	-
14	Design and Development of Dual Powered Media Mixture Machine for Horticultural Crop Nursery	Ambaliya Pravinaben S (1050222001)	Dr. T. D. Mehta	-
15	Design and Development of Mini Tractor Operated Groundnut Digger cum Inverter	Lakhani Aanand L (1050222003)	Dr. R. K. Kathiria	-

2024-25				
16	Development and Performance Evaluation of AI-based chemical applicator for site specific weeds control	Dama Vaibhav R (1050221002)	Dr. T. D. Mehta	-
17	Performance evaluation of different type of nozzles in insecticide and weedicide operation in vegetable crop	Thokchom Macedonia Devi (1050223004)	Dr. T. D. Mehta	-

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS, *ETC.*)

Feedbacks are collected from the respective stakeholders through various mechanisms like personal contacts, visitors register, emails, etc. The few of the feedbacks as received from the different stakeholders are appended in the Table 38 and the documentary evidences are provided in the Annexure-VIII.

Table 38. Feedback received from stakeholders

Feedback detail	Excellent	Very good	Good	Average
How do you rate the sequence and syllabus of the Courses studied in the previous semester?	44.44	55.56	0.00	0.00
How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?	44.44	44.44	11.11	0.00
How do you rate the relevance of the units in the Syllabus relevant to the course?	88.89	11.11	0.00	0.00
How do you rate the sequence of the units in the course?	55.56	22.22	22.22	0.00
How do you rate the allocation of the credits to the courses?	44.44	55.56	0.00	0.00
How do you rate the distribution of the contact hours among the course components (L-T-P)?	55.56	22.22	11.11	11.11
How do you rate the electives offered regarding their relevance to the specialization streams?	55.56	33.33	11.11	0.00
Rate the courses in terms of extra learning or self-learning considering the design of the courses.	33.33	55.56	11.11	0.00
Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.	66.67	22.22	11.11	0.00
How do you Rate the loading of the courses in a semester?	55.56	33.33	0.00	11.11
How was the evaluation/exam pattern of the courses?	33.33	66.67	0.00	0.00

How do you rate the objectives stated for each of the courses?	55.56	33.33	11.11	0.00
How do you rate the skill improvement from the courses?	66.67	22.22	11.11	0.00
How do you rate the practical exposure from the courses?	55.56	22.22	22.22	0.00
How do you rate the experiments about the real-life Applications?	33.33	66.67	0.00	0.00

6.4.8. STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS

Table 39. Student intake and attrition in the programme for last five years

Year	Sanctioned seats	Actual intake	Attrition	% Attrition
2021-22	01	03	0	00
2022-23	05	02	0	00
2023-24	05	01	0	00
2024-25	03	03	0	00
2025-26	04	03	1	33.33 %
Total	**17**	**12**	**1**	**8.33**

Note : Students selected for job in government sector or opted for competitive examinations had left the studies.

6.4.9. ICT APPLICATION IN CURRICULA DELIVERY

(A) UG/PG Admission system

Junagadh Agricultural University (JAU) participates in a centralized Common Admission Portal, jointly managed by all four State Agricultural Universities (SAUs) of Gujarat, for the streamlined administration of admissions to diploma, undergraduate, postgraduate, and doctoral programmes. The portal enables prospective students to register, submit applications, pay fees online, track application status, and access rank lists. Additionally, applicants receive real-time SMS notifications regarding important updates such as entrance exams schedule and admission rounds.

On the administrative side, the portal supports several backend operations including application verification, eligibility validation, rank list generation, and programme allotment, thereby ensuring a uniform, transparent, and efficient admission process across all SAUs. Candidates can select their preferred colleges and degree programmes, and the system automatically allocates admissions based on merit and preference. The entire

process, including the publication of merit lists and category-wise vacancy matrices, is conducted online to ensure accessibility, fairness, and transparency.

(B) Online Fees collection system

College students pay their semester fees online through the dedicated portal http://online.jau.in/student_fees/, which is accessible via the Student Corner on the official university website. The system supports multiple payment modes, including UPI, credit/debit cards, and net banking, providing a convenient and secure method for fee transactions during subsequent semesters of various degree programmes.

The collected fees are directly deposited into the respective college's bank account, ensuring accuracy and transparency in financial management. Additionally, college administrators have access to real-time fee collection reports through the system, enabling effective monitoring and record maintenance.

(C) Academic activities

Simultaneously, the Academic Information Management System (AIMS) enhances curriculum delivery and monitoring by providing a dynamic digital interface for faculty and students. Through AIMS, instructors upload and share lecture notes, assignments, class materials, and video lectures, ensuring round-the-clock access to learning resources. The platform also supports online assessments, attendance tracking, and real-time academic monitoring, including faculty feedback and progress reports. These ICT-enabled features promote interactive learning, strengthen academic accountability, and create a personalized, student-focused educational environment at JAU.

(D) Teaching through ICT tools

Teaching is made by using PPT, videos, visual, animations and smart boards. During COVID-19 pandemic s, all classes are conducted online using the various platforms viz. Zoom, Google Meet through Google Classroom and WhatsApp applications during academic year 2020-21 and 2021-22. The teachers are taking live lectures as well as supplying the teaching materials using these platforms. The teachers are performing live practical on Zoom or Google Meet through Google Classroom platforms online for the students. The examinations are also conducted online using the Online Examinations Management Software (OEMS) and a proper evaluation is made to justify the students' efforts.

The faculty members are involved in preparing the virtual lectures in the well-developed virtual classroom facility in the university which is appreciated by the ICAR also.

(E) Examination Management system

The JAU Examination Management System (JEMS) is a comprehensive ICT-based platform that efficiently manages academic and examination-related activities for undergraduate and postgraduate students. It facilitates the entry of internal and external marks and streamlines critical postgraduate processes such as online submission of campus forms, synopsis, preliminary proposals, exam results, thesis evaluation and examination panel selection, and final viva voce outcomes. Each stage - from submission by the major advisor to review by the Head of Department and Dean of the respective faculty, and final approval by the Dean of Postgraduate Studies and the Registrar - is conducted digitally through the JEMS portal. This robust system ensures timely tracking of student progress, adherence to academic timelines, and transparent, paperless record management

(F) Online Alumni Portal

The College of Agricultural Engineering and Technology (CAET) offers an online Alumni Portal where graduated students can register themselves and stay connected with the institution. The portal includes features such as searching alumni from other batches, viewing current city/location, and the ability to update personal profiles at any time throughout the year. This platform serves as a valuable tool for fostering professional networking, maintaining alumni engagement, and strengthening the bond between alumni and the institution.

(G) E-library

E-library for all the constituent colleges of the JAU is managed by the University Campus Library, established in the year 1978. The two storied new Building is located at the eastern side in the main campus. The Library with ICT platform is one of the most important centers of the University, which facilitates the teaching, research and extension program. Both students and faculty extensively use the facility. The Junagadh Agricultural University has given key prominence to the development of the library facilities at the headquarters as well as the constituent colleges and research stations.

Our library provides services students/faculties to constituent colleges, which come under Junagadh Agricultural University, viz., 5 at Junagadh campus like College of Agriculture, College of Agriculture Engineering & Technology, College of Horticulture, Junagadh, Post Graduate Institute of Agri. Business Management and College of Agriculture(Morbi, presently at Junagadh), 3 College of Agriuclture, at Khapat, Mota Bhandariya and Targhadiya, 3 Different Polytechnics of Agro Processing & Food Technology,

Agriculture, Horticulture in the Junagadh campus, 3 Polytechnics of Agriuclture at Amreli, Dhari and Halvad and 1 Polytechnic of Agriucltural Engineering at Targhadiya.

Many knowledge-based services like that of Reference, Bibliography, INFLIBNET service. CD-ROM Databases, Internet browsing and e-services are provided by the library for its users.

Under Automation, library has RFID for the library circulation and security of library material along with OPAC through KOHA, thus the library is fully automized. Post Graduate and Doctorate theses of research scholars of different faculties and rare or important books and documents are digitized in the university library through the digitization camera available in the library. The library circulation section works with KOHA as well as LIBSYS library software.

Books, periodicals, theses, reports, maps and encyclopedia relevant to the mandate areas of the university have been stocked in the University Library and its constituent center. University Library is well equipped with 59509 text as well as reference books, 80 research journals/periodicals, 3982 thesis, 14000 bound volumes, 1037 e-books, 2 e-journals, various reports, maps and encyclopedia relevant to teaching, research and extension activities of the university. The library has offline database in the form of CAB, Agris, and Agricola as well as online database is available at e-library tab on university website. University Library subscribes 10 newspapers to acquaint users with daily news.

The university library renders its services to users from 8:00 to 18:10 h. A separate air conditioned reading room is developed with the best facilities as well as good ventilation and aeration. This AC reading room accommodates approximately 150 students. The Reading Room remains open for its users from 8.00 to 23.00 hours on working days whereas 8.00 to 14.00 hours on holidays.

(H) Internet

The College Cyberary, equipped with high-speed internet connectivity, provides students and faculty with seamless access to a wide range of online journals and academic databases. Key databases such as CABI, AGRIS, and AGRICOLA are available in CD-ROM format, while resources like INDIAN HARVEST are accessible as online databases. To enhance user experience, the library uses WinSPIRS, a Windows-based client interface, for efficient access to the various subscribed databases. This digital infrastructure supports academic research and learning by ensuring convenient and reliable access to global and national scientific literature.

The Library is equipped with 40 computer workstations with internet connectivity, along with scanning and CD writing facilities, all of which are extensively utilized by both students and faculty members for academic and research purposes. To support academic learning, the library also offers a Book Bank facility, through which students are provided with textbooks related to their respective subjects and semesters. This initiative ensures that students have easy access to essential learning resources throughout their academic journey.

(I) Wi-fi facility

The University provides 24x7 Wi-Fi connectivity across key areas of the campus, including the library, departments, and hostels, with secure login-based authentication to ensure safe and reliable access. In addition, the main campus is connected through an IP-based network, allowing students and faculty members to access the internet seamlessly from their respective hostels and departments. This connectivity enables users to browse scholarly resources, access previous literature, stay updated with recent advancements, and enhance their academic and research pursuits.

The e-library is having following online access facilities:

J-Gateplus (Complete):

J-Gate is a comprehensive online indexing and access gateway to global e-journal literature. It has indexes more than 58 million journal articles from over 58,000 journals, covering multiple disciplines including science, technology, medicine, social sciences, and humanities.

J-Gate is highly useful in the agricultural discipline for researchers, students, faculty, and professionals by providing streamlined access to a wide range of scholarly literature. J-Gate indexes thousands of journals, including many in the field of agriculture such as: Agronomy, Soil Science, Horticulture, Agricultural Engineering, Plant Pathology, Crop Science and Animal Husbandry. J-Gate allows searches using: Keywords, Author names, Journal titles & Subject categories. This helps agriculture researchers find specific articles or trends efficiently. Junagadh Agricultural University use J-Gate through consortia like: CeRA (Consortium for e-Resources in Agriculture) by ICAR.

CeRA :

CeRA (Consortium for e-Resources in Agriculture) plays a vital role in agriculture by providing **access to a wide range of electronic journals and research resources** to

Junagadh Agricultural university. CeRA is the ICAR Consortium of e-resources in Agriculture. This covers more than 3000 scholarly journals pertaining to the Agriculture and allied sciences which are available in full text. Its main functions include:

Facilitating access to scholarly literature for scientists, researchers, and students in agriculture and allied sciences. **Promoting information sharing** among ICAR institutes and State Agricultural Universities (SAUs). **Supporting research and innovation** by offering timely and comprehensive digital resources. Overall, CeRA enhances the **quality and reach of agricultural research and education** in India.

ASTRAL :

Junagadh Agricultural University have purchased 630 e-books from Astral International (P) Ltd. These e-books are related to agriculture and allied sciences.

ScienceDirect :

Junagadh Agricultural University has subscription of ScienceDirect, a leading full-text scientific database from Elsevier, is highly valuable in agricultural research and education. It provides access to peer-reviewed journals, book chapters, and research articles.

KrishiKosh:

KrishiKosh is a digital repository of agricultural knowledge in India, developed and maintained by the Indian Council of Agricultural Research (ICAR). ICAR have provided access to all the State Agricultural University of India. These digital repositories include theses, research papers, reports, books, journals, and other academic resources in agriculture and allied sciences.

Krishikosh is a database of theses submitted to the Agriculture universities and ICAR institutions are freely accessible by students. The JAU Library is member for Krishikosh and all the theses submitted to the JAU are being uploaded regularly.

EBSCOhost:

Junagadh Agricultural University has subscription of is also powerful online research platform provided by EBSCO Information Services that gives access to a wide range of academic, scientific, and professional databases. **EBSCOhost** is offering access to: Scholarly journals, E-books, Magazines, Research articles, Conference papers across multiple disciplines including **agriculture** and allied sciences.

NIPAERS:

The JAU has access to 204 e-books.

e-KrishiShiksha:

e-KrishiShiksha is the ICAR e-learning portal on agricultural education.

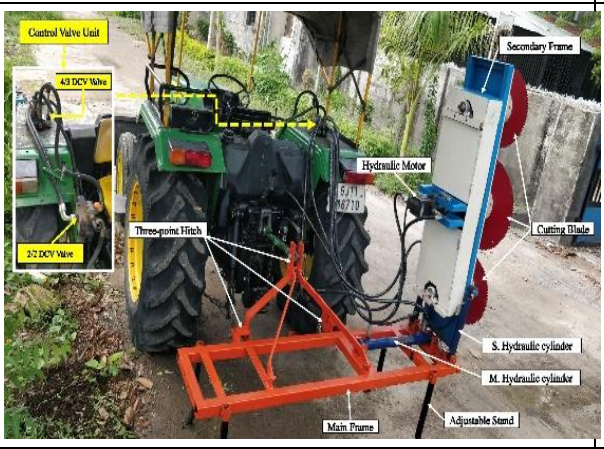
Art & Science Academic Publications (ASAP):

ASAP is providing access of e-books from more than 51 publishers across the globe in various fields to JAU based on IP and Login.

Commodities:

The recent news on agricultural commodities is published on this platform. The university has acceptance of the usage agreement & privacy policy with Centre for Monitoring Indian Economy Pvt. Ltd.

Students developed equipment during their research project works:

<table>
<tr><td>  </td><td>  </td></tr>
<tr><td>Tractor drawn carrot crop harvesting machine</td><td>Remote controlled mechatronic precession planter</td></tr>
<tr><td> 
</td><td>  </td></tr>
<tr><td>Hydraulics operated Bush cutter</td><td>Battery Operated Push type Pegeaon Pea Stem Cutter</td></tr>
</table>



Mini Tractor Operated Two Row Cotton Planter cum Fertilizer Applicator



Manually Operated Finger Weeder



Picking mechanism for knapsack cotton picker



Lucerne harvesting machine



A plant inversion attachment to the existing groundnut digger shaker



Solar Powered Remote Controlled Sprayer

	
Tractor operated pneumatic groundnut pod collector	**Chickpea harvester**
	
Chilli transplanter	**College was awarded the "Best Debutant Team Award"**
	
Tactor drawn onion digger cum detopper	Mini tractor operated groundnut digger cum inverter

	
Dual powered media mixture machine for a horticultural crop nursery	AI-Based chemical applicator for site-specific major weed control in cotton crop

6.4.10. CERTIFICATE

I the Dean, College of Agricultural Engineering & Technology, Junagadh Agricultural University, Junagadh, hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college and degree awarding university.

July 16, 2026

(K . C. Patel)
Principal & Dean
College of Agril. Engg. & Tech.
JAU, Junagadh

SELF STUDY REPORT FOR

Ph. D. (AGRIL. ENGG.)

PROGRAMME IN THE DISCIPLINE OF

PROCESSING & FOOD ENGINEERING

6.4. SELF STUDY REPORT FOR THE PH. D. (AGRIL. ENGG.) IN DISCIPLINE OF PROCESSING & FOOD ENGINEERING (PFE) DEGREE PROGRAMME

6.4.1 BRIEF HISTORY OF THE DEGREE PROGRAMME

EVOLUTION OF THE P.G./PH.D. PROGRAMME:

The College of Agricultural Engineering and Technology established in March, 1984 with the broad mandate of teaching, research and extension education in agricultural engineering. The first batch of B. Tech. (Agril. Engg.) was admitted in July 1984, considering the importance of Agricultural Engineering under the then Gujarat Agricultural University at Junagadh Campus.

With the split of Gujarat Agricultural University into four universities with effect from May 1, 2004, now the college is one of the constituent colleges of Junagadh Agricultural University, Junagadh. The College of Agricultural Engineering and Technology (CAET) is located at the campus. The college building is spread in about 6 ha land. The total in built area of the building area is 25000 sq. m. In addition to this, the Instructional farm of about 35 ha is maintained by the college. Instructional farm is used for UG, PG and department research and practical.

From the year 2001, Ph.D. programme has also been started in discipline of Soil & Water Engineering. Since year 2005-06 Ph.D. programme started in other disciplines like Farm Machinery & Power Engineering, Processing & Food Engineering and Renewable Energy Engineering with total intake capacity of about 15 students.

OBJECTIVES

- To provide the intellectually and trained human resource for the public and private sector to develop the strategies of food processing to meet the demands and requirement of the farmers, industry and consumers.
- To conduct applied research in basic and translational food processing and fosters interactions and collaboration between faculty, researcher and industry.
- To promote a supportive learning environment for life through implementing continuous learning programmes.

FACILITIES AND SERVICES:

The Department of Processing and Food Engineering is one of the departments of the College of Agricultural Engineering and Technology established in June, 1984. The

Department of Processing and Food Engineering has undertaken various research projects in addition to its teaching activities at Under Graduate and Post Graduate levels. The department is offering 41 credit hours course work at B. Tech. level and also offering post graduate course leading to M. Tech. and Ph. D. degree with the specialization in Processing and Food Engineering. The total numbers of M. Tech. and Ph. D. thesis submitted since 1994 to 2025 on different aspects of Processing and Food Engineering are 105 and 20 respectively, with the goal to train required technical man power in the field of Processing and Food Engineering suitable for research and education and also to assist farmers, processors & entrepreneurs in reduction of post-harvest losses and value addition through processing. The important areas of research work are

(i) Engineering properties of biological materials

(ii) Drying and dehydration of fruits and vegetables

(iii) Processing of oilseeds

(iv) Development of process technology

(v) Storage of food products and

(vi) Development of processing machineries.

IMPORTANT P.G. STUDENT'S RESEARCH TOPICS LINKED WITH STAFF RESEARCH PROJECTS

1. Design and Development of Cleaner-cum-Grader for Cumin Seed
2. Value chain of Onion.
3. Value chain of Groundnut
4. Study on Packaging, storage, processing and by-product utilization of Kesar Mango.
5. Processing of Turmeric
6. Processing of Pigeon pea Grains.
7. Design and Development of on Farm Sapota grader
8. Development of gel extraction process for aloe Vera leaves
9. Post-Harvest Technology for Banana.
10. Post-Harvest Handling of Aonla Fruits in Gujarat
11. Low Temperature Grinding of Spices
12. Design and Development of Pomegranate Juice Extractor

13. Processing of Dragon Fruit (Hylocereus polyrhizus).
14. Development of Continuous Microwave Dryer for Leafy Vegetables
15. Foam Mat Drying of Papaya Pulp for Preparation of Papaya Powder
16. Foam Mat Drying of Prickly Pear (Opuntia elatior Mill.) Pulp for Preparation of Good Quality Powder
17. Studies on Effect of Gamma Irradiation on Peanut (Arachishypogaea L.) Kernels Quality and Storability
18. Development of Continuous Microwave Dryer for Leafy Vegetable
19. Development of Starch Based Biodegradable Plastic
20. Development of Dry Coconut Dehusking and Deshelling Machine
21. Development of Ultraviolet-C Irradiation Chamber for Sapota
22. Ozone Application in Wheat Storage
23. Design and Development of Peanut Flour Based Thabdi Peda Forming Machine
24. Valorization of sweet orange (*Citrus Sinesis*) and lime (*Citrus auruntitolin*) waste and development of value added products by using different processing technology
25. Microwave assisted encapsulation of PUFA rich peanut oil
26. Develoment of refractance window dryer for papaya pulp
27. Development of dehusking technology for psyllium (Plantago ovata) seeds
28. Modification in grinding chabmer of cooling system assisted spice grinding mill

ACCOMPLISHMENTS:

Ph. D. (Agril. Engg.)-PFE student's research outcomes which are helpful for the Farming community and further research are highlighted in Table 40 below.

Table 40. Students' research topics linked with staff research projects

SN	Title of Thesis	Name of Student	Name of Guide	Month/Year of submission
	Ph. D. (Agril. Engg.)-Processing andFood Engineering Thesis			
1	Studies on Effect of Gamma Irradiation on Peanut (Arachishypogaea L.) Kernels Quality and Storability	Gojiya Devanand Karabhai	Prof. D. M. Vyas	May, 2020

2	Development of Continuous Microwave Dryer for Leafy Vegetable	Khodifad Bhargavbhai Chitharbhai	Dr. N. K. Dhamsaniya	October, 2020
3	Development of Starch Based Biodegradable Plastic	Ms. Hirpara Neha Jayantilal	Dr. M. N. Dabhi	September, 2021
4	Development of Dry Coconut Dehusking and Deshelling Machine	Naliapara Viraj Anilbhai	Prof. D. M. Vyas	April, 2022
5	Development of Ultraviolet-C Irradiation Chamber for Sapota	Charan Singh	Dr. N. K. Dhamsaniya	September, 2022
6	Ozone Application in Wheat Storage	Shingala Abhishaben Mukeshbhai	Dr. M. N. Dabhi	December, 2022
7	Design and Development of Peanut Flour Based Thabdi Peda Forming Machine	Sejani Viraj Mahendrabhai	Dr. N. K. Dhamsaniya	January, 2023
8	Valorization of sweet orange (Citrus Sinesis) and lime (Citrus auruntitolin) waste and development of value added products by using different processing technology	Popaliya Chandni	Dr. V. K. Chandegara	June, 2023
9	Microwave assisted encapsulation of PUFA rich peanut oil	Bhuva Sachin Sanatkuma	Dr. N. K. Dhamsaniya	September, 2023
10	Develoment of refractance window dryer for papaya pulp	Parmar Arjun Ranmalbhai	Dr. N. K. Dhamsaniya	October, 2023
11	Development of dehusking technology for psyllium (Plantago ovata) seeds	Joshi Nirav Umeshbhai	Dr. M. N. Dabhi	November, 2023
12	Modification in grinding chabmer of cooling system assisted spice grinding mill	Sapariya Parthkumar Shashikant	Dr. M. N. Dabhi	December, 2024

EXTERNAL FUNDED PROJECTS:

Table 41. External funded projects

Sr No	Name of the project/scheme	Date of start	Date of termination	Sponsoring Agency
1	AICRP on PHET	01/04/1980	Continue	ICAR
2	Assessment of Harvest and Post Harvest Losses of Major Crops and Commodities in India	01/04/2012	31/03/2015	Ministry of Food Processing Indusries, New Delhi (Collaborative Project for AICRP on PHET with 100% grant from MoFPI) Junagadh was one of Centre)
3	Study on determining storage losses of food grains	01/04//2013	31/03/2016	Food Corporation of Inida, New Delhi

	in FCI and CWC warehouses and to recommend norms for storage losses in efficient warehouse management			(Collaborative Project for AICRP on PHET with 100% grant from FCI Junagadh is one of Centre)
4	Enzymatic pretreatment for processing of pigeon pea	01/04/2014	31/03/2017	Ministry of Agriculture and Farmers welfare
5	Development of Protocols for Shelf Life Safe Storage, Milling Outturn of Major Pulses	01/04/2019	01/03/2021	Department of Consumars Affairs, Ministry of Consumer Affairs, New Delhi (Collaborative Project for AICRP on PHET with 100% grant from DoCA Junagadh is one of Centre)

6.4.2 FACULTY STRENGTH:

Table 42. Faculty Strength

Sr. No.	Sanctioned Facultry	Faculty in place	Vacant position	Faculty recommended by the ICAR	Deviation from ICAR recommendation
Department of Processing and Food Engineering					
1	Professor	1	0	1	-
2	Associate Professor	1	1	2	-1
3	Assistant Professor	4	0	4	-
AICRP on Post Harvest Engineering and Technology					
4	Research Engineer	1*	0	0	+1
5	Assistant Research Engineer	1	0	0	+1
6	Assistant Process Engineer	1	0	0	+1
7	Assistant Professor (Biochemistry)	0	1	0	-
8	Assistant Professor (Entomology)	0	1	0	-
9	Assistant Professor (Microbiology)	1	0	0	-
Faculty from office of the Director of Research					
10	Associate Professor	1	0	0	+1
Faculty from Polytechnic in Agro Processing					

11	Associate Professor	1	0	0	+1
12	Assistant Professor	2	0	0	+2
Faculty from Renewable Energy Department					
13	Assistant Professor	2	0	0	+2

**On pool at Aspee College of Agriculture, JAU, Khapat, Porbandar*

6.4.3 TECHNICAL AND SUPPORTING STAFF:

Table 43. Technical /supporting staff Position

Sr. No.	Sanctioned Faculty	Faculty in place	Vacant position	Faculty recommended by ICAR	Deviations from ICAR recommendations
Department of Processing and Food Engineering					
1	Laboratory Technician	1	0	2	-1
2	Technical Assistant	0	0	2	-2
AICRP on Post Harvest Engineering and Technology					
3	Technical Assistant	1	1	0	+1
4	Draftman mechanic	1	0	0	+1
5	Craftman	1+1*	0	0	+1
6	Senior mechanic	1**	0	0	0

**On pool at RTTC, JAU, Junagadh
***On pool at Department of SWCE, CAET, JAU, Junagadh

Apart from the staff filled on regular basis, the department is engaging on contractual basis 04 persons. At present, computer operator 1, clerk 1, peon 1, driver 1 is working on contractual basis.

6.4.4 CLASSROOMS AND LABORATORIES:

CLASSROOMS

Department have a PG Classroom of 12 x 10 sq. m. with seating capacity of 50 students. Classroom have white board, LCD projector, computer and Air condition. Wall panelling and fall sealing is provided in classroom for better environment.

Table 44. Major Laboratories

Sr. No.	Name of Laboratory	Area (m x m)	Working capacity
1	Biochemistry laboratory	15 x 8	50
2	Drying laboratory	12 x 8	50
3	Engineering Properties laboratory	12 x 8	50
4	Size Reduction laboratory	12 x 8	50
5	Storage laboratory	12 x 8	50
6	Electrical Engineering Laboratory	12 x 9	50
7	Crop Process Engineering Laboratory	12 x 9	50
8	Workshop	12 x 10	50
9	Mango Canning Plant	24 x 10	50
10	Pulse Milling Plant	20 x 5	50

Table 45. Major Equipment

Sr. No.	Equipment Name	No. of equipment
1	Electronic top loading Balance	1
2	Specific gravity Separator	1
3	Deck Assembly for large seed	1
4	Deck Assembly For small seed	1
5	Stoner Deck Assembly	1
6	Hot air Oven	1
7	Seed huller	1
8	Tablet hardness tester	1
9	Weighing scale 10 kg capacity	1
10	Digital anemometer	1
11	Fluid type bed dryer	1
12	Tray dryer	1
13	Digital electronic dial vernier calliper	1
14	Bulk density apparatus	1
15	Digital stroke counter with reset and alarm system	1
16	Fruit and vegetable slicer	1
17	Muffle Furness	1
18	Penetrometer	1
19	Microwave oven	1
20	Data Logger	1

21	Data logger system with data receiving unit and printing device	1
22	Mango canning plant	1
23	Digital Electonic Top Loading Balance	1
24	Digital constant temperature water bath capacity 30 liter	1
25	Digital fruit firmness	1
26	Milk analyser	1
27	Tomato processing plant	1
28	Dehydration plant with Sorting Table (Belt Conveyor), Rotary Fruit & Vegetable Washing Machine, Blancher, Dicing & Cubing Machine, Dehydrator	1
29	Pre-cooling room walk in Cooler Room Size 3.65m x 2 3.65m x 23.05 m (H), capacity 2.5 tonmes	1
30	Cold storage room Size 7.01 m x 23.35m x 23.3528, capacity 20 tonnes	1
31	LCD Projector	1
32	Microscope	1
33	Laminar flow cabinet with SS table accessories for laminar flow, Transparent front door, static manometer, UV light for laminar flow, cock for gas or vacuum line	1
34	Ripening chamber	2
35	Pulper	1
36	Homogenizer	1
37	Groundnut pod grader model	1
38	Cumin cleaner cum grader model	1
39	Fruit grader model	1
40	Aloe Vera gel extractor machine model	1
41	Multicrop cleaner cum grader model	1
42	Onion grader model	1
43	Digital humidity temperature meter with infrared thermometer	2
44	Digital portable hand refractometer 0-55 brix	2
45	Digital portable hand refractometer 58-92 brix	1
46	Digital portable hand refractometer 0-70 brix	1
47	Ph meter	1
48	Ribbon blender	1
49	PDKV Mini Dall Mill	1
50	Pulse milling plant	1
51	Incubator cum mixer	1

52	Digital vernier caliper 0-200 mm LC 0.02	1
53	Digital vernier caliper 0-300 mm LC 0.02	3
54	Grain moisture meter	1
55	Spectrophotometer	1
56	Machine vision based colour sorting system machine vision	1
57	Three pan jaggary making machine	1
58	Desktop work station	1
59	Digital thermo hygrometer	2
60	Digital GSM tester	5
61	Digital thickness gauge	5
62	Drop tester	1
63	Forced convection apparatus brass tube	1
64	Fruit penetrometer	2
65	Fruit juice extractors	2
66	Stem jacketed kettle	1
67	Precision circulation waterbath	2
68	Continuous microwave dryer	1
69	Vapour absorption test apparatus	1
70	Thermal conductivity of liquid	1
71	Thermal conductivity measuring apparatus for metal rod.	1
72	Thermal conductivity measuring apparatus for powder	1
73	Automatic mild steel sieve shaker	1
74	Indented cylinder grader	1
75	Peanut flour base thabdi penda machine	1
76	Ultraviolet C Chamber for sapota	1
77	Vacuum packaging machine	1
78	Texture analyzer	1
79	Freeze dryer	1
80	Deep Freeze	1
81	Vacuum Heat Air Dryer	1

WORKSHOP:

The department is facilitated with workshop with sufficient staff and equipment to fabricate and repairing of processing machineries under PG research.

6.4.5. CONDUCT OF PRACTICAL AND HANDS-ON-TRAINING

Students conduct their practical in well-developed laboratories with modern equipment. They also under go Hands-on-Training for Mango Canning, Pulse Processing and Dehydration of vegetables as the Department possess Mango Canning Plant, Pulse Processing Plant and Dehydration Plant.









Hands on training for mango canning





Hands on training for potato processing










Practicals in laboratory

6.4.6 SUPERVISION OF STUDENTS IN PG/PHD PROGRAMMES

Every student shall have Student Advisory Committee to guide the student during the study programme. The advisory committee for Ph. D. scholar shall comprise of a Major Guide, Minor Guide and three members. Two members will be from other related field of thesis research. If the topics involve more of inter-disciplinary approach, the number of advisory committee members from other disciplines may be increased by one with prior approval of the Dean, PG studies. Only recognized teachers are eligible for teaching and guiding PG students. The research problem will be selected as per the need of the farmers, existing problems including basic, strategic and applied research. Programme of Research proposed by the Advisory Committee and approved by the Dean, PG studies will be carried out by the student under the supervision of Advisory Committee. Total 105 M. Tech. and 20 Ph. D. students are passed out from the Department of Processing and Food Engineering, 8 M. Tech. from Agricultural Product Process Engineering Department, Anand, 2 M. Tech. from Renewable Energy and Rural Engineering Department, SK Nagar.

Table 46. Student Intake and Student to teacher ratio of the Department

Year	Theory	Practical	Project
2020-21	0.6:1	0.6:1	0.6:1
2021-22	1:1	1:1	1:1
2022-23	1:1	1:1	1:1
2023-24	1.4:1	1.4:1	1.4:1
2024-25	1.2:1	1.2:1	1.2:1

Table 47. Details of PG students' guidance.

SN	Title of Thesis	Name of Student	Name of Advisor	Remarks/ achievement
2020-21				
1	Development of Continuous Microwave Dryer for Leafy Vegetable	Khodifad Bhargavbhai Chitharbhai 1050217003	Dr. N. K. Dhamsaniya	-
2021-22				
2	Development of Starch Based Biodegradable Plastic	Ms. Hirpara Neha Jayantilal 1050217002	Dr. M. N. Dabhi	-
3	Development of Dry Coconut Dehusking and Deshelling Machine	Naliapara Viraj Anilbhai 1050216004	Prof. D. M. Vyas	-
2022-23				
4	Development of Ultraviolet-C Irradiation Chamber for Sapota	Charan Singh 1050219002	Dr. N. K. Dhamsaniya	-
5	Ozone Application in Wheat Storage	Shingala Abhishaben Mukeshbhai 1050218004	Dr. M. N. Dabhi	-
6	Design and Development of Peanut Flour Based *Thabdi Peda* Forming Machine	Sejani Viraj Mahendrabhai 1050218003	Dr. N. K. Dhamsaniya	-
2023-24				
7	Valorization of sweet orange (Citrus Sinesis) and lime (Citrus auruntitolin) waste and development of value added products by using different processing technology	Popaliya Chandni J 1050220007	Dr. V. K. Chandegara	-
8	Microwave assisted encapsulation of PUFA rich peanut oil	Bhuva Sachin Sanatkumar 1050220002	Dr. N. K. Dhamsaniya	-

9	Develoment of refractance window dryer for papaya pulp	Parmar Arjun Ranmalbhai 1050220009	Dr. N. K. Dhamsaniya	-
10	Development of dehusking technology for psyllium (Plantago ovata) seeds	Joshi Nirav Umeshbhai 1050219006	Dr. M. N. Dabhi	-
2024-25				
11	Modification in grinding chabmer of cooling system assisted spice grinding mill	Sapariya Parthkumar Shashikant 1050220010	Dr. M. N. Dabhi	Patent is published
12	Development Of Value Added Products From Dried Red-Flesh Dragon Fruit (HYLOCEREUS POLYRHIZUS) Powder	Sabalpara Rinaben Hareshbhai 1050222005	Dr. S. P. Cholera	Patent published

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS AND FARMERS)

Feedbacks are collected from the respective stakeholders through various mechanisms like personal contacts, visitors register, emails, etc. The few of the feedbacks as received from the different stakeholders are appended in the Table 48 and the documentary evidences are provided in the Annexure-IX.

Table 48. Feedback received from students

Feed back detail	Excellent	Very good	Good	Average
How do you rate the sequence and syllabus of the Courses studied in the previous semester?	30.00	70.00	0.00	0.00
How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?	50.00	40.00	10.00	0.00
How do you rate the relevance of the units in the Syllabus relevant to the course?	40.00	50.00	10.00	0.00
How do you rate the sequence of the units in the course?	10.00	80.00	0.00	0.00
How do you rate the allocation of the credits to the courses?	30.00	60.00	10.00	0.00
How do you rate the distribution of the contact hours among the course components (L-T-P)?	20.00	60.00	10.00	0.00
How do you rate the electives offered regarding their relevance to the specialization streams?	10.00	60.00	20.00	0.00
Rate the courses in terms of extra learning or self-learning considering the design of the courses.	10.00	40.00	20.00	0.00

Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.	30.00	60.00	0.00	0.00
How do you Rate the loading of the courses in a semester?	60.00	30.00	0.00	0.00
How was the evaluation/exam pattern of the courses?	50.00	40.00	10.00	0.00
How do you rate the objectives stated for each of the courses?	60.00	20.00	10.00	0.00
How do you rate the skill improvement from the courses?	40.00	30.00	10.00	10.00
How do you rate the practical exposure from the courses?	40.00	20.00	10.00	20.00
How do you rate the experiments about the real-life Applications?	50.00	30.00	20.00	0.00

6.4.8 STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS

Table 49. Student intake and attrition in the programme for last five years

Year	Sanctioned seats	Actual intake	Attrition	% Attrition
2020-21	3	5	0	0
2021-22	5	2	0	0
2022-23	5	1	0	0
2023-24	7	2	1	50
2024-25	6	3	0	0

6.4.9 ICT APPLICATION IN CURRICULA DELIVERY

(A) UG/PG Admission system

Junagadh Agricultural University (JAU) participates in a centralized Common Admission Portal, jointly managed by all four State Agricultural Universities (SAUs) of Gujarat, for the streamlined administration of admissions to diploma, undergraduate, postgraduate, and doctoral programmes. The portal enables prospective students to register, submit applications, pay fees online, track application status, and access rank lists. Additionally, applicants receive real-time SMS notifications regarding important updates such as entrance exams schedule and admission rounds.

On the administrative side, the portal supports several backend operations including application verification, eligibility validation, rank list generation, and programme allotment, thereby ensuring a uniform, transparent, and efficient admission process across

all SAUs. Candidates can select their preferred colleges and degree programmes, and the system automatically allocates admissions based on merit and preference. The entire process, including the publication of merit lists and category-wise vacancy matrices, is conducted online to ensure accessibility, fairness, and transparency.

(B) Online Fees collection system

College students pay their semester fees online through the dedicated portal http://online.jau.in/student_fees/, which is accessible via the Student Corner on the official university website. The system supports multiple payment modes, including UPI, credit/debit cards, and net banking, providing a convenient and secure method for fee transactions during subsequent semesters of various degree programmes.

The collected fees are directly deposited into the respective college's bank account, ensuring accuracy and transparency in financial management. Additionally, college administrators have access to real-time fee collection reports through the system, enabling effective monitoring and record maintenance.

(C) Academic activities

Simultaneously, the Academic Information Management System (AIMS) enhances curriculum delivery and monitoring by providing a dynamic digital interface for faculty and students. Through AIMS, instructors upload and share lecture notes, assignments, class materials, and video lectures, ensuring round-the-clock access to learning resources. The platform also supports online assessments, attendance tracking, and real-time academic monitoring, including faculty feedback and progress reports. These ICT-enabled features promote interactive learning, strengthen academic accountability, and create a personalized, student-focused educational environment at JAU.

(D) Teaching through ICT tools

Teaching is made by using PPT, videos, visual, animations and smart boards. During COVID-19 pandemic s, all classes are conducted online using the various platforms viz. Zoom, Google Meet through Google Classroom and WhatsApp applications during academic year 2020-21 and 2021-22. The teachers are taking live lectures as well as supplying the teaching materials using these platforms. The teachers are performing live practical on Zoom or Google Meet through Google Classroom platforms online for the students. The examinations are also conducted online using the Online Examinations Management Software (OEMS) and a proper evaluation is made to justify the students' efforts.

The faculty members are involved in preparing the virtual lectures in the well-developed virtual classroom facility in the university which is appreciated by the ICAR also.

(E) Examination Management system

The JAU Examination Management System (JEMS) is a comprehensive ICT-based platform that efficiently manages academic and examination-related activities for undergraduate and postgraduate students. It facilitates the entry of internal and external marks and streamlines critical postgraduate processes such as online submission of campus forms, synopsis, preliminary proposals, exam results, thesis evaluation and examination panel selection, and final viva voce outcomes. Each stage - from submission by the major advisor to review by the Head of Department and Dean of the respective faculty, and final approval by the Dean of Postgraduate Studies and the Registrar - is conducted digitally through the JEMS portal. This robust system ensures timely tracking of student progress, adherence to academic timelines, and transparent, paperless record management

(F) Online Alumni Portal

The College of Agricultural Engineering and Technology (CAET) offers an online Alumni Portal where graduated students can register themselves and stay connected with the institution. The portal includes features such as searching alumni from other batches, viewing current city/location, and the ability to update personal profiles at any time throughout the year. This platform serves as a valuable tool for fostering professional networking, maintaining alumni engagement, and strengthening the bond between alumni and the institution.

(G) E-library

E-library for all the constituent colleges of the JAU is managed by the University Campus Library, established in the year 1978. The two storied new Building is located at the eastern side in the main campus. The Library with ICT platform is one of the most important centers of the University, which facilitates the teaching, research and extension program. Both students and faculty extensively use the facility. The Junagadh Agricultural University has given key prominence to the development of the library facilities at the headquarters as well as the constituent colleges and research stations.

Our library provides services students/faculties to constituent colleges, which come under Junagadh Agricultural University, viz., 5 at Junagadh campus like College of Agriculture, College of Agriculture Engineering & Technology, College of Horticulture, Junagadh, Post Graduate Institute of Agri. Business Management and College of

Agriculture(Morbi, presently at Junagadh), 3 College of Agriuclture, at Khapat, Mota Bhandariya and Targhadiya, 3 Different Polytechnics of Agro Processing & Food Technology, Agriculture, Horticulture in the Junagadh campus, 3 Polytechnics of Agriuclture at Amreli, Dhari and Halvad and 1 Polytechnic of Agriucltural Engineering at Targhadiya.

Many knowledge-based services like that of Reference, Bibliography, and INFLIBNET service. CD-ROM Databases, Internet browsing and e-services are provided by the library for its users.

Under Automation, library has RFID for the library circulation and security of library material along with OPAC through KOHA, thus the library is fully automized. Post Graduate and Doctorate theses of research scholars of different faculties and rare or important books and documents are digitized in the university library through the digitization camera available in the library. The library circulation section works with KOHA as well as LIBSYS library software.

Books, periodicals, theses, reports, maps and encyclopedia relevant to the mandate areas of the university have been stocked in the University Library and its constituent center. University Library is well equipped with 59509 text as well as reference books, 80 research journals/periodicals, 3982 thesis, 14000 bound volumes, 1037 e-books, 2 e-journals, various reports, maps and encyclopedia relevant to teaching, research and extension activities of the university. The library has offline database in the form of CAB, Agris, and Agricola as well as online database is available at e-library tab on university website. University Library subscribes 10 newspapers to acquaint users with daily news.

The university library renders its services to users from 8:00 to 18:10 h. A separate air conditioned reading room is developed with the best facilities as well as good ventilation and aeration. This AC reading room accommodates approximately 150 students. The Reading Room remains open for its users from 8.00 to 23.00 hours on working days whereas 8.00 to 14.00 hours on holidays.

(H) Internet

The College Cyberary, equipped with high-speed internet connectivity, provides students and faculty with seamless access to a wide range of online journals and academic databases. Key databases such as CABI, AGRIS, and AGRICOLA are available in CD-ROM format, while resources like INDIAN HARVEST are accessible as online databases. To enhance user experience, the library uses WinSPIRS, a Windows-based client interface, for efficient access to the various subscribed databases. This digital infrastructure supports academic

research and learning by ensuring convenient and reliable access to global and national scientific literature.

The Library is equipped with 40 computer workstations with internet connectivity, along with scanning and CD writing facilities, all of which are extensively utilized by both students and faculty members for academic and research purposes. To support academic learning, the library also offers a Book Bank facility, through which students are provided with textbooks related to their respective subjects and semesters. This initiative ensures that students have easy access to essential learning resources throughout their academic journey.

(I) Wi-fi facility

The University provides 24x7 Wi-Fi connectivity across key areas of the campus, including the library, departments, and hostels, with secure login-based authentication to ensure safe and reliable access. In addition, the main campus is connected through an IP-based network, allowing students and faculty members to access the internet seamlessly from their respective hostels and departments. This connectivity enables users to browse scholarly resources, access previous literature, stay updated with recent advancements, and enhance their academic and research pursuits.

The e-library is having following online access facilities:

J-Gateplus (Complete):

J-Gate is a comprehensive online indexing and access gateway to global e-journal literature. It has indexes more than 58 million journal articles from over 58,000 journals, covering multiple disciplines including science, technology, medicine, social sciences, and humanities.

J-Gate is highly useful in the agricultural discipline for researchers, students, faculty, and professionals by providing streamlined access to a wide range of scholarly literature. J-Gate indexes thousands of journals, including many in the field of agriculture such as: Agronomy, Soil Science, Horticulture, Agricultural Engineering, Plant Pathology, Crop Science and Animal Husbandry. J-Gate allows searches using: Keywords, Author names, Journal titles & Subject categories. This helps agriculture researchers find specific articles or trends efficiently. Junagadh Agricultural University use J-Gate through consortia like: CeRA (Consortium for e-Resources in Agriculture) by ICAR.

CeRA:

CeRA (Consortium for e-Resources in Agriculture) plays a vital role in agriculture by providing **access to a wide range of electronic journals and research resources** to Junagadh Agricultural University. CeRA is the ICAR Consortium of e-resources in Agriculture. This covers more than 3000 scholarly journals pertaining to the Agriculture and allied sciences which are available in full text. Its main functions include:

Facilitating access to scholarly literature for scientists, researchers, and students in agriculture and allied sciences. **Promoting information sharing** among ICAR institutes and State Agricultural Universities (SAUs). **Supporting research and innovation** by offering timely and comprehensive digital resources. Overall, CeRA enhances the **quality and reach of agricultural research and education** in India.

ASTRAL:

Junagadh Agricultural University have purchased 630 e-books from Astral International (P) Ltd. These e-books are related to agriculture and allied sciences.

ScienceDirect:

Junagadh Agricultural University has subscription of ScienceDirect, a leading full-text scientific database from Elsevier, is highly valuable in agricultural research and education. It provides access to peer-reviewed journals, book chapters, and research articles.

KrishiKosh:

KrishiKosh is a digital repository of agricultural knowledge in India, developed and maintained by the Indian Council of Agricultural Research (ICAR). ICAR have provided access to all the State Agricultural University of India. These digital repositories include theses, research papers, reports, books, journals, and other academic resources in agriculture and allied sciences.

Krishikosh is a database of theses submitted to the Agriculture universities and ICAR institutions are freely accessible by students. The JAU Library is member for Krishikosh and all the theses submitted to the JAU are being uploaded regularly.

EBSCOhost:

Junagadh Agricultural University has subscription of is also powerful online research platform provided by EBSCO Information Services that gives access to a wide range of academic, scientific, and professional databases. **EBSCOhost** is offering access to : Scholarly

journals, E-books, Magazines, Research articles, Conference papers across multiple disciplines including **agriculture** and allied sciences.

NIPAERS:

The JAU has access to 204 e-books.

e-KrishiShiksha:

e-KrishiShiksha is the ICAR e-learning portal on agricultural education.

Art & Science Academic Publications (ASAP):

ASAP is providing access of e-books from more than 51 publishers across the globe in various fields to JAU based on IP and Login.

Commodities:

The recent news on agricultural commodities is published on this platform. The university has acceptance of the usage agreement & privacy policy with Centre for Monitoring Indian Economy Pvt. Ltd.

6.4.10. CERTIFICATE

I the Dean, College of Agricultural Engineering & Technology, Junagadh Agricultural University, Junagadh, hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college and degree awarding university.

July 16, 2026

(K . C. Patel)
Principal & Dean
College of Agril. Engg. & Tech.
JAU, Junagadh

SELF STUDY REPORT FOR
PH. D (AGRIL. ENGG.)
PROGRAMME IN THE DISCIPLINE OF

RENEWABLE ENERGY ENGINEERING

6.4. SELF STUDY REPORT FOR THE M.TECH. (AGRIL. ENGG.) IN DISCIPLINE OF RENEWABLE ENERGY ENGG. (REE) DEGREE PROGRAMME

6.4.1. BRIEF HISTORY OF THE DEGREE PROGRAMME

EVOLUTION OF THE P.G. PROGRAMME:

Since inception of the College of Agricultural Engineering & Technology, the department is functioning. In beginning, the department was known as Agricultural engineering to take care of Basic Science and Engg. subjects in B.Tech. (Ag. Engg.) programme. However, later realizing the importance and potential of renewable energy of the region, the department was renamed as Renewable Energy & Rural Engineering in year 1992. The M Tech. (Agril. Engg.) in the disciplines of Renewable Energy Management was started in year 1994 and later the nomenclature of the degree was changed to Renewable Energy Engineering in year 2001 whereas the Ph.D. was started from year 2005. The main aim of the department is to strengthen the Agricultural Engineering Faculty by carrying out teaching in the areas of Renewable Energy Engineering. The department is also offering UG teaching in Civil Engineering and Basic Sciences & Humanities as well as research and extension activities in the areas of Renewable Energy Engineering.

OBJECTIVES

- To develop department as a center of excellence in the area of renewable energy, imparting quality education, generating competent, skilled and humane power to face the scientific, technological, managerial and social challenges with high degree of credibility, integrity, ethical standards and social concern.
- To undertake R & D activities in the areas of Renewable Energy in Agriculture viz. solar thermal energy, Solar PV technology, Biomass gasification, Biogas technology, Biofuel technology, Wind energy and Energy Conservation in agro industries along with Plasticulture Engg. & Technology area for helping the farmers.
- To carry out short term and vocational training and other extension activities in the above areas for transfer & popularization of technology.

FACILITIES AND SERVICES:

The Department has 2 wings (C & G) with different teaching/research Labs having full facilities of instruments and equipment required to teach UG/PG level courses. Both the wings of the department are having LAN and Wi-Fi internet connection. Additionally,

both the department has 01 office/Room for HoD, 01 Rooms for administrative staff and 15 Office/Rooms for the Faculty/Technical staff/Supportive staff in main building. It has well equipped 10 Laboratories in department, 2 Fields (Renewable energy park, plasticulture farm), 1 training hall. 1 PG classroom and 1 seminar hall. The approx 20 KW solar plant is established as part green energy initiatives inform of agrovoltaic and hybrid type SPV plants. The department library contains several Text/Reference books on Solar energy, bioenergy, wind energy, thermochemical conversion of biomass, waste management, biochemical conversion of biomass, basic science along with Practical manual, technical bulletins, Annual reports etc. Apart from the Labs facilities, the department has common facilities like A/C lecture room of 40 seating capacity with LCD multimedia display system, PG lecture cum seminar hall, Departmental Library, A/C Computer Room for Faculty & PG Students, clean drinking water facilities for Faculty & Students, Greenhouses & Net houses complex, Well-furnished faculty rooms with Internet connection. The UG/PG practical, departmental research experiments, AICRP experiments as well as UG/PG research experiments are undertaken in the renewable energy farm. The renewable energy park is also having demonstration of different types of greenhouses, windmills, Agri-voltaic system, Thermochemical & Biochemical Conversion systems, Hybrid and On-grid SPV plants etc.

Table 50. Infrastructure Facilities

SN	Facilities	Size	Nos.
1	Office/Room for HoD with computer, printer and required peripherals	4.8 m x 4.6 m	01
2	Administrative Office/Room	4.5 m x 4.6 m	01
3	Office/Chamber/Room separate for each faculty/staff with computer, printer and required peripherals.	5 m x 3 m	15
4	Department Library	5.6 m x 3.9 m	01
5	Laboratories in Department	Given Lab list	10
6	Departmental farm	Given farm facilities list	02

ACCOMPLISHMENTS: P.G. STUDENTS' RESEARCH OUTCOMES WHICH ARE HELPFUL FOR THE FARMING COMMUNITY AND FURTHER RESEARCH:

Ph. D (Agril. Engg.)-REE student's research outcomes which are helpful for the farming community and further research are highlighted in Table 51 below.

Table 51. Students' research topics linked with staff research projects

SN	Title of Thesis	Name of Student	Name of Guide	Month/Year of submission
1	Energy audit for Cotton, Groundnut & Wheat farming in Saurashtra region of Gujarat	J. D. Varu	Dr. P. M. Chauhan	November, 2021
2	Development and Experimental Investigation of Agrivoltaic Greenhouse System for Energy and Crop Production	M. L. Ramani	Dr. P. M. Chauhan	December, 2023
3	Design and Development of Microwave Pyrolyser	S. V. Kelaiya	Dr. P. M. Chauhan	October, 2024
4	Design and Development of water Gas shift reactor integrated with biomass gasifier for Hydrogen enriched fuel production	J. M. Makawana	Dr. P. M. Chauhan	July, 2025

EXTERNAL FUNDED PROJECTS

Table 52. Completed projects/schemes

SN	Name of the project/scheme	Date of start	Date of termination	Sponsoring Agency
1	ICAR Adhoc Research Project: Soil Solarization for Nursery Raising	2000	2003	ICAR, Adhoc Scheme
2	Establishment of Energy Park	1996	1999	MNRE, GoI

Table 53. Ongoing projects/schemes

SN	Name of the Project / Scheme	Starting Year
1	AICRP on Plasticulture Engineering in Agriculture Structure and Environment Management (ICAR) (BH. 2258-B)	2004
2	State Govt. Plan Scheme on Strengthening of Department of Renewable Energy & Rural Engg. (BH. 12121)	2013-14
3	Consortia Research Platforms (CRPs) on Energy from Agriculture (BH. 2260)	2015-16

6.4.2 FACULTY STRENGTH

Table 54. Faculty strength

S N	Sanctioned Faculty	Faculty in Place	Vacant position	Faculty recommended by ICAR	Deviations from ICAR recommendations	Remarks
Department of Renewable Energy Engineering (REE)						
1	Professor (REE)	0	1	1	-1	-
2	Associate Professor (REE)	1	1	2	-1	-
3	Assistant Professor (REE)	2	2	4	-2	-
Strethening of Dept. of Renewable energy Engineering (BH 12121)						
4	Assistant Professor (REE)	1	1	0	+1	-
Basic Engineering and Applied Science (BEAS)						
5	Associate Professor (BEAS)	0	2	2	-2	-
6	Assistant Professor (BEAS)	5	0	3	+2	1-REE, 2-PFE, 1-FMPE, 1-DSW
Services of Assistant professors from other department to carry out courses and guidance to the PG students.						
7	Assistant Professor of Ag. Engg., CoA, JAU, Junagadh	1	0	0	0	-
8	Assistant Professor of Office of DR, JAU, Junagadh	1	0	0	0	-
AICRP on Plastic Engineering in Agriculture Structure and Environment Management						
9	Research Engineer (Assoc. Prof.)	0	1	0	0	-

10	Post-harvest Engineer (Asst. Prof.)	1	1	0	0	-
	Total	**12**	**09**	**12**	**-3**	

6.4.3. TECHNICAL AND SUPPORTING STAFF:

Table 55. Technical/Supporting staff position

SN.	Sanctioned Staff	Staff in place	Vacant position	Staff recommended by ICAR/UGC/VCI/Other regulatory bodies	Deviations from ICAR recommendations
Department of Renewable Energy Engineering					
1	SRA / Tech.Asst.	2	0	2	-
2	Lab. Technician	1	1	2	-1
3	Draftsman (Civil)	0	1	1	-1
4	Messenger/ Peon	1	0	0	-
***AICRP on* Plasticulture Engineering & Technology**					
5	SRA / Tech.Asst.	0	1	1	-1
Contractual Basis					
6	Jr. Clerk	1	0	0	-
7	Peon	1	0	0	-
	Total	**6**	**3**	**6**	**-3**

Note: *Besides the above, the department has 1 SRF, One YP-2 working in ICAR projects*

6.4.4. CLASSROOMS AND LABORATORIES:



Department of Renewable Energy Engineering

Department with the facilities:

- Departmental Library
- Smart PG lecture room and seminar hall
- Departmental laboratories
- Computer Room with Xerox facility
- Hybrid solar power plant with the capacity of 10 kW for power backup
- Agrovoltaic plant with capacity of 13.5 kW power supply
- Informative Educational charts
- Individual Faculty chambers with computers and printers
- Workshop facility

WELL-FURNISHED TRAINING HALL, SEMINAR HALL AND CLASSROOM EQUIPPED WITH AUDIO-VISUAL AIDS

A well-furnished training hall was developed with the capacity of 60 students. The hall is equipped with audio-visual aids, multimedia projector with screen, white board and computer with tables and cushioned chair. Similarly, seminar hall and PG lecture room with the capacity of 15 and 40 respectively have been available in department.

Table 56. Seminar Hall and classroom

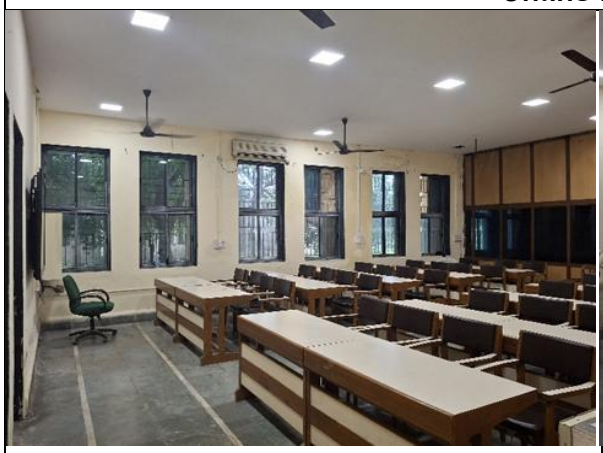
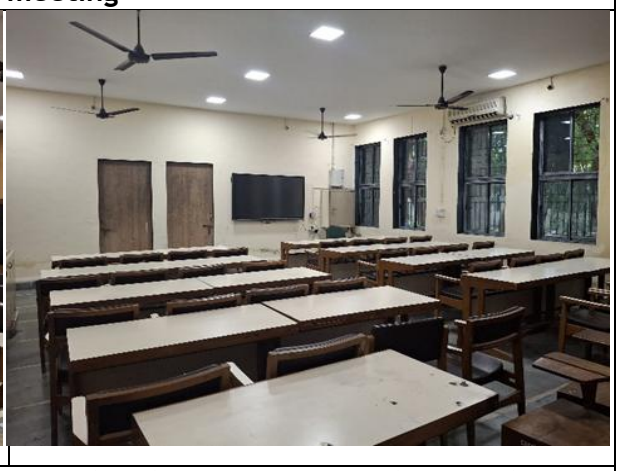
Sr. No	Classroom	Area (m x m)	Seating capacity	Other facilities
1	Training Hall	12.20 X 9.10	60	LCD Projector-1 Plasma Screen-1 Computer-1 Furniture (Tables with cushioned chair)
2	Seminar Hall	6.6 X 4.5	15	Interactive Display Panel -1 Furniture (Tables with cushioned chair) AC-1
3	PG Lecture Room	9.2 X 7.4	40	Interactive Display Panel -1 Furniture (Tables with cushioned chair)




Well-furnished training hall equipped with multimedia projector




Well-furnished Seminar Hall equipped with Interactive Display Panel, Cam, Sound for Online meeting

Well-furnished PG Lecture room equipped with Interactive Display Panel

Table 57. MajorLaboratories

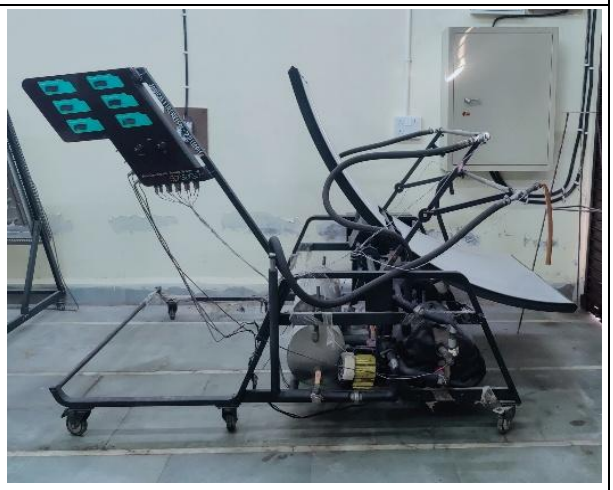
Sr No	Name of laboratory	Area (m x m)	Working capacity
1	Biomass Gasification Lab.	15.0 x 8.0	50
2	Solar Energy Lab.	9.60 x 7.60	50
3	Bioenergy Lab.	9.20 x 7.60	50
4	Wind Energy Lab.	15.25 x 7.60	50
5	Physics lab.	12.15 x 7.60	50
6	Chemistry lab.	12.30 x 7.60	50
7	Civil Engg. Lab.	7.60 x 9.10	50
8	Ultramorden Communication Lab. (Language Lab.)	7.60 x 9.10	50
9	Experiential learning for production and management of RSE lab.	7.60 x 9.10	50
10	AICRP on PEASEM Lab.	12.15 x 7.60	50

Table 58. List of major equipment

SN	Equipment Name	No. of Equipment
1	Sunshine recorder	1
2	Biomass gasifier plant (down draft)	1
3	Rockwell hardness testing machineSurveying equipment	1
4	Wind pump	1
5	Hot air oven	1
6	Precooler	1
7	L. C. D. projector	2
8	Plate bending machine	1
9	Shearing machine	1
10	Precision lathe machine	1
11	Modern workshop facility for fabrication of solar appliances	1
12	Modified atmosphere packaging machine	1
13	Shrink wrapping machine	1
14	Muffle furnace	2
15	Solar precision pyranometer with data logger	2
16	Solar PV pump	1
17	Zener characteristic circuit	1
18	B.O. D. incubator	1
19	Dissolved oxygen meter	1
20	C.O.D. digestion apparatus	1
21	Water bath	1
22	Computerized UTM 100-ton capacity	1
23	Horizontal wind turbine	1
24	Gas Chromatograph	1
25	Solar PV Trainer	1
26	Biogas plant with burners	1
27	Solar Thermal Training System	1
28	Biogas Analyser	1
29	Pore Point Apparatus	1
30	Digital Gas flowmeter	1
31	Biogas flow meter	1

32	Wind turbine Emulator	1
33	Wind Energy Training System	1
34	Biomass Briquetting Machine	1
35	Pyrheliomter with datalogger	1
36	Solar Concentrator Training system	1
37	E/M apparatus	1
38	LCR circuit	1
39	Biomass gasifiers	4
40	50 kW solar power plant	2
41	Bomb calorimeter	2
42	Junker's calorimeter	2
43	Lab-scale Biodiesel plant with major properties measurement apparatus (Flash point, Density, Viscocity etc.)	1
44	JAU Model Agri-voltaic System (13.5 kW)	1
45	load testing machine (electronic)	1
46	Willy mill	1
47	10 kW Solar Hybrid Inverter	1
48	Pellet making machine	1
49	Hybrid Solar PV plant (6.2 kW)	1
50	Solar Tracking Robot	1
51	Portable I-V checker for SPV plant	1
52	Vertical wind turbine	2
53	Spectrum-Temperature/Humidity Model No. 1250	2
54	Plant Growth Station	1
55	Automatic Methane potential test system	1
56	Compact Weather Station	1
57	Interactive Display Panel	2

PHOTOGRAPHS OF THE DIFFERENT MAJOR INSTRUMENTS OF THE LABORATORIES WITH DEVELOPED TECHNOLOGIES

	
Solar Tracking Robot	Lab-scale Biodiesel plant
	
Solar Thermal Training System	Solar Concentrator Training System
	
SPV Plant	Open-core Down Draft Gasifier System

	
Polycarbonate Greenhouse	Agri-voltaic system
	
Biomass Briquetiing Machine	Biomass Pelleting Machine
	
Automatic Methane Potential Test System	Solar tunnel dryer

	
Evaporative cooling system	Agrivoltaic greenhouse
	
Water gas shift Reactor	Solar powered tractor
	
Fixed dome type biogas plant	Floating drum type biogas plant



Gas chromatograph



Solar rikshaw



Furnace



Automatic bomb calorimeter



Viscometer

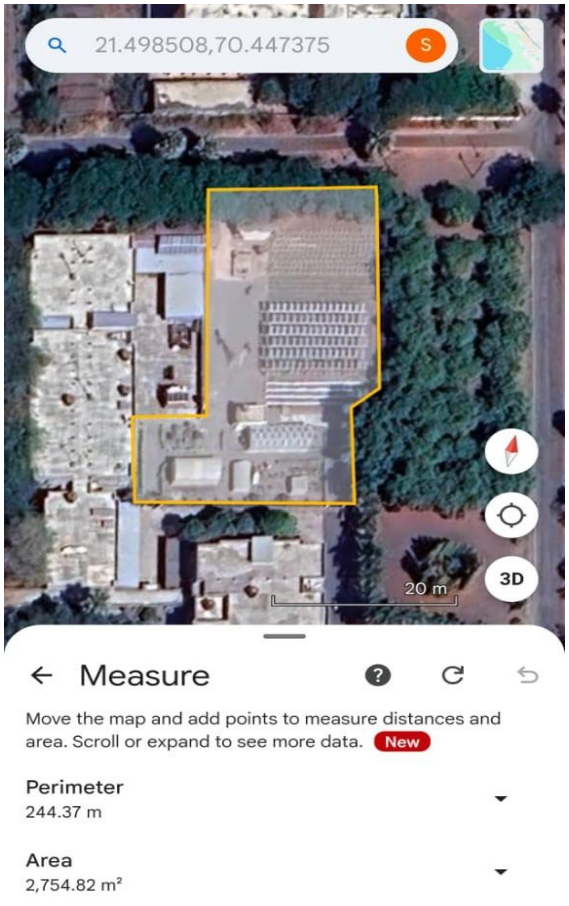


Hot air oven

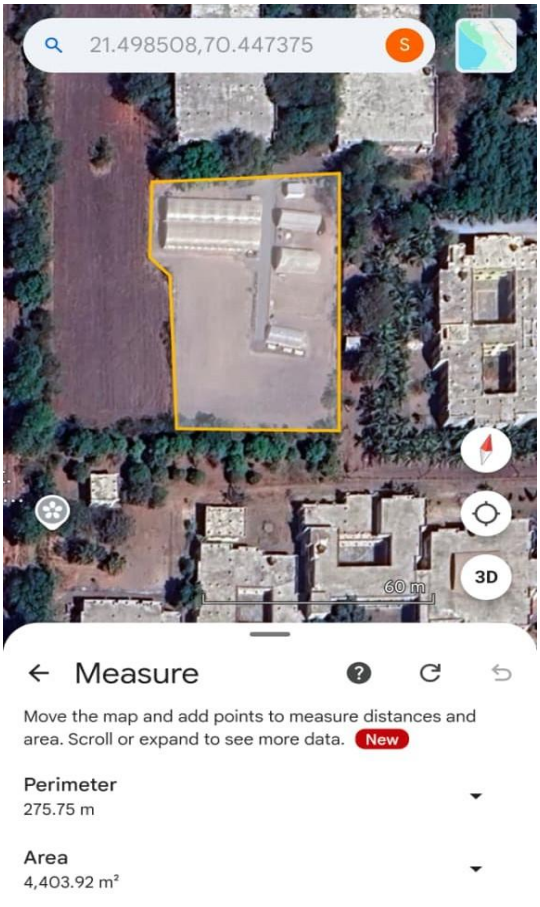
Table 59. Farm facilities

SN	Name of the Department	Farm area	Irrigated/ Non-irrigated	Crops grown
1	**Renewable Energy Park** • Agri-voltaic Greenhouse • Agri-voltaic system (13.5 kW) • Roof top solar Power plant • Wind pump • Solar water Pump • Biomass Shed • Horizontal and Vertical Wind turbine • Biogas Plant • Poly cum Shade-net House • Walk-in type Tunnel House • Net House	2755 sq.m	Irrigated	Crops as per objectives of the experiment
2	**Plasticulture park** • Polycarbonate greenhouse • Naturally ventilated greenhouse • Shade net greenhouse • Fan-pad greenhouse • Solar Tunnel dryer	4404 sq.m	Irrigated	Crops as per objectives of the experiment

Renewable Energy Park



Plasticulture park



P.G RESEARCH FACILITIES:

Research facilities available (Solar Photovoltaic, Solar Thermal sensors, Biomass, Biomass waste management, Bio energy, Thermochemical and bio chemical conversion of biomass, etc.) and workforce required for conducting PG research are facilitated.

WORKSHOP:

The required fabrication works and ELP's hands on training works are carried out in workshop available at Dept. of REE (C wing) of the college.

The department is facilitated with the equipment's which are sufficient to carry out the PG and PhD students' research. The field related equipment's, the land requirement for conducting the research work is also sufficient. The faculty members are well qualified to guide, mentor and handle the courses of PG and Ph.D. students to fulfil the course curriculum of supporting courses. Various hand tools and following machines were procured for training purpose and fabrication.

		
Power Shearing Machine	**Mechanical press brake**	**Plate Bending Machine**
		
Hack show, Drill and shearing machine	**Precision lathe machine**	**Surfacer, thicknesser, circular saw with blade grinder**

	
View of the installed machines in the workshop	View of the Installed machines and tools in the workshop

		
Tig welding, welding rectifier, arc welding transformer & compressor	Hand cut-off machine and wooden vice	Grinding Machine

6.4.5. CONDUCT OF PRACTICL AND HANDS ON TRAINING

The Department has 2 wings (C & G) with different teaching/research Labs having full facilities of instruments and equipment required to conduct UG/PG level practices and training purposes. Both the wings of the department are having LAN and Wi-Fi internet connection

Students conduct their practicals in well-equipped laboratories featuring modern renewable energy systems and instrumentation. They undergo hands-on training in solar resource assessment using advanced tools such as pyranometers, PV analyzers, data loggers, and solar tracker. Practical exposure is also provided in the design, installation, and performance evaluation of solar photovoltaic and solar thermal systems.

Students receive specialized training in biomass energy through feedstock characterization, biogas/CBG plant operation, pyrolyser and gasifiers. They also gain experience in wind energy systems and its wind energy assessment using anemometers and data acquisition systems.

The department also offering minor courses in Renewable energy for the department of SWCE, FMPE and PFE.

	
Practical on protected cultivation and its design	Practical on biomass pyrolyzer and reactor design

6.4.6. SUPERVISION OF STUDENTS IN PG PROGRAMMES

Every M. Tech student has an advisory Committee with a Major Guide and at least three members among whom two members are from outside the major field of specialization. An Advisory Committee for Ph.D. student consists of a Major Guide and at least four members of whom 2 are from outside the major field of specialization. The research problem is selected as per the need of the farmers, existing problems including basic, strategic and applied research. The student has to present the research proposal in seminar in the presence of an advisory committee as well as faculties of Major field. The suggestions/critics are considered by student before submitting the advisory committee proposes the synopsis to the advisory committee. The Programme of Research and recommended by PG Coordinator, Dean, Faculty of Agricultural Engineering and approved by the Dean, Director of Research & Dean, Post Graduate Studies. The Research work is carried out by the student under the supervision of Advisory Committee. Totally 10 M.Tech. (Agril. Engg.)-REE and 4 Ph.D. (Agril. Engg.)-REE doctoral students are passed out from the Department of Renewable Energy Engineering from academic year 2020-21 to 2025-26. The research is carried out by students is in renewable energy engineering like bio-chemical/thermo-chemical conversion technology, solar photo-voltaic and greenhouse technology etc.

Table 60. Student Intake and Student to teacher ratio of the Department

Year	No. of PG/Ph.D. recognized teachers	Intake of students	Student to teacher ratio
		Ph.D	
2020-21	2	1	1:2
2021-22	2	0	0
2022-23	2	1	1:2

2023-24	2	0	0
2024-25	2	2	1:1

Table 61. Details of PG students' guidance.

SN	Title of Thesis	Name of Student	Name of Advisor	Remarks/ achievement
2020-21				
	-Nil-			
2021-22				
1	Energy audit for Cotton, Groundnut & Wheat farming in Saurashtra region of Gujarat	J. D. Varu	Dr. P. M. Chauhan	-
2022-23				
	-Nil-			
2023-24				
2	Development and Experimental Investigation of Agrivoltaic Greenhouse System for Energy and Crop Production	M. L. Ramani	Dr. P. M. Chauhan	-
2024-25				
3	Design and Development of Microwave Pyrolyser	S. V. Kelaiya	Dr. P. M. Chauhan	Patent applied
4	Design and Development of water Gas shift reactor integrated with biomass gasifier for Hydrogen enriched fuel production	J. M. Makawana	Dr. P. M. Chauhan	Granted Patent

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.)

Feedbacks are collected from the respective stakeholders through various mechanisms like personal contacts, visitors register, emails, etc. The few of the feedbacks as received from the different stakeholders are appended in the Table 62 and the documentary evidences are provided in the Annexure-X.

Table 62. Feedbacks received from stakeholders

No.	Feedback detail	Excellent	Very Good	Good	Average	Poor
1	How do you rate the sequence and syllabus of the Courses studied in the previous semester?	0	100	0	0	0
2	How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?	50	25	25	0	0
3	How do you rate the relevance of the units in the Syllabus relevant to the course?	0	75	25	0	0
4	How do you rate the sequence of the units in the course?	0	75	25	0	0
5	How do you rate the allocation of the credits to the courses?	50	25	25	0	0
6	How do you rate the distribution of the contact hours among the course components (L-T-P)?	25	75	0	0	0
7	How do you rate the electives offered regarding their relevance to the specialization streams?	50	50	0	0	0
8	Rate the courses in terms of extra learning or self-learning considering the design of the courses.	50	50	0	0	0
9	Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.	0	50	50	0	0
10	How do you Rate the loading of the courses in a semester?	25	75	0	0	0
11	How was the evaluation/exam pattern of the courses?	50	50	0	0	0
12	How do you rate the objectives stated for each of the courses?	0	75	25	0	0
13	How do you rate the skill improvement from the courses?	0	75	25	0	0
14	How do you rate the practical exposure from the courses?	0	75	0	25	0
15	How do you rate the experiments about the real-life Applications?	75	25	0	0	0
16	Recommendations for course improvement (Please specify	-	-	-	-	-

	topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)					

6.4.8. STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS

Table 63. Details of student intake and attrition in the programme for last five years

Year	Sanctioned seats	Actual intake	Attrition	% Attrition
	Ph.D	Ph.D	Ph.D	Ph.D
2020-21	1	1	1	100
2021-22	0	0	0	0
2022-23	1	1	0	0
2023-24	2	0	0	0
2024-25	2	2	0	0
Total	**5**	**4**	**1**	**20**

6.4.9. ICT APPLICATION IN CURRICULA DELIVERY

(A) UG/PG Admission system

Junagadh Agricultural University (JAU) participates in a centralized Common Admission Portal, jointly managed by all four State Agricultural Universities (SAUs) of Gujarat, for the streamlined administration of admissions to diploma, undergraduate, postgraduate, and doctoral programmes. The portal enables prospective students to register, submit applications, pay fees online, track application status, and access rank lists. Additionally, applicants receive real-time SMS notifications regarding important updates such as entrance exams schedule and admission rounds.

On the administrative side, the portal supports several backend operations including application verification, eligibility validation, rank list generation, and programme allotment, thereby ensuring a uniform, transparent, and efficient admission process across all SAUs. Candidates can select their preferred colleges and degree programmes, and the system automatically allocates admissions based on merit and preference. The entire process, including the publication of merit lists and category-wise vacancy matrices, is conducted online to ensure accessibility, fairness, and transparency.

(B) Online Fees collection system

College students pay their semester fees online through the dedicated portal http://online.jau.in/student_fees/, which is accessible via the Student Corner on the official university website. The system supports multiple payment modes, including UPI, credit/debit cards, and net banking, providing a convenient and secure method for fee transactions during subsequent semesters of various degree programmes.

The collected fees are directly deposited into the respective college's bank account, ensuring accuracy and transparency in financial management. Additionally, college administrators have access to real-time fee collection reports through the system, enabling effective monitoring and record maintenance.

(C) Academic activities

Simultaneously, the Academic Information Management System (AIMS) enhances curriculum delivery and monitoring by providing a dynamic digital interface for faculty and students. Through AIMS, instructors upload and share lecture notes, assignments, class materials, and video lectures, ensuring round-the-clock access to learning resources. The platform also supports online assessments, attendance tracking, and real-time academic monitoring, including faculty feedback and progress reports. These ICT-enabled features promote interactive learning, strengthen academic accountability, and create a personalized, student-focused educational environment at JAU.

(D) Teaching through ICT tools

Teaching is made by using PPT, videos, visual, animations and smart boards. During COVID-19 pandemic s, all classes are conducted online using the various platforms viz. Zoom, Google Meet through Google Classroom and WhatsApp applications during academic year 2020-21 and 2021-22. The teachers are taking live lectures as well as supplying the teaching materials using these platforms. The teachers are performing live practical on Zoom or Google Meet through Google Classroom platforms online for the students. The examinations are also conducted online using the Online Examinations Management Software (OEMS) and a proper evaluation is made to justify the students' efforts.

The faculty members are involved in preparing the virtual lectures in the well-developed virtual classroom facility in the university which is appreciated by the ICAR also.

(E) Examination Management system

The JAU Examination Management System (JEMS) is a comprehensive ICT-based platform that efficiently manages academic and examination-related activities for undergraduate and postgraduate students. It facilitates the entry of internal and external marks and streamlines critical postgraduate processes such as online submission of campus

forms, synopsis, preliminary proposals, exam results, thesis evaluation and examination panel selection, and final viva voce outcomes. Each stage - from submission by the major advisor to review by the Head of Department and Dean of the respective faculty, and final approval by the Dean of Postgraduate Studies and the Registrar - is conducted digitally through the JEMS portal. This robust system ensures timely tracking of student progress, adherence to academic timelines, and transparent, paperless record management

(F) Online Alumni Portal

The College of Agricultural Engineering and Technology (CAET) offers an online Alumni Portal where graduated students can register themselves and stay connected with the institution. The portal includes features such as searching alumni from other batches, viewing current city/location, and the ability to update personal profiles at any time throughout the year. This platform serves as a valuable tool for fostering professional networking, maintaining alumni engagement, and strengthening the bond between alumni and the institution.

(G) E-library

E-library for all the constituent colleges of the JAU is managed by the University Campus Library, established in the year 1978. The two storied new Building is located at the eastern side in the main campus. The Library with ICT platform is one of the most important centers of the University, which facilitates the teaching, research and extension program. Both students and faculty extensively use the facility. The Junagadh Agricultural University has given key prominence to the development of the library facilities at the headquarters as well as the constituent colleges and research stations.

Our library provides services students/faculties to constituent colleges, which come under Junagadh Agricultural University, viz., 5 at Junagadh campus like College of Agriculture, College of Agriculture Engineering & Technology, College of Horticulture, Junagadh, Post Graduate Institute of Agri. Business Management and College of Agriculture(Morbi, presently at Junagadh), 3 College of Agriuclture, at Khapat, Mota Bhandariya and Targhadiya, 3 Different Polytechnics of Agro Processing & Food Technology, Agriculture, Horticulture in the Junagadh campus, 3 Polytechnics of Agriuclture at Amreli, Dhari and Halvad and 1 Polytechnic of Agriucltural Engineering at Targhadiya.

Many knowledge-based services like that of Reference, Bibliography, INFLIBNET service. CD-ROM Databases, Internet browsing and e-services are provided by the library for its users.

Under Automation, library has RFID for the library circulation and security of library material along with OPAC through KOHA, thus the library is fully automized. Post Graduate

and Doctorate theses of research scholars of different faculties and rare or important books and documents are digitized in the university library through the digitization camera available in the library. The library circulation section works with KOHA as well as LIBSYS library software.

Books, periodicals, theses, reports, maps and encyclopedia relevant to the mandate areas of the university have been stocked in the University Library and its constituent center. University Library is well equipped with 59509 text as well as reference books, 80 research journals/periodicals, 3982 thesis, 14000 bound volumes, 1037 e-books, 2 e-journals, various reports, maps and encyclopedia relevant to teaching, research and extension activities of the university. The library has offline database in the form of CAB, Agris, and Agricola as well as online database is available at e-library tab on university website. University Library subscribes 10 newspapers to acquaint users with daily news.

The university library renders its services to users from 8:00 to 18:10 h. A separate air-conditioned reading room is developed with the best facilities as well as good ventilation and aeration. This AC reading room accommodates approximately 150 students. The Reading Room remains open for its users from 8.00 to 23.00 hours on working days whereas 8.00 to 14.00 hours on holidays.

(H) Internet

The College Cyberary, equipped with high-speed internet connectivity, provides students and faculty with seamless access to a wide range of online journals and academic databases. Key databases such as CABI, AGRIS, and AGRICOLA are available in CD-ROM format, while resources like INDIAN HARVEST are accessible as online databases. To enhance user experience, the library uses WinSPIRS, a Windows-based client interface, for efficient access to the various subscribed databases. This digital infrastructure supports academic research and learning by ensuring convenient and reliable access to global and national scientific literature.

The library is equipped with 40 computer workstations with internet connectivity, along with scanning and CD writing facilities, all of which are extensively utilized by both students and faculty members for academic and research purposes. To support academic learning, the library also offers a Book Bank facility, through which students are provided with textbooks related to their respective subjects and semesters. This initiative ensures that students have easy access to essential learning resources throughout their academic journey.

(I) Wi-fi facility

The University provides 24x7 Wi-Fi connectivity across key areas of the campus, including the library, departments, and hostels, with secure login-based authentication to ensure safe and reliable access. In addition, the main campus is connected through an IP-based network, allowing students and faculty members to access the internet seamlessly from their respective hostels and departments. This connectivity enables users to browse scholarly resources, access previous literature, stay updated with recent advancements, and enhance their academic and research pursuits.

The e-library is having following online access facilities:

J-Gateplus (Complete):

J-Gate is a comprehensive online indexing and access gateway to global e-journal literature. It has indexes more than 58 million journal articles from over 58,000 journals, covering multiple disciplines including science, technology, medicine, social sciences, and humanities.

J-Gate is highly useful in the agricultural discipline for researchers, students, faculty, and professionals by providing streamlined access to a wide range of scholarly literature. J-Gate indexes thousands of journals, including many in the field of agriculture such as: Agronomy, Soil Science, Horticulture, Agricultural Engineering, Plant Pathology, Crop Science and Animal Husbandry. J-Gate allows searches using: Keywords, Author names, Journal titles & Subject categories. This helps agriculture researchers find specific articles or trends efficiently. Junagadh Agricultural University use J-Gate through consortia like: CeRA (Consortium for e-Resources in Agriculture) by ICAR.

CeRA:

CeRA (Consortium for e-Resources in Agriculture) plays a vital role in agriculture by providing **access to a wide range of electronic journals and research resources** to Junagadh Agricultural university. CeRA is the ICAR Consortium of e-resources in Agriculture. This covers more than 3000 scholarly journals pertaining to the agriculture and allied sciences which are available in full text. Its main functions include:

Facilitating access to scholarly literature for scientists, researchers, and students in agriculture and allied sciences. **Promoting information sharing** among ICAR institutes and State Agricultural Universities (SAUs). **Supporting research and innovation** by offering timely and comprehensive digital resources. Overall, CeRA enhances the **quality and reach of agricultural research and education** in India.

ASTRAL:

Junagadh Agricultural University have purchased 630 e-books from Astral International (P) Ltd. These e-books are related to agriculture and allied sciences.

ScienceDirect:

Junagadh Agricultural University has subscription of ScienceDirect, a leading full-text scientific database from Elsevier, is highly valuable in agricultural research and education. It provides access to peer-reviewed journals, book chapters, and research articles.

KrishiKosh:

KrishiKosh is a digital repository of agricultural knowledge in India, developed and maintained by the Indian Council of Agricultural Research (ICAR). ICAR have provided access to all the State Agricultural University of India. These digital repositories include theses, research papers, reports, books, journals, and other academic resources in agriculture and allied sciences.

Krishikosh is a database of theses submitted to the agriculture universities and ICAR institutions are freely accessible by students. The JAU Library is member for Krishikosh and all the theses submitted to the JAU are being uploaded regularly.

EBSCOhost:

Junagadh Agricultural University has subscription of is also powerful online research platform provided by EBSCO Information Services that gives access to a wide range of academic, scientific, and professional databases. **EBSCOhost** is offering access to : Scholarly journals, E-books, Magazines, Research articles, Conference papers across multiple disciplines including **agriculture** and allied sciences.

NIPAERS:

The JAU has access to 204 e-books.

e-KrishiShiksha:

e-KrishiShiksha is the ICAR e-learning portal on agricultural education.

Art & Science Academic Publications (ASAP):

ASAP is providing access of e-books from more than 51 publishers across the globe in various fields to JAU based on IP and Login.

Commodities:

The recent news on agricultural commodities is published on this platform. The university has acceptance of the usage agreement & privacy policy with Centre for Monitoring Indian Economy Pvt. Ltd.

6.4.10. CERTIFICATE

I the Dean, College of Agricultural Engineering & Technology, Junagadh Agricultural University, Junagadh, hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college and degree awarding university.



July 16, 2026

(K . C. Patel)
Principal & Dean
College of Agril. Engg. & Tech.
JAU, Junagadh

SELF STUDY REPORT

FOR

COLLEGE OF AGRICULTURAL ENGINEERING AND TECHNOLOGY

ABOUT THE COLLEGE

Considering the importance of Agricultural Engineering, the College of Agricultural Engineering and Technology was established in May, 1984 as an constituent college of the then Gujarat Agricultural University at Junagadh Campus with the broad mandate of teaching, research and extension education in agricultural engineering. With the promulgation of Gujarat Agricultural Universities Act 2004 on May 1, 2004 heralding formation of Junagadh Agricultural University (JAU), the College became a constituent college of JAU. JAU's jurisdiction covers ten districts of Saurashtra region of Gujarat viz., Bhavnagar, Surendranagar, Rajkot, Morbi, Amreli, Gir Somnath, Junagadh, Porbandar, Jamnagar and Devbhumi Dwarka. The first batch of B. Tech. (Agril. Engg.) was admitted in July 1984.

The Junagadh Agricultural University Campus is located in the heart of Junagadh city at about 4 km from Railway Station and 3 km from Bus Station. The College of Agricultural Engineering and Technology (CAET) is located at this campus. The college premises established in about 11 ha land including the land occupied by the college building, various department buildings, lawns, roads, orchards and other establishments. The total buildup area is about 20000 sq.m. In addition to this, the Instructional farm of about 35 ha is maintained by the college. Instructional farm is used for demonstration of Agril. Engg. Technology, UG, PG & departmental research and practical. It is providing demonstration of mechanized farm to students and farmers and also producing breeder, foundation, certified and truthful seed for the farmers.

The Agricultural Engineering plays an important role in increasing production and productivity of agricultural crops, thereby, increasing the income of farmers. The important areas in which Agricultural Engineering profession has to play major role are timeliness of farm operation through efficient agricultural implements and machinery including testing and evaluation of farm implements / machineries as per BIS system, appropriate land and water management activities, value addition and efficient post-harvest technology and processing of farm produces, efficient management of renewable energy resources, protective cultivation greenhouse technology and use of plastic mulch for crop cultivation, use of Artificial Intelligence in the agricultural equipment, machinery and process.

The passed out alumni of the college has a good track record and contributed significantly in the Agro Industries of the state and the country. Many passed out have become the entrepreneur and managing almost entire business of Micro Irrigation System in Gujarat. Even in the leading Government Agency in MIS; namely Gujarat Green Revolution

Company (GGRC), the maximum technical experts are the passed out of this college. It is a matter of proud that due to technical knowhow and sincere efforts of the Aluma Matter of the college, the Gujarat State leads in MIS execution in the country.

PARTICULARS OF THE COLLEGE

Table 1. Head of the college Since Establishment

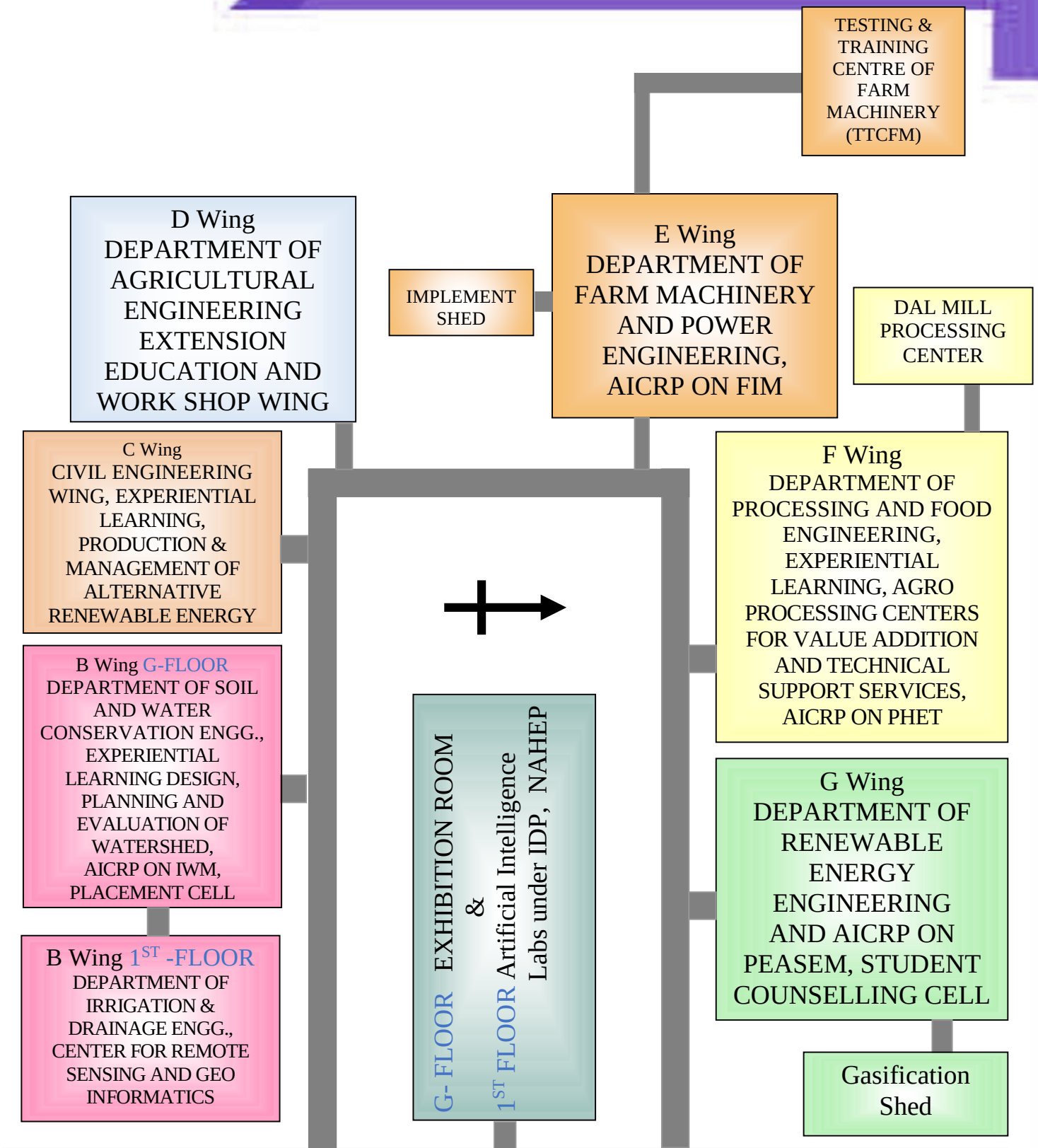
Sr. No.	Name of Head	Duration
1	Prof. (Dr.) M. V. Kanzaria	01/03/1984 to 16/11/1986
2	Prof. L. G. Thakkar	17/11/1986 to 14/05/1987
3	Prof. R. N. Pandey	01/06/1987 to 07/02/1990
4	Prof. (Dr.) J. C. Patel	14/02/1990 to 30/09/1991
5	Prof. (Dr.) L. P. Singh	01/10/1991 to 26/04/1992 14/05/1992 to 06/06/1993
6	Prof. (Dr.) S. C. B. Siripurapu	07/06/1993 to 10/05/1994 20/08/1997 to 03/02/2001
7	Prof. (Dr.) P. M. Singh	11/05/1994 to 20/10/1995
8	Prof. (Dr.) N. C. Patel	20/10/1995 to 20/08/1997 29/05/2001 to 07/08/2009
9	Prof. J. B. Savani	04/02/2001 to 28/05/2001 01/10/2010 to 26/08/2012
10	Prof. A. H. Memon	07/08/2009 to 30/09/2010
11	Prof. (Dr.) N. K. Gontia	27/08/2012 to 31/07/2023
12	Prof. (Dr.) P. M. Chauhan	01/08/2023 to 30/06/2024
13	Prof. (Dr.) H. D. Rank	01/07/2024 to 30/06/2026
14	Prof. (Dr.) K. C. Patel	01/07/2026 to Continue…

INSTITUTIONAL PROFILE OF
COLLEGE OF AGRICULTURAL ENGINEERING AND TECHNOLOGY JUNAGADH



Table 2. Institutional profile of College of Agricultural Engineering and Technology Junagadh.

University	Name	Junagadh Agricultural University
	Headquarters	Junagadh
College	Name	College of Agricultural Engineering and Technology
	Address	Junagadh Agricultural University, Junagadh – 362 001
	Telephone	0285 2677426
	Fax	-
	E Mail	caet@jau.in
Date of Establishment	University	01/05/2004
	College	01/05/1984
Head of Faculty	Name	Dr. K. C. Patel
	Designation	Principal & Dean
Head of the College	Name	Dr. K. C. Patel
	Designation	Principal & Dean



LAYOUT OF COLLEGE OF AGRICULTURAL ENGINEERING & TECHNOLOGY

INFRASTRUCTURE OF THE COLLEGE

Table 3. Infrastructure of the College of Agricultural Engineering and Technology Junagadh.

Sr. No.	Particulars	Availability			
		No. of unit	Plinth Area (Sq. m)	Capacity if applicable	Adequate (Yes/No)
1	Administrative offices	8	2775		Yes
2	Classrooms	8	1393	4 of 120 each 5 of 70 each 1 Drawing & 1 Exam hall	Yes
3	Laboratory	51	3142		Yes
4	IDP lab	1	150		Yes
5	Library / reading room	1	50	40	Yes
6	Gymkhana room	1	50		Yes
7	Housing for faculty	15	2000		Yes
8	Boys' hostel Viswakarma Vivekanand International Hostel Sardar Patel Hostel	4	7742	324 (138 rooms)	Yes
9	Kasturba Girls' hostel	1	2710	159 (53 rooms)	Yes
10	Sports complex	1			Yes
11	Canteen (University)	1	-		Yes
12	Health clinics	1	467		Yes
13	Farm Machinery Testing and Training Centre (FMTTC)	1	640		Yes
14	Faculty club	-	-		No
15	Auditorium	1	1387		Yes
16	Others(specify)				
17	Canning Plant	1	792	50	Yes
	Dal Mill	1	214	50	Yes
	Seminar hall (CAET, SWCE,FMPE,PFE,Civil)	1+4	337	250 +150	Yes
18	Exhibition hall	1	249		Yes
	Conference hall	1	48	35	Yes
	Examination hall	2	536		Yes

6.5 SELF STUDY REPORT OF COLLEGE OF AGRICULTURAL ENGINEERING AND TECHNOLOGY, JUNAGADH AGRICULTURAL UNIVERSITY, JUNAGADH

OUR COLLEGE

Agricultural Engineering profession started in India in 1940 at Allahabad Agricultural Institute, Naini by Prof. Mason Vaugh and first batch of Agril. Engg. Graduates passed out in 1942. Considering the importance of Agricultural Engineering, the College of Agricultural Engineering and Technology was established in May, 1984 as an constituent college of the then Gujarat Agricultural University at Junagadh Campus as the 18th Agricultural Engineering college of India. The broad mandates of college are teaching, research and extension education in agricultural engineering. With the promulgation of Gujarat Agricultural Universities Act 2004 on May 1, 2004 heralding formation of Junagadh Agricultural University (JAU), the College became a constituent college of JAU.

The college has Six full-fledged departments namely Soil and Water Conservation Engineering, Irrigation and Drainage Engineering, Farm Machinery and Power Engineering, Processing and Food Engineering, Renewable Energy Engineering as well as Agricultural Engineering Extension Education. The courses related to basic engineering, basic science and humanities are also being offered by these departments.

The College offers facilities for study of Agricultural Engineering, leading to degree of Bachelor of Technology (Agricultural Engineering). The M.Tech. Programme in different disciplines started from June, 1994. The disciplines included Master of Technology (Agril. Engg.) in Farm Machinery & Power Engineering, Soil & Water Engineering, Processing & Food Engineering and Renewable Energy Engineering. Irrigation and Drainage Engineering discipline started from 2022-23. From the year 2001, Ph.D. programme has also been started in discipline of Soil & Water Engineering. Since year 2005-06 Ph.D. programme started in other disciplines like Farm Machinery & Power Engineering, Processing & Food Engineering and Renewable Energy Engineering. Irrigation and Drainage Engineering discipline started from 2022-23.

The college has all essential basic academic facilities like class rooms, examination halls, digital smart classroom, college & departmental library, seminar hall, conference hall, computer lab, mechanical workshop, artificial intelligence labs, exhibition hall / museum, instructional farm, hostels etc. The facilities like central library, central museum, central

examination hall, information technology cell, agri. studio, health center, sports complex, playground (gymkhana), auditorium, open air theatre, canteen, guest houses, faculty residence and , cattle breeding farm(KU), are also available in university campus. The bank, ATM and post office facilities are also available in the campus.

College is participating in the ranking survey of Best Engineering Colleges in India conducted by GHRDC. It is a matter of pride that the college has improved its ranking every year since last 14 years. It is worth to mention that according to GHRDC survey -2025, the college ranked 2nd in Gujarat state after Nirma Institute of Technology, Ahmedabad and at national level ranked 21st and 1st in the 6th category of Ranking of Engineering Colleges of Outstanding Excellence in India. The college ranked 4th in the Western region of India.

INSTITUTION DEVELOPMENT PLAN (IDP), NAHEP

National Agricultural Higher Education Project (NAHEP) has been formulated by Indian Council of Agricultural Research (ICAR), New Delhi funded by World Bank with a total cost outlay of Rs. 1100 crore for five years. Among the three components of NAHEP, Institutional Development Plan (IDP) is the major component of investments towards the 21st century Agricultural university educational plan. The Junagadh Agricultural University (JAU), Junagadh, Gujarat, India is the only Agricultural University in Gujarat and amongst eight at India level which successfully received the prestigious IDP under NAHEP of ICAR, New Delhi with a budget outlay of Rs. 30 crore (including Rs. 5 crore of state share) for improving the competency of education quality. The major theme of the project is “Artificial Intelligence, Automation, Robotics and Drone Technology in Agriculture”.

The objective of the Project is to support Participating Agricultural Universities and ICAR in providing more relevant and higher quality education to Agricultural University students. NAHEP addresses quality by supporting interested AUs to propose and implement technically sound and verifiable investments that increase faculty performance, attract better students to these AUs, improve student learning outcomes and raise their prospects for future employability, particularly in the private sector.

INFRASTRUCTURAL FACILITIES

Under the flagship project of IDP, advanced laboratories of Artificial Intelligence are developed at the College of Agricultural Engineering and Technology, JAU, Junagadh which includes,

i) Artificial Intelligence Lab
ii) Robotics and Automation Lab
iii) CAD and Simulation Lab
iv) Precision Agriculture Lab

v) High Tech MIS Park

vi) Incubation center on Advanced Irrigation Technologies

vii) SPV Power System and its Control Unit





















In these laboratories, students will gain skillness in these field by practicing sophisticated technologies like artificial intelligence, robotics, drones, agricultural sensors, computer aided design and simulation, precision agriculture. Taking these needs in consideration, various advanced equipment such as high-end servers, workstations, spraying drones, surveying drones, welding robots, color sorting machines, self-learning robot kits, robotic arm trainers, 3-D printers, IoT boards, DDS function objects, Automation in MIS, Automatic Pumping Unit, Automatic Filters, Various type of Sensors, AR/VR kits etc. were purchased to equip laboratories with these cutting edge equipments so that students can learn and gain practical knowledge in these areas.

STUDENTS DEVELOPMENT ACTIVITIES

Under the Student Development Programme, around 18 different student activities which included International Training, Vocational Trainings, Workshop, Skill Development Programs, Entrepreneurship Program, leadership programmes etc. have been organized. A total of about 2547 students have been benefited through these activities under NAHEP-IDP.

Total Thirty Three (33) students, out of which Thirteen (13) students have attended International Training and Experimental Learning on "Drones, IoT and Google Earth Engine and their Applications" at Geo-Informatics Centre, AIT, Bangkok, Ten (10) students have attended International Training at Western Sydney University, Australia and Ten (10) students have attended International Training at Hokkaido University, Japan. These training programs, sponsored under the National Agricultural Higher Education Project (NAHEP) funded by the World Bank through ICAR, New Delhi, were aimed at exposing students to advanced technologies, innovative research, and global best practices in agriculture and allied sciences.



ALL INDIA COORDINATED RESEARCH PROJECTS (AICRP)/ EXPERIENTIAL LEARNING PROGRAMME (ELPS)

Four All India Coordinated Research Projects (AICRPs) funded by ICAR on Irrigation Water Management (IWM), Farm Implements & Machinery (FIM), Post Harvest Engineering & Technology (PHET) and Plastic Engineering in Agricultural Structure and Environment Management (PEASEM) and one Consortia Research Project on Energy from Agriculture. These projects are contributing the research in the respective fields. There is one Farm Machinery Testing and Training Centre, RKVY schemes running under the college. Moreover, the plan / other schemes functioning in the college are Research on Post-Harvest Technology of Important crops of Saurashstra region, Instructional Farm of College of Agricultural Engineering & Technology and three Experiential Learning schemes: Design, planning and evaluation of watershed, Hands on Training on agro processing center for value addition technologies and technical support services and Production & Management of alternative

renewable energy in the college. Polytechnics in Agro processing at Junagadh and Agricultural Engineering at Targhadia were started from the year 2009-10 and 2012-13, respectively.

The faculty of Agricultural Engineering has so far released / developed 161 (123 Farmer Community +38 Scientific Community) numbers of research recommendations / technologies for the benefit of farmers and entrepreneurs / industries.

GOALS AND OBJECTIVES

GOALS

The Goal of College of Agricultural Engineering and Technology is to impart quality education, research and extension education in field of agricultural engineering & technology. Creating an intellectually stimulating campus environment, the academic quality, excellence and responsiveness to the need of the farmer and industry would be our distinction.

OBJECTIVES

The college aims at creating and stimulating campus environment and strengthening teaching, research and extension education programmes with the following objectives.

- To promote students learning in Agricultural Engineering & Technology to discover and improve new technology for stake holders.
- To provide the required manpower to state, nation and globally education in the field of agricultural engineering leading to UG, PG and Ph.D. degrees suitable for academic, research and extension for academic institutions, government agencies, public sector, private industries, agro-industries and NGOs'.
- To be centre of excellence in teaching, research and extension in the discipline of Agricultural Engineering and Technology.
- To assist farmers in reduction in cost of cultivation through better utilization of efficient machinery, soil and water conservation, irrigation water management, precision agriculture and irrigation technology, value addition through farm level processing, post-harvest technology; protective cultivation and use of renewable energy, application of artificial intelligence, robotics, drones and sensor technology in agriculture, application of emerging technology, AI and IOT in agriculture ultimately help the farmers to increase their income.

PROGRAMMES OFFERED WITH DURATION

Table 4. Details of programmes offered with duration

	Programmes	Duration
UG	B.Tech. (Agril. Engg.) (Bachelor of Technology) Since 1984	4 Years (8 Semesters)
PG	M.Tech. (Agril. Engg.) (Master of Technology) in discipline of FMPE,SWE,PFE,REE Since 1994 in discipline of IDE, SWCE Since 2022	2 Years (4 Semester) for full time 3 Years (6 Semester) for in-service
	Ph. D. (Agril. Engg.) in discipline of SWE Since 2001 in discipline of FMPE, PFE, REE Since 2006 in discipline of IDE, SWCE Since 2022	3 Years (6 Semester) for full time 4 Years (8 Semester) for in-service

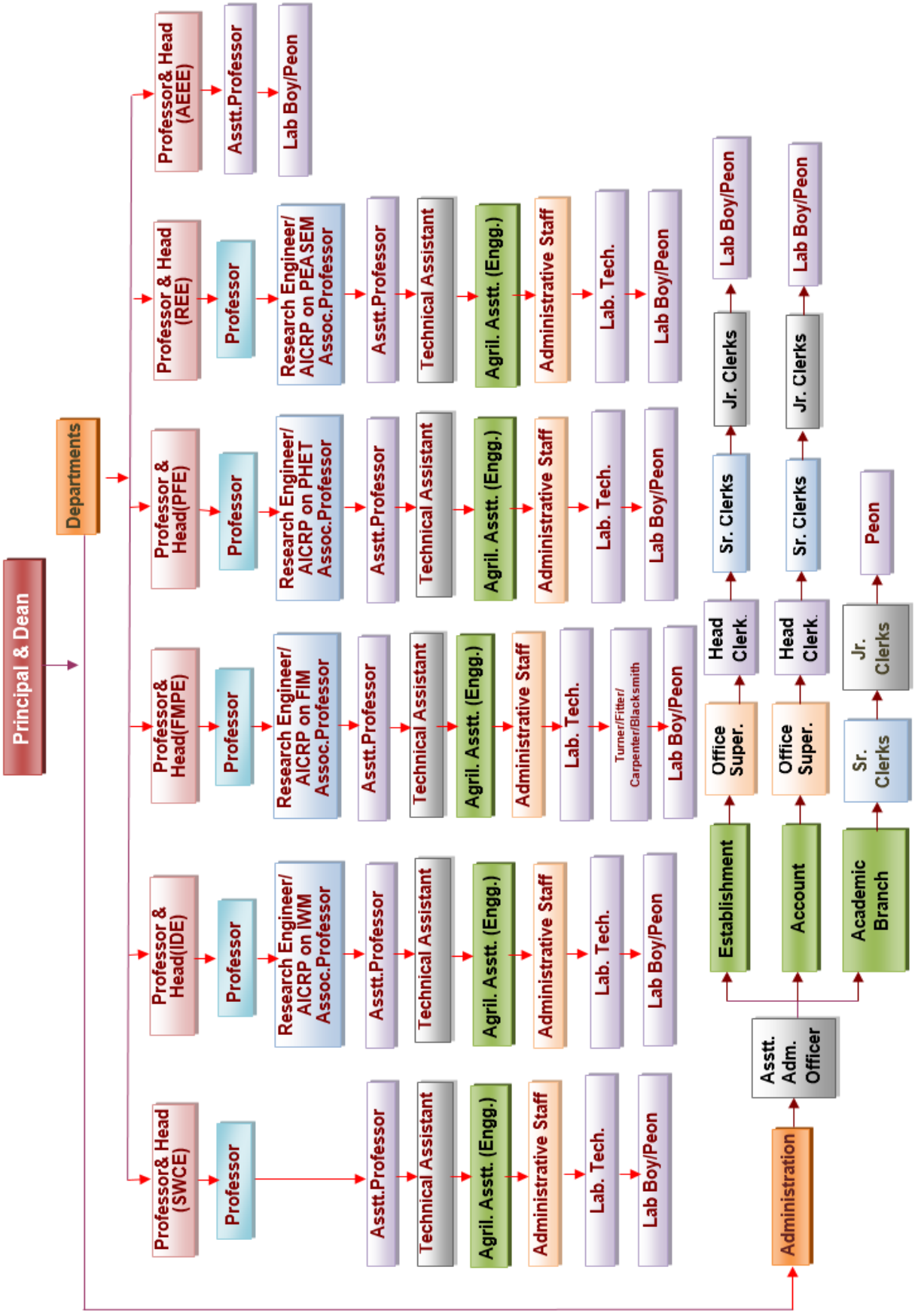
6.5.1 COLLEGE ADMINISTRATION

The Dean is the Head of the institution, appointed by the University through wide advertisement, interview and direct selection. The Dean looks after the administration, academics and provides leadership for the overall functioning of the College. He monitors teaching, research and extension programmes of the college in coordination with Director of Research & Dean PG Studies, Director of Extension Education and Registrar in the best interest of the University.

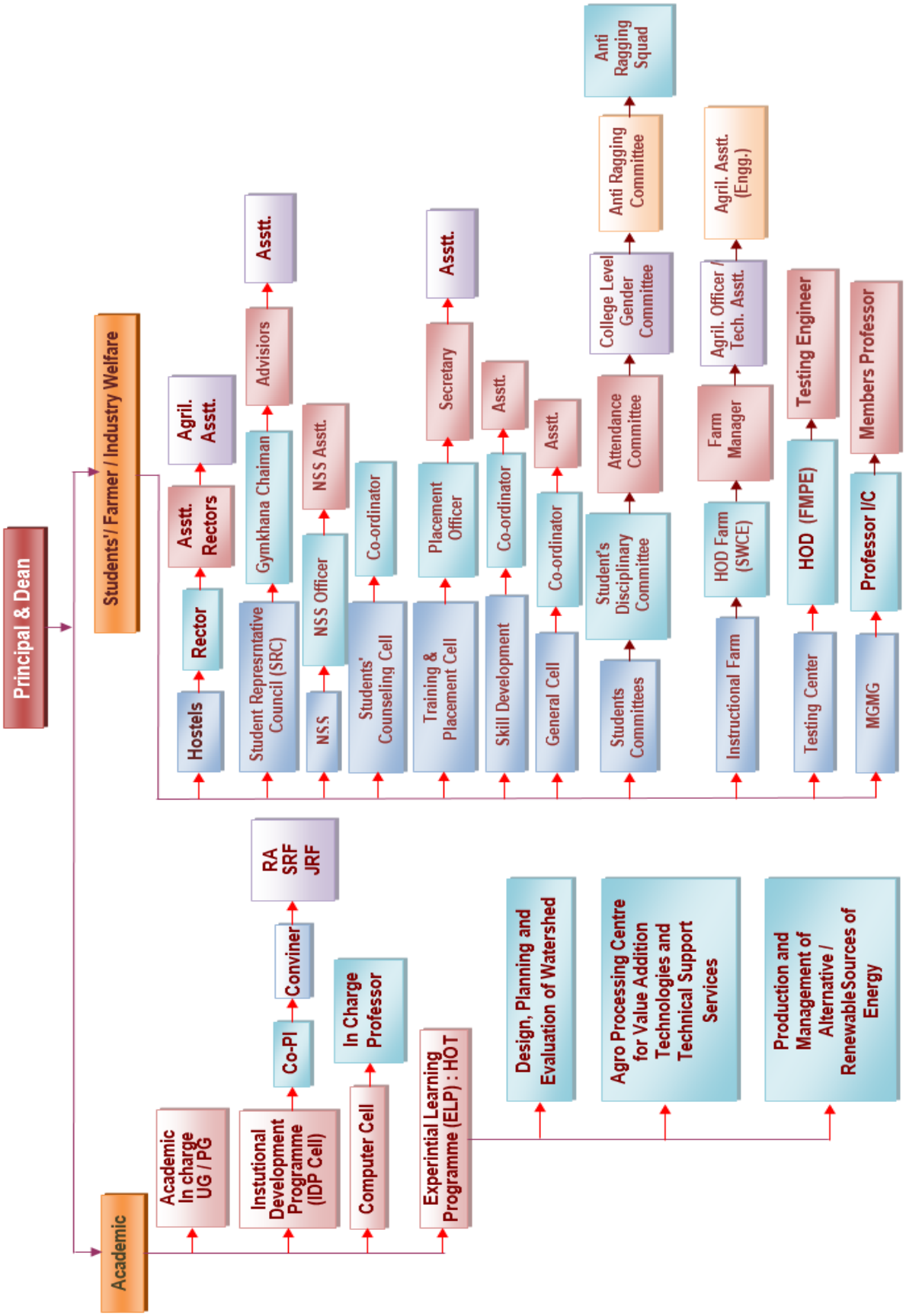
Gujarat State Agricultural Universities of Gujarat Rules, i.e., the Government of Gujarat Rules are followed for the above. There is Accountant who looks after the cash, pay and allowances, contingencies, provident fund, receipts, etc and maintains its record and makes audit under the supervision of Assistant Administrative Officer of the college. The annual audits are made by university audit team, State Government audit as well as CAG of India.

The organogram of the college is given below.

1. ADMINISTRATIVE STRUCTURE OF THE COLLEGE



2. ACADEMIC DEVELOPMENT, STUDENTS' AND FARMERS / INDUSTRY WELFARE ACTIVITIES OF THE COLLEGE



STRENGTH

- Qualified faculty members having degrees from well reputed institutes across India.
- Six faculties of the college have taken international training from international organization in various foreign countries like; Hokkaido University-Japan, Teagasc Food Research Center, Ireland, Institute for Natural Resources and Agrobiology (IRNAS), SPAIN and WSU-Australia.
- Thirty three students of the college were trained in international organizations in various foreign countries like AIT-Bangkok, WSU-Australia and Hokkaido University-Japan.
- Committed and motivated staff with co-operative attitude.
- JAU has collaboration with Western Sydney University, Australia, offering dual degree program for final year UG and PG students.
- Sufficient building space for smart class rooms with central AC, laboratories, office *etc.*
- College has achieved 1st position in the category of Ranking of Engineering Colleges of Outstanding Excellence in India and got overall 21st ranking at National Level. The college ranked 4th in the West region of India. The college ranked 2nd in all Engineering Colleges of Gujarat State in the year 2025.
- Under the flagship project of IDP, Six advanced laboratories like AI/IoT etc. are developed at the College of Agricultural Engineering and Technology, JAU, Junagadh.
- AC Seminar Hall with interactive panel, conference camera and AV systems for the students and staff.
- 24x7 Wi-Fi connectivity across key areas of the college, including the library, departments, and hostels, with secure login-based authentication to ensure safe and reliable access.
- Placement through campus interviews in private industries, NGOs which attracts good students.
- Supports and guidance to alumni to build careers in the intended sectors.
- Good facilities for curricular and extracurricular activities lke sports, NSS, NCC, cultural programs, various national/international day celebrations etc.
- Fully mechnaised and well managed Instructional Farm.
- Regular Counselling of students through experts.
- Well developed infrastracture and ELPs for Skill Development of Students.
- Introduction of Artificial Intelligence, Robotics, Drones, Sensors, AR/VR, Remote Sensing in curriculum for enhancing knowledge of students.
- Incubation center on Advanced Irrigation Technologies.

- Skill Development and Startup cell to support students for innovative research, IPR and startup ecosystem.
- JAUIF to support students for innovative idea, IPR and startup ecosystem.

WEAKNESSES

- In Gujarat State, recruitment of Agril. Engg. Graduates and Post Graduates in Department of Agriculture, Department of Horticulture, Department of Rural Development, Department of Narmada Water Resources, GSLDC, GEDA and other line departments etc is lacking.
- The Department of Agriucltural Engineering is not yet established by the state government. This impact the attraction of students in the college.
- The patented technologies even after massive research efforts have to sell at lower price which lack revenue generation.
- Faculty exchange between Government Institutions in India and the foreign countries is lacking.
- The gradutaes/postgraguates are declined towards the high tech farming and rural based industries because of lower return.
- State government do not promote to depute the faculties for the higher studies in abroad under faculty improvement scheme.

6.5.1.1 COLLEGE DEAN'S OFFICE ESTABLISHMENT

The Dean's post has been sanctioned as per the model act of the ICAR adopted by the Junagadh Agricultural University, Junagadh. The mode of selection of Dean Post is by wide advertisement, interview and direct selection. At present, **Dr. K. C. Patel** is working as I/c **Principal and Dean.** He is professor since April, 2023.

	:	Dr. K. C. Patel Principal & Dean College of Agricultural Engineering & Technology Junagadh Agricultural University Junagadh- 362 001, Gujarat
Telephone No	:	0285-2677426
Mobile	:	+91 - 98791 04668 (O) & +91- 99793 17525 (P)
E mail	:	caet@jau.in(O) kamlesh@jau.in(P)

Table 5. Principal & Dean of the college since last five years

Name of the Principal and Dean	Period	
Prof. (Dr.) N. K. Gontia	27/08/2012	31/07/2023
Prof. (Dr.) P. M. Chauhan (I/c)	01/08/2023	30/06/2024
Prof. (Dr.) H. D. Rank (I/c)	01/07/2024	30/06/2026
Prof. (Dr.) K. C. Patel (I/c)	01/07/2026	Continue till the date….

The Dean is assisted by the following staff.

Table 6. Dean's Secretariat

Sr.No.	Designation	No. of Persons
1.	Technical Assistant	01
2.	Personal Assistant / Stenographer	01
3.	Driver	01
4.	Peon / Messenger	02
	Total	**05**

The Dean is assisted by UG/PG academic convener, SRC, Rector, Training & Placement Cell, General Service Cell, Student Counselling Cell, Assistant Administrative Officer, Office Superintendents, Clerical staff for the various activities of academics, administrations and accounts.

Table 7. Details of administrative staff of the college

Sr. No.	Name of Post	Post		
		Sanctioned	Filled	Vacant
1	Asstt. Adm. Officer	1	0	1
2	Office Superintendent	1	1	0
3	Head Clerk	2	1	1
4	Senior Clerk	6	2	4
5	Junior clerk	6	2	4
6	Steno grade-2	1	1*	0
7	Steno Grade-3	1	0	1
8	Peon/Lab boy	1	1	0
9	Sweeper	1	1	0
	Total	**20**	**08+01***	**11**

*-Person working on pool to other office of the university

Table 8. Facilities available in the Dean's office

Sl. No.	Item	Qty (No)
	Deans' Chamber	
1	Executive Wooden Revolving chair (Dean)	01
2	Dean Table	01
3	Revolving Chair for Computer	01
4	Wooden cushion Armed chair	08
5	Plastic Chair	05
6	Sofa set	02 set
7	Wooden Center Table / Teapoy	03
8	Incumbency board	01
9	Computer Set	01 set

10	HP Laptop (Dean)	02
11	Printer Hp Laser Jet Pro MFP M126nm	01
12	Printer HP Colour Laser Jet Pro 200 M251n	01
13	AC (Fixed)	01
14	Pedestal Fan	01
15	Wall hanging Fan	02
16	Visitor Chairs in visitors room	08
17	Buttery Back up for Principal office light and fan	01
18	Wall side cabinet	02
19	Wooden Cupboard	02
20	LED Screen for CCTV Camera Monitoring System	01
TA/PA/Visitor Room		
1	Computer Set	02 set
2	Printer Hp Laser Jet M1136 MFP	01
3	Printer Hp Laser Jet 3055	01
4	Perforated Revolving Chair	02
5	CCTV Camera Monitoring System	01
6	Nikon Camera with charger	01
Catering Room		
1	Refrigerator	01
2	Cupboard	01
3	Wall side cabinet	01
4	Celling Fan	01
Conference Room		
1	'U' Shaped meeting table	01
2	Wooden arm visitor chairs for meeting table	20
3	Air Conditioner	01
4	Celling Fan	01

6.5.1.2 MONITORING MECHANISM FOR QUALITY EDUCATION (ON-LINE AND OFF-LINE)

The college has a strong monitoring mechanism to provide quality education to the students of the UG, PG and Ph.D. degree programme. Sincere efforts are continuously being done to impart current and upto-date scientific knowledge to the students and also to enhance scientific acumen of the faculty to meet the needs of the stakeholders. The college has a good monitoring system equipped with modern tools to assist the authority for regular and periodical monitoring of the education. For regular monitoring of quality education various initiative are continuing which include;

- Academic regulations are prepared keeping in view the recommendation of ICAR VI Dean's committee for UG degree programme and BSMA for PG degree programs and are strictly followed.

- Academic calendars are prepared in advance in consultation with the colleges of other SAUs' of Gujarat and followed in Toto.
- A common semester end examinations including paper setting and evaluation for UG are conducted to all SAUs' of Gujarat.
- In PG the academic calendar is common for all SAUs' of Gujarat but the examinations are conducted at university level.
- College follows a comprehensive monitoring mechanism ensuring regular on-time conduct of theory and practical lectures at both UG and PG levels strictly adhering to the time-table. The students' progress is also tracked through real-time monthly on-class visits by Principal and respective Professor and Heads.
- In each course apart from the teacher of the concern course an additional examiner nominated to observe and inspect the assignment and journal as well as conduct the viva voce exam of the students.
- The examinations are conducted with strict supervision and under CCTV surveillance.
- The undergraduate level theory classes are conducted in the lecture halls of administration building of the college enabled with CCTV surveillance at the Principal's chamber. Besides, a register is also maintained at the Staff waiting room in which the course teacher has to enter the timings and lecture details before taking the class. The entries in the register are verified by the Principal of the college every month.
- Apart from, conducting regular lectures, the theory and practical lecture notes and learning aids in audio and video formats are also provided to the students through Academic Information Management System (AIMS) portal (http://aims.jau.in/) and the Principal ensure that the students receive the latest materials on time. This unique arrangement at the University is of great help to the students in completing all their curricular requirements on time even amid the testing times of COVID-19 crisis.
- Students' attendance is monitored every month and the students falling-short are informed through notice issued by Principal. The online attendance of students is also maintained by the concerned faculties through Google Attendance Sheet.
- The Head of the departments monitors the PG classes regularly and frequently monitor by the Dean and university officers.
- The college has prepared the practical manuals for all the subjects as per ICAR V/VI Dean's committee recommendation.

- The laboratories are well-equipped with charts / specimens / teaching ads / models for conducting the practical classes.
- Educational visits are organized to state / central institutes / Industries and progressive farmers' fields.
- College has developed an advisory system in which about 10 students are allotted to a faculty member as advisor in first year and remain throughout his UG course programme. The advisory Note book is issued to the student and whenever he meets his advisor an entry is made in the book, at the end of each semester the result of the student is also mentioned and advisor guides the student for further course of action. The advisors also guide the students regarding their academic activities, other activities and career opportunities.
- College has a small library to cater the need of the student for enhancing their general knowledge and competitive exam preparation.
- Each department has its own library which provide the dissertation theses, text books and important reference books to the students.
- The Central Library is available at university level which is digitalized and well equipped with adequate books, e-books & e-journal and statistical tools for the reference of students and is also provided with CCTV to monitor the students. The library has a separate section to serve the students who are preparing for various competitive examinations.
- PG students are allocated to the teachers based on their area of specialization along with student's merit and their area of research interest. External qualifying examination system is being followed for PG.
- The UG final year students do their project work and prepare a report in form of thesis which is evaluated by an external examiner along with internal examiner nominated by the Dean.
- Feedback is obtained from the students about the courses taught by the teachers who are making their candidature for Best Teacher Award every year.
- Feedback from alumni is also obtained for improvement of teaching/research periodically.
- JAU Exam Management System (JEMS) is Web Enabled application Software for Management of various academic activities of the College. The System caters to the requirements of different users Dean, Registrar, Heads, Guides, Faculty, Teachers,

Students, Administrators and officials for performing their assigned tasks. The System is user friendly and can be accessed ubiquitously. The online capabilities of the system allow the students, faculty members, guides and administrators to publish and retrieve the information from their respective disciplines. It has modules like Dashboard, Mapping Details, Master, Master Mapping, Dashboard Dean PG, Exam, Setting and Report. This software helps in Management of Courses, Student Management, Faculty Management, Examinations and Results and Transcripts.

- There is one Student Fee software with modules Dashboard, Student Master, online Fee Schedule and Report. It allows the students to submit the Fees directly online in the college account.

MONITORING OF TEACHING, RESEARCH AND EXTENSION (TRE)

- The college is engaged in triple activities of Education, Research and Extension Education. There are separate bodies for planning these activities for semester for a year and for a longer period also.
- The academic calendar for Implementation of Under Graduate and Post Graduate programmes is proposed from the college to the university. A common academic calendar is prepared for all State Agricultural University of Gujarat in a joint meeting of the authorities from all four Agriculture Universities of the Gujarat. The common academic calendar helps in Execution of academic programme such as class room teaching, practical, internal exams, skill development trainings, Experiential Learning Programme (ELP), in-plant training, projects, educational tour, and semester end theory and practical exam. In UG, the semester end question paper is prepared common for all the State Agriculture University of Gujarat and similarly examination is conducted for all State Agriculture University of Gujarat. All the procedures are approved by Academic Council of the University.
- The Research proposals are submitted by the departments and discussed in the ZRAEC committee (twice in a year, one for Kharif season during January and second for rabi/summer seasons in September month) and approved proposals are submitted in Agricultural Engineering Research Subcommittee (AGRESCO). After thorough discussion, the proposals are submitted to Joint AGRESCO of all faculties and then recommendations and New Technical Programmes are approved in combined AGRESCO of all SAUs of Gujarat. The approved programmes are submitted in University Research Council for approval.
- The college has a separate department of Agricultural Engineering Extension Education (AEEE) which is unique in whole country. The department transfer the technology developed by the college, University and Other institutes to the farmers of the state.

The Extension Education Activities are proposed by the department and approved in the Extension Education Council.

- The budgetary and financial proposals, which needs the approval of the Board of Management of the University are submitted for approval to the board and ultimately the approved proposal are submitted to the State Government for the necessary financial assistance.

MECHANISM / BODIES FOR COURSE CURRICULUM DEVELOPMENT AT COLLEGE LEVEL

- The curriculum is carefully monitored by the faculty at various levels. In the first level, the teachers of the respective disciplines, heads of departments meet and discuss the syllabus on the basis of the curriculum proposed by ICAR.

- Additionally, at the end of each semester, the online link on university website is created to gather feedback from the students with an objective to assess their teaching effectiveness. The examination papers of internal examination are reviewed by the course teachers under the supervision of Heads of Departments.

- The annual meeting of Faculty Group of Subjects (FGoS) are organised to review and plan Teaching, Research and Extension programmes of various discipline wise. In this meeting, the Head of Department put up the progress of education in their department and also discuss with faculty member about the course curricula and proposed necessary modifications if needed. The meeting is attended by all faculties and M Tech/PhD students of the discipline of that FGoS and monitored by Dean, Registrar, Director of Research & Dean-PG Studies, and along with the Hon. Vice Chancellor of the University.

- The proposed course curricula of UG/PG of all discipline is discussed in the Board of studies of Faculty of Agril. Engg. & Technology and proposed course curricula of PG of all discipline is discussed in the PG Board of studies of the University and the finalized version is sent for further approval to the Academic Council of the University. The Academic Council approves the course curricula and for any financial requirement, it is submitted to the Board of Management of the University for Final Approval and implementation.

COURSE CURRICULUM DEVELOPMENT AT COLLEGE LEVEL

- In additions to the course curricula of the ICAR V Dean committee syllabus, the new age courses related to artificial intelligence, precision agriculture, application of robotics and drone in Agriculture are introduced as an elective courses in the UG

programme (8th semester) of Agricultural Engineering. The details of the courses are given in the Table 9A.

Table 9A. Courses introduced as an elective course to students of Faculty of Agricultural Engineering and Technology since academic year 2019-20 (V Dean committee syllabus)

Sr. No.	Course Number	Course Title	Course Credit
1	CSE-4.8.25	Artificial Intelligence in Agriculture	3(1+2)
2	IDE-4.8.10	Precision Agriculture & Animal Husbandry	3(1+2)
3	FMPE-4.8.17	Robotics in Agricultural Engineering	3(2+1)

- In the course curricula of the ICAR VI Dean committee syllabus after NEP-2020, new age courses like AI, Robotics, ML, Automated precision farming etc. have been already incorporated into the course curricula. Besides an array of elective courses have been included so that the student can get deeper knowledge and understanding in the subject of his/her interest. The details of the courses are given in the Table 9B. Addition of new age courses related to Agricultural Engineering and incorporation of choice based online courses which can be taken up from NPTEL, moo KIT, edX, Coursera, SWAYAM or any other portal in open digital learning environment.

Table 9B. New Age courses since academic year 2024-25 (VI Dean committee syllabus)

Sr. No.	Course Number	Course Title	Course Credit
1	VAC - II	Agricultural Informatics and Artificial Intelligence (1st Sem)	3 (2+1)
2	CSE6.3	Sensors, AI and Robotics in Agriculture (6th Sem)	3 (2+1)
3	FMPE8.8	Precision Agriculture and System Management (8th Sem)	3 (2+1)
4	CSE8.30	Python Programming (Elective)	3 (1+2)
5	CSE8.31	Artificial Intelligence (Elective)	3 (2+1)
6	CSE8.32	Advances in Automation and Robotics in Agriculture (Elective)	3 (2+1)
7	CSE8.33	Machine Learning (Elective)	3 (2+1)
8	SEC6	Machine vision, sensors and sensors architecture (2nd sem. Elective)	4 (0+4)

MECHANISM / BODIES FOR COURSE CURRICULUM DEVELOPMENT AT UNIVERSITY LEVEL. INDICATE THE INVOLVEMENT OF FACULTY, STUDENTS AND OTHER STAKEHOLDERS

Development of syllabi is carried out by discussion, revision and requirement of modification by Dean, Senior Professors in State Agricultural University meetings.

1. Group of Subject Discipline wise
2. Board of Studies of Faculty of Agril. Engg. & Technology
3. PG Board of Studies of the University
4. Academic Council of the University
5. Board of Management of the University

IMPACT OF MONITORING ON THE OUTCOMES

The college has produced quality man power in field of Agricultural Engineering which is catering the need of the state and country in academic institutes, public sector units, private organizations and agro based industries. A majority of the students have developed their own enterprises and manufacturing units and strengthened the agricultural infrastructure of the state.

College has a Training & Placement cell and Student Counselling Cell for facilitating the career guidance and personality development programmes that aim at increasing employability of the students. Faculty are also encouraging and coaching students during holidays to prepare for various competitive exams like NET/ARS, GATE, JRF, SRF, GRE, TOEFL, IELTS, CAT and other competitive exams like GPSC, UPSC and Banking services.

DETAILS OF STUDENT ACCOMPLISHMENTS ARE MENTIONED BELOW.

Table 10. Year wise UG Students passed out

	Year	No. of graduates passed out
A.	1988 to 2003 (GAU)	408
B.	2004 TO 2019 (JAU)	930
C.	2020	83
	2021	71
	2022	99
	2023	81
	2024	81
	2025	64
Total of 6 Years		**479**
Grand Total (A+B+C)		**1817**

Table 11. Discipline wise PG/Ph.D. Students passed out

Discipline		Soil & Water Engineering		Farm Machinery& Power Engineering		Processing & Food Engineering		Renewable Energy Engineering		Total	
	Year	M.Tech	Ph.D.	M.Tech	Ph.D.	M.Tech	Ph.D.	M.Tech	Ph.D.	M.Tech	Ph.D.
A.	1996 to 2003 (GAU)	12	0	9	0	13	0	1	0	**35**	**0**
B.	2004 to 2019 (JAU)	58	10	63	6	69	8	16	1	**206**	**25**
C.	2020	1	0	0	1	0	1	0	0	**1**	**2**
	2021	3	2	2	0	2	1	2	1	9	4
	2022	1	2	8	6	2	3	1	0	12	11
	2023	1	2	6	2	5	5	2	1	14	10
	2024	3	2	3	1	3	0	2	0	11	3
	2025	4 (SWCE)	1 (SWE)	3	6	3	3	2	2	12	12
Total of Last 6 Year		**13**	**9**	**22**	**16**	**15**	**13**	**9**	**4**	**59**	**42**
Grand Total (A+B+C)		**83**	**19**	**94**	**22**	**97**	**21**	**26**	**5**	**300**	**67**

Table 12. Students' performance in Competitive Exams

YEAR	JRF	SRF	ARS-NET	GATE	Total
	No.	No.	No.	No.	No.
2020-21	2	0	0	7	9
2021-22	0	0	5	6	11
2022-23	5	3	3	3	14
2023-24	5	0	0	1	6
2024-25	0	0	*	2	2
Grand Total	12	03	08	19	42
Note*	Not conducted by ICAR				

6.5.1.3 COLLEGE COUNCIL/BOARD OF STUDIES

The College of Agricultural Engineering & Technology, Junagadh is a constituent college of Junagadh Agricultural University, Junagadh and is governed by decisions of the statutory bodies *viz.*, Board of Studies (BoS) and Academic Council which includes nominated Professors, Associate Professors, Assistant Professors of all the constituent colleges along with University officers and Co-opt members.

The following major recommendations have been made during the period of report:

- The ICAR VI Dean's Committee report of UG for faculty of Agricultural Engineering & Technology has been accepted in the Board of Studies and recommended the same to

the Academic Council. The Academic Council has approved the report and same is implemented in the university since academic year 2024-25.

- The ICAR BSMA report of PG for faculty of Agricultural Engineering & Technology has been accepted in the Board of Studies and PG Board and recommended the same to the Academic Council. The Academic Council has approved the report and same is implemented in the university since academic year 2022-23.
- Academic regulations are modified and recommended with respect to fees structure, course, intake, admission procedure and other academic activities and recommended the same to the Academic council.
- The college has designed its logo and it is approved in the Board of Studies as well as in Academic Council meeting during year 2020.
- The composition and dates of conduct of meetings of the above said statutory bodies are as bellow:

COMPOSITION OF BOARD OF STUDIES OF FACULTY OF AGRICULTURAL ENGINEERING & TECHNOLOGY

The Board of Studies of Faculty of Agricultural Engineering & Technology is constituted of the following members:-

a) The Dean of the Faculty - Chairman
b) The Head of the Department and Professors teaching the assigned subjects
c) The Director of Extension Education
d) The Director of Research and Dean Post Graduate studies
e) Five Co-opted members
f) The Assistant Registrar (Academic) as Secretary

Table 13. Meeting of Board of Studies of Faculty of Agricultural Engineering & Technology Conducted in last 5 years

Academic Year	Date of Conduct of Meeting	Major Recommendation
2020-21	12-04-2021 (13th Meeting of BoS)	1. It was recommended to start M. Tech. (Agril. Engg.) and Ph. D. (Agril. Engg.) in the discipline of Soil and Water Conservation Engg. and Irrigation and Drainage Engg. 2. It was recommended to include eligible scientists/ technocrats of various academic/ research/ development/ industrial organizations in Advisory Committee of PG and Ph. D. students

2021-22	04-06-2022 (14th Meeting of BoS)	1. It was recommended to the Academic Council to consider 12th Pass candidates of A, B and AB Group eligible to get admission in B. Tech (Agril. Engg.) and to teach the Bridge Courses of mathematics for admitted B Group students
2022-23	18-05-2023 (15th Meeting of BoS)	1. It was noted that 3 students and 10 faculty members are shortlisted for foreign training during the year 2023-24. It was also noted that 22 students of B. Tech. (Agril. Engg.) went for Student READY programme during year 2019-20 to 2022-23 to foreign countries. 2. It was recommended to approve the feed back mechanism to be adopted in JAU for different stake holders. 3. It was recommended to approve the list of experts for thesis evaluation/examination of master and doctoral degree of different discipline of Agril. Engg.
2023-24	18-05-2024 (16th Meeting of BoS)	1. It was resolved to recommend Research Council and Board of Management to approve nonexclusive license for licensing of technology of " A Grain Treater for Pre-milling enzymatic treatment to Pegion Pea" with tulshi Agro Engg. Mech Pvt Ltd, Rajkot. 2. It was resolved to recommend Academic Council and Board of Management to approve that MOU signed between different companies related to the fields of Agril. Engg. and Junagadh Agricultural University for technical collaboration and training and placement for students of B. Tech. (Agrl. Engg.). 3. It was resolved to recommend Academic Council for its approval to implement UG dual degree programme, PG dual degree programme and higher degree research with Western Sydney University, Australia for the students of Agricultural Engineering faculty. 4. It was recommend to the PG faculty board of study for its approval of the Academic Council to authorize the Dean, Agricultural Engineering Faculty to approval professors from international educational institutions as co-guides for dissertations in B. Tech. (Agril. Engg.) Programme without imposing any financial burden. For PG Research project, the co-guide from international educational institutions may also be considered after due approval from the

		University authority.
2024-25	11-12-2024 (17th Meeting of BoS)	1. It was resolved to recommend the Academic Council to approve the syllabus of the VI Deans' Committee of ICAR with some changes in syllabus, Semester wise course distribution and credit load for UG certificate course, UG Diploma and B.Tech. in Agricultural Engineering for its implementation in JAU, Junagadh from academic year 2024-25. 2. It was resolved to recommend the Academic Council for implementation of Articulation Agreement for UG students and MOU for Institutional Coloration on Dual Award and Joint Higher Degree for PG Student with Western Sydney University, Australia for the students of Agricultural Engineering faculty.

6.5.1.4. ANTI-RAGGING CELL

PREVENTION OF RAGGING IN THE COLLEGE

The Anti Ragging Committee and Anti Ragging Squad has been formed for prohibition of ragging in the college. The Anti Ragging committee and Anti Ragging squad work as per the norms and directives of Hon'ble Supreme court. Directions and guidelines of the UGC issued from time to time are strictly implemented in this college to curb the menace of ragging. The college is taking all precautionary measures and formalities at the time of admission. During the reporting period, no incident of ragging was observed in the college.

Ragging incidents have not happened in this college because of the precautionary measures taken from time to time by the college administration.

THE FOLLOWING MEASURES ARE TAKEN TO CURB THE MENACE OF RAGGING

- The Dean, faculties, Director of Students' Welfare(DSW), Rector and Assistant Rectors of the hostels regularly address all the students and educate them about the consequences of involving in ragging related activities.
- Newly admitted students and parents are well oriented about the punishments for ragging and they are sensitized about the ragging and its prevention.
- As per the UGC guidelines, all the students are registered on the website http://www.amanmovement.org and http://www.antiragging.in and given an undertaking that they will not involve/indulge in any type of ragging activities.

- Anti ragging committee has been constituted which is conducting regular meetings with teachers, students and local police staff & local social activists.
- Anti-ragging squads is constituted, to make surprise visits to sensitive areas like hostel premises, canteen, corridors, class rooms, fields and play ground.
- Each department arrange special duties of faculty and staff for supervisions, strict vigilance during night hours in the hostels during first two months after admission of students.
- Every teaching and non-teaching staff, employees of mess/canteen are given necessary instructions to keep strict vigilance and to report any incidence of ragging to the college authorities.
- Both administrative and college building as well as hostels are under CCTV surveillance which is monitored by the office of the Dean at college level and rectors at hostel level.
- Flex boards and banners have been displayed in the college and hostels highlighting guidelines, warnings, punishments and its harmful consequences of ragging.
- Students are encouraged to involve in the sports / games / co-curricular activities in the hostels. The students are given psycho-social support through yoga camps, health camps, awareness programmes, sports and other activities for raising confidence, amity and friendship among themselves.
- Counseling of both fresher and seniors is conducted by their respective advisors.
- College website is updated with nodal officers related to anti-ragging committee with contact details.
- The newly admitted students are encouraged to be free to submit their complaints and problems to authorities. The complaint boxes are also kept college and hostels. The students are also drop a suggestions/complaints in the box.
- Periodical reports of ragging incidents if any are submitted to MHRD and UGC Secretariats of Government of India through the University.

Table 14. Anti-Ragging Committee

Name	Contact No.	Designation / Address / Category	Committee
Dr. K. C. Patel	9879104668	Principal and Dean, College of Agricultural Engineering and Technology, JAU, Junagadh	Chairperson
Poilce Sub Inspector	0285-2673544	**Representative from Police**	Member
Shri. P.N. Vaghasiya	9427919072	Near Shanteshwar Mahadev Temple, Joshipara, Junagadh. **Representative from Local Media**	Member
Representative from NGO	--	**Representative from Local Community / NGO**	Member
Shri. Manish Rupareliya	9925335833	A-502, Monarch-2, Raijibaug, Near Motibaug, Junagadh. **Parent Representative**	Member
Mr. Paghadar Mihil R.	9313367294	7th Semester B.Tech. (Agril. Engg.) **Senior Student Representative - (Boys)**	Member
Mr. Boliya Riyan J.	8735963170	5th Semester B.Tech. (Agril. Engg.) **Junior Student Representative - (Boys)**	Member
Ms. Rathod Bansari M.	9327164874	7th Semester B.Tech. (Agril. Engg.) **Senior Student Representative - (Girls)**	Member
Ms. Vishakha Bhatiya	8141554501	5th Semester B.Tech. (Agril. Engg.) **Junior Student Representative - (Girls)**	Member
Shri. M.H. Dave	9712920767	College of Agricultural Engineering and Technology, JAU, Junagadh **Representative from Non-teaching Staff**	Member
Dr. S.M. Gadhesariya	9925008714	Joint Director of Agriculture, Sardar Baug, Junagadh **Representative from Civil Services**	Member
Dr. R.J. Patel	9879203665	Associate Professor, Dept. of IDE, CAET, JAU, Junagadh	Member Secretary

Table 15. Anti-Ragging Squad

Name of the Officer / Member	Contact Number	Designation & Department	Committee
Dr. T. D. Mehta	9824481483	Professor & Head, Dept. of AEEE CAET, JAU, Junagadh	Chairman
Dr. H. V. Parmar	9499774974	Rector, Dept. of SWCE, CAET, JAU, Junagadh	Member
Dr. S. P. Cholera	8780595880	Chairman, Gymkhana, Dept. of REE, CAET, JAU, Junagadh	Member
Dr. C. S. Matholiya	8140342681	Programme Officer, NSS, CAET, JAU, Junagadh	Member
Prof. M. J. Gojiya	9909743343	Assistant Rector, Dept. of REE, CAET, JAU, Junagadh	Member
Prof. G. D. Gohil	8264475707	Assistant Rector, Dept. of PFE, CAET, JAU, Junagadh	Member
Prof. D. B. Chavda	9033218179	Assistant Rector, Dept. of FMPE, CAET, JAU, Junagadh	Member
Dr. C. J. Popliya	7984921911	Assistant Rector, Dept. of PFE, CAET, JAU, Junagadh	Member
Mr. Mihil R. Padhdar	9313367294	B.Tech. - 7th Semester (Representative of Senior Students)	Member
Mr. Riyan J. Bolia	8735963170	B.Tech. - 5th Semester (Representative of Junior Students)	Member
Ms. Bansari M. Rathod	9377164874	B.Tech. - 7th Semester (Representative of Senior Girl Students)	Member
Ms. Vishakhaben Bhatiya	8141554501	B.Tech. - 5th Semester (Representative of Junior Girl Students)	Member

6.5.1.5. BIOLOGICAL WASTE DISPOSAL FACILITY

- Chemical, Biological and recyclable wastes generated through a variety of research activities, maintenance and cleaning operation at the college level have been disposed systematically. Field wastes are converted to compost.
- Compost units are established in the college, hostels and instructional farm area for disposing biological wastes of college, hostels and farm.
- The Renewable Energy Engineering department has established the briquetting Unit for manufacturing of briquettes from agricultural residue and waste. The department has also established a Down Draft Gasifier Unit which converts the agricultural residue and waste in producer gas, bio-oil and biochar.
- Waste bins and Dust bins are maintained at regular distances.

- Regular cleaning and burying activities of the wastes accumulated are done by the field staff and NSS students.
- Under the "Swachh Bharat Abhiyan" campaign, the college staff have also frequently participated in the cleaning of the college and department premises and surrounding area.

6.5.1.6. INSTITUTIONAL ETHICS COMMITTEE FOR EXPERIMENT ON ANIMALS

Experimentation on animals in course of veterinary science research and education is not being taken up at our college; hence no such committee was formed.

6.5.1.7. COMMITTEE FOR PREVENTION OF SEXUAL HARASSMENT OF WOMEN AT WORK PLACES

The University has taken measures for prevention of sexual harassment of women at work place. The college has constituted a committee consisting the Principal & Dean, CAET, JAU, Junagadh as Chairperson.

DUTIES OF THE COMMITTEE

- Regular conduct of meetings
- Receive the complaints and take appropriate action

The committee has taken all necessary measures for the prevention of Sexual Harassment of Women at work place. The committee meets at least once in a year. Till date such grievances are not reported in this college.

Table 16. College Level Gender Committee

Name	Designation and Department	Remarks
Dr. K. C. Patel Principal & Dean	College of Agricultural Engineering and Technology Junagadh Agricultural University, Junagadh	Chairman
Dr. B. M. Devani Assistant Professor	Department of PFE, College of Agricultural Engineering and Technology Junagadh Agricultural University, Junagadh	Member Secretary
Ms. Akhila Shaini Ph.D. Student	3rd Semester-Ph.D. (Agril. Engg.) Dept. of SWCE, College of Agricultural Engineering and Technology Junagadh Agricultural University, Junagadh	Member
Ms. Aghaduk Liza P. UG Student	B.Tech. (Agril. Engg.), 7th Semester, College of Agricultural Engineering and Technology, Junagadh Agricultural University, Junagadh	Member
Ms. Dave Yashvi V. UG Student	B.Tech. (Agril. Engg.), 5th Semester, College of Agricultural Engineering and Technology, JAU, Junagadh	Member
Er. B. A. Karangiya Senior Research Assistant	Department of REE, College of Agricultural Engineering and Technology, JAU, Junagadh	Member

6.5.2 FACULTY

6.5.2.1 FACULTY STRENGTH FOR THE LAST 5 YEARS

FACULTY IN THE TEACHING BUDGETS OF THE COLLEGE

Table 17. Faculty Strength in the college in last 5 years (In Education Budget)

Faculty	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	Sanctioned by State Govt.	Recommended by the ICAR
Dean	01	01	01	0	0	0	01	01
Professor	03	04	03	0	02	03	04	05
Assoc. Professor	05	09	04	03	08	05	09	10
Asst. Professor	14	20	15	14	19	17	22	20
Placement Officer	0	0	0	0	0	0	0	01
Total	**23**	**34**	**23**	**17**	**29**	**25**	**36**	**37**
Note:	In addition to above, 2 Associate Professors and 5 Assistant Professors of research schemes are also involved in UG/PG teaching theory/practical as detailed in Table-18.							

Table 18. Faculty strength in the Research Schemes of the college in last 5 years

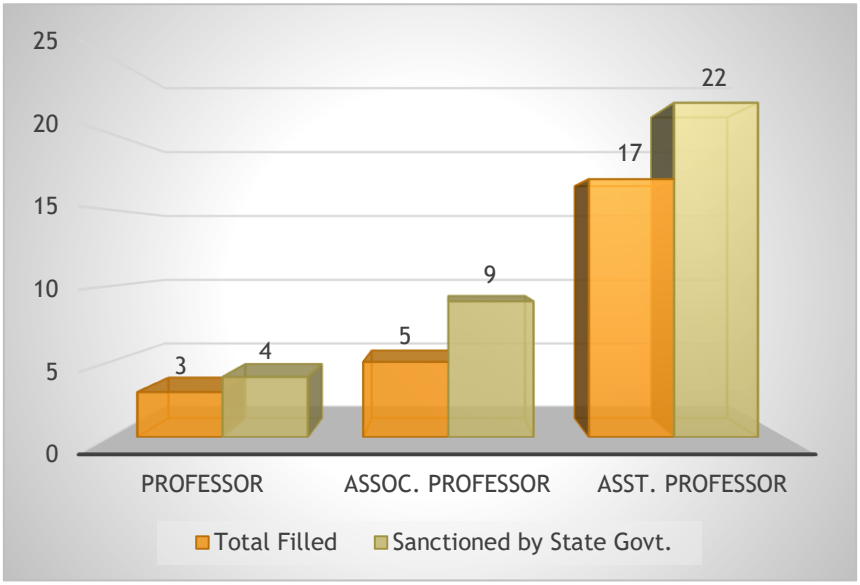
Faculty	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	Sanctioned by State/ Govt.	Sanctioned by the ICAR
Professor	0	0	0	0	0	0	0	0
Assoc. Professor	04	0	03	03	03	03	04	04
Asst. Professor	08	04	07	06	07	07	09	09
Total	**12**	**04**	**10**	**09**	**10**	**10**	**13**	**13**

6.5.2.2 FACULTY PROFILE (DEPARTMENT WISE) (AS ON 31/12/2025)

Table 19. Faculty Positions Department wise

Faculty	CAET	SWCE	IDE	FMPE	PFE	REE	AEEE	Total Filled	Sanctioned by State Govt.	Recommended by the ICAR
Dean	0	0	0	0	0	0	0	0	1	1
Professor	0	1	1	0	1	0	0	3	4	5
Assoc. Professor	0	0	1	2	1	1	0	5	9	10
Asst. Professor	0	2	1	4	4	6	0	17	22	20
Placement Officer	0	0	0	0	0	0	0	0	0	1
Total	**0**	**3**	**3**	**6**	**6**	**7**	**0**	**25**	**36**	**37**

CAET : College of Agricultural Engineering and Technology.
SWCE : Soil and Water Conservation Engineering
IDE : Irrigation and Drainage Engineering
FMPE : Farm Machinery and Power Engineering
PFE : Processing & Food Engineering
REE : Renewable Energy Engineering
AEEE : Agricultural Engineering Extension Education



Faculty Positions in Teaching

Table 20. Faculty positions Department wise in Research Schemes / Projects

	CRS&GA (SWCE)	IWM (IDE)	FIM & PWW (FMPE)	PHET (PFE)	PEASEM (REE)	Total Filled	Sanctioned by State Govt.	Sanctioned by the ICAR
Professor	0	0	0	0	0	0	0	0
Assoc. Professor	01	0	01	01	0	03	04	04
Asst. Professor	01	01	01	03	01	07	09	09
Total	**02**	**01**	**02**	**04**	**01**	**10**	**13**	**13**

CRS&GA-Centre of Remote Sensing and Geoinformatics in Agriculture

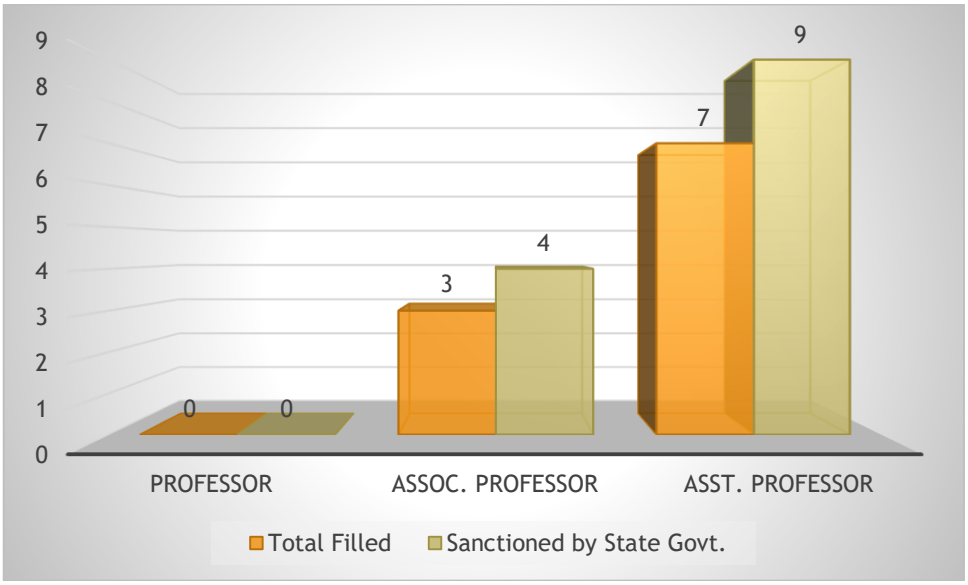
AICRP on IWM- Irrigation Water Management

FIM- Farm Implements and Machinery

PHET- Post Harvest Engineering and Technology

PEASEM- Plastic Engineering in Agricultural Structure and Environment Management

PWW-Other Scheme; Project on workshop wing



Faculty Positions in Research

The position sanctioned are for both UG and PG programmes of the college. The deficit of UG and PG teachers is made up by supporting faculty form research schemes / projects of the departments and PG recognized teachers of concerned discipline available in the other colleges / units of the university. Therefore, the sufficient teachers are available to teach the courses of UG & PG programmes, guiding the projects, student's READY programmes and other academic activities.

6.5.2.3. CREDENTIALS OF THE FACULTY

The university recruits the faculties frequently as and when it is required. The recruitment of the faculty has been done as per the norms of the university and prescribed qualification by ICAR/UGC.

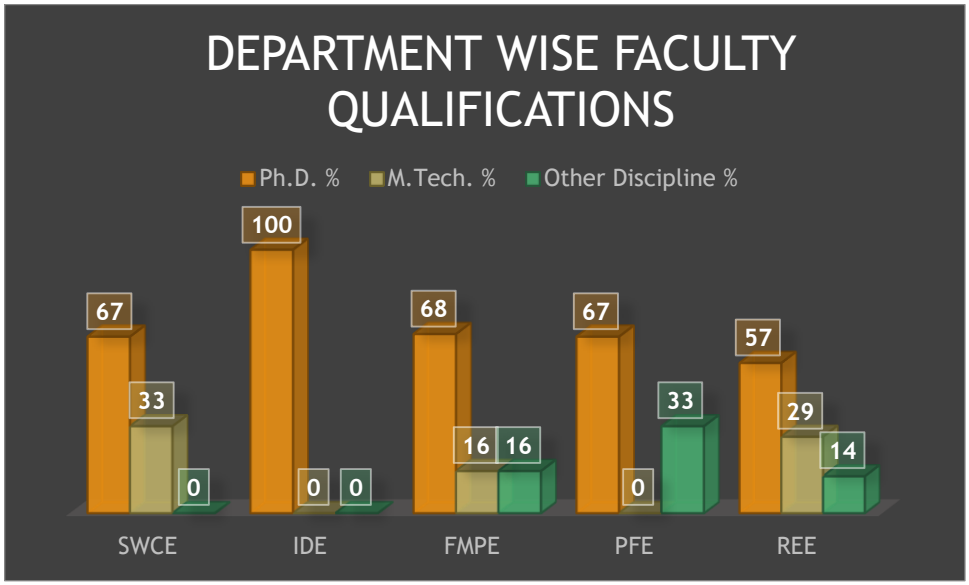
Among the faculties, Sixty per cent have doctoral degree and others with minimum of Master's degree in different areas of Agricultural Engineering, Civil Engineering, Mechanical Engineering, Electrical Engineering, ABM, Home Science and allied subjects. Faculty are allowed to take admission as an in-service candidate for higher studies in various disciplines in the university as per their requirement. Faculty are being also deputed for various refresher / summer / winter courses for upgradation expertise within and outside the country.

FACULTY CREDENTIALS (2025-26)

Table 21. Department wise faculty qualifications

Department	Ph.D.		M.Tech.		Others if any* (Specify)	
	No.	%	No.	%	No.	%
SWCE	2	67.0	1	33.0	0	0.0
IDE	3	100.0	0	0.0	0	0.0
FMPE	4	68.0	1	16.0	1*	16.0
PFE	4	67.0	0	0.0	2*	33.0
REE	4	57.0	2	29.0	1*	14.0
Total	**17**	**68**	**4**	**16**	**4***	**16**

*- Other Discipline (Mechanical Engg., Computer Engg., Electrical Engg., Civil Engg., Home Science)

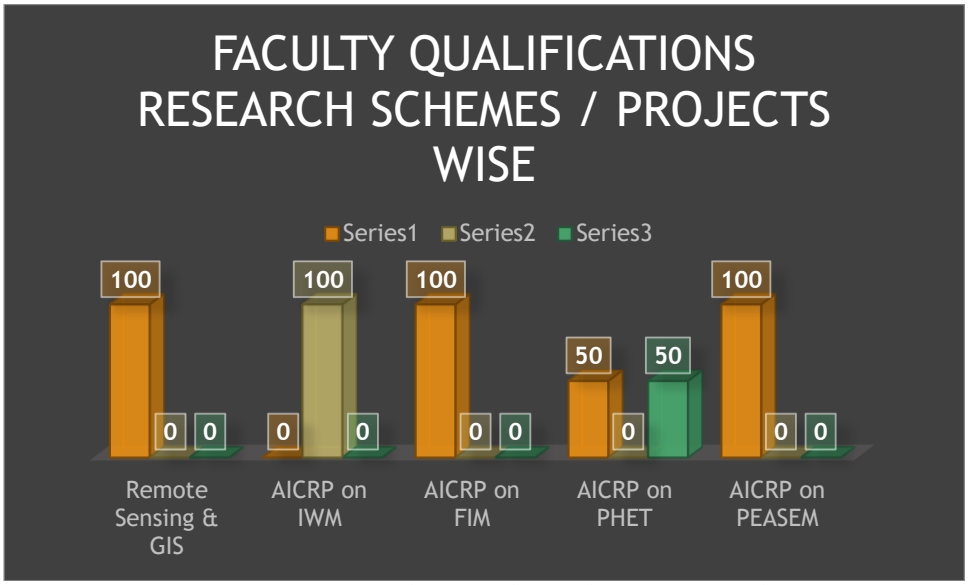


Faculty Credentials in Department

Table 22. Faculty qualifications Research Schemes / Projects wise

Scheme / Project	Ph.D.		M.Tech.		Others if any* (Specify)	
	No.	%	No.	%	No.	%
Remote Sensing & GIS	2	100.0	0	0.0	0	0.0
AICRP on IWM	0	0.0	1	100.0	0	0.0
AICRP on FIM	2	100.0	0	0.0	0	0.0
AICRP on PHET	2	50.0	0	0.0	2*	50.0
AICRP on PEASEM	1	100.0	0	0.0	0	0.0
Total	**7**	70	**1**	10	**2***	20

*- Other Discipline (ABM, MSC Micro Biology)



Faculty Credentials in Research

PROMOTIONAL POLICIES FOR FACULTY

The promotional policies for the faculty, i.e. Assistant Professor and Associate Professor are in accordance with the guidelines suggested by ICAR for the Career Advancement Scheme (CAS).

Table 23. Faculty Credentials Details

Sr. No.	Name of the Faculty	Designation	Higher Degree obtained	Related work experience (in years)	Honors. Awards, reflecting excellence in teaching & achievements (After joining the service)
College					
1.	Dr. K. C. Patel	Principal & Dean	Ph.D. (Agril. Engg.)	36 years	**Awards: 03** • Reddy Award by ISAE, New Delhi for Best PG Thesis • Best Ph.D. Thesis Award by GAAS • Journal research papers-18 • Conference papers-02 • Book chapters -06 • Books-03 • Total Citations-50 • h-index-03 • i-index-01 • International training- 01 • SAC-ISRO Projects-3 • ICAR Ad-hoc project-1
Soil and Water Conservation Engineering					
1	Dr. H. V. Parmar	Associate Professor	Ph.D.	17 years	• Journal research papers-27 • Conference papers- 11 • Book chapters -01 • Books-02 • Total Citations- 167 • h-index- 07 • i-index- 04 • Filed Copyright/ Trademark- 01 • International training- 01
2	Dr. H. D. Rank	Professor	Ph.D.	34 years	**Awards: 12** • Best Teacher Award-1 • Best Ph. D. Thesis Award-1 • Best Paper Award-3 • Best vernacular article Award-2 • Reviewer Excellence Award-2 • GATE fellowship award-1 • ICAR-JRF -2 Awards • Journal research papers-75 • Conference papers-30 • Book chapters -05 • Books-03 • Total Citations-306 • h-index-10 • i-index-12

Sr. No.	Name of the Faculty	Designation	Higher Degree obtained	Related work experience (in years)	Honors. Awards, reflecting excellence in teaching & achievements (After joining the service)
					• Patent published in Journal- 1. • Filed for Trademark Copyright - 1
3	Prof. H. H. Mashru	Assistant Professor	M.Tech	19 years	**Awards: 1** • ISAE Best Poster Presentation Awards • Journal research papers-18 • Conference papers-10 • Total Citations-129 • h-index-6 • i-index-2 • Practical Manual-2 • Booklet-9 • Popular article-2 • Research Note / Abstracts / Extension Bulletins - 16
4	Dr. J. M. Modhvadhiya (Retired in 2024)	Assistant Professor	M.Sc.	31 years	• Farm management • Research experiment management • Seed Production management
5	Dr. K. M. Gojiya	Assistant Professor	Ph.D.	2 years	Awards: 11 • Vice Chancellor's Gold Medal: 01 • Merit Gold Medals: 05 • Best Oral/Poster Paper Awards: 05 • PG Merit Scholarship by JAU: 01 • Journal Research Papers: 20 • Conference Papers: 05 • Popular Articles: 09 • Books: 02 • Book Chapters: 04 • Citations: 60 • h-index: 05 • i10-index: 02
6	Dr. R. M. Satasiya	Professor	Ph.D.	36 years	Awards : 04 • NRDC Societal Innovation Award-2014 • Uttam lekh award-3 • Patent -1 • Journal Research Papers: 39 • Conference Papers : 31

Sr. No.	Name of the Faculty	Designation	Higher Degree obtained	Related work experience (in years)	Honors. Awards, reflecting excellence in teaching & achievements (After joining the service)
					• Books: 2 • Booklets: 10 • Popular article-25 • Total Citations: 156 • h-index-8 • i-index-6
7	Dr. P. S. Jayswal	Associate Professor	Ph.D.	12.5 years	**Awards: 2** • Best Paper Presentation Award • Best KVK Extension Scientist Award • Reviewer in peer review papers • Journal research papers-17 • Conference papers-05 • Book chapters -10 • Books-07 • Total Citations-45 • h-index-05 • i-index-0 • Vernacular articles-18 • Practical manuals-01
Irrigation and Drainage Engineering					
1	Dr. G. V. Prajapati	Professor	Ph.D. (Agril. Engg.)	19 Years (Teaching, Research and Extension)	**Awards: 17** • Vice Chancellors Gold Medal at UG level • Shri M. M. Patel (Morbi) Ex Agril. Engg. Gold Medal • Dr. J. S. Patel Memorial ISAE Gold Medal • Chancellor's Gold Medal at PG level • Best Paper Award • Best Young Scientist Award • Best Paper Presentation • Outstanding Scientist Award • Best Innovative Doctoral Researcher Award • Best Oral Presentation Award -2 • Excellence in Research-2017 Award • Research Excellence Award

Sr. No.	Name of the Faculty	Designation	Higher Degree obtained	Related work experience (in years)	Honors. Awards, reflecting excellence in teaching & achievements (After joining the service)
					• Awarded Certificate of Excellence • Awarded Best Sector Officer • Best Teacher Award in Agricultural Higher Education 2021-22 • Best Centre Award-2024 AICRP on PEASEM • Journal Research Papers: 36 • Conference Papers : 25 • Books: 15 • Booklets: 05 • Total Citations: 191 • h-index-7 • i-index-5 • Design Registration: 2 • International Training: 1
2	Dr. R. J. Patel	Assistant Professor	Ph.D.	16	• Best Paper Award-1 • Journal research papers-34 • Conference papers-13 • Book chapters -08 • Books-03 • Total Citations-193 • h-index-08 • i-index-06
3	Prof. P. B. Vekaria	Assistant Professor	M.Tech	35	**Awards: 1** • Saradar Patel Award Jointly • Journal research papers-22 • Conference papers-5 • Book chapters -05 • Books-02 • Total Citations-125 • h-index-6 • i-index-1 • Patent published in Journal- 1. • Filed for Trademark Copyright - 1
4	Prof. P. A. Pandya	Assistant Professor	*Ph.D.*	11 Years	Awards: 10 • Mahindra Samriddhi Scholarship • Best Ph. D. Thesis Award • Best Presentation Award-5 • Young Scientist Award -3

Sr. No.	Name of the Faculty	Designation	Higher Degree obtained	Related work experience (in years)	Honors. Awards, reflecting excellence in teaching & achievements (After joining the service)
					• Journal research papers-36 • Conference papers-12 • Book chapters -14 • Books-03 • Total Citations-240 • h-index-09 • i-index-8 • International training- 1
5	Dr. P. H. Rank	Assistant Professor	Ph.D. (Agril. Engg.)	0.67	Awards: 20 • Uttam Lekh Award : 2 • Best Poster Presentation Award : 2 • Best Oral Presentation Award : 4 • Ornate-Godhara Cash Prize Award • Prime Minister's Fellowship Award For Doctoral Research • Best Ph.D. Thesis Award • I2OR National Eminent Engineer Award • Best Post Graduate Researcher Award • Young Researcher Award • Best Student Project Award • IRSD Preeminent Young Aspirant Award • JRF Award • SRF Award • Reviewer Excellence Award : 1 • Journal research papers : 19 • Books : 04 • Book Chapter : 06 • Popular Article : 08 • Total Citations : 176 • h-index : 09 • i-index : 06 • Conference papers : 14
6	Prof. P. A. Damor	Assistant Professor	M.Tech	13 years	• Journal research papers-4 • Abstract: 1 • Book chapters -04 • Popular article-1

Sr. No.	Name of the Faculty	Designation	Higher Degree obtained	Related work experience (in years)	Honors. Awards, reflecting excellence in teaching & achievements (After joining the service)
Farm Machinery & Power Engineering					
1	Dr. P. P. Gajjar	Associate Professor and I/c Head	Ph.D.	20 years	Awards:01 • Reviewer Excellence Award-1 • GATE fellowship award-0 • ICAR JRF – 0 Awards • Journal research papers- 9 • Conference papers- 1 • Book chapters - 2 • Books- 1 • Total Citations- 21 • h-index- 03 • i-index- 0
2	Dr. T. D. Mehta	Associate Professor	Ph.D.	34 years	Awards: 02 • Best Teacher Award-1 • Bronze Medal (3rd Prize), National Design Research Forum, Institute of Engineers (India), Calcutta. • Journal research papers- 24 • Conference papers-03 • Book chapters -1 • Books-2 • Total Citations- 58 • h-index- 4 • i-index- 2 • Design registration- 2 Nos.
3	Prof. A. L. Vadher	Assistant Professor	M.Tech	35 years	• Journal research papers- 24 • Conference papers- 2 • Books- 1 • Total Citations- 70 • h-index- 5 • i-index- 2
4	Prof. N B. Parmar	Assistant 1Professor	M.E.	12 years	• Journal research papers-17 • Conference papers-02 • Book chapters -Nil • Books-04 • Total Citations-38 • h-index-04 • i-index-01 • Design registration- 03
5	Dr. D. B. Chavda	Assistant Professor	Ph.D.	8 years	• Journal research papers : 11 • Conference papers : 9

Sr. No.	Name of the Faculty	Designation	Higher Degree obtained	Related work experience (in years)	Honors. Awards, reflecting excellence in teaching & achievements (After joining the service)
					• Books : 1 • Total Citations : 30 • h-index : 3 • i-index : 1 • Design registration : 2
6	Dr. V. S. Vala	Assistant Professor	Ph.D.	1 year	Awards: 06 • Young Scientist Award – 01 • Best Oral presentation Award--02 • National Expo Award-02 • Best poster Award - 01 • Journal research papers-14 • Conference papers- 01 • Book chapters -02 • Total Citations-27 • h-index-03 • i-index- 0 • Design registration- 01
7	Dr. C. S. Matholiya	Assistant Professor	Ph.D.	1 year	Awards:05 • Award for Promising Innovation-1 • Runner-up in Innovation village, LJIT, Ahmedabad. • JRF Award during, ASPEE ARDF Foundation • Shodh Fellowship Award by KCG, Ahmedbad • Outstanding Performance Award at Egniol Services Private Limited. • Book Publication :2 • Research Paper: 9 • Abstract: 3 • Conference Paper: 1 • Vernacular Article-1 • Total Citations- 12 • h-index- 2 • i-index- 0
8	Prof. P. N. Vavaliya	Assistant Professor	M.Tech	35 years	• Journal research papers-08 • Vernacular Article:02
9	Prof. B. P. Patel	Assistant Professor	M.Tech	35 years	• Journal research papers-05 • Total Citations- 20 • h-index- 3 • i-index- 1
10	Dr. Vipal Mansuriya	Assistant Professor	Ph.D.	01 Year	• Journal research papers-04 • Book chapters -01

Sr. No.	Name of the Faculty	Designation	Higher Degree obtained	Related work experience (in years)	Honors. Awards, reflecting excellence in teaching & achievements (After joining the service)
					• Books-01 • Total Citations-4 • h-index-02 • i-index- 0
11	Dr. V. V. Agravat	Assistant Professor	Ph.D.	01 Year	• Awards : 1 • Best vernacular article Award- 1 • Journal research papers- 12 • Conference papers- 0 • Book chapters - 0 • Books- 4 • Total Citations- 75 • h-index- 4 • i-index- 2
Processing and Food Engineering					
1	Dr. M. N. Dabhi	Professor & Head	Ph.D.	33 years	Awards: 07 • Best Paper Award- 1 • Reviewer Excell. Award- 6 • Journal research papers- 56 • Conference papers- 41 • Book chapters - 16 • Books- 6 • Total Citations- 326 • h-index- 10 • i-index- 9 • Patent-3
2	Dr. V. K. Chandegara	Associate Professor	Ph.D.	33 years	Awards: 6 • Sardar Agricultural Research Award-1 • Best Teacher Award-1 • Best Ph. D. Thesis Award-1 • Best Paper Award- 2 • Best vernacular article Award- 1 • Journal research papers- 24 • Conference papers- 13 • Book chapters - 10 • Books- 3 • Total Citations- 274 • h-index- 9 • i-index- 10
3	Prof. V P. Sangani	Associate Professor	Ph.D.	35 years	Awards: 05 • Best Paper Award- 1 • Best vernacular article Award- 4

Sr. No.	Name of the Faculty	Designation	Higher Degree obtained	Related work experience (in years)	Honors. Awards, reflecting excellence in teaching & achievements (After joining the service)
					• Journal research papers- 29 • Conference papers- 9 • Book chapters - 10 • Books- 6 • Total Citations- 157 • h-index- 8 • i-index- 7 • Patent- 2 No.
4	Prof. P. R. Davara	Associate Professor	Ph.D.	16 years	Awards : 20 • Best Teacher Award -1 • Best Ph. D. Thesis Award - 1 • Best vernacular article Award - 4 • Reviewer Excellence Award-11 • Appreciation letter – 2 • Felicitation – 1 • Research papers - 31 • Conference papers - 27 • Book chapters - 12 • Books - 13 • Booklet/Bulletin – 7 • Practical Manual - 5 • Total Citations - 153 • h-index - 7 • i10-index - 6 • Course Curriculum Development – 2 • Patent Regd. – 1 • Technology Transfer – 1 • International training – 1
5	Prof. A. M. Joshi	Assistant Professor	M.Sc.	16 years	• Journal research papers- 10 • Books- 4 • Total Citations- 54 • h-index- 5 • i-index- 2
6	Prof. G. D. Gohil	Assistant Professor	M.E.	12 years	• Journal research papers- 14 • Conference papers- 1 • Total Citations- 40 • h-index- 3 • i-index- 2
6	Prof. G.S. Kharadi	Assistant Professor	M.E.	12 years	• Journal research papers-8 • Book chapters - 1 • Total Citations- 1 • h-index- 1, i-index- 0

Sr. No.	Name of the Faculty	Designation	Higher Degree obtained	Related work experience (in years)	Honors. Awards, reflecting excellence in teaching & achievements (After joining the service)
7	Dr. B. M. Devani	Assistant Professor	Ph. D.	8 years	Awards: 01 • Best Teacher Award-1 • Journal research papers- 6 • Conference papers-2 • Book chapters - 1 • Total Citations- 84 • h-index- 3 • i-index- 3 • Patent- Under process-2
Renewable Energy Engineering					
1	Dr. M S Dulawat	Professor & Head	Ph.D.	16 years	• Journal research papers- 11 • Book chapters - 01 • Total Citations- 179 • h-index- 08 • i-index- 08 • Design registration- 01 • International training – 01 Nos.
2	Dr. S. P. Cholera	Professor (CAS)	Ph.D.	35 years	Awards: 02 • Best Centre Award (AICRP on PEASEM): 01 • Best Paper Award- 01 • Journal research papers- 05 • Total Citations- 70 • h-index- 05 • i-index- 01
3	Dr. S. P. Cholera	Professor (CAS)	Ph.D.	35 years	• Awards: 02 • Best Centre Award (AICRP on PEASEM): 01 • Best Paper Award- 01 • Journal research papers- 05 • Total Citations- 70 • h-index- 05 • i-index- 01 • Patent : 01
4	Er. M. J. Gojiya	Assistant Professor	M.Tech	32 years	• Journal research papers- 14 • Conference papers- 2 • Book chapters - 3 • Books- 3 • Total Citations- 12 • h-index- 2 • i-index- 0

Sr. No.	Name of the Faculty	Designation	Higher Degree obtained	Related work experience (in years)	Honors. Awards, reflecting excellence in teaching & achievements (After joining the service)
5	Dr. S. V. Kelaiya	Assistant Professor	Ph.D.	8 years	• Awards: 02 • Best Paper Award- 02 • Journal research papers- 12 • Conference papers- 08 • Book chapters - 02 • Books- 01 • Total Citations- 61 • h-index- 05 • i-index- 01 • Design registration- Nos. 03
6	Er. D. S. Thanki	Assistant Professor	M.E.	16 years	• Journal research papers- 06 • Book chapters - 01 • Books-01 • Total Citations- 03 • h-index- 01 • i-index- 0
7	Dr. D. A. Nakum	Assistant Professor	Ph.D.	3 Months	Awards: 01 • ICAR JRF - Awards: 01 • Journal research papers- 01 • Conference papers- 01 • Total Citations- 89 • h-index- 06 • i-index- 05
8	Dr. V. P. Joshi	Assistant Professor	Ph.D.	8 Months	Awards:1 • Best Paper Award- 1 • Book chapters - 02 • Total Citations- 75 • h-index- 3 • i-index- 1
9	Dr. M. L. Ramani	Assistant Professor	Ph.D.	3 Months	Awards: 01 • Best Researcher Award- 01 • Journal research papers- 03 • Conference papers- 02 • Book chapters - 01 • Total Citations- 4 • h-index- 1 • i-index- 0

FACULTY DEVELOPMENT

Table 24. Faculty with the highest degree received locally, nationally and internationally

Cadre	Highest degree from same university	Highest degree from other university within the State	Highest degree from out of the State university	Highest degree from Foreign Country
Professor	3	0	0	0
Assoc. Professor	7(5+2*)	0	1	0
Asst Professor	17 (11+6*)	5	2	0
Total	**27 (16+8*)**	**5**	**3**	0
Percentage	77	14	9	0

***** Faculty of Research Scheme

Table 25. Faculty attended various developments \ programmes during last 5 years

Department	Faculty Development Programmes									
	Refresher Course/ Summer & winter course		Study Leave		Sabbatical Leave		Workshop/ Seminar/ National Symposium		International Symposium attended or Foreign visits	
	No. of Faculty[1]	Percentage[2]	No. of Faculty[1]	Percentage[2]	No. of Faculty[1]	Percentage[2]	No. of Faculty[1]	Percentage[2]	No. of Faculty[1]	Percentage[2]
1. SWCE	0	0	0	0	0	0	5	3	2	7
2. IDE	2	5	0	0	0	0	5	3	2	7
3. FMPE	31	84	0	0	0	0	27	16	2	7
4. PFE	0	0	0	0	0	0	127	75	19	65
5. REE	4	11	0	0	0	0	5	3	4	14
6. AEEE	0	0	0	0	0	0	0	0	0	0

1- Means number of faculty participated in the programme
2- Means percentage of the total faculty in the college

Table 26. Department wise publications in last 5 years

Department	No. of papers published		No. of extension publications	Practical Manuals	Books	Others (Research bulletin/ abstract)
	Research	Others				
SWCE	34	6	4	0	1	36
IDE	69	7	5	4	6	33
FMPE	94	0	10	5	0	0
PFE	42	0	51	4	25	33
REE	40	8	20	0	5	43
Total	**279**	**21**	**90**	**13**	**37**	**145**

Table 27. Research, Educational, Extension and other activities organized during the last 5 years

Sr. No.	Particular	No. of Programs	Total Participants
1	Training on research methodology	1	99
2	Symposia / Workshops/ Seminars	3	386
3	Summer / Winter / Short courses	3	391
4	Production oriented training programmes	6	412
5	Extension fairs	4	5000
6	Others (Farmer training)	12	801
7	International Conference	1	350

6.5.2.4. TECHNICAL AND SUPPORTING STAFF (2025-26)

The college has been sanctioned with adequate technical and supporting staff to meet the requirement of teaching, research and extension, administration and academic activities. The details are presented in the following table.

Table 28. Technical Staff Positions

Sr. No.	Name of Post	Post		
		Sanctioned	Filled	Vacant
College				
1	SRA / Technical Assistant	1	1	0
2	Agriculture Assistant	1	1	0
3	Driver	1	1	0
4	Peon/Lab boy	1	1	0
Total		**04**	**04**	**0**
Soil and Water Conservation Engineering				
1	SRA / Technical Assistant	1	0	1
2	Agriculture Officer	1	0	1
3	Agriculture Assistant	1	1+1**	0
4	Lab. Technician	1	0	1
5	Peon/Lab boy	1	0	1
Total		**05**	**01+01****	**04**
Irrigation and Drainage Engineering				
1	Tech. Mech./Field Tech.	1	1	0
Total		**01**	**01**	**00**
Farm Machinery & Power Engineering				
1	SRA / Technical Assistant	1	1	0

2	Agriculture Assistant	2	1+1*	0
3	Draftsman (Mechanic)	1	1*	0
4	Lab. Technician	1	1	0
5	Turner	1	0	1
6	Black smith	1	0	1
7	Senior Mechanic	1	1	0
8	Tech. Mech./Field Tech.	1	0	1
9	Engine Driver	0	1**	0
10	Peon/Lab boy	1	1	0
	Total	**10**	**05+02*+1****	**03**
Processing and Food Engineering				
1	SRA / Technical Assistant	2	1	1
2	Lab. Technician	1	1	0
3	Investigator	1	0	1
4	Senior Mechanic	1	1	0
5	Craftsman	3	1+1*	1
6	Draftsman	1	0	1
	Peon/Lab boy	1	1	0
	Total	**10**	**05+01***	**04**
Renewable Energy Engineering				
1	SRA / Technical Assistant	2	2	0
2	Lab. Technician	1	1	0
	Draftsman (Civil)	1	0	1
3	Peon/Lab boy	1	0	1
	Total	**05**	**03**	**02**
Instructional Farm				
1	SRA / Technical Assistant	2	1	1
2	Agriculture Assistant	2	1	1
	Total	**04**	**02**	**02**
	Grand Total	**39**	**21+03*+02****	**15**

***-Working in Other Office **-Working from other office**

Table 29. Administrative and supporting Staff Positions in the College

Sr. No.	Name of Post	Post		
		Sanctioned	Filled	Vacant
1	Asstt. Adm. Officer	1	0	1
2	Office Superintendent	1	1	0
3	Head Clerk	2	1	1
4	Senior Clerk	6	2	4

5	Junior clerk	6	2	4
6	Steno grade-2	1	1*	0
7	Steno Grade-3	1	0	1
8	Peon/Lab boy	1	1	0
9	Sweeper	1	1	0
Total		**20**	**08+01***	**11**

*-Person working on pool to other office of the university
On the vacant posts the persons are employed on contractual bases

Apart from the staff filled on regular basis, the college is engaging the technical and supporting staff on contractual basis. At present, about **48 persons** are working on contractual basis out of which driver-8 (including tractor driver), computer operator-1, clerk-12, peon/messenger-12, electrician-1, Welder-1, Black Smith-1, Leb. Tech-1, Draftman-1, Fitter-1, Mali-1, Sweeper-7 and Helper-1. The positions lying vacant are taken care by engaging the contractual staff as above.

6.5.3 LEARNING RESOURCES

6.5.3.1. COLLEGE LIBRARY (DIGITAL)

College has a small library to cater the need of the student for enhancing their general knowledge and competitive exam preparation. Each department has its own library which provide the dissertation theses, text books and important reference books to the students. One teacher of the college is nominated as library convener who runs the library with the help of a peon. Each department also maintain their library through one of the faculty as library convener.

INDICATE LIBRARY HOLDINGS AT DEPARTMENT LEVEL:

Due to paucity of funds, department-wise library holdings are not encouraged. The faculty members get the books/ periodicals / journals issued according to the UG / PG subjects to be taught to the students. However, a library at college level and reference libraries at department level are maintained.

Table 30. Library holdings at department level

Department	Text books	Other Books	Periodicals	Journals	Magazines
College	0	150	0	30	250
SWCE	49	313	0	0	0
PFE	78	128	0	0	0
FMPE	40	110	0	0	0
REE	55	18	0	0	0

UNIVERSITY LIBRARY

The University Library is available at university level which is digitized and well equipped with adequate books, e-books & databases and statistical tools for the reference of students and is also provided with CCTV to monitor the students. The library has a separate section to serve the students who are preparing for various competitive examinations. The university library is well used and utilized by the teachers, undergraduate and postgraduate students of the college.

There is a library council at university level which meets twice a year to plan and execute development of library. The required books and journals are procured based on the recommendations of the concerned faculty, HoDs and research scientists of the university.

The university has a university library apart from that college has a library and each department maintains a reference library. The details of university library are as below:

Table 31. Various educational materials available in the library / media centre

Type material	Description of material	Application
Books	59509 books, general books, novels, encyclopaedia, competitive exam material etc.	By reading, By issuing the books to students and faculties
E-Books	1037	
Online Service	C D Rom Database, CAB, AGRIS, AGRICOLA, J-Gate Plus, Krishikosh, CeRA, E-Books, Commodity	

The University Library acquaints services to the scholars, scientists and extension activists under different colleges as well as research stations and extension education centres of Junagadh Agricultural University, Junagadh. Library is a large building with full-fledged space for stocking of library material and reading.

The University Library possesses around 59509 text Book as well as reference books. These books are very valuable and helpful in studies, research and preparation for competitive examinations. It provides foreign and Indian journals and around 14000 back volumes.

E-library with 100 mbps LAN connectivity facilitates users to access online database like J- Gateplus (Complete) online which has full text journals, Commodities (CMIE) online database is also available for research scholars. Our library has 1037 e-books. Facility of Foreign Journals through Online Access of Journals through Consortium for e-Resources in Agriculture (CeRA) by ICAR are available and CD-ROM databases like CAB, AGRICOLA, AGRIS. Full time internet, scanning and CD writing facilities are available for the students in the Library in which there are 40 work stations with internet access. These facilities are being extensively utilized by both faculty and students. Students are

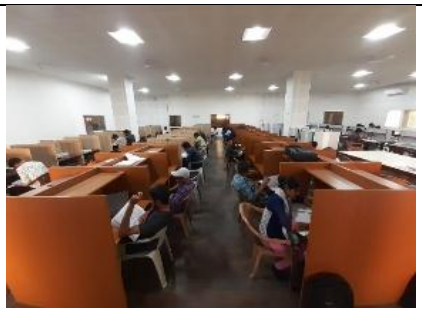
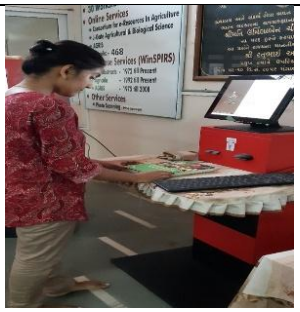
provided with books of their concerned subject of their respective semesters through Book Bank facility for students is also available. University Library subscribes 10 newspapers to acquaint users with daily news.

Under automation, University library has RFID for the library circulation and security of library material along with OPAC through KOHA, thus the library is fully automized. Post Graduate and Doctorate Theses of research scholars of different faculties and rare or important books and documents are digitized in the university library through the digitization camera available in the library. University Library circulation section works with KOHA as well as LIBSYS library software.

The university library renders its services to the users from 8:00 to 18:10 h. A separate Air Conditioned Reading Room is developed with the best facilities as well as good ventilation and aeration. This AC reading room accommodates approximately 125 students. The Reading Room remains open for its users from 8.00 to 23.00 hours on working days whereas 8.00 to 14.00 hours on holidays.





Students' reading facility in the University library

6.5.3.2. LABORATORIES, INSTRUCTIONAL FARM, WORKSHOPS, DAIRY PLANT, VETERINARY CLINIC, HATCHERY, PONDS ETC.

The college has six departments viz., Soil & Water Conservation Engineering, Irrigation & Drainage Engineering, Farm Machinery & Power Engineering, Processing & Food Engineering, Renewable Energy Engineering and Agricultural Engineering Extension Education, Instruction Farm, Testing & Training Centre and workshop to support the teaching of various UG/PG degree programmes, research and extension activities. Adequate number of classrooms and laboratories have been established at the college and departments.

- The Classrooms available at CAET, JAU, Junagadh are designated as UG and PG classrooms.
- Four AC classrooms are designated for UG and equipped with interactive panels with internet facility.
- Separate department wise classrooms for M.Tech and PhD programmes have been established.

All the departments have well equipped laboratories with the required equipment as indicated in the tables below.

Table 32. Department wise major laboratories established

Sr. No.	Name of laboratories	Area (m x m)	Working capacity (No.)
Soil and Water Conservation Engineering			
1	Soil Conservation Laboratory	9.10 x 7.60	50
2	Hydrology laboratory	9.25 x 8.30	50
3	Remote sensing & GIS Laboratory	9.10 x 7.60	50
4	Precision Agriculture Laboratory	9.20 x 6.00	50
5	Soil conservation field Laboratory (Runoff- Soil erosion measurement structure)	1220 sq.m	50
6	Instrumental Cell	7.50 x 4.50	50
Irrigation and Drainage Engineering			
1	Irrigation Systems Laboratory	15.80 X 7.60	50
2	Pump Testing Laboratory	12.35 X 7.60	50
3	Wells and Pumps Engineering Laboratory	12.20 x 7.50	50
4	Fluid Mechanics Laboratory	12.20 x 9.10	50

Sr. No.	Name of laboratories	Area (m x m)	Working capacity (No.)
5	Soil Mechanics Laboratory	12.20 x 7.50	50
6	Drainage laboratory	7.75 x 8.30	50
7	Water Quality analysis Laboratory,	12.20 x 7.60	50
8	Incubation center on advanced irrigation technologies	17.20 x 8.30	100
9	High Tech MIS Park	25.0 x 20.0	50
10	Hydraulic park	34.50 x 32.0	50
Farm Machinery & Power Engineering			
1	Fitting Shop	15.0 x 13.0	15
2	Mechanical Laboratory	19.0 x 8.0	50
3	Carpentry Shop	12.0 x 9.0	15
4	Machine Shop	22.0 x 13.0	30
5	Welding Shop	12.0 x 12.0	15
6	Cut Model Laboratory	6.0 x 12.0	10
7	Drawing Laboratory	22.0 x 10.0	100
8	Tillage & Traction Laboratory	12.0 x 19.0	35
9	Thresher Laboratory	12.0 x 16.0	35
10	Plant Protection Laboratory	12.0 x 6.0	35
11	Tractor Room	12.0 x 15.0	40
12	CAD CAM Laboratory	9.0 x 9.0	30
13	FIM Laboratory	12.0 x 12.0	50
14	Incubation centre and Precision Mechanisation	12.0 x 6.0	35
15	AI and Robotic lab	12.0 x 19.0	50
Processing and Food Engineering			
1	Biochemistry laboratory	15.0 x 8.0	50
2	Drying laboratory	12.0 x 8.0	50
3	Engineering Properties laboratory	12.0 x 8.0	50
4	Size Reduction laboratory	12.0 x 8.0	50
5	Storage laboratory	12.0 x 8.0	50
6	Electrical Engineering Laboratory	12.0 x 9.0	50
7	Crop Process Engineering Laboratory	12.0 x 9.0	50
8	Workshop	12.0 x 10.0	50
9	Mango Canning Plant	24.0 x 10.0	50
10	Pulse Milling Plant	20.0 x 5.0	50

Sr. No.	Name of laboratories	Area (m x m)	Working capacity (No.)
Renewable Energy Engineering			
1	Biomass Gasification Lab.	15.0 x 8.0	50
2	Solar Energy Lab.	9.60 x 7.60	50
3	Biogas Lab & Biofuel Lab.	9.20 x 7.60	50
4	Wind Energy Lab.	15.25 x 7.60	50
5	Physics lab.	12.15 x 7.60	50
6	Chemistry lab.	12.30 x 7.60	50
7	Civil Engg. Lab.	7.60 x 9.10	50
8	Ultramorden Communication Lab.	7.60 x 9.10	50
9	Experiential learning for production and management of RSE lab.	7.60 x 9.10	50
10	Application of Plastics in Agriculture Lab.	12.15 x 7.60	50
Agril. Engg. Ext. Education			
1	Exhibition Hall (Museum)	26.0 X 22.0	100
At College Level			
1	Computer Lab (UG)	25.0 x 8.0	80
2	Computer Lab (PG)	7.0 x 7.0	20
3	Artificial Intelligence Lab under Institutional Development Plan (IDP), NAHEP, ICAR (4 labs)	26.0 x 22.0	50 in each lab
4	Instructional Farm	35 ha	

INSTRUCTIONAL FARM

The department is maintaining 35 ha instructional farm for demonstration of agricultural technologies, especially soil and water conservation engineering, irrigation water management, renewable energy, protective cultivation and value addition to the students and farmers as well as for conducting research on various crops. The instructional farm consisting of sapota and mango plantation under drip irrigation with an area of 5.0 ha and 2.5 ha, respectively. New plantation of coconut, mango, Black Jamun, Lemon and custard apple under drip irrigation has been done in 0.5 ha, 1.0 ha, 1.0 ha, 1.25 ha and 1.25 ha, respectively in undulating land. Beside this, various structures such as drop inlet, drop structure, check dams, runoff and soil loss measurement plots and well recharge structure with filters are constructed on farm for water harvesting and demonstration purpose. The unique demonstration on tube well recharge from spill over water from check dam through connector well technique has been demonstrated. The process is going on to develop as a fully mechanized modern farm including fully automated drip irrigation system.

Table 33. Instructional farm; Area under crops, yield and income during the year 2024-25

Crop	Crop varieties	Stage	Yield (kg/ha)	Revenue generated (Rs. Lakh)
Groundnut	GG-32	Certified	1050	33.51
Wheat	Lok-1	Truthfull	5230	
Gram	GG-5	Truthfull	1680	
Black gram	GU-2	Truthfull	760	
Horticulture Crop	Mango, Sapota, and Jamun, Coconut	-	-	
	Lemon, Cluster apple	-	-	

Table 34. Instructional farm facilities

Sr. No.	Crops grown	Farm Area (ha)	Status of Irrigation
1	Area is covered under road, building, nallah etc.	9.8	-
2	Mango	2.25	Drip Irrigated
3	Sapota	3.95	Drip Irrigated
4	Coconut	0.50	Irrigated
5	Jamun	1.16	Irrigated
6	Custard Apple	1.25	Irrigated
7	Lemon	1.25	Drip Irrigated
8	Field Crop Area	6.35	Mini Sprinkler Irrigated
		8.00	Irrigated

Table 35. Major farm equipment (costing > Rs.1 lakh)

Sr. No.	Name of the equipment	Quantity (No.)	Cost (Rs. in Lakhs)	Working condition (Excellent/Good/ Poor)
1	Tractor	02	14.00	Excellent
2	Mini Tractor	02	6.00	Excellent









MANGO CANNING PLANT

A mango canning plant and tomato processing plant was established in the year of 2010 under the Department of Processing and Food Engineering, CAET, JAU, Junagadh. These facilities were developed for imparting training to UG/PG/Diploma students, entrepreneurs, farmers (mango growers), extension workers, trainees, etc., since 2011. As a result of these trainings, 14 mango growers had established their own mango canning plant, 1 entrepreneur has established his small scale frozen mango pulp unit as well as 2 entrepreneurs have established their own natural *Sarbat* / syrup plants. These farmers / entrepreneurs have successfully processed different local crops, viz., mango, tomato, guava, etc., in peak season and selling during off season with marginal benefits.

In addition to this, total 446 students of B.Tech. (Ag. Engg.) during their ELP training produced total number of 504 Sawaj Brand Mango Tins and 300 Sawaj Brand Tomato Ketchup bottles 2020-25.









PULSE MILLING PLANT

India is the largest producer, largest consumer and the largest importer of pulses in the world. In India, Pulses are grown in around 24-26 million hectares of area producing 17-19 million tonnes of pulses annually. India accounts for over one third of the total world area and over 20 percent of total world production. Pulses are mostly consumed after dehulling in the form of dhal (decorticated split cotyledon). There is a good potential in Gujarat to establish the pulse processing industry as many districts are engaged in the pulse cultivation. In view of this, processing facility for pulse crops was developed to provide the training and demonstration to the students, farmers and entrepreneurs. A Pilot Pulse Milling Plant was established at Dept. of Processing and Food Engineering, College of Agril. Engg. and Technology, JAU, Junagadh in the year 2016. The plant was erected under the National Food Security Mission project as sponsored by Ministry of Agriculture and Farmers Welfare, Govt. of India, New Delhi.

Pulse milling plant is having processing capacity of 500 kg/h. The plant is facilitated with the different processing machineries like cleaning and grading unit, destoner, elevators, screw conveyors, drying unit, dehusking and splitting unit, polishing unit and packaging unit. During the year 2020, the vertical colour sorter having a one suit facility was also purchased under the Institutional Development Project for the better cleaning and sorting of processed dhal. Every year, the students have been provided the training on pulse milling under the Experiential Learning Programme. Number of farmers and entrepreneurs are visiting the plants every year to get the guidance and demonstration for pulse processing. Presently, the plant is running very successfully.








TESTING & TRAINING CENTRE OF FARM MACHINERY

The "Testing and Training Centre of Farm Machinery" was established in August - 2008 by State Govt. with the help of Central Govt. for testing and training of farm machinery in the Gujarat state. It is on the line of testing of agricultural machines carried out by Farm Machinery Testing and Training Institute (FMTTI), established by the Govt. of India. The center is one of the 30 sanctioned by the central Govt. It is only the centre in Gujarat by which number of manufacturers taking benefit to test as well as improve the quality as per standards of BIS testing. So, far, this centre has released test reports of 1575 farm implements which are approved by Government of India.

This centre is working based on following objectives:

- Testing of farm equipments (hand tools, implements and machines) to assess their working performance, suitability and certification.
- To carry out laboratory and field tests and experiments in order to check their performance in detail.
- To establish standardization in parts, components, assembly, systems etc. to bring quality and to reduce repairing, replacement cost.
- To impart training on use, repairs, maintenance and management aspects.

The testing of farm equipment (hand tools, implements and machines) is done at this centre as per BIS Test Codes. The details are given below in Table 36:

Table 36. Details of Farm Equipment Tested

Year	2008-09 to 2013-14	2014-20	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Implements Tested	577	705	151	177	162	120	142	**1575**

Table 37. Category Wise Farm Equipment Tested During 2024-25

	Category								Total	Income Lacs.
Particular	A	B	C	D	E	F	G	H		
2024-25	85	24	0	5	14	14	0	0	142	**229.56**

Catagory	Name of Equipment / Machine
A	Land development, tillage & seedbed preparation equipment
B	Sowing and planting equipment
C	Inter-cultivation equipment
D	Plant protection equipment
E	Harvesting and threshing equipment
F	Equipment for residue management
G	Post harvest and agro processing equipment
H	Hand tools

As testing fee, so far, **Rs. 1471.68 lakhs** has been deposited to Uni. Fund. Account. Now the testing centre has become financially self-dependent. The testing revenue will meet the financial requirement like recurring expenditure, staff salaries, diesel, etc.



Field testing on multi crop thresher



Spray angle measuremets of Sprayer



Field testing of chaff cutter



Testing of Lance of knapsack sprayer



Testing of winnowing fan



Laboratory testing of multi crop seed cum fertilizer drill



Laboratory testing of seed cum fertilizer drill



Testing of rotavator water pudlling

BARBED WIRE MAKING AND SELLING OF IT TO THE VARIOUS DEPT./ CENTERS OF JAU

Year	2010-14	2014-20	2020-21	2021-22	2022-23	2023-24	Total
Selling in kg.	37381	1232	390	2254	1514	1712	**61483**
Income (lakh)	28.62	17.18	0.51	2.93	1.97	2.23	**53.44**

AGRO PROCESSING CENTER

Migration of rural population in urban area could be prevented by stabilizing industries in the proximity of the source of raw material or near the vicinity of consumption catchments area to avoid higher transportation cost. This will help the villages to become self-sufficient in production, processing and consumption of raw material produced by them. More job opportunities would also be created, resulting in more income generation.

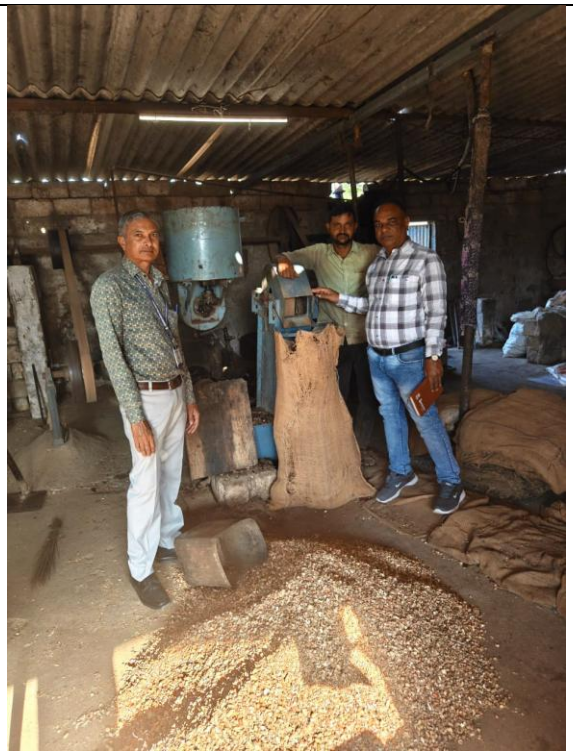
Under the research scheme of All India Co-ordinated Research Project on Post-Harvest Engineering and Technology sponsored by ICAR, New Delhi and headed by CIPHET, Ludhiana located at Dept. of Processing and Food Engineering, CAET, JAU, Junagadh, the Agro Processing Centers have established in the different village of Junagadh district. The aim of the APC is to increase utilization of agricultural produce, to reduce post-harvest losses, to provide processing facilities at rural threshold to generate employment and strengthen rural based economy and to make producer as processor. At present total 5 Agro Processing Centers are functioning in the village Tadka Pipaliya (Ta. Besan), Virol (Ta. Mangrol), Loej (Ta. Mangrol), Chotila (Ta. Chotila) and one in the tribal area at Vill. Vadala (Ta. Talala). The equipments were purchased under a special grant from ICAR, New Delhi for setting up agro processing centre. These APCs are having the facility of mini oil mill, HPS quality decorticator cum grader, spice grinding machine (micro pulveriser), multipurpose spice grinding machine, multi crop thresher cum decorticator, mini dhal mill, plastic bag sealing machine, cap sealing machine and miscellaneous equipment. Infrastructure namely, electric power, water supply, fuel, etc. has been provided by the respective Co-operative Society of the village. With the technical know-how provided by the scheme staff constantly, the APC is functioning well. The members of the cooperative society are fully satisfied with the performance of the machines supplied to them. APC is not only the profitable unit but it has also become the centre of extension activities. Many villagers, Extension Officers, Gram Sevak have visited the centre. Presently, all the APCs are running very successfully. All centres are paying back their instalments in time.





Agro Processing Center(APC) at Tadka Pipaliya, Tehsil-Bhesan, Dist-Junagadh





Agro Processing Center(APC) at Virol, Tehsil-Mangrol, Dist-Junagadh





Agro Processing Center(APC) at Loej, Tehsil-Mangrol, Dist-Junagadh

Activities at Agro Processing Centers

6.5.3.3. STUDENT READY / EXPERIENTIAL LEARNING PROGRAMMES / SKILL DEVELOPMENT TRAINING / FOREIGN TRAINING / INDUSTRIAL TRAINING

A) EXPERIENTIAL LEARNING PROGRAMME

Three Experiential Learning schemes: Hands on Training Agro Processing Centers for Value Addition and Technical Support Services, Design, Planning and Evaluation of Watershed and Production and Management of Alternative Renewable Energy are running in the college. Total 105 students intake capacity of Experiential Learning Programme.

1. DESIGN, PLANNING AND EVALUATION OF WATERSHED

In view of the importance of imparting training to the students during their course of study "The Experiential Learning for Hands on Training on "Watershed Management" is established in the Department of Soil and Water Engineering, College of Agricultural Engineering and Technology, Junagadh Agricultural University, Junagadh (Gujarat).

The training facility was established as per the following different sections.

(1) Establishment of RS and GIS lab.

(2) Procurements of all the software useful for the watershed development/ management.

(3) Development of well furnished training hall equipped with audio-visual aids

(4) Development of survey lab and hydrology lab.

Establishment of RS and GIS lab.

The multi user PCI Geometica remote sensing and GIS software has been purchased and installed in the computers of the RS & GIS labs.

Procurements of all the softwares useful for the watershed development/ management.

Other many software like MikeShe, Temporal analyst for ARC GIS, Visaul Mode flow, Hydrogeo flow, Surfer, Aquachem, Surfer, FE flow, Storm Net, BOSS River CAD, ET estimation software, software for Chemckdam design, LINDO, LINGO etc are also installed for applying in analysis of the soil and water management aspects.

Development of well-furnished training hall equipped with audio-visual aids

A well-furnished training hall is also developed for educating the students during the training period. The hall is equipped with computer aided audio-visual aids.

Development of survey lab and hydrology lab.

The total survey stations and GPS are purchased for the watershed survey. The instruments for the groundwater level measurement and recording for monitoring and impact assessing of the watershed procured. The use of various instruments, techniques of observation and analysis will be carried out by the students.

All the facilities developed under ELP are utilized for the UG / PG education, Farmer's training work as well as for the student's project and research work.

Students have undergone experiential learning programme entitled "DESIGN, PLANNING AND EVALUATION OF WATERSHED" at the Department of Soil and Water Engineering. The training program boost the knowledge of students in watershed management. The training aimed to enhance technical knowledge and practical skills. They have made survey of various farm using DGPS and total survey station, digitized the data and prepared contour plan using Pythagoras software and AUTOCAD, they also made planning and design of soil and water conservation and harvesting structures. As an impact, their skill have been improved and attitudes towards watershed management have also been boosted up.

Table 38. Details of students trained under ELP

Sr. No.	Year	Beneficiaries UG students	Income generated
1	2020-21	74	Nil
2	2021-22	99	Nil
3	2022-23	81	Nil
4	2023-24	86	Nil
5	2024-25	65	Nil
	Total	**405**	**-**



Total station survey



Automatic Micro Irrigation system

	
Installation of Micro Irrigation System in Irrigation Park	**DGPS survey**
	
Application of GIS in Watershed Management	**Application of IoT in Irrigation**

2. HANDS ON TRAINING ON PRODUCTION AND MANAGEMENT OF ALTERNATIVE RENEWABLE SOURCES OF ENERGY

The training facilities are created in such a way that the students are acquainted and trained on the operation of workshop machines required for such establishment at the industrial level. The lacuna in terms of the design, development and installation of renewable energy devices during the graduation programme will be overcome by the training. The students are specifically trained as per the following concepts.

1) The emphases are given on the concept of alternate/renewable energy technology, its advantages and disadvantages, commercial uses, operation and maintenance, safety measures, small business entrepreneurship, etc.

2) The students are educated in design, development, operation and maintenance of renewable energy devices.

3) The cost analysis and project report writing.

The ELP is facilitated with the following components.

(i) Production//workshop facility

(ii) Well furnished training hall equipped with audio-visual aids

(iii) Working shed for assembly purpose

(iv) Store room for raw material and finished product

(v) Testing instruments, equipments and office automation

Students have been trained for the production of box type solar cooker. In good solar radiation conditions, it is possible to achieve the temperature up to 140°C inside the hot box of the solar cooker, hence best suited for boiling kind of cooking. Different fixtures of different components like bottom, side, tray, lid etc for the production of box type solar cooker are developed in the experiential learning unit of the Deptt of REE, CAET, JAU, Junagadh.

TRAINING IMPARTED AND DEVICES PRODUCED

Year wise details of students trained and renewable energy devices produced by the students during the training period under the experiential learning: hands on training on the manufacturing of solar energy devices are shown in Table 39.

Table 39. Details of students trained and renewable energy devices produced

Sr. No.	Academic year	No. of Students trained	Number of devices produced	Unit cost, Rs	Total cost, Rs
1	2020-21	74	Online	-	-
2	2021-22	99	8 box type solar cooker	2000/-	16000/-
3	2022-23	81	6 box type solar cooker	3000/-	18000/-
4	2023-24	86	3 box type solar cooker	3000/-	9000/-
5	2024-25	65	4 box type solar cooker	3000/-	12000/-

In addition to ELP, the facilities developed are also utilized for the UG / PG education, for the students' projects work and departmental research work. The facilities were also used for the production of solar air heaters used for the development of solar crop dryer and development of mulching machine of the All India Coordinated Research Project on PEASEM, ICAR, JAU, Junagadh and for the development or modification of gasifier and SPV plant under Consortia Research Platform on Energy from Agriculture, ICAR, JAU, Junagadh.





3. HANDS ON TRAINING ON AGRO PROCESSING CENTRE FOR VALUE ADDITION TECHNOLOGIES AND TECHNICAL SUPPORT SERVICES

Processing is an integral part of agricultural production and utilization system and plays an important role in loss prevention, value addition, employment and income generation. The agricultural business based on processing can bring a qualitative change in the life of Indian population provided appropriate technologies having backward linkage with the producer / farmer who ensure constant supply of raw material. If a careful analysis about the resources available in each district of the country and appropriate industries based on them is done the level of technology available or up-gradation needed will generate employment and increase the income of farm / processors by 15-20 %.

The major goal agro of processing is loss prevention and value addition. At every stage of processing, value is added to the product. The estimated value addition to the raw food material through conventional primary and secondary / tertiary processing are 75 % and 25 % respectively.

Looking to the importance of processing, it was thought to impart training to the UG as well as PG students as part of their course curriculum. Looking to the above an "Experiential learning – for hands on training on Agro Processing Centre for value addition technologies and technical Support services is established in the Department of Processing and Food Engineering, College of Agricultural Engineering and Technology, Junagadh Agricultural University, Junagadh.

FACILITIES DEVELOPED FOR IMPARTING TRAINING

1. Establishment of Mango Canning Plant of 500 kg/ h capacity
2. Establishment of Tomato Processing Plant of 500 kg/ h capacity

ACHIEVEMENT

Table 40. Details of training imparted

Sr. No.	Title of Training	Period (From to)	Beneficiaries
1	Practical Training on Mango Canning for Kesar Mango	2020- 2025	PG Students

Table 41. Numbers of can produced, revenue generated and students/entrepreneurs trained

No	Year	No of Tins Canned	Expenditure incurred Rs.	Total Revenue Generated Rs.	Income, Rs.	Students/Entrepreneurs Trained
1	2020	(Online training due to Covid)	-	-	-	114
2	2021	-	-	-	-	99
3	2022	154	24314	24640	326/-	81
4	2023	150	14521	22500	7979/-	86
5	2024	-	-	-	-	66
6	2025	200	Selling to be done			15
		Total	**38835**	**47140**	**83805**	**461**



Table 42. Details of experiential learning units

SN	Title of the E L Unit	Location	Date of Start	Nodal Person (Contact Details)	Income generated	Working/ Non Working	No. of Students Trained
1	Design, Planning and Evaluation of Watershed	Department of Soil and Water Conservation Engineering CAET, JAU, Junagadh	2006-07	Dr. H. H Mashru Assistant Professor, Department of Soil and Water Conservation Engineering, CAET, JAU, Junagadh, E-mail : hhmashru@jau.in swe@jau.in Mobile:9426266590 / 8849240076	NIL	Working	53 (2012-13) 73 (2013-14) 75 (2014-15) 100 (2015-16) 06 (2016-17) 72 (2017-18) 37(2018-19) 38(2019-20) 75(2020-21) 99(2021-22) 81(2022-23) 86(2023-24) 66 (2024-25) **861- Total**
2	Production & Management of Alternative / Renewable Sources of Energy	Dept. of Renewable Energy Engg., CAET, JAU	2006-07	Prof. S. V. Kelaiya Assistant Professor, Department of Renewable Energy Engg.,CAET, JAU, Junagadh, E-mail : sagarkelaiya@jau.in Mobile:9033617809	NIL	Working	53 (2012-13) 73 (2013-14) 12 (2014-15) 13 (2015-16) 13 (2016-17) 09 (2017-18) 01(2018-19) 18(2019-20) 75(2020-21) 99(2021-22) 81(2022-23) 86(2023-24) 66 (2024-25) **599 - Total**
3	Hands on Training on Agro Processing Centre for Value Addition Technologies and Technical Support Services	Processing and Food Engineering Department, College of Agricultural Engineering and Technology, JAU, Junagadh	2008-09	Prof. M.N. Dabhi, Professor and Head, Processing and Food Engineering Department, College of Agricultural Engineering and Technology, JAU, Junagadh Email: pfe@jau.in Mobile No. 9979793668	NIL	Working	83 (2012-13) 87 (2013-14) 80 (2014-15) 81 (2015-16) 100 (2016-17) 72 (2017-18) 21 (2018-19) 12 (2019-20) 75 (2020-21) 99 (2021-22) 81(2022-23) 86(2023-24) 66 (2024-25) **943 - Total**
						Students' Trained, Grand Total	**2403**

SUCCESS STORY - EXPERIENTIAL LEARNING PROGRAMME

Table 43. ELP Success Story -1

Sr. No.	Particular	Details
1	Name of the student entrepreneur	Pinakin Maru
2	Contact details	C-502, Sapphire Elegance, Opp. RMC Water Tank, Near Shantinagar Gate, Rajkot - 360005
3	Email ID and mobile number	Pinakin Maru +91 99248 01094, Pinakinamaru8@gmail.com
4	Name of the university	Junagadh Agriucltural University, Junagadh
5	Name and address of college	College of Agril. Engg.& Tech, JAU, Junagadh
6	Year of passing	2020 (B Tech. -Agril. Engg.)
7	Experiential learning programme attended	I worked in companies like Unacademy, Adda247
8	Title and start date of enterprise	Lakshyam Academy
9	Nature of enterprise	Lakshyam Academy is an educational enterprise that provides guidance and training to students. Academy provide Competitive Exam Coaching Center and Knowledge Process Outsourcing (KPO) to students. Academy serve Mentorship and Content Development to students. Business Model of academy is B2C (Business to Consumer). Mission & Vision of academy is Empowerment and Result-oriented Approach.
10	Approximate turnover per year	Rs. 2 Crore per year
11	Approx. net profit per year	--
12	Number of employment generated for others	35






Glimpsis of activities of Lakshyam Academy

Table 44. ELP Success Story -2

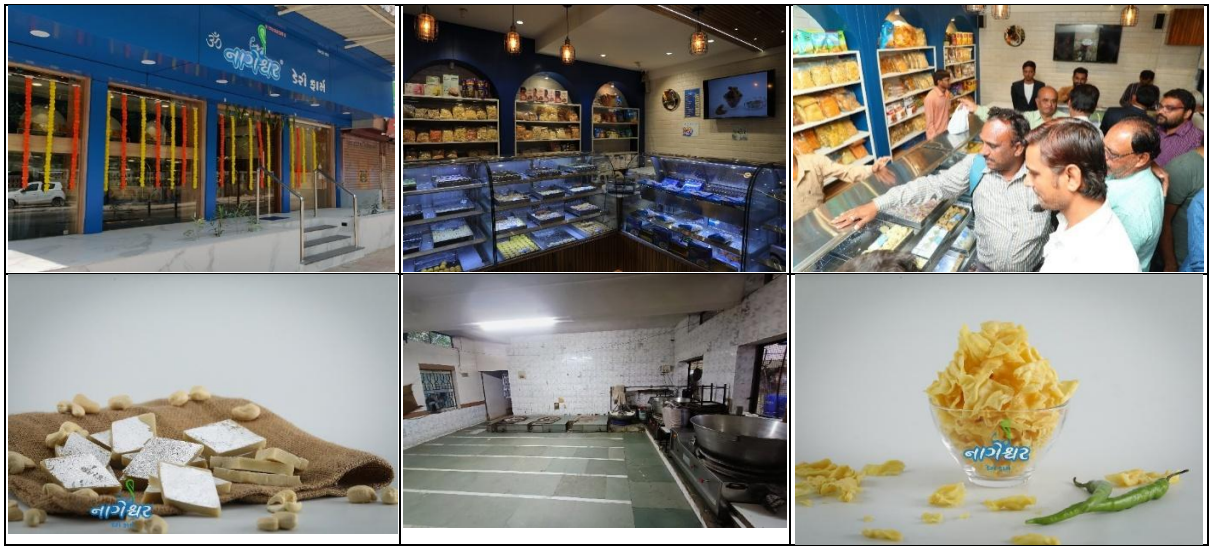
Sr. No.	Particular	Details
1	Name of the student entrepreneur	Thaker Brinda (Bhuva Brinda)
2	Contact details	51, "Gokul", Radhanagar Society, Near Ambavadi, Joshipura, Junagadh - 362001
3	Email ID and mobile number	Thaker Brinda (Bhuva Brinda) +91 78610 10140 sattvikaoils@gmail.com, brinda.s.bhuva96@gmail.com
4	Name of the university	Junagadh Agricultural University, Junagadh
5	Name and address of college	College of Agril. Engg.& Tech, JAU, Junagadh
6	Year of passing	2021-22 (M. Tech.-PFE)
7	Experiential learning programme attended	ELP in food processing
8	Title and start date of enterprise	OPTIMA FOODS (Start Date: 18/08/2025)
9	Nature of enterprise	High quality nutritional rich premium "Sattvika" brand Cold Press Edible Oil Manufacturing with extraordinary hydraulic piston press mechanism, Defatted Groundnut Meal Supplier
10	Approximate turnover per year	Rs. 25 Lakhs per year
11	Approx. net profit per year	--
12	Number of employment generated for others	1



Glimpses of Edible Oil Manufacturing Activities and Sattvika premium cold press oil

Table 45. ELP Success Story -3

Sr. No.	Particular	Details
1	Name of the student entrepreneur	Viraj M. Sejani
2	Contact details	A-5, Sankalp Complex, Opp. Trimurti Hospital, S. T. Road, Junagadh- 362001
3	Email ID and mobile number	Viraj M. Sejani +91 90332 34801 virajsejani@gmail.com
4	Name of the university	Junagadh Agriucltural University, Junagadh
5	Name and address of college	College of Agril. Engg. & Tech, JAU, Junagadh
6	Year of passing	2022-23 (PhD-PFE)
7	Experiential learning programme attended	Undergone in plant training of design, processing and value addition of agricultural products
8	Title and start date of enterprise	Nageshwar Dairy Farm
9	Nature of enterprise	Sweet and Namkeen manufacturer and retailer
10	Approximate turnover per year	Rs. 60 lakh per year
11	Approx. net profit per year	--
12	Number of employment generated for others	11



Glimpsis of activities of Nageshwar Dairy Farm

Table 46. ELP Success Story -4

Sr. No.	Particular	Details
1	Name of the student entrepreneur	Dr. Viraj Anilbhai Naliapara
2	Contact details	Opposite Real Tailor, Madh Street, Soni Khadki, Juno Nagarwado, Junagadh – 362001
3	Email ID and mobile number	Dr. Viraj Anilbhai Naliapara +91 90335 04194 virajnaliapara18@gmail.com; shreehoteljnd@gmail.com.
4	Name of the university	Junagadh Agriucltural University, Junagadh
5	Name and address of college	College of Agril. Engg.& Tech, JAU, Junagadh
6	Year of passing	2021-22 (PhD-PFE)
7	Experiential learning programme attended	--
8	Title and start date of enterprise	Shree Hotel. 12/11/2022
9	Nature of enterprise	Hospitality Business. A hotel with 29 rooms and own ample parking situated at Bhavnath which is heart of pilgrimage and tourism in Gujarat state.
10	Approximate turnover per year	₹ 40 Lakh
11	Approx. net profit per year	--
12	Number of employment generated for others	10-15

Table 47. ELP Success Story -5

Sr. No.	Particular	Details
1	Name of the student entrepreneur	Yagnik Faldu Jay Kapuriya
2	Contact details	Office No. 101, near mavdi chowk, Rajkot, gujarat
3	Email ID and mobile number	Yagnik Faldu +91 99745 31629 yagnikfaldu123@gmail.com Jay Kapuriya +91 88490 98512 Jaykapuriya7385@gmail.com
4	Name of the university	Junagadh Agricultural University, Junagadh
5	Name and address of college	College of Agril. Engg.& Tech, JAU, Junagadh
6	Year of passing	2023-24 (B Tech-Agril. Engg.)
7	Experiential learning programme attended	ELP in food processing
8	Title and start date of enterprise	M/s Tark International
9	Nature of enterprise	Export & Import of various fruits and vegetables from different countries.
10	Approximate turnover per year	Rs. 1.2 Crore per year
11	Approx. net profit per year	--
12	Number of employment generated for others	10



Glimpses of activities of M/S Tark International - Export from INDIA to UAE

(A) SKILL DEVELOPMENT TRAINING - I & II

Table 48. Students Trained under Summer Training / Skill Development Training - I & II

Sr. No.	Year	No. of Student Trained under Summer Training / Skill Development Training - I	No. of Student Trained under Summer Training / Skill Development Training - II
1	2020-21	91	73
2	2021-22	93	99
3	2022-23	84	81
4	2023-24	68	88
5	2024-25	66	67

Table 49. Students Trained under ELP /Industrial Training

Sr. No.	Year	No. of Student Trained under ELP	No. of Student Trained under Industrial Training
1	2020-21	74	74
2	2021-22	99	99
3	2022-23	81	81
4	2023-24	86	86
5	2024-25	65	65

(C) STUDENTS TRAINING AND LEARNING ACTIVITIES UNDER INSTITUTIONAL DEVELOPMENT PLAN (IDP), NAHEP, ICAR

STUDENT DEVELOPMENT PROGRAMMES UNDER NAHEP-IDP

Table 50. Details of Students sent for Foreign Training under IDP, NAHEP of ICAR.

Sr. No.	Year	Place / Details of Training	Duration	No. of Students
1	2022-23	International Training and Experimental Learning on "Drones, IoT and Google Earth Engine and their Applications" at Geo-Informatics Centre, AIT, Bangkok	25/07/2022 to 23/09/2022	13
2	2023-24	International Training at Western Sydney University, Australia	28/07/2023 to 25/09/2023	10
3	2023-24	International Training at Hokkaido University, Japan	06/10/2023 to 14/11/2023	10
			Total	**33**

Table 51. Students' development trainings/programmes organised during the Academic year 2020-21 under NAHEP-IDP

Sr. No	Type of training	Activities	Total no. of students benefitted
1	Job Oriented Cutting-Edge Skill Enhancement Training	Webinar on "Role of Design in Agriculture" (19-May-2020)	112
2		Webinar of "Introduction to Matrix Laboratory (MatLab) software and application of MatLab in agricultural domain on 14th May, 2020	55
3		Webinar of "Application of CAD in Agricultural Engineering" on 16thMay, 2020	37
4		Webinar on "Advanced Machinery for Tillage operations" on 19th May, 2020	42
5		Webinar on "Advanced Food Processing Techniques" on 21st May, 2020	53
6		Webinar on "Application of Robotics in Agriculture" on 27th May, 2020	79
7		Webinar on "Application of Remote Sensing and GIS in Agriculture Domain" on 29 th May, 2020	53
8	Soft & Language Proficiency skill classes/courses	One-week online training on "English Proficiency and Communication Skills" DURING 24-29TH August	132
9	Entrepreneurship skills development programmes	Saurashtra-Kutch Entrepreneurial Ecosystem Meetup (SEEM)" on 07-10-2020	39
10	Support for student learning	KRITAGYA- A National level AgriTech Hackathon-Ongoing Event	3
11	Job Oriented Cutting-Edge Skill Enhancement Training	NPTEL certification course for Agriculture Engineering during 14-Sep-2020 to 20-Dec-2020	41
12		5 Days Online Vocational Training on "Automation in Micro Irrigation System" from 13-19th February, 2021	170
13		National Webinar on "Agricultural Residue and Waste Utilization for Energy Generation" from 16-17th March, 2021	182
14	Personality development and employability skill classes/courses	Workshop on "Agritourism Management and Business Plan" from 22-26th March, 2021	5
Total Programmes = 14		**Total no of students benefited**	**1003**

Table 52. Students' development trainings/programmes organised during the Academic year 2021-22 under NAHEP-IDP

Sr. No	Type of training	Activities	Total no. of students benefitted
1	Job Oriented Cutting-Edge Skill Enhancement Training	Vocational Trainings i.e. 1. Vocational training on "Advances in Watershed Planning, Development and Management" (September 20-24, 2021)	91
2		Vocational Training on IoT (Internet of Thing) in Agriculture (October 04-08, 2021)	91
3		Vocational Training on Food Processing Technologies for Entrepreneurship Development (October 04-08, 2021)	93
4		Vocational Training on Solar Energy Technologies for Sustainable Agriculture & Rural Development (Feb. 28- March, 05, 2022)	99
5		Vocational Training on "Agricultural Spraying Drones" (Feb. 28- March, 05, 2022)	58
6	Entrepreneurship skills development programmes	One day programme on Aatmanirbhar Bharat: Opportunities in Start-up and MSME (March 28th, 2022)	281
7	Support for student learning	National level Championship on "Technology Innovation Forum for Agricultural Nurturing (TIFFAN-2021)"	25
Total Programmes = 07		**Total no of students benefited**	**738**

Table 53. Students' development trainings/programmes organised during the Academic year 2022-23 under NAHEP-IDP

Sr. No	Type of training	Activities	Total no. of students benefitted
1	Job Oriented Cutting-Edge Skill Enhancement Training	Two Days workshop on "Use of Modern Technologies and Automation in Food Processing" from January 05-06-2023	108
2		Two Days workshop on "Waste Utilization and Management for Energy Generation" from February 16-17,2023	79
3		Two Days' workshop on "Application of Robotics and Drone Technologies in Agriculture" from March 02-03,2023	91

4		Five Days Vocational Training Programme on "IoT and AR/VR Embedded Climate Smart Water Management" under Incubation Center on Advanced Irrigation Technologies from 05-09-2022 to 09-09-2022	73
5		International Training and Experimental Learning on "Drones, IoT and Google Earth Engine and their Applications" at Geo-Informatics Centre, AIT, Bangkok, Thailand from 25-07-2022 to 23-09-2022	13
6	Support for student learning	National level Championship on "Technology Innovation Forum for Agricultural Nurturing (TIFFAN-2022)	25
Total Programmes = 06		**Total no of students benefited**	**389**

Table 54. Students' development trainings/programmes organised during the Academic year 2023-24 under NAHEP-IDP

Sr. No	Type of training	Activities	Total no. of students benefitted
1	Job Oriented Cutting-Edge Skill Enhancement Training	Vocational Training Programme on "Emerging Trends in Food Process Industries" August 21-25,2023	77
2		Vocational Training Programme on "Remote Sensing & GIS in Water Resources Management" August 21-25,2023	42
3		Vocational Training Programme on "Advanced Computer Aided Design using CREO Parametric Software " August 21-25,2023	45
4		International Training at Western Sydney University, Australia from July 28 to September 25, 2023	10
5		International Training at Hokkaido University, Japan	10
6		Drone Training with DGCA Certification from September 4 to 9, 2023	29
7	Entrepreneurship skills development programmes	Vocational Training Programme on "Start-Up Opportunities for Exporting Irrigation Equipment " August 21-25,2023.	40
8	Support for student learning	Special Coaching of various competitive exams, i.e. GPSC Class 1, 2 and 3, IBPS etc. for UG students of JAU from August 10, 2023 to September 24, 2023	94
9		Two months Industrial training at MAHINDRA and MAHINDRA ltd., Nagpur, Maharashtra from September 11 to November 11, 2023	16
10		Two months Industrial training at AGRINEXT Consultancy, Pune , Maharashtra from September 11 to November 11, 2023	16

11		Two months Industrial training at Albedo Foundation, Nashik, Maharashtra from September 11 to November 11, 2023	20
12		Two months Industrial training at Deccan Institute of Technologies, Hyderabad from September 11 to November 11, 2023	18
Total Programmes = 12		**Total no of students benefited**	**417**

6.5.3.4 CURRICULA DELIVERY THROUGH IT (SMART CLASS ROOMS/INTERACTIVE BOARD ETC.)

College has well equipped class rooms with interactive panels, green boards, internet facilities with LAN connection and Wi-Fi. The teachers are making PowerPoint presentations for effective teaching.

- Three classrooms are Air Conditioned with interactive panel, green board, writing pad and internet facility through LAN and Wi-Fi.
- One classroom is with interactive panel, green board, writing pad and internet facility through LAN and Wi-Fi.
- Four classrooms are equipped with green board, writing pad, LCD projectors with computer and internet facility through Wi-Fi.
- Separate department wise classrooms for M.Tech. and Ph.D. programmes have been established.
- All the departments have well equipped laboratories with the required equipment.
- Along with these, the PG students make use of the laboratories at the collaborative institutes whenever necessary.

All the classrooms are equipped with CCTV camera and are under surveillance of Dean and higher authorities of the university.

(A) Academic activities

The Academic Information Management System (AIMS) enhances curriculum delivery and monitoring by providing a dynamic digital interface for faculty and students. Through AIMS, instructors upload and share lecture notes, assignments, class materials, and video lectures, ensuring round-the-clock access to learning resources. The platform also supports online assessments, attendance tracking, and real-time academic monitoring, including faculty feedback and progress reports. These ICT-enabled features promote interactive learning, strengthen academic accountability, and create a personalized, student-focused educational environment at JAU.

Few faculties create course wise **google classroom** and/or **whatsgroup** for open discussion of the topics for concerned course as well as to upload the notice, class notes, supporting reference literatures and assignements. The studnets may upload the assignements in the google classroom or whatsup group before physical submission. The studnets intercat each other and teacher for the clear uniderstanding of the topics.

(B) Teaching through ICT tools

Teaching is made by using PPT, videos, visual, animations and smart boards. During COVID-19 pandemic s, all classes are conducted online using the various platforms viz. Zoom, Google Meet through Google Classroom and WhatsApp applications during academic year 2020-21 and 2021-22. The teachers are taking live lectures as well as supplying the teaching materials using these platforms. The teachers are performing live practical on Zoom or Google Meet through Google Classroom platforms online for the students. The examinations are also conducted online using the Online Examinations Management Software (OEMS) and a proper evaluation is made to justify the students' efforts.

The faculty members are involved in preparing the virtual lectures in the well-developed virtual classroom facility in the university which is appreciated by the ICAR also.

(C) E-library

E-library for all the constituent colleges of the JAU is managed by the University Campus Library, established in the year 1978. The Library with ICT platform is one of the most important centers of the University, which facilitates the teaching, research and extension program. Both students and faculty extensively use the facility. The Junagadh Agricultural University has given key prominence to the development of the library facilities at the headquarters as well as the constituent colleges and research stations. Many knowledge-based services like that of Reference, Bibliography, INFLIBNET service. CD-ROM Databases, Internet browsing and e-services are provided by the library for its users.

(D) Examination Management system

The JAU Examination Management System (JEMS) is a comprehensive ICT-based platform that efficiently manages academic and examination-related activities for undergraduate and postgraduate students. It facilitates the entry of internal and external marks and streamlines critical postgraduate processes such as online submission of campus forms, synopsis, preliminary proposals, exam results, thesis evaluation and examination panel selection, and final viva voce outcomes. Each stage - from submission by the major advisor to review by the Head of Department and Dean of the respective faculty, and final

approval by the Dean of Postgraduate Studies and the Registrar - is conducted digitally through the JEMS portal. This robust system ensures timely tracking of student progress, adherence to academic timelines, and transparent, paperless record management

COLLEGE UPDATE ON JAU WEBSITE

Junagadh Agricultural University maintains a website **http://www.jau.in/**, in which all the activities of the university are updated regularly. College has also a place in this website (**http://www.jau.in/caet/**) in various activities including academic, Research and Extension. All these activities are updated frequently on the web site like academic activity details of college, all departments, the education programmes run by the college, admission procedure, course curriculum, regulations, semester wise time tables, students enrollment list, exam time table, results etc. are uploaded regularly on the web site.

6.5.4 STUDENT DEVELOPMENT

6.5.4.1. STUDENT INTAKE AND ATTRITION

Table 55. Details of Under-graduate and Post-graduate Programmes in the college

Department	Year Started	Approved Seats		Actual Enrolment	
		Year Established	Current Year	Year Established	Current Year
1. U.G.	1984	50	107 (78 + 19 ICAR + 10 EWS) +*	30	104
2. P.G. (Masters)					
SWCE	1994	10	11(8 + 3 ICAR)	3	5
IDE	2022	8	8(6 + 2 ICAR)	1	4
FMPE	1994	10	7(5 + 2 ICAR)	5	3
PFE	1994	10	8(6 + 2 ICAR)	5	7
REE	1994	0	3(2 + 1 ICAR)	0	2
3. P.G. (Doctoral)					
SWCE	2001	2	7(5 + 2 ICAR)	1	5
IDE	2022	0	3(2 + 1 ICAR)	0	0
FMPE	2006	2	2(1 + 1 ICAR)	0	2
PFE	2006	2	6(4 + 2 ICAR)	0	3
REE	2006	2	2(1 + 1 ICAR)	0	2

* - 10% of intake capacity is admitted in 2nd year (3rd Sem.) from Diploma to Degree programme.

Table 56. Student intake, retention and passed out in last 5 years

Graduating Year	Programs	Students admitted*			Dropped			Appeared in final examination**			Percentage passed	
		M	F	Total	M	F	Total	M	F	Total	M	F
2020-21	UG	90	5	95	9	-	9	67	5	72	90	100
	PG	19	4	23	6	1	7	17	3	20	68	75
	Ph.D.	3	2	5	-	-	-	2	0	2	100	100
2021-22	UG	100	12	112	6	-	6	88	11	99	94	100
	PG	13	6	19	5	-	5	12	3	15	62	100
	Ph.D.	12	2	14	1	-	1	3	3	6	92	100
2022-23	UG	90	14	104	13	-	13	67	14	81	86	100
	PG	8	3	11	1	-	1	8	6	14	88	100
	Ph.D.	9	2	11	1	-	1	9	1	10	89	100
2023-24	UG	97	14	111	18	4	22	71	10	81	81	100
	PG	5	8	13	2	-	2	8	3	11	60	100
	Ph.D.	5	1	6	1	-	1	8	3	11	80	100
2024-25	UG	86	22	108	30	2	32	45	19	64	65	91
	PG	7	2	9	1	-	1	4	8	12	86	100
	Ph.D.	4	3	7	-	-	-	7	5	12	100	100

M = Male, F = Female
Students admitted *- The students who are admitted before four years in first year
Appeared in final examination** - The students appeared in final examination of graduation in the year

STUDENT INTAKE AND ATTRITION IN THE UG PROGRAMME FOR LAST FIVE YEARS

Year wise information on sanctioned strength, actual intake and attrition during the last five years of the Degree Programme are furnished in the tabular form. This attrition is due to shifting of students to some other degree programme like engineering and dairy sciences etc.

Table 57. Details of student intake and attrition in the UG programme for last five years

Year	Sanctioned seats	Actual intake	Attrition	Attrition Percentage
2020-21	108 (99+9*)	93(93+9*)	6 + 1*	6.86
2021-22	108 (99+9*)	95(95+10*)	6 + 1*	6.67
2022-23	118(107+11*)	58(58+10*)	9+1*	14.71
2023-24	118(107+11*)	63(63+11)	6+2*	10.81
2024-25	118(107+11*)	104(104+11)	2	1.74

*- Student Admitted through Diploma to Degree Programme in 3rd Semester

Table 58. Composition of students during last five years

Year	Under graduate						Post graduate					
	Within the State		Out side State		Foreign		Within the State		Out side State		Foreign	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
2020-21	82	88.17	11	11.83	0	0	23	76.67	7	23.33	0	0
2021-22	83	87.37	12	12.63	0	0	10	58.82	7	41.18	0	0
2022-23	40	68.97	18	31.03	0	0	12	60.00	8	40.00	0	0
2023-24	49	77.78	14	22.22	0	0	4	26.67	11	73.33	0	0
2024-25	88	84.62	16	15.38	0	0	12	36.36	21	63.64	0	0
Total	342	81.38	71	18.62	0	0	61	51.70	54	48.30	0	0

6.5.4.2. AVERAGE NUMBER OF STUDENTS IN THEORY AND PRACTICAL CLASSES

Table 59. Students batches in theory and practical classes

Sr. No.	Name of the degree programme	Batch of students in theory class	Batch of students in practical class
1	B.Tech. (Agril. Engg.)	One batch (80-90)	Three or Two batches (30-40)
2	M.Tech. (Agril. Engg.)	One batch	One batch
3	Ph. D	One batch	One batch

Table 60. Theory and practical batches of classes of the students

Academic Year	Theory class		Practical class			
	Batch (No.)	Students (No.)	Batches (No.)	Students (No.)		
				Batch I	Batch II	Batch III
2020-21	01	93	03	31	31	31
2021-22	01	95	03	31	31	33
2022-23	01	58	02	30	28	-
2023-24	01	63	02	30	33	-
2024-25	01	104	03	33	33	38

STUDENT-TEACHER RATIO

BASED ON STUDENTS AND TEACHER IN A CLASS OF THEORY AND PRACTICAL

As per ICAR Norms (Theory- 60: 1, Practical/Tutorial - 15-20: 1, Project - 10: 1)

Table 61. Student-Teacher ratio (Based on students and teacher in a class of theory and practical)

Particular	Under-graduate		
	Theory	Practical/ Tutorial	Project
CAET, JAU	16:1	6:1	3:1

Student Teacher ratio is based on the credit hours and number of teachers in different departments for UG and PG courses separately.

Table 62. Student Teacher ratio (Based on credit hours and number of teacher in different departments for UG and PG courses separately)

Department	Under-graduate *			Post-graduate **		
	Theory	Practical/ Tutorial	Project	Theory	Practical/ Tutorial	Project
SWCE	16:1	5:1	3:1	3:1	3:1	2:1
IDE	16:1	5:1	3:1	3:1	3:1	2:1
FMPE	16:1	5:1	3:1	1:1	1:1	2:1
PFE	16:1	5:1	3:1	2:1	2:1	2:1
REE	16:1	5:1	3:1	1:1	1:1	2:1
	* ES = $\frac{\text{CH x No of Students}}{15}$ EF= $\frac{\text{CH x No of Faculty}}{15}$ Ratio = ES/EF			** ES = $\frac{\text{CH x No of Students}}{12}$ EF= $\frac{\text{CH x No of Faculty}}{12}$ Ratio = ES/EF		

ES = Equivalent Student EF = Equivalent Faculty CH = Credit Hours

6.5.4.3. ADMISSION PROCESS

The Admission of UG, PG and Ph.D. students is conducted commonly for all the four SAUs' of Gujarat by an online system. The intake capacity is filled by State Quota and ICAR Quota as per ICAR norms. In state quota, reservation of various categories is maintained.

UNDERGRADUATE PROGRAMME

In UG, the state quota is 80% and 20% seats are reserved for ICAR candidates. In 2nd year 10% seats are filled by the Lateral Entry [Diploma (Agril. Engg./Agro. Processing and Food Technology) students] over and above the intake capacity. Admissions in the university are made subject to reservation of seats for various social and economic categories as stipulated by the state government in this behalf from time to time. Two seats are reserved for Kashmiri migrants, one for Ex. Army's Son/Daughter and one for Parsi Community over and above the intake capacity. Admission of NRI's / Foreign Nationals shall be through ICAR/ GoI nomination over and above the ICAR quota. The admission process right from inviting application till the allotment of seats will be done by one of State Agricultural University of Gujarat, which is entrusted for the admission process. Accordingly, the admission of students for under graduate degree programmes is made based on GUJCET (entrance test) conducted by the state government and HSCE marks.

Junagadh Agricultural University (JAU) participates in a centralized Common Admission Portal, jointly managed by all four State Agricultural Universities (SAUs) of Gujarat, for the streamlined administration of admissions to diploma, undergraduate, postgraduate, and doctoral programmes. The portal enables prospective students to register, submit applications, pay fees online, track application status, and access rank lists. Additionally, applicants receive real-time SMS notifications regarding important updates such as entrance exams schedule and admission rounds.

POST GRADUATE AND PH.D PROGRAMME

In PG & Ph.D, the state quota is 75% and 25 % seats are reserved for ICAR candidates. Admission of NRI's / Foreign Nationals shall be through ICAR/ GoI nomination over and above the ICAR quota.

All State Agricultural Universities of Gujarat have a common committee wherein all policy matters of the different Universities are discussed and finalized. Accordingly, the admission of students for various post graduate degree programmes will be made through common entrance examination conducted by one of the Agricultural Universities in the

state. The admission process right from inviting application till the allotment of seats will be done by the University which is entrusted for the admission process.

(E) UG/PG Admission system

On the administrative side, the portal supports several backend operations including application verification, eligibility validation, rank list generation, and programme allotment, thereby ensuring a uniform, transparent, and efficient admission process across all SAUs. Candidates can select their preferred colleges and degree programmes, and the system automatically allocates admissions based on merit and preference. The entire process, including the publication of merit lists and category-wise vacancy matrices, is conducted online to ensure accessibility, fairness, and transparency.

Table 63. Admission Requirement

Particular of Examination	UG	PG	Ph.D.
Qualifying Examination	10+2 with PCM, PCB or PCMB and English as a course	B. Tech. (Agril Engg) & related field	M.Tech. (Agril. Engg.) in concerned discipline
Minimum Eligibility Requirement	40% in HSCE Board in PCM, PCB or PCMB Theory only 35% for SC/ST	6.0 OGPA in B.Tech. (Agril Engg) 5.5 OGPA for SC/ST	6.5 OGPA in M.Tech. (Agril Engg) 6.0 OGPA for SC/ST
Entrance Examination	GUJCET^	University Entrance test	University Entrance test
Criteria for merit of the Candidate	60 % weightage to PCM/PCB/PCMB (Theory) in HSCE and 40% weightage to GUJCET Exam	50 % weightage to B.Tech.(Agril.Engg.) OGPA and 50 % weightage to Entrance Test	50 % weightage to M.Tech.(Agril.Engg.) OGPA and 50 % weightage to Entrance Test
Others (ICAR)	Nominees by entrance exam AIEEA	Nominees by entrance exam AIEEA	Nominees by entrance exam AIEEA

^ GUJCET-Entrance Test conducted by the Gujarat State for Admission in UG professional Courses

(F) Online Fees collection system

College students pay their semester fees online through the dedicated portal http://online.jau.in/student_fees/, which is accessible via the Student Corner on the official university website. The system supports multiple payment modes, including UPI,

credit/debit cards, and net banking, providing a convenient and secure method for fee transactions during subsequent semesters of various degree programmes.

The collected fees are directly deposited into the respective college's bank account, ensuring accuracy and transparency in financial management. Additionally, college administrators have access to real-time fee collection reports through the system, enabling effective monitoring and record maintenance.

FEES PAYMENT MECHANISM

For UG, PG and Ph.D. admission, the fees is collected by the respective admission authorities at the time of admission through online banking and the students who are registering for the subsequent semesters, fees is collected from such students by the respective colleges through online mode.

Table 64. Details of Fees and other charges per year

Particular	For U.G.		For P.G.	
	Boys	Girls	Boys	Girls
Tuition fees	7000	0	10000	0
Hostel charges	3000	0	4000	0
Laboratory fees	1000	1000	4000	4000
Others	5900	5900	8200	8200
Total	**16900**	**6900**	**26200**	**12200**

* For girls students, tuition fee and hostel charges are exempted.

REGISTRATION PROCESS

The selected candidates shall pay the prescribed fees on or before the notified date and submit the original documents and then register for the relevant courses in person failing which their registration stands cancelled. In subsequent semesters, the registration shall be in the first two days of commencement of semester without fine and maximum of seven working days after the commencement of semester with fine. The Registrar notified the schedule of the various UG, PG and Ph.D. programmes in advance for every semester and the same will be followed by all the constituent colleges of the University.

6.5.4.4. CONDUCT OF PRACTICAL AND HANDS ON TRAINING

B.Tech (Agril. Engg.) is a professional degree aimed to develop skilled and professionally sound human resource. The students in Agricultural Engineering degree programme are exposed to hands-on training and practical demonstrations as a part of their courses which has helped them to graduate with a better understanding at field knowledge with skills. For B.Tech (Agril. Engg.) programme, in V Dean syllabus, total 182 credit hours

are prescribed, out of which 97 credit hours are dedicated for practical and hands on training, while in VI Dean syllabus, total 175 credit hours are prescribed, out of which 80 credit hours are dedicated for practical and hands on training and 15 credit hours are for non gradial courses. In practical classes, individual student is given an opportunity to handle and learn the skills.

Table 65. Students trained under Skill Development Training - I & II

Sr. No.	Year	No. of Student Trained under Summer Training / Skill Development Training - I	No. of Student Trained under Summer Training / Skill Development Training - II	Total
1	2020-21	91	73	**164**
2	2021-22	93	99	**192**
3	2022-23	84	81	**165**
4	2023-24	68	88	**156**
5	2024-25	66	67	**133**

Table 66. Students trained under ELP / Industrial Training

Sr. No.	Year	No. of Student Trained under ELP /Industrial Training
1	2020-21	74 (Online Training)
2	2021-22	99
3	2022-23	81
4	2023-24	86
5	2024-25	65

Table 67. Students went for Foreign Training under IDP, NAHEP of ICAR.

Sr. No.	Year	Place / Details of Training	Duration	No. of Students
1	2022-23	International Training and Experimental Learning on "Drones, IoT and Google Earth Engine and their Applications" at Geo-Informatics Centre, AIT, Bangkok	25/07/2022 to 23/09/2022	13
2	2023-24	International Training at Western Sydney University, Australia	28/07/2023 to 25/09/2023	10
3	2023-24	International Training at Hokkaido University, Japan	06/10/2023 to 14/11/2023	10
			Total	**33**

6.5.4.5. EXAMINATION AND EVALUATION PROCESS CONDUCT OF PRACTICAL AND HANDS ON TRAINING

FOR UNDER GRADUATE PROGRAMME

Fifth Deans' Committee deliberated on the examination and evaluation system being followed by different universities. The Committee recommends Uniform Grading system to be followed with uniform OGPA requirements for award of degrees at all levels and uniform conversion formulae to be followed for declaration of division based on OGPA range as; First division with distinction (8.000-10), First division (7.000-7.999), Second division (6.000-6.999) and Pass division (5.000-5.999). Declaration of division in the degree certificate to be made compulsory by all universities:

1) As per fifth Deans Committee

1. EXAMINATION

- ***Courses with theory and practical***
- *Mid-term exam (30%) + Assignment/ progressive assessment (5%) + practical (15%).*
- *External theory (50%)*
- ***Courses with only theory***
- *Mid-term exam (40%) + Assignment/ progressive assessment (10%)*
- *External theory (50%)*
- ***Courses with only practical:***
- *Internal (100%)*

Table 68. Evaluation system for V Dean syllabus

	External theory	Internal theory (Mid-term)	Assignment/ progressive assessment	Final Practical
For courses having both theory and practical components	50%	30 %	5%	15%
For courseswith theory only	50%	40%	10%	--
Courses with practical only	--	--	--	100% (Practical)

2) As per Sixth Deans Committee

1. EXAMINATION

- ***Courses with theory and practical***
- *Mid-term exam (20%) + Quiz/progressive assessment (20%) + final practical (20%).*
- *External theory (40%)*
- ***Courses with only theory***
- *Mid-term exam (30%) + Quiz/*Progressive Assessment *(20%)*
- *External theory (50%)*

➢ ***Courses with only practical:***

- *Internal mid term practical(30%)*
- *Quiz/progressive assessment/assignment (20%)*
- *Internal final practical(50%)*

Table 69. Evaluation system for VI Dean syllabus

	External theory	Internal theory (Mid-term)	Quiz/ Progressive assessment	Final Practical
For courses having both theory and practical components	40%	20 %	20%	20%
For courseswith theory only	50%	30%	20%	--
Courses with practical only	--	30% (Practical)	20%	50% (Internal)

- The setting and evaluation of the question paper of the internal examination are done by the course instructor. HOD shall ensure the coverage of syllabus. If needed moderation can be done.
- Evaluation are done internally by the faculty other than the Course Instructor.
- For practical, it is recommended that examination shall be conducted by course instructor(s) and one teacher nominated by HoD.
- Syllabus of the concerned course shall be sent to the panel of 4 external examiners, one from each SAU of Gujarat, appointed by coordinating registrar of GSAUs. The question paper will be sent to moderator. The moderator will send the final question paper in sealed envelope to concerned Dean of the GSAUs. The answer books will be evaluated by the panel of the examiners.

2. EVALUATION

FOR UNDER-GRADUATE DEGREE PROGRAMME

Table 70. System of Evaluation for B. Tech. (Agril. Engg.) for V Dean and VI Dean

Degree	Percentage of Marks Obtained	Conversion into Points
B. Tech. (Agril. Engg.).	100	10 Points
	90 to <100	9 to < 10
	80 to <90	8 to < 9
	70 to <80	7 to < 8
	60 to <70	6 to < 7
	50 to <60	5 to < 6
	<50 (Fail)	< 5
	Eg. 80.76	8.076
	43.60	4.360
	72.50 (but shortage in attendance)	Fail (1 point)

Table 71. OGPA based Grading Division for B. Tech. (Agril. Engg.) for V Dean and VI Dean

OGPA	Division
5.000 – 5.999	Pass
6.000 – 6.999	II division
7.000 – 7.999	I division
8.000 and above	I division with distinction

GPA = Total points scored / Total credits (for 1 semester)

CGPA = ∑ Total points scored / Course credits

OGPA = ∑ Total points scored (after excluding failure points)/ Course credits

% of Marks = OGPA x 100/10

FOR POST-GRADUATE DEGREE PROGRAMME

Table 72. System of Evaluation for M.Tech. (Agril. Engg.)/Ph.D. (Agril. Engg.)

(i) As Per 4th Dean Committee			
No.	Examination	Theory marks	Practical marks
1	Self-study (Assignment & Presentation)	20	-
2	Internal Tests / Exam	30	40
3	Semester-end examination	50	60
	Total Marks	**100**	**100**

(ii) As Per BSMA				
No.	**Examination**	**The Course with theory and practical**	**The Course with theory only**	**The Course with practical only**
1	Internal Test	20	40	-
2	Assignment	10	10	-
3	Practical	20	-	100
4	Semester-end	50	50	-
	Total Marks	**100**	**100**	**100**

AWARD OF CLASS

The award of a class to a student shall be based on OGPA (Overall Grade Point Average) obtained by him/her and shall be indicated in the degree certificate. The basis of the award of class shall be as under Table 69. The declaration of class based on OGPA range as; First division with distinction (8.00-10), First class (7.00-7.99) and Second class (6.50-6.99).

Table 73. Award of class

Overall Grade Point Average	Class	
	4th Deans	BSMA
8.00 and above	First Class with Distinction	First Class with Distinction
7.00 to 7.99	First Class	First Class
6.50 to 6.99	Second Class	Second Class

AWARD OF GRADE

The evaluation made by the teachers / examiners in all examinations of a course shall be reflected in total score, score/weighted score and grade point. The following marking shall also be shown by the teachers/examiners/University in the students' performance evaluation.

Table 74. Detail of grades for the students' performance evaluation

Grade	Significance	Value
Ab	Absent	For those students who do not appear in Internal / External Examination without giving any reason.
W	Withdrawal	For those students who do not appear at semester-end examination due to unforeseen circumstances as certified by the Dean /Principal (in very exceptional cases only.)
I	Incomplete	Candidates not permitted to appear at thesemester-end examination. As per Rule-36.5 and Rule-41.11
F	Fail	For those who appear but fail to score 50% in a particular course
R	Repeat	To be shown by university in evaluation report and transcript in case of course repeated andcleared.
S	Satisfactory	For non gradial courses
US	Unsatisfactory	For non gradial course.
Note: Grade "S" or "US" shall have no significance in calculating GPA / CGPA / OGPA.		

Table 75. Details of marks distribution for various examinations

Examination		As per V Deans-UG	As per IV Deans PG		As per VI Deans-UG	As per BSMA PG	
		UG	PG	Ph.D.	UG	PG	Ph.D.
Internal (percentage)	Courses with Theory and Practical	50	30	30	60	50	50
	Courses with only Theory	50	30	30	50	50	50
	Courses with only Practical	100	40	40	100	100	100
External (percentage)	Courses with Theory and Practical	50	50	50	40	50	50
	Courses with only Theory	50	50	50	50	50	50
	Courses with only Practical	0	60	60	0	0	0

Table 76. Various Exams conducted with their duration

Exam	As per V Deans	As per IV Deans		As per VI Deans	As per BSMA	
	UG	PG	Ph.D.	UG	PG	Ph.D.
Quiz / progressive assessment	-	-	-	3 (10min. each)	-	-
Mid-Term	1 (1 or 1.5 h.)	2 (1 h. each)	2 (1 h. each)	1 (1 or 1.5 h.)	1 (1h)	1 (1h)
Practical	1 (2 h.)	2 (2 h. each)	2 (2 h. each)	1 (3 h.)	1 (3h)	1 (3h)
Semester-wise (Semester End Exam)	1 (2 h.)	1 (2 h.)	1 (2 h.)	1 (2 h.)	1 (2h)	1 (2h)
Others (Viva-voce, seminar, student READY, comprehensive viva, project etc.)	√	√	√	√	√	√

Table 77. Mode of Student Evaluation (Percent weightage) - As per V Deans' Committee-UG/IV Dean committee-PG

Mode		UG	PG	Ph.D.
Midterm / Practical Examination	Courses with Theory and Practical	50	30	30
	Courses with only Practical	0	40	40
Assignment		Yes	20	20
Semester End Examinations	Courses with Theory and Practical	50	50	50
	Courses with only Practical	100 (Internal)	60	60

Seminars	Yes	Yes	Yes
Others (Specify), Practical, Viva-voce, seminar, student READY, comprehensive viva, Project, ELP etc.	Yes	Yes	Yes

Table 78. Mode of Student Evaluation (Percent weightage) - As per VI Deans' Committee UG

Mode	Quiz / Progressive Assessment	Internal Theory (Midterm)	Final Practical	External Theory
Courses with Theory and Practical	20	20	20	40
Courses with only Theory	20	30	0	50
Courses with only Practical	20	30 (Practical)	50 (Internal)	-
Assignment			Yes	
Seminars			Yes	

Table 79. Mode of Student Evaluation (Percent weightage) - As per BSMA

Mode		PG	Ph.D.
Internal Test	Courses with Theory and Practical	20	20
	Courses with only Theory	40	40
Practical	Courses with Theory and Practical	20	20
	Courses with only Practical	100	100
Assignment	Courses with Theory and Practical	10	10
	Courses with only Theory	10	10
Semester End Examinations	Courses with Theory and Practical	50	50
	Courses with only Theory	50	50
Seminars		Yes	Yes
Others (Specify), Practical, Viva-voce, seminar, student READY, comprehensive viva, Project, ELP etc.		Yes	Yes

PRELIM EXAM EVALUATION

In 4th Dean PG syllabus adoptions, a post-graduate student shall have to pass the prelim examination with a minimum of 60% in written exam to be eligible for *Viva-voce* and the overall score should be minimum of 60%. The *Viva-voce* is conducted by the advisory committee for M.Tech. and advisory committee and external examiner appointed by the Director of Research and Dean PG studies for Ph.D.

In BSMA PG syllabus adoptions, a post-graduate student shall have to pass the prelim examination with a minimum of 60% in written exam to be eligible for *Viva-voce* and the overall score should be minimum of 60% for M Tech student. The *Viva-voce* is conducted by the advisory committee for M. Tech. However, for the Ph. D. student, only the viva voce

examination is required to pass. The viva voce is conducted by an advisory committee and external examiner appointed by the Director of Research and Dean PG studies for Ph.D.

THESIS EVALUATION

The thesis prepared by a student under the guidance of advisory committee will be evaluated by an external examiner in case of M.Tech. and two external examiners in case of Ph.D. The final Viva-voce will be conducted by the students' advisory committee with one additional external examiner in case of M.Tech. and with two additional external examiners, among which, one will be out of these two external examiners who evaluated the thesis in case of Ph.D.

STUDENTS ATTENDANCE

In all programmes, UG, PG and Ph.D., it is necessary for students to attend the classes regularly. A student should have at least 75% attendance in each course separately. In case of medical emergency and other, the request of a student is evaluated by the Students' Attendance Committee and on its recommendation, 5% relaxation may be given by the principal and in very extraordinary case, Honourable Vice Chancellor may allow for another 5%.

However, students must have at least 50% physical presence to avail the benefits of absence based on medical ground. The student whose attendance is less than the requirement is debarred from attending the semester end examination and awarded incomplete (I) grade which he has to clear as and when the course is offered.

The Students' Disciplinary Committee deal with any misconduct made by any student in and around the campus. The college Students' Attendance and Disciplinary Committees are as below:

Table 80. Students' Attendance Committee

Name	Designation and Department	Remarks
Dr. P. P. Gajjar	Professor and Head, FMPE	Convener
Dr. H. V. Parmar	Associate Professor, SWCE	Member
Dr. M. N. Dabhi	Professor and Head, PFE	Member
Dr. M. S. Dulawat	Professor and Head, REE	Member
Dr. G. V. Prajapati	Professor and Head, IDE	Member
Prof. B. M. Devani	Academic Convener (PG), PFE	Member
Prof. A. L. Vadher	Academic Convener (UG), PFE	Member Secretary

Table 81. Students' Disciplinary Committee

Name	Designation and Department	Remarks
Dr. M. N. Dabhi	Professor and Head, PFE	Convener
Dr. H. V. Parmar	Rector and Assoc. Professor, SWCE	Member
Dr. S. P. Cholera	Chairman, Gymkhana and Asstt. Professor, REE	Member
Prof. C. S. Matholiya	NSS Officer and Asstt. Professor, FMPE	Member
Prof. M. J. Gojiya	Asstt. Rector and Asstt. Professor, REE	Member
Prof. G. D. Gohil	Asstt. Rector and Asstt. Professor, PFE	Member
Prof. A.L. Vadher	Asstt. Professor, FMPE	Member Secretary

6.5.4.6. NCC / NSS / RVC UNITS

- National Service Scheme is an important extra-curricular activity implemented in our college for overall personality development and building social responsibilities among students.
- NSS units are established as one unit per 100 students and at present 1.5 NSS units are operated in the college and for all units one faculty is assigned as a Programme Officer. NSS is offered as a non-credit compulsory course during each semester of first and second year of the degree programme.
- The Unit has regular activities and special camps. A village is adopted for its overall development involving NSS volunteers.
- NSS units are active in creating awareness about social issues, importance of national events, special days of cause and various activities are carried out in the campus as well as outside the campus.
- NSS units are effectively involved in implementation of schemes like Swachh Bharath Abhiyana, organizing health camps, motivational and personality development speeches. Special emphasis is given for the maintenance of cleanliness and plantation in the campus.
- Blood Donation and Thalassemia camps are arranged by NSS volunteers every year.

Table 82. Details of NSS programme organised during last five years

Sr. No.	Year	No. of NSS Programme	No. of NSS Volunteers participated
1	2020-21	06	403
2	2021-22	09	750
3	2022-23	08	583
4	2023-24	07	323
5	2024-25	12	947
Total		**42**	**3006**

6.5.4.7. LANGUAGE LABORATORY

The college is having an independent Digital English Language laboratory with capacity of 32 students along with the computers and audio visual aids. The audio-visual aids are used in modern teaching methods to teach the English language. The language lab offers an exclusive result oriented and efficient English language learning process.

The language lab is developed on the methodology of LSRW (Listening, Speaking, Reading and Writing) skills. It also helps in developing skills in presentation, Interviews, Group Discussions, Public Speeches and soft communication skills. The contents include activities, exercises and home assignments with audio-visual modules. There is a special module on preparation for online competitive exams such as GRE, TOEFL, IELTS etc. As per the need of the students, the intensive training was provided by the faculty of the college. The details of the students trained in the language lab with glimpses of lab are as under.

Table 83. Details of the students trained in the language lab

Year	Intensive Training	Competitive Exam	PG classes
	No of Students	No of Students	No of Students
2020-21	Nil (Due to Covid 19)	Nil	Nil
2021-22	42	21	71
2022-23	56	22	68
2023-24	49	20	75
2024-25	57	23	81
Total	**204**	**86**	**295**



Language laboratory

6.5.4.8. CULTURAL CENTER

The College has an open air theatre to organize various cultural activities, which can accommodate about 500 students. The indoor cultural activities are organized in the seminar hall of the college with about 150 seating capacity. Apart from this, a room is available for music and other cultural activities of the students. The College has a Student Representative Council (SRC) which is also called as Gymkhana. The SRC arrange various cultural competitions among the students.

The intercollegiate cultural competition is arranged at University level and Inter University Cultural Competition is arranged for All Agricultural Universities of Gujarat State. A warm welcome function is organised by the college students for fresher by organising cultural and other events. Similarly, the college students give a send-off to the outgoing batch by organising cultural and other events. On these occasions, cultural programmes are also arranged.

General knowledge Quizzes, competition *etc.* are regular affairs of the college. The students are also performing various cultural activities like; mono-acting, folk-classical songs, drama, folk dance, play, etc. during get-together programme, on festivals, national level events, and annual day functions and inter university festivals.

6.5.4.9. PERSONALITY DEVELOPMENT

- The various national and international day celebration are organised by different departments of the college to enhance the general awareness and to develop the soft skills of the students.
- Personality development programmes are arranged for the overall development of students and also to increase the employability.
- Special Guest lectures / trainings are regularly conducted to acquire English communication skills, Group discussions, Interview skills and reasoning by the students.
- The English digital language laboratory is used for the said purpose.
- The special coaching classes are organized to enhance the ability of students to face the competitive exams conducted by ICAR, IIT, Public service commissionsand other private and public organizations. The college also encourages the students participate seminars, conferences, workshops, group discussions, personal interviews, quiz and debate and competitions organized by various organizations etc..

Students' counselling cell:

A separate Student Counselling Cell, headed by a convener, is functioning to oversee counselling activities. The cell provides guidance to students on various aspects such as preparation for competitive examinations, higher studies, employment, and entrepreneurship. It has a collection of more than 70 books on related topics to support students in their preparation. In addition, talks and lectures on relevant subjects are regularly arranged for the benefit of students. Through activities such as student–staff meetings, Annual Day celebrations, Welcome and Farewell functions, expert lectures, and leadership development sessions, students are encouraged and their concerns addressed. A total of 15 counselling lectures have been organized over the past five years. Under the Counselling Cell, the college has also developed an advisory system, wherein each faculty member is assigned 10–15 students in the first year and continues as their advisor throughout the undergraduate program. Each student is issued an advisory notebook, in which entries are made whenever the student meets the advisor. At the end of every semester, the student's results are recorded, and the advisor provides guidance for future action. Advisors also counsel students on academic progress, extracurricular activities, and career opportunities. The year-wise details of student counselling lectures are presented in Table 84.

Table 84. Lectures organized for personality development of students

Year	2020-21	2021-22	2022-23	2023-24	2024-25
No. of lectures organized	03	05	04	01	02

Table 85. Details of student counselling activities organized for personality development

Sr. No.	Date	Activity	Speaker	No. of participants
Academic year - 2020-21				
1	26/11/2020	Celebration of Republic Day	Dr. N. K. Gontia and Prof. N. K. Mistry	42
2	25/01/2021	Celebration of National Voters Day	Dr. N. K. Gontia and Prof. N. K. Mistry	39
3	30/01/2021	Programme on the occasion of Martyrs' Day	Dr. N. K. Gontia, Prof. D. S. Thanki and Dr. K. K. Jain	48
Academic year - 2021-22				
4	30/10/2021	Celebration of "National Unity Day"	Prof. N.K. Mistry.	80 Students and staff
5	03/12/2021	Celebration of "Agricultural Education Day". Talk on "Artificial	Dr. N. K. Gontia, Hon. Vice	150 students

Sr. No.	Date	Activity	Speaker	No. of participants
		Intelligence in Agriculture"	Chancellor, JAU, Junagadh.	
6	06/12/2021	Celebration of "World Soil Day" Theme: " Halt Soil salinization , boost soil productivity"	Dr. N.K. Gontia, Hon. Vice Chancellor, JAU, Junagadh.	130 Students
7	14/12/2021	A special lecture on the topic: "Carier Development in Agriculture"	Dr. S.T. Rajan Retired Scientist , Central Sault & Marine Research Institute , Bhavnagar	56 Students
8	04-05/03/2022	Two days training on "Campus to Corporate Training"	Dr. Mehul Thakkar, Associate Professor, NAU, Navsari	99 Students
Academic year - 2022-23				
9	11/05/2022	Celebration of "National Technology Day – 2022"	1. Prof.(Dr.) N K Gontia , Hon'ble VC, JAU 2. Mr. Kiran Kathiriya , Founder & MD of Bhoomi Agro Tech, Rajkot. 3. Dr. H P Gajipara, JAU, Junagadh. 4. Dr. D M Jethva , JAU. 5. Prof. G D Gohil, JAU.	350 Students
10	07-08/09/2022	Two days training on "Unleash The Power Within"	Mr. Maulik Shah, Mrs. Sudha Shah	83 Students
11	03/12/2022	Celebration of "Agricultural Education Day"	Dr. N K Gontia, JAU	85 Students
12	18/03/2023	Special lecture on "Financial Planning & Indian Economy in Coming Decade"	Mr. Vikas Vaid National Head, Prabhudas Liladhar Stock Broking, Bombay	160 Students
Academic year - 2023-24				
13	17/02/24	Special lecture on "Basics of Capital market- An awareness initiative" by SEBI	Mr. Vaibhav Puranik	41 Students
Academic year - 2024-25				
14	30-11-2024	Special lecture on "Guidance for Higher Education in Australia".	1. Dr. K. C. Patel, Director of IT, JAU, Junagadh 2. Prof. G. D. Gohil,	150 students

Sr. No.	Date	Activity	Speaker	No. of participants
			Asst. Prof., CAET, JAU, Junagadh.	
15	30-11-2024	Special lecture on "Dream. Dare. Do: The Entrepreneur's Journey".	Mr. Harshadbhai Rupareliya, MD, Rainmark Irrigation Industries, Rajkot	150 students



Two days training on "Unlease The Power Within"



Expert talk delivered by Dr. K.C. Patel, DIT, JAU, Junagadh



Diginitories on the Dais in Programme of Dream. 'Dare. Do The Entrepreneur's Journey'



Special lecture on "Guidance for Higher Education in Australia"

6.5.5 PHYSICAL FACILITIES

6.5.5.1 HOSTELS

There are three well-equipped hostels for undergraduate students and two hostels for postgraduate and Ph.D. male students on the campus. In addition, one girls' hostel is available to accommodate undergraduate, postgraduate, and Ph.D. female students, providing residential facilities for all. The campus also has **an International Hostel for foreign** students, equipped with air-conditioned rooms, attached kitchen facilities, and a common washing machine. Each hostel is provided with amenities such as a TV, guest room, reading room, RO water cooler, solar water heating system, and vehicle parking facilities.

All hostels are equipped with indoor games and Wi-Fi internet connectivity. Hostel kitchens, toilets, bathrooms, and premises are cleaned daily by hostel staff. The hostels are located within 500 meters of the college and about 200 meters from the sports facilities and library, making vehicle transportation unnecessary. A health clinic is also available on the campus for students and staff, along with a 24×7 ambulance facility for emergency cases requiring referral to the civil hospital or other hospitals.



International Hostel



Vivekanand Hall of Residency



Vishwakarma Hostel



Kasturba Girls Hostel





Hostels with roof top solar and water heating system

MESS MANAGEMENT

During the reporting period, the hostel messes were primarily managed by the boarding students. Each hostel was equipped with all the necessary facilities such as dining furniture, kitchen utensils, refrigerators, cooking gas connections, and RO drinking water systems with water coolers. To ensure smooth functioning of the mess and to provide nutritious and delicious food to the students, a menu was decided in mutual consultation with students. The mess operations were managed by a student committee under the overall supervision of the Rector/Assistant Rector. The Principal, Rector, and Assistant Rector regularly supervised the functioning of the mess, the quality of food, and other related issues.

Table 86. Hostel wise available accommodation

SN	Name of Hostel	Type of Hostel (Boys/Girls)	Wi-Fi	Accommodation facilities in Number			Remarks
				Rooms	Students per Room	Accommodation	
1	International Hostel	Boys & Girls (UG, PG & Ph.D.)	Yes	17	01	17	-
2	Kasturba Girls Hostel	Girls (UG, PG & Ph.D.)	Yes	52	02 (PG) 03 (UG)	110	-
3	Vishwakarma Hostel	Boys (UG)	Yes	47	03	141	-
4	Vivekanand Hostel	Boys (UG)	Yes	56	02	112	-
5	Sardar Patel Hostel (Polytechnic in Agro Processing)	Boys (UG)	Yes	17	03	51	-

HEALTH SERVICES

The University primary health centre which is offering the health services to the faculty, staff and students. The primary health centre has one doctor and weakly services of other experts. The health centre is equipped with OPD, Pathology Lab. (Blood Testing Facilities), X-ray machine, ECG machine and facility for admitting the patient in emergency. There is one ambulance to take the patient up to the referred hospital or doctor. All possible medicine and treatment services are provided free of cost to the faculty, staff and students.

CANTEEN

A canteen run by private contractor and situated in the vicinity of hostel area is operating on the campus, which is providing refreshment to the students during working hours. Another Canteen is within the campus run for University Staff and Students, which has even lunch and dinner facility.









University Health Centre

University Canteen



6.5.5.2 EXAMINATION HALL

- There is one examination hall in the college with seating a capacity of 120. On and above if required exams are conducted in the classrooms also.
- The examination hall and classrooms are well ventilated and equipped with lights, fans, drinking water and rest room facility.
- The examination hall and classrooms are under CCTV surveillance.

6.5.5.3 SPORTS AND RECREATION FACILITIES

Physical fitness is as important as the mental fitness. It is always considered that a healthy mind can exist only in a healthy body. For an individual study and sports are two interlink and are always be an important component of the learning process. The Government of Gujarat giving importance to sports and under the policy of (Khelo Gujarat) "Khel Maha Khumbhs" are organized every year. The colleges' students are also be involved in these activities. In today's fast and internet based life style mental stress is a common phenomenon which can be easily managed by yoga and sports. The physical fitness needs a regular exercise or sports along with the nutritive diet.

Table 87. Campus level facilities for outdoor and indoor games

Sr. No.	Games and Sports	Number	Equipment and Infrastructure available
Facilities for Outdoor Games			
1	Cricket Ground	01	Cricket kits (complete)
2	Athletics Ground	01	Running Tracks of 400 meters with all athletics equipment. All the necessary Equipment for various games like Jabbing Throw, Hammer Throw, Disc Throw, Long Jump, High Jump, Pole Jump etc.
3	Khokho Grounds	02	-
4	Kabbadi Grounds	02	-
5	Basket Ball Grounds with night playing facility	01	Basket Balls
6	Volley Ball Grounds with night playing facility	02	Volley Balls

7	Badminton Court	01	Rackets and shuttle cocks for Badminton
8	Gymnasium Room	01	All gymnasium equipment
Facilities in Sports Complex for Indoor Games			
1	Table tennis Courts	04	Table, rackets and tennis balls
2	Badminton Courts	02	Rackets and shuttle cocks for Badminton
3	Recreation / Yoga Hall	01	-
Facility for Cultural Activities			
1	Auditorium for cultural activities (at Univ. Level)	01	A hall with digitized stage, sound systems, computer wi-fi facility, LCD projector with screen, Artist Rooms, fully air conditioned for about 500 seating capacity.
2	Open Air Theatre Sardar Patel Sabha Gruh	01	Capacity about 1500 with LCD projector with screen and ceiling Fan Facility
3	Open Air Theatre at college	01	Capacity about 500
4	Cultural and Music Room at college	01	With all music instruments

The faculty of the college, according to their skills and experience, regularly participate in students' sports and cultural activities. The Student Representative Council members also take care of various sports and cultural events for the overall development of the student community. Junagadh Agricultural University has excellent playground facilities with a running track, volleyball and basketball courts with floodlights for night play. The University also has a national-level sports complex with facilities such as a badminton court, table tennis court, and gymnasium.

SPORTS TOURNAMENTS ORGANIZED ANNUALLY

1. Inter-collegiate Tournament
2. Inter-university Tournament
3. Inter-collegiate Cultural Competitions
4. Inter-university Cultural Competitions
5. Inter-university Debates and Essay Competitions
6. Zonal Inter-State Agricultural University Competitions
7. University Coaching Camp
8. Open tournaments organized by different Clubs
9. Annually Khel Maha Kumbh



Indoor Sport Stadium JAU, Junagadh



Athelatic / Cricket Ground



Basketball Ground



Volleyball Ground





University Gymnasium (Boys)







University Gymnasium (Girls)

6.5.5.4 AUDITORIUM

An Auditorium is available at university campus with a hall with digitized stage, sound systems, computer wi-fi facility, LCD projector with screen, Artist Rooms, fully air conditioned for about 500 seating capacity. The Auditorium is used by the college for its fresher welcome programme, annual function, cultural programme, inaugurations of various seminars/workshops, farewell function of outgoing batch and any other special events. Every three year college organizes Alumni Association meet (02 days) in the Auditorium. At college level an air conditioned seminar with seating capacity of 150 and an open air theatre with seating capacity of 500 is used for conducting the college level literary and cultural activities. The seminar hall is well furnished with AC, projector, digital podium, web camera, cushion chairs, white screen with speaker, mikes and computer system.





University Auditorium





Inaugural Function of CAET Alumni Association



Felicitation of leading alumni



Felicitation of retired faculties



Release of Alumni Directory



Formation of new Executive Council





Cultural events

University Auditorium

6.5.5.5 EXHIBITION HALL / MUSEUM

The college has an Exhibition Hall with an area of 26 m x 22 m. The technologies released from the college, other SAUs & ICAR Institutes are displayed for the benefit of the different stakeholders' *viz*., farmers, entrepreneurs, students and extension functionaries. The specimen models, information charts are displayed at the exhibition hall.

Important technology charts and models displayed are models of different type of engine and their systems, working cut model of a tractor and diesel engine, all types of farm implements developed by JAU, all types of pumps and their impellers, different type of MIS components, different types of agro products and value added products, models of post harvesting machines developed by JAU, model of various types greenhouse and model of solar appliances. A typical Saurashtra village model, watershed model, different type of drip irrigation systems and solar fencing etc. are displayed in the exhibition hall. There is a q-ask system to show the documentaries of Agricultural machines, farm equipment, agro processing techniques and agricultural practices.

In the exhibition hall an assembly room is there where the visitors are informed about various technology and interaction is made with them. The farmers group brought by the Directorate of Extension Education are visiting very frequently the exhibition hall. The students of various institutes are also visiting frequently. The dignitaries visiting the college is also taken to the exhibition hall for a quick information about the development of Agricultural Engineering aspects of the college. A visiting register is maintained in the exhibition and visitors are giving their valuable comments and feed back in it.

Apart from this, a national level museum is maintained at the campus level by the Directorate of Extension Education. The museum has piece of art models, charts and live demonstrations of various technologies including the history of agriculture in India and particularly in Saurashtra region of Gujarat. It has discipline wise display rooms. The College

also maintains the display room related to Agricultural Engineering Technology. The technology and models related to farm equipment and machinery, soil and water conservation, irrigation and drainage, agri processing, value addition, greenhouse technology, renewable energy and artificial intelligence intervention in agriculture are displayed in the agricultural engineering technology room. The museum has an open air theatre for assembling of stakeholders. The broad details of the museum is presented in the SSR of university.



College Museum



University Museum

6.5.6 RESEARCH FACILITIES

The faculty of Agricultural Engineering and Technology carried out research work in the major areas of Agricultural Engineering like Soil & Water Engineering, Irrigation & Drainage Engineering, Farm Machinery & Power Engineering, Processing & Food Engineering, and Renewable Energy Engineering.

6.5.6.1. POST GRADUATE LABORATORIES AND EQUIPMENT

DEPARTMENT OF SOIL AND WATER CONSERVATION ENGINEERING

Table 88. Details of major Labs of Department of Soil and Water Conservation Engineering

Sr. No.	Name of laboratories	Area (m x m)	Working capacity (No.)
1	Soil Conservation Laboratory	9.10 x 7.60	50
2	Hydrology laboratory	9.25 x 8.30	50
3	Remote sensing & GIS Laboratory	9.10 x 7.60	50
4	Precision Agriculture Laboratory	9.20 x 6.00	50
5	Soil conservation field Laboratory (Runoff- Soil erosion measurement structure)	1220 sq.m	50
6	Instrumental Cell	7.50 x 4.50	50

Table 89. Major Equipment of Department of Soil and Water Conservation Engineering

SN	Equipment Name	No. of Equipment
1	Water sediment sampler	2
2	Soil conservation models	11
3	Hydraulic flume	1
4	Data logger system	1
5	Digital Rainfall Recorder	1
6	Water level recorder	1
7	Turbidity meter	1
8	Sediment sampler	4

SN	Equipment Name	No. of Equipment
9	Digital cone pentrometer	1
10	Core cutter apparatus set	5
11	Porometer	1
12	Pressure bomb apparatus	1
13	GPS	1
14	Scanner cum Plotter	1
15	Data logger with sensor	1
16	Digital evaporation recorder	1
17	Temp/RH Meter	4
18	LCD multimedia projector	1
19	ESRI ArcGIS Arc view software with single license	1
20	PCI Geomatica (5-user license) software	1
21	DHI Software Mike SHE, Temporal analyst Software	1
22	Boss Storm Net Software	1
23	Boss River CAD XP Complete Package	1
24	Surfer Software	1
25	Grapher Software	1
26	Aquachem Software	1
27	FEFLOW 5.3 Software	1
28	Multi slot deviser	3
29	Soil thermometer	3
30	Digital planimeter	1
31	Nano Drone	5
32	Ordinary rain gauge (Non recording)	6
33	River sediment sampler	1
34	Pan Evaporimeter	4
35	Siphon type raingauge	3
36	Non - recording raingauge	5
37	Coshocton wheel	5
38	Water stage Recorder	2
39	Portable TDR soil moisture meter	2
40	Drone Kit for Lab	3
41	Crop Surveying Drone with 4k camera	1
42	Data retrieval system	3
43	Drone with Visible Camera	1
44	Drone with NIR Camera	1
45	NDVI Meter	1

DEPARTMENT OF IRRIGATION AND DRAINAGE ENGINEERING

Table 90. Details of major Labs of Department of Irrigation and Drainage Engineering

Sr. No.	Name of laboratories	Area (m x m)	Working capacity (No.)
1	Irrigation Systems Laboratory	15.80 X 7.60	50
2	Pump Testing Laboratory	12.35 X 7.60	50
3	Wells and Pumps Engineering Laboratory	12.20 x 7.50	50
4	Fluid Mechanics Laboratory	12.20 x 9.10	50

5	Soil Mechanics Laboratory	12.20 x 7.50	50
6	Drainage laboratory	7.75 x 8.30	50
7	Water Quality analysis Laboratory,	12.20 x 7.60	50
8	Incubation center on advanced irrigation technologies	17.20 x 8.30	100
9	High Tech MIS Park	25.0 x 20.0	50
10	Hydraulic park	34.50 x 32.0	50

Table 91. Major Equipment of Department of Irrigation and Drainage Engineering

SN	Equipment Name	No. of Equipment
1	Tensiometer	3
2	Ventury meter	2
3	Hot air oven	3
4	Submersible pump	1
5	Submersible K type pump	1
6	Micro controller based UV-VIS Spectrophotometer	1
7	Digital flame photometer	1
8	Rotary Flask shaker	1
9	Water and soil analysis kit	1
10	Pump testing set up	1
11	Submersible pump (6 HP 4 Stage as Per Indian STD ISI)	1
12	Submersible pump (7.5 HP 10 stage as Per Indian ISI)	1
13	Oil Sealed rotary Vacuum pump	1
14	Micro control based BOD Incubator with Shaker	1
15	Research centrifuge Model TC 8100	1
16	COD digester	1
17	M.S.Fler Fault valve stand	1
18	Lysimeter	1
19	Micro gopher	1
20	Total Survey station	2
21	Digital balance	2
22	Rpm frequency meter	1
23	Geometic Total Education Suits ver.10.0	1
24	Digital camera	2
25	Digital titration burette 50 ml	1

26	E-studio digital copier	1
27	Hydraulic ram test ring	1
28	Drip Irrigation filter testing ring	1
29	Hydrostatic pressure testing	1
30	Automatic water level recorder	1
31	Pump testing digital panel board	1
32	Well logger with data logger	1
33	Ground water sampler	1
34	Signal stacking resistivity meter	1
35	Flow measurement apparatus	1
36	Impact of Jet Apparatus	1
37	Jayant test sieves 8"	11
38	Reynolds apparatus	1
39	Digital manometer	6
40	Sand replacement cylinder	3
41	Digital pressure gauge with adapter	1
42	Manometer	4
43	Pelton turbine	1
44	Permeability apparatus	1
45	Bernoulli' s theorem apparatus	4
46	Core cutter apparatus set	4
47	Digital current meter	1
48	Electrically analogy apparatus	1
49	Metacentric Height of ship model	8
50	Manning's Roughness coefficient determination apparatus	1
51	Pipe friction Apparatus	2
52	Friction loss Apparatus	5
53	Automation Pumping System	1
54	Orifice and mouthpieces app.	1
55	Notch apparatus	1
56	Online UPS 5kva	1
57	Tensiometer Gauge Type Size:15, 30, 45 cm	1
58	Data retrieval system	1
59	Digital Soil Moisture meter	2
60	Water mark soil moisture (suction) sensor	28

61	Cut model of MIS filter	1
62	Sieve shaker	6
63	Darcy's law appratus	2
64	Screen filter	1
65	Gravel filter	1
66	Soil moisture meter	1
67	Soil auger	10
68	Clear transparent glass soil thermometer	20
69	Pycnometer Comprises 1 Kg glass Jar with Brass Cone	20
70	Emitter testing rig	1
71	Shrinkage limit set	5
72	Plastic limit set	5
73	Sap flow meter	1
74	Portable TDR soil moisture meter	1
75	Water meter	10
76	Digital soil moisture meter	1
77	Electronic water level indicator	5
78	Canopy chamber	1
79	Water level indicator	3
80	Direct shear test apparatus	3
81	Automation fertigation system	1
82	Sensors for irrigation	2
83	Manning's apparatus	7
84	Permeability apparatus	18
85	Ground water level indicator 100 mt	11
86	Ground water level indicator 200 mt	14
87	Different types of Automatic Filters	1
88	Centrifugal pump Test Rig	6

DEPARTMENT OF FARM MACHINERY AND POWER ENGINEERING

Table 92. Details of major Labs of Department of Farm Machinery and Power Engineering

Sr. No.	Name of the laboratory	Area	Seating capacity
1	Fitting Shop	15.0 x 13.0	15
2	Mechanical Laboratory	19.0 x 8.0	50
3	Carpentry Shop	12.0 x 9.0	15
4	Machine Shop	22.0 x 13.0	30

5	Welding Shop	12.0 x 12.0	15
6	Cut Model Laboratory	6.0 x 12.0	10
7	Drawing Laboratory	22.0 x 10.0	100
8	Tillage & Traction Laboratory	12.0 x 19.0	35
9	Thresher Laboratory	12.0 x 16.0	35
10	Plant Protection Laboratory	12.0 x 6.0	35
11	Tractor Room	12.0 x 15.0	40
12	CAD CAM Laboratory	9.0 x 9.0	30
13	FIM Laboratory	12.0x 12.0	50
14	Incubation centre and Precision Mechanisation	12.0 x 6.0	35
15	AI and Robotic lab	12.0 x 19.0	50

Table 93. Major Equipment of Department of Farm Machinery and Power Engineering

Sr. No.	Item Name	Qty.
1	Power weeder	1
2	Power tiller	1
3	Blade harrow cum land leveler – Tractor drawn	1
4	Disc plough - tractor operated (2 Disc) and (3 Disc)	3
5	Power sprayer	1
6	Power duster	1
7	Reversible M.B. plough (2+2 bottom)	2
8	M. B. plough tractor operated (2 bottom) and (3 bottom)	2
9	Multipurpose bullock drawn pipe implement	2
10	Single bullock drawn pipe frame implement	1
11	Ground nut digger - bullock drawn & tractor operated	2
12	Rotavator - tractor operated 4 ft, 6 ft	1
13	Planter - bullock drawn implement mounted & tractor operated	2
14	Tractor operated post hole digger	1
15	Subsoiler – tractor operated	1
16	Engine : VST shakti Z- 170F, 5 – HP, 8- HP. 10 HP	3
17	Trailer, 4-wheel	1
18	Ground nut & Caster decorticator	2
19	Cotton shredder, 5 – HP/ electric motor operated	1
20	Jettrofa decorticator	1
21	Measuring & Display unit of Dynamometer for bullock drawn & tractor drawn implement	2
22	Cultivator – tractor operated (9 tyne, 7 tyne, 5 tyne)	3
23	Integrated vibration & noise meter (vibration meter, noise meter & for multiple channels common retrieving unit)	9
24	Noise level Recorder (portable)	1
25	Dust level Recorder (portable)	1
26	Vibration Meter (portable)	1
27	Cotton shredder – tractor operated	1
28	Front end loader (for mini tractor)	
29	Front mounted dozer with M.B. plough	1
30	Green groundnut thresher	1
31	Ridger – tractor drawn	1
32	Cultivator cum rotary tiller	1
33	Disc harrow 12 disc, 8 disc	2
34	Reaper Harvester & Reaper Binder & Power reaper	3

35	Rice Transplanter	1
36	Thermo anemometer	5
37	Digital vacuum gauge	3
38	Digital multi meter, Digital LUX meter	7
39	Hand pallet truck, Manual Stacker Plate form hand trolley	3
40	Grain moisture meter	3
41	Hardness tester	3
42	Universal Testing Machine (UTM)	1
43	UTM Hydraulic unit with comp. acc.	1
44	Combine Harvester-Tractor mounted/ Self Propelled	2
45	Straw Combine-Tractor Drawn	1
46	Seed Germinator	1
47	Digital Bomb Calorimeter with Oxygen Cylinder	1
48	Digital ultra low temperature meter	1
49	Standard Penetrometer, Flow Cup Viscometer, Bulk Density Apparatus, Universal Moisture Meter Moag-U, Digital Moisture Meter AG-3, Digital Flow Anemometer, Outside Micrometer, Digital Micrometer, IR Non Contact Thermo (2 Nos).	10
50	Chaff Cutter	1
51	Mobile Chopper & Mobile Shredder	3
52	Grass Trimmer & Aqua Power Cleaner	2
53	Dust Level Recorder	1
54	Exhaust Gas Analyzer	1
55	Hardness Testing M/C	1
56	Seed Uniformity Test Setup	1
57	Heart Rate Monitor, Anthropometer	1
58	Single Cylinder Diesel Engine Test Rig.	1
59	Potato Planter Tractor Ope. & Potato Digger Tractor Ope.	2
60	Centrifugal Ceramic Process Pump, Self Priming Multistage Boiler Feed Pump, Submersible Dewatering Pump, Cross Section Of Self-Priming Mud Sewage Pump, Cross Section Of Process Pump, Submersible Mono Pumpset, ASPEE HTP sprayer pump	7
61	Fully Automatic Potato Planter Tractor Operated	1
62	Manual Muscle Tester	1
63	Displacement Measu. Tutor Using LVDT, Load Measu. Tutor Using Loadcell, Pressure Measu. Tutor Using Pressure Transducer, Strain Measu. Tutor Using Strain Cantilever Beam, Torque Measu. Tutor Using Torque Transducer, Temp. Measu. Tutor Using Thermister, Speed Measu. Tutor Using Elec. Magnetic, Angular Measu. Tutor Using Angular Sensor, Digital Wattmeter	9
64	Laser Guided Land Leveller	1
65	Digital Smoke Meter	1
66	Aero Blast Sprayer Model	1
67	Tractor Operated/Mounted 2 Disc Ridger Tractor Operated Ridge & Furrow Making Implement 2 In 1 Hand Operated Chaff Cutter	1 1 1
68	Tractor Operated Rotary Plough	1
69	Tractor Operated Mower	1
70	Spectrometer	1
71	Groundnut Digger Shaker	2
72	Fuel Pump & Fuel Filter Test Set-Up	2
73	Test Apparatus For Determination of Fatigue Failures In Compression	1

	Sprayer Tanks	
74	Test Apparatus For Power Efficiency Measurement Of Power Operated Hydraulic Sprayers	1
75	Rig For Conducting Pump Performance And Endurance Test On Various Agricultural Sprayers	1
76	Microscope For Droplet Size (Agricultural Sprayer's Nozzles) Analysis	1
77	Cut Off Machine Heavy Duty	1
78	Spring Test Rig	1
79	Electronic Penetrologger Set	1
80	Patternator	1
81	Digital Vernier Caliper (150 Mm) With NABL Accredited Calibration Certificate	4
82	Thread Pitch (Screw Pitch) Gauge With NABL Accredited Calibration Certificate	2
83	Standard Wire Gauge With NABL Accredited Calibration Certificate	2
84	Digital Micrometer (0-25 Mm) With NABL Accredited Calibration Certificate	2
85	Stainless Steel Degree Protector With NABL Accredited Calibration Certificate	2
86	Stop Watch With NABL Accredited Calibration Certificate	2
87	Tachometer (Mechanical) With NABL Accredited Calibration Certificate	2
88	Tachometer (Contact Type Digital, Non-Contact Digital) With NABL Accredited Calibration Certificate	4
89	Dampened Pressure Gauge With NABL Accredited Calibration Certificate	2
90	Self Propelled (3-Wheeld) Multipurpose Farm Implement	1
91	Test Set Up (Patternator) For Spray Distribution For Boom Of Power Operated Hydraulic Sprayer's Nozzles	1
92	Laser Leveler Test Rig	1
93	Digital Dynamometer (Capacity: 2 Ton/100 G, 1 Ton/50 G)	1
94	Electric Seed Cum Fertilizer Drill Test Rig Set Up	1
95	Welding Machine	1
96	Power Thresher	1
97	Sieve Shaker (Gyratory)	1
98	Axial Compensated Load Cell	1
99	Portable Load Meter	1
100	Digital Cone Penetrometer	1
101	Tractor operated deep furrow sugarcane cutter planter	1
102	Tractor operated phule two row forward reverse rotavator for sugarcane crop	1
103	Hand tachometer chronometric	1
104	Soil bulk density measurement	1
105	Digital telemetry system for rotary torque measurement	1
106	Cut model of tractor steering assembly & clutch assembly	2
107	Tractor cut model	1
108	Post hole digger	1
109	Zero till drill, CIAE Tractor drawn precision drill, Tractor drawn seed cum fertilizer drill, Mini tractor operated rotary weeder cum fertilizer drill, Tractor operated multi crop seed cum fertilizer drill, Bullock drawn pipe frame seed drill	6
110	Engine operated portable post hole digger	1

111	Rotavtor/ Rotary tiller	1
112	Thresher cum cleaner cum grader	2
113	Castor/Jetropha Decorticator	1
114	variable frequency drive	1
115	Lazor leveler FRP case	1
116	Portable vibration analyser	1
117	Multiple human vibration analyzer with sensor	1
118	Precision vegetable seed planter	1
119	Horizontal diesel engine, 5 HP, 2.5 HP	2
120	Plastic mulch machine	1
121	Manually drawn Engine operated fooder crop harvester	1
122	Single row cotton planter	1
123	Mini tractor operated Groundnut digger elevator cum heap formator	1
124	self-propelled weeder & Solar operated power weeder	2
125	Remote operated sprayer	1
126	Sprayer calibrator	1
127	Combiened test ring for trigger type cut off device sprayer lance pressure test	1
128	Walking type battery operated boom sprayer cum weeder	1
129	Mulching machine attachment of rotavator	1
130	LCD dispay calipers, Digital Varniar calipers	2
131	Hydraulics motor operated bush cutter	1
132	Carrot harvesting machine	1
133	Remote controlled precision planter	1
134	Mini tractor operated two row cotton planter	1
135	Solar powered remote controlled sprayer	1
136	Self prpeeled riding type cheakpea harvester	1
137	Chilli transplanter	1
138	Onion digger cum detopper	1
139	Mini tractor operated groundnut digger cum inverter	1
140	Media mixture machine for horticultural crop	1
141	Warm and warm wheel	3
142	Parallelogram of force apparatus	3
143	Planimeter	2
144	Parallel ruler soil brass bridge wheel and pupets steel	5
145	Edge binding machine	1
146	Drawing Board (815x585)	20
147	Set of model of penetration 1. Two cylinder penetrating at right angle. 2. Two cylinder with oblique penetration. 3. Cylinder-cone with oblique penetration. 4. Cylinder-cone with penetrating at right angle. 5. Two cone at right angle. 6. Two square prism at right angle. 7. Two square prism at oblique angle. 8. Spear and cone at center. 9. Engineering drawing model (cylinder cube, triangular prism, hexagonal prism, triangular pyramid)	 1 1 1 1 1 1 1 1 1
148	Slide crank mechanism (a) Reciprocating engine mechanism (b) Oscillating cylinder mechanism	 1 1

	(c) White worth quick return mechanism	1
149	Petrol Engine Model 4-stroke & Diesel Engine Model 2-stroke	2
150	Spring Dynamometer (Spring system based load sell type (0-500) kg Hydraulic Dynamometer (Hydraulic system based load cell type, 0-1000kg)	3
151	Motorized Gyroscope	1
152	Static & Dynamic Balance Apparatus	1
153	Air Conditioning Tutor	1
154	Moment of Inertia of Flywheel 15 cm, 20 cm, 25 cm dia.	3
155	Window Air Condition Cycle Test Rig	1
156	Ice Plant Tutor-30Kg	1
157	Computerized Multi-Fuel Research Engine Test Setup	1
158	Water cooler test ring	1
159	Experimental cold storage trainer	1
160	Cut section model of compressor	1
161	Workshop apparatus : Fitting vice 3" bench vice, Lag vice 6", Pipe vice 2", Universal marking gauge 9", Surface plate 8"x12", Smith hurth 24"x30"x6", Anvil 1.5 wt (London pattern), Earn steel 7"x7"x12", Swage block 12"x12", Metal lathe mate true chuck 9", Refractory Furness 9"x4"x4" 1200 C,	5
162	Lathe machine 1370 mm bed length S.S. & S.C. V-belt driven, fitted with Norton gearbox	2
163	Sand mixture capacity 3 kg	1
164	Wood surface planner 9"x48"(sarswati brand) with accessory	1
165	Fobars digital micrometer M 0-25	1
166	Contech Electonic Balance Model CP-2T/500 Capacity-2Ton, Accuracy-500gm. Platform Size-1200x1200mm	1
167	CNC Turning Center Model DX 200 with Isolation Transformer and with all standard accessories and electricals Lathe Machine 4.5" size 8" through chuck Lath machine (1000x300)	1 4 2
168	Variable speed gear boxes	7
169	Digital Techometer 0to10000 RPM	1
170	Wood working machine, Hacksaw machine	2
171	Mechanical starrer	1
172	Barbed wire making Machine	2
173	Shaping Machine	1
174	MIG (250) Welding Machine	1
175	Milling machine	1
176	S.E.W. Brand Pllar Drilling Machine.	1
177	All Geared type Shaping machine	2
178	Bench Grinder, Hand grinding machine 715 watt, 1200 rpm	2
179	Lawn mover Make/Model: Makita EL4110	1
180	Portable Welding Machine(ESSAB), Rocker arm Spot Welding Machine	2
181	Smith Hearth With Blower	1
182	Chain link Fence making machine	1
183	Vertical Milling machine	1

DEPARTMENT OF PROCESSING AND FOOD ENGINEERING

Table 94. Details of major Labs of Department of Processing and Food Engineering

Sr. No.	Name of Laboratory	Area (m x m)	Working capacity
1	Biochemistry laboratory	15.0 x 8.0	50
2	Drying laboratory	12.0 x 8.0	50
3	Engineering Properties laboratory	12.0 x 8.0	50
4	Size Reduction laboratory	12.0 x 8.0	50
5	Storage laboratory	12.0 x 8.0	50
6	Electrical Engineering Laboratory	12.0 x 9.0	50
7	Crop Process Engineering Laboratory	12.0 x 9.0	50
8	Workshop	12.0 x 10.0	50
9	Mango Canning Plant	24.0 x 10.0	50
10	Pulse Milling Plant	20.0 x 5.0	50

Table 95. Major equipment of Department of Processing and Food Engineering

Sr. No.	Equipment Name	No. of equipment
1	Electronic top loading Balance	1
2	Specific gravity Separator	1
3	Deck Assembly for large seed	1
4	Deck Assembly For small seed	1
5	Stoner Deck Assembly	1
6	Hot air Oven	1
7	Seed huller	1
8	Tablet hardness tester	1
9	Weighing scale 10 kg capacity	1
10	Digital anemometer	1
11	Fluid type bed dryer	1
12	Tray dryer	1
13	Digital electronic dial vernier calliper	1
14	Bulk density apparatus	1
15	Digital stroke counter with reset and alarm system	1
16	Fruit and vegetable slicer	1
17	Muffle Furness	1
18	Penetrometer	1
19	Microwave oven	1
20	Data Logger	1

21	Data logger system with data receiving unit and printing device	1
22	Mango canning plant	1
23	Digital Electonic Top Loading Balance	1
24	Digital constant temperature water bath capacity 30 liter	1
25	Digital fruit firmness	1
26	Milk analyser	1
27	Tomato processing plant	1
28	Dehydration plant with Sorting Table (Belt Conveyor), Rotary Fruit & Vegetable Washing Machine, Blancher, Dicing & Cubing Machine, Dehydrator	1
29	Pre-cooling room walk in Cooler Room Size 3.65m x 2 3.65m x 23.05 m (H), capacity 2.5 tonmes	1
30	Cold storage room Size 7.01 m x 23.35m x 23.3528, capacity 20 tonnes	1
31	LCD Projector	1
32	Microscope	1
33	Laminar flow cabinet with SS table accessories for laminar flow, Transparent front door, static manometer, UV light for laminar flow, cock for gas or vacuum line	1
34	Ripening chamber	2
35	Pulper	1
36	Homogenizer	1
37	Groundnut pod grader model	1
38	Cumin cleaner cum grader model	1
39	Fruit grader model	1
40	Aloe Vera gel extractor machine model	1
41	Multicrop cleaner cum grader model	1
42	Onion grader model	1
43	Digital humidity temperature meter with infrared thermometer	2
44	Digital portable hand refractometer 0-55 brix	2
45	Digital portable hand refractometer 58-92 brix	1
46	Digital portable hand refractometer 0-70 brix	1
47	Ph meter	1
48	Ribbon blender	1
49	PDKV Mini Dall Mill	1
50	Pulse milling plant	1
51	Incubator cum mixer	1

52	Digital vernier caliper 0-200 mm LC 0.02	1
53	Digital vernier caliper 0-300 mm LC 0.02	3
54	Grain moisture meter	1
55	Spectrophotometer	1
56	Machine vision based colour sorting system machine vision	1
57	Three pan jaggary making machine	1
58	Desktop work station	1
59	Digital thermo hygrometer	2
60	Digital GSM tester	5
61	Digital thickness gauge	5
62	Drop tester	1
63	Forced convection apparatus brass tube	1
64	Fruit penetrometer	2
65	Fruit juice extractors	2
66	Stem jacketed kettle	1
67	Precision circulation waterbath	2
68	Continuous microwave dryer	1
69	Vapour absorption test apparatus	1
70	Thermal conductivity of liquid	1
71	Thermal conductivity measuring apparatus for metal rod.	1
72	Thermal conductivity measuring apparatus for powder	1
73	Automatic mild steel sieve shaker	1
74	Indented cylinder grader	1
75	Peanut flour base thabdi penda machine	1
76	Ultraviolet C Chamber for sapota	1
77	Vacuum packaging machine	1
78	Texture analyzer	1
79	Freeze dryer	1
80	Deep Freeze	1
81	Vacuum Heat Air Dryer	1

DEPARTMENT OF RENEWABLE ENERGY ENGINEERING

Table 96. Details of major Labs of Department of Renewable Energy Engineering

Sr. No	Name of laboratory	Area (m x m)	Working capacity
1	Biomass Gasification Lab.	15.0 x 8.0	50
2	Solar Energy Lab.	9.60 x 7.60	50
3	Bioenergy Lab.	9.20 x 7.60	50
4	Wind Energy Lab.	15.25 x 7.60	50
5	Physics lab.	12.15 x 7.60	50
6	Chemistry lab.	12.30 x 7.60	50
7	Civil Engg. Lab.	7.60 x 9.10	50
8	Ultramorden Communication Lab. (Language Lab.)	7.60 x 9.10	50
9	Experiential learning for production and management of RSE lab.	7.60 x 9.10	50
10	AICRP on PEASEM Lab.	12.15 x 7.60	50

Table 97. Major Equipment of Department of Renewable Energy Engineering.

SN	Equipment Name	No. of Equipment
1	Sunshine recorder	1
2	Biomass gasifier plant (down draft)	1
3	Rockwell hardness testing machineSurveying equipment	1
4	Wind pump	1
5	Hot air oven	1
6	Precooler	1
7	L. C. D. projector	2
8	Plate bending machine	1
9	Shearing machine	1
10	Precision lathe machine	1
11	Modern workshop facility for fabrication of solar appliances	1
12	Modified atmosphere packaging machine	1
13	Shrink wrapping machine	1
14	Muffle furnace	2
15	Solar precision pyranometer with data logger	2

16	Solar PV pump	1
17	Zener characteristic circuit	1
18	B.O. D. incubator	1
19	Dissolved oxygen meter	1
20	C.O.D. digestion apparatus	1
21	Water bath	1
22	Computerized UTM 100-ton capacity	1
23	Horizontal wind turbine	1
24	Gas Chromatograph	1
25	Solar PV Trainer	1
26	Biogas plant with burners	1
27	Solar Thermal Training System	1
28	Biogas Analyser	1
29	Pore Point Apparatus	1
30	Digital Gas flowmeter	1
31	Biogas flow meter	1
32	Wind turbine Emulator	1
33	Wind Energy Training System	1
34	Biomass Briquetting Machine	1
35	Pyrheliomter with datalogger	1
36	Solar Concentrator Training system	1
37	E/M apparatus	1
38	LCR circuit	1
39	Biomass gasifiers	4
40	50 kW solar power plant	2
41	Bomb calorimeter	2
42	Junker's calorimeter	2
43	Lab-scale Biodiesel plant with major properties measurement apparatus (Flash point, Density, Viscocity etc.)	1
44	JAU Model Agri-voltaic System (13.5 kW)	1
45	load testing machine (electronic)	1
46	Willy mill	1
47	10 kW Solar Hybrid Inverter	1
48	Pellet making machine	1
49	Hybrid Solar PV plant (6.2 kW)	1
50	Solar Tracking Robot	1

51	Portable I-V checker for SPV plant	1
52	Vertical wind turbine	2
53	Spectrum-Temperature/Humidity Model No. 1250	2
54	Plant Growth Station	1
55	Automatic Methane potential test system	1
56	Compact Weather Station	1
57	Interactive Display Panel	2

Table 98. Farm facilities available at of Department of Renewable Energy Engineering

Sr. No.	Name of the Department	Farm area	Irrigated/ Non-irrigated	Crops grown
1	Renewable Energy Park	3048 sq. m	Irrigated (only Agri-voltaic system)	Crops as per objectives of the experiment
2	Greenhouse park	4228 sq.m	MIS Irrigation	Crops as per objectives of the experiment

- JAU Model Agri-voltaic structure, Polycarbonate greenhouse structure and different types of greenhouse structure developed for research at Instruction Farm, CAET at Junagadh.

RESEARCH SCHEMES/PROJECTS IN THE COLLEGE

The college is conducting departmental research through various research schemes sponsored by ICAR and Governement of Gujarat. The college has four All India Coordinated Research Project (AICRP) and one CRP on energy from agriculture funded by ICAR and 1 Remote Sensing and Geoinformatics Center funded by Gujarat Governement as bellow:

1. ICAR Funded AICRP on Irrigation Water management
2. ICAR Funded AICRP on Farm Implements and Machinery
3. ICAR Funded AICRP on Post-Harvest Engineering and Technology
4. ICAR Funded AICRP on Plastic Engineering in Agriculture Structures and Environment Managment
5. ICAR Funded AICRP on Consortia Research Platform (CRP) on Energy from Agriculture
6. Government of Gujarat state funded Center of Remote Sensing and Geoinformatics in Agriculture

All above schemes/projects are presently being operated under the college and contributing the research in the respective fields. Moreover, under state plan scheme a research project on Proposal for Research on Watershed Management and an advance centre on Remote Sensing and Geo-Informatics in Agriculture, funded by Government of Gujarat is

undertaken by Soil and Water Engineering Conservation Department. The Department of Processing and Food Engineering has one scheme of Research on PHET of Important Crops of Saurashtra, CAET, JAU, Junagadh under state plan scheme. The faculty of Agricultural Engineering has so far released 161 number of research recommendations for the benefits of farmers and entrepreneurs/industries.

The research recommendations are passed on to the Directorate of Agriculture, Government of Gujarat by the Junagadh Agricultural University for onward transfer of the technology to the farmers. The feedback from the farmers which is the impact of research indicates that the cost of cultivation has reduced, timeliness of field operation, removed drudgery of farming, efficient utilization of inputs including irrigation water and reduction in post-harvest losses.

6.5.6.2 RESEARCH CONTINGENCY

The research contingency is allotted by the University under various schemes which is utilized by the college and the departments for agricultural PG research and staff research as when required. The grants allotted are fully utilized by the different departments for the purpose for which it has been allotted. During financial year (2025-26) Rs. 188.25 lakh is allotted under various schemes which is used commonly for UG, PG and Ph.D. research as well as for other requirements of the college. Sufficient grants are available to cater the need of UG, PG and Ph.D. research of students as well as the faculty research and even additional grants may be allocated by the university if required.

Further the grant allotted by ICAR under SAU are also utilized properly based on the needs of different departments. Proper planning has been made for utilization of grants to the full extent. Apart from this every department has one AICRP scheme of ICAR which also supports in faculty research programmes.

Table 99. Details of grant allocation for the different schemes (2025-26)

Sr. No.	Name of schemes	BH	Annaul RC allocation
1	Establishment of College of Agril. Engg. & Tech.	711500	1420000
2	Centre of Remote Sensing and Geo-Informatics in Agriculture at College of Agricultural Engineering & Technology	1202400	690000
3	Strengthening of College of Agril. Engineering & Technology	1211500	7496000
4	Strengthening of Instructional Farm at CAET	1212000	1720000
5	Strengthening of Renewable Energy and Rural Engg. of CAET, JAU, Junagadh	1212100	870000
6	Strengthening of UG Programme of CAET JAU	1212200	200000

7	Strengthening of Dept. of Processing and Food Engg at CAET JAU	1212300	170000
8	Establishment of Instructional Farm of CAET	1212700	1900000
9	PG Programme in CAET at JAU, Junagadh	1256600	760000
10	Research on PH. T. Of Impro. Crops of Saurashtra, CAET, JAU., Junagadh	1257600	320000
11	Student Facilities, Agril. Engineering College, Junagdh	1286500	150000
12	Proposal for Watershed Management at SWE, Engg College, Junagadh	1290500	290000
13	Establishment of Extension Edu. at CAET	1292900	320000
		Total	16306000
AICRPs' Schemes of ICAR			
1	AICRP on Post-Harvest Engineering Technology, JND	225800	800000
2	AICRP on Irrigation and Water Management At C A E T, Junagadh	022580A	73332
3	AICRP on Plasticulture Engineering & Technology	022580B	533333
4	AICRP on Farm Implement & Machinery at CAET, Junagadh	022580D	399999
5	Consortia Research Platform (Crp) on Energy from Agriculture at CAET	226000	712673
		Total	2519337

Table 100. Internal resources during last 5 years (Rs in Lakhs)

Sr. No.	Source	2020-21		2021-22		2022-23		2023-24		2024-25	
		Amount (Rs.)	%	Amount (Rs.)	%	Amount (Rs.)	%	Amount (Rs.)	%	Amount (Rs.)	%
1	Farm including Dairy, poultry *etc.*	37.87	17.77	29.88	10.41	31.15	15.20	46.32	13.21	33.51	10.58
2	Student Fees	68.83	32.29	66.91	23.31	60.56	29.55	56.97	16.24	53.32	16.83
3	Consultancy	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
4	Hiring out college facilities	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
5	Funds raised by Alumni Groups	0.34	0.16	0.31	0.11	0.59	0.29	4.84	1.38	0.41	0.13
6	Farm Machinery Testing Fee	106.13	49.79	189.89	66.17	112.66	54.97	242.58	69.17	229.56	72.46
Total		**212.8**	213.2	100	287.0	100	205.0	100	350.7	100	316.8

RESEARCH OUTCOMES

Table-101. The details of the technologies developed/ patented /commercialised by CAET, JAU, Junagadh

SN	Name of technologies	Status of Developed Technology (Filed/Published/Registered/ Commercialized)
1	A Grain Treater for Pre-Milling Enzymatic Treatment to Pigeon Pea	Patent Granted No. 470670 Date : 20/11/2023 and Commercialized
2	Foldable Container for Storage and Transportation of Agriculture Produce	Registered Patent No. 404866 Granted on Date: 29/08/2022
3	Open Core Throat Less Downdraft Biomass Gasifier	Registered design No. : 394622-001 Granted on date: 07/09/2023
4	Design of Modular Plastic Block	Filed App. No. 445105-001
5	Design of Agrivoltaic Greenhouse	Filed App. No. 445108-001
6	JAU model Agrivoltaic System	Filed App. No. 353048-001
7	A Process of Enzymatic Pre-Treatment on Varieties of Pigeon Pea	Patent Granted No.: 486988, Date : 21/12/2023
8	Pomegranate Juice Extractor	Patent Granted No.: 506284, Date : 01/02/2024
9	A Sesame Dehulling Machine	Filed Patent App. No. 202121050203; EMP/E-1/56910/2021-MUM
10	Batch Type Biomass Pyrolyser	Registered design No.: 370646-001, Granted on date: 12/09/2022
11	An Integrated Grinding Chamber with Temperature-Controlled Cooling System	Filed application No. 202521050847, 27/05/2025 Publication date: 20/07/2025
12	A Natural Ice-Cream Enriched With Freeze-Dried Dragon Fruit Powder And Its Method	Filed application No. 202521070918 Dated 25/07/2025 Publication date: 08/08/2025
13	Pneumatic Left-Over Groundnut Pod Collector	Registered Design No.: 423827-001 Date : 04/11/2024
14	Unmanned Mechatronic Precision Planter	Registered Design No.: 435749-001 Date : 06/02/2025
15	Inverse Gravity Flow Roof Water Harvesting Filter System With Self Cleaning Mechanism and Methods Thereof	Published in Patent office Journal No 37/2025, Date: 12/09/2025., Patent App. No.202521082242
16	Map of Groundwater Potential Recharge Zones (GWPRZs) in Gujarat.	Filed for copyright,

		Dairy Number : LD-40382/2025 - CO
17	Water Gas Shift Reactor	Registered International design No.: 6452052, Date: 27/06/2025
18	Hydrothermal Assisted Dehulling Process for Varieties of Sesame Seeds	Filed Patent App. No. 202421085963, TEMP/E-1/99691/2024-MUM

6.5.7 OUTCOME / OUTPUT

6.5.7.1. STUDENT PERFORMANCE IN NATIONAL EXAMINATION

Final-year UG, PG, and Ph.D. students are competing in various national-level examinations, and many of them are achieving success. In Gujarat, students tend to be entrepreneurial, so many graduates prefer to work in private industry for the first two to three years. After gaining sufficient market and business experience, they often start their own ventures. This may be one of the reasons why a slightly smaller number of students participate in competitive examinations. The graduates who have succeeded in various national-level examinations are as follows;

Table 102. Students passed various national level examinations

Year	JRF		SRF		ARS/NET		GATE		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
2020-21	2	22.22	0	0	0	0	7	77.78	9	100
2021-22	0	0	0	0	5	45.45	6	54.55	11	100
2022-23	5	41.67	3	25	1	8.33	3	25.00	12	100
2023-24	5	83.33	0	0	0	0	1	16.67	6	100
2024-25	0	0	0	0	0	0	2	100	2	100
Grand Total	**12**		**03**		**06**		**19**		**40**	

6.5.7.2. STUDENTS PLACEMENT PROFILE

Table 103. Year wise students' Placement Profile

Year	Passed out	GATE/ARS/NET/ Management Courses / NET /CAT / SRF	Placements in corporate sector
2020-21	72	9	32
2021-22	99	11	41
2022-23	81	12	29
2023-24	81	6	37
2024-25	64	2	41
Total	**397**	**40**	**180**

Table 104. Summary of the UG placement (Year:2020-21 to 2025-26)

Sr. No.	Recruitment status in various sectors	2020-21	2021-22	2022-23	2023-24	2024-25
a)	Joined in Government Services	1	0	0	0	0
b)	Joined in Industry	32	41	29	37	41
c)	Self-employed: Business	3	9	2	5	3
d)	Further Education	0	0	22	0	12
e)	Semi Govt. /Bank/NGO	0	1	0	2	0
f)	Preparing for competitive examination	36	48	28	37	8
	Total	**72**	**99**	**81**	**81**	**64**

Table 105. Summary of the M.Tech (Agril. Engg.) Placement (Year:2020-21 to 2024-25)

Sr. No.	Recruitment status in various sectors	2020-21	2021-22	2022-23	2023-24	2024-25
a)	Joined in Government Services	10	3	4	4	0
b)	Joined in Industry	5	3	2	5	6
c)	Self-employed: Business	1	0	1	0	0
d)	Further Education	2	4	9	2	1
e)	Semi Govt. Bank/NGO	1	0	0	0	0
f)	Preparing for competitive examination	1	5	0	0	5
	Total	**20**	**15**	**16**	**11**	**12**

Table 106. Summary of the the Ph.D (Agril. Engg.) Placement (Year:2020-21 to 2024-25)

Sr. No.	Recruitment status in various sectors	2020-21	2021-22	2022-23	2023-24	2024-25
a)	Joined in Government Services	2	2	7	5	4
b)	Joined in Industry	1	2	2	4	4
c)	Self-employed: Business	0	1	1	0	0
d)	Further Education	0	0	0	0	0
e)	Semi Govt. /Bank/NGO	0	0	0	0	2
f)	Preparing for competitive examination	0	1	0	2	2
	Total	**3**	**6**	**10**	**11**	**12**

Table 107. List of achievers Alumni of the College

Sr. No.	Position & Name	No.
A	**High profile entrepreneurs**	**17**
1	Ramesh D. Khichadia, Chairman & Managing Director, CAPTAIN group, Rajkot	
2	Butalal Bhatiya, Director, Samarth Agriculture Private Limited, Bhopal	
3	Dudhatra Narendra P. CMD, Paragon Synthetics and Polymers, LTD, Vadodara	
4	Donga Rakesh D., CMD, Donga Watertech pvt. Ltd, Ahmedabad	
5	Vanalia Suresh P., Director, Tri-Arc Enterprise Co.. Ltd., Bangkok	
6	Suraj Savaliya, CMD, Patsons Agro Processing Ltd. And Green Fiber, Navsari, Gujarat.	
7	Vekaria Lalji G., MD, Sarsadr Irrigation System Ltd., Junagadh	
8	Harshadbhai Rupareliya, MD, Rainmark Polymers, Rajkot	
9	Akabari Manshukhlal M., Director, Deccan Green House and Irrigation Pvt. Ltd., Surat	
10	Manubhai Prajapati, CMD, Truevalue Irrigation System, Veraval	
11	Mukesh Vora, MD, Madav Polymers, Rajkot	
12	Hitesh Kyada, Director, Bhuva Polyplast Pvt. Ltd., Rajkot	
13	Sakhia Sureshbhai B., Director,Jalganga Irrigation, Rajkot	
14	Hardik Rokad, Founder MD, Lexwell Purification, Raipur, Chhattisgarh.	
15	Haresh Movaliya, Growpat Industries, Rajkot.	
16	Jay Kapuria, Director, M/s Tark International, Rajkot	
17	Faldu Yagnik, Director, M/s Tark International, Rajkot	
B	**IIM graduates holding Key positions in India & Foreign countries**	**02**
1	Kaushlendra,Founder MD, Kaushalya Foundation, Patna ; Agriculture Advisor to CM,Bihar.	
2	Nishant Singh, GIS counsultants, UK.	
C	**Working abroad (in USA, Germany, Switzerland, Canada, Thailand etc.)**	**50**
1	Butani Kishor, M., CEO and MD, Robatech India and Director, Robatech Group, Switzerland,	
2	Prof. Vinay Nangia, Research Program Leader – Soil, Water, and Agronomy International Center for Agricultural Research in the Dry Areas (ICARDA),Morocco and Adjunct Faculty, Texas A&M University, USA and Visiting Professor, Arid Land Research Center, Tottori University, Japan.	
3	Navreet Kaur, Head Strategic Partnerships, Sustainability (Google Technical services, gTech), Google, Mountain View, USA.	
4	Rashmi Dinesan, Business Development Lead, Yugabyte, Singapore	
5	Naik Rakeshkumar Ishvarlal, Managing director, Nature race investment, Botswana, USA	
6	Patel Paresh M., Director, Renewable Energy Tech. Arkansas State University, USA	
7	Sindhav Birud G., Professor, College of Business Administrarion, St. Uni. of Nebraska, Omaha, USA	
8	Dr. Amit Sehgal, Vice President & General Manager - Asia , Middle East and Africa, Company: Avantor Performance Materials Pvt Ltd, Singapore.	
9	Jigar Joshi, Operations Manager, Rolan Plants Farm, USA	
10	Pandya Kamlesh M., Busineess, Canada	
11	Chavada Chandrapal Sinh G., Graduate Research Assistnat, Mississippi State Uni., USA	

12	Pathak Tapan B., MS Agril. Engg., Utah State Uni., USA	
13	Bharodia Nehal Kumar R., Indian University of Pennsylvania, USA	
14	Raghuveer Kaushik V., Dept, of Biological and Irrigation Engg., Utah State Uni., USA	
15	Rawat Veerendra, TCS, Australia	
16	Sindhav Birud G., Prof., College of Business Administrarion, St. Uni. of Nebraska, Omaha, USA	
17	Pathak Tapan B., MS Agril. Engg., Utah State Uni., USA	
18	Patel Ketul D., Business, Green House Grower, South Australia	
19	Gajera Kalpesh K. , Business, Devine Handicraft, Australia	
20	Patel Jaynil, Business Analyst, ECOM Trading Dallas, Texas, US	
21	Mirza Samirahmed, Netherlands	
22	Manisha Savaliya, Dubai	
23	Budharani Bharati, USA	
24	Balani Punam, Dubai	
25	Patel Saurabh, Newzeland	
26	Jenifer Christian, USA	
27	Aditya Pankhaniya, Austraslia	
28	Tailor Krunalkumar R., Landscape and Irrigation Engineer, Asklan trading, Qatar	
29	Kalathiya Harshad R., Production Manager, Everflora Ltd, Ruiru, Nairobi	
30	Pandya Abhimanyu, Canada	
31	Vaghasiya Sagar, Austrelia	
32	Bhavesh Donda, Agro-Paris- Tee, France	
33	Navreet Kaur, Head, Strategies & Parterships, Google, USA	
34	Pankaj Kumar, Infosys, Germany	
35	Paramjeet Kaur, USA	
36	Ismit Kaur, Canada	
37	Rawat Veerendra, TCS, Australia	
38	Jigar Joshi, Operations Manager, Rolan Plants Farm, USA	
39	Jay Sisodiya, Canada	
40	Milan Kathiriya, Canada	
41	Nirmal Rakholiya, Canada	
42	Hirjani, USA	
43	Pratik Jethwani, Australia	
44	Dipen Dave, Australia	
45	Sanjay Khunt, MNC, Germany	
46	Paresh Gagalani, Adani Port	
47	Jay Maru, Australia	
48	Bhammar Danubhai, Germany	
49	Bhesaniya Ramesh, Electric Project O & M, FT Service, Fort Mcmurry, Alberta, Canada	
50	Er Terfin Chandra, Process Engineer, ConAgra MNC, USA	
D	Key positions holder	26
1	Er. Ashokbhai Dayani, Asst. Vice President - Sales & Marketing, Head, Gujarat, Maharashtra and South India, New Swan Multitech Ltd., Ludhiana.	
2	Chandrakant Kumbhani, Chief Operating Officer, Ambuja Foundation, Ahmedabad	
3	Chirag Ramanbhai Amin (IFS), DCF, Morbi	
4	Viren Maheta, Assistant Commisioner, GST, Ahmedabad	
5	Jay Chothani, Program Analyst, WellsFargo, Hyserabad	
6	Gurang Bhesaniya, RFO, Forest Department, Gandhinagar	

7	Abhishek Malaviya, Maeketing Managener(International) Tirth Agro Equipment, Rajkot.	
8	Pund S, Sr. Manager, Bolero Div, Mahindra and Mahindra, Mumbai	
9	Bagada Sunil Keshubhai, Chief Manager, Punjab National Bank, Hyderabad, Telangna.	
10	Rathore Chandersingh, DGM, IDBI BANK, Mumbai	
11	Savaliya Kalpesh premjibhai, DGM, SBI, Lodhika Rajkot.	
12	Dangar Divyesh, Manager, SBI, Vathali	
13	Nilesh Mungra, Director, Captain Polyplast Limited	
14	Rashik Ambaliya, Director, Balson Polyplast Pvt Ltd, Rajkot	
15	M B Pithiya, Technical Director, GGRC Ltd, Vadodara.	
16	Sanjay Dwivedi, Sr. Manager, TAFE, Chennai	
17	Pramod Rikhi, DGM, John Deer India Pvt, Ltd, Ludhiana	
18	Vijay Rathor, Sr. Manager, Netafim, Guj.	
19	Dr. K. C. Patel, Director, IT, JAU, Junagadh	
20	Dr. G R Patel, Registrar, Anand Agriucltural University, Anand	
21	Dr. H. D. Rank, Principal & Dean, CAET, JAU, Junagadh	
22	Dr. V M Modi, Principal & Dean, Principal and Dean, College of Renewable Energy & Envirnmental Engineering, Sardarkrushinagar Dantiwada Agricultural University,Sardarkrushinagar, Gujarat.	
23	Dr. H R Vadar, Principal, ASPEE College of Agriuclture, JAU, Khpata, Porbandar.	
24	Dalsukh Vaghasiya, General Manager, Ambuja Foundation, Kodinar, Gir Somnath, Gujarat 36271	
25	Anita Yadav, Project Director, Grameen Foundation For Social Impact , Lucknow Uttar Pradesh India.	
26	Bapodaria Kiritkumar, AGM, Ahmedabad District co op Bank ltd, Ahmedabad	
E	**Consultants**	**9**
1	Joshi Jyotilkumar V., Shivam Irrigation and Consultant, Jamnagar	
2	Joshi Yogeshkumar B., Agro Servise Centre, Danshura, Sabarkantha	
3	Patel Vipinbhai R, Agri Business Centre, Balasinor	
4	Patel Mahesh Kumar M., Kishan Vikash Kendra, Mahesana	
5	Amit Savalia , Consultant, Organic farming	
6	Jaydeep Savaliya, Khedut Hat, Organic Farming	
7	Pankaj Ramoliya, Consultant Chilly farming	
8	Pankaj Dholaria, Mall of Agri and General Products	
9	Pinakin Maru, Consultant, Lakshyam Academy, Rajkot	

6.5.7.3 AWARDS / RECOGNITIONS / CERTIFICATES RECEIVED BY

A. RANKING OF THE COLLEGE IN BEST ENGINEERING COLLES OF INDIA

College of Agricultural Engineering and Technology, JAU, Junagadh is the only Agricultural Engineering College in the country participating in the ranking survey of Best Engineering Colleges in India conducted by GHRDC magazine every year. It is a profound previlage that the college has improved its ranking every year since last 14 years. In the survey of year-2025, the college ranked 2nd in Gujarat state after Nirma Institute of

Technology, Ahmedabad and at national level ranked 1st in the 6th category of Ranking of Engineering Colleges of Outstanding Excellence in India and got overall 21st ranking at National Level. The college ranked 4th in the West region of India. It is a matter of proud for the institute. The year wise ranks achieved by the college during last five year 2020 to 2025 are presented in tabular form below.

Table 108. Year wise ranking of the college in GHRDC survey

Year	Rank in Gujarat State	Rank In India
2020	2nd	Ranked 22nd in the 4th Category of Outstanding Engineering Colleges of Excellence. Overall 63rd Rank at India level
2021	2nd	Ranked 5th in the 4th category of Outstanding Engineering Colleges of Excellence. Overall 47th Rank at India level
2022	2nd	Ranked 1st in the 5th category of Outstanding Engineering Colleges of Excellence. Overall 45th Rank at India level
2024	2nd	Ranked 1st in the 6th category of Ranking of Engineering Colleges of Outstanding Excellence. Overall in 22nd ranking at National Level and 5th in the West region of India.
2025	2nd	Ranked 1st in the 6th category of Ranking of Engineering Colleges of Outstanding Excellence. Overall 21st ranking at National Level and 4th in the West region of India.

B. STUDENTS' RECEIVED THE MEDALS OF JUNAGADH AGRICULTURAL UNIVERSITY IN LAST FIVE YEARS

Table 109. List of students' received the medals of Junagadh Agricultural University

Sr. No	Name of the Award / Recognition / Certificate	Name of recipient Student				
		2020-21	2021-22	2022-23	2023-24	2024-25
1	Chancellor's Gold Medal for Master Degree in Other than Agricultural Faculty	--	Rakshit Nileshkumar Vasoya	--	Kuldeep P. Naghera	Chocha Dhruv

2	Vice Chancellor Gold Medal for B.Tech (Agril. Engg.) Degree	Patoliya Jenish Arvindbhai	Chocha Dhruv	Kamal V. Charan	Patel Sushant Bharat	Aditya Kumar Soni
3	Late Shrimati Kamlaben Jagjivanbhai Gondhiya, Shilpin Electronic, Junagadh Gold Plated Silver Medal	Patoliya Vivek Maheshbhai	Babariya Parth Pravinbhai	-	-	-
3-A	Late Shri Pravinbhai Jagjivanbhai Gondhiya, Shilpin Electronic, Junagadh Gold Plated Silver Medal	-	-	Kamal V. Charan	Priyanshu Agrawal	Pradeep Singh Parihar
4	Dr. Shailesh V.Makadia, Gold Plated Silver Medal	Patoliya Vivek Maheshbhai	Babariya Parth Pravinbhai	Kamal V. Charan	Priyanshu Agrawal	Pradeep Singh Parihar
5	Dr. JS Patel Memorial ISAE Gold Plated Silver Medal	Patoliya Vivek Maheshbhai	Pandya Hardik Hemanshubhai	Kamal V. Charan	Priyanshu Agrawal	Kshitij Kumar
6	Shri MM Patel (Morbi), Ex. Agricultural Engineer Gold Plated Silver Medal	Patoliya Vivek Maheshbhai	Pandya Hardik Hemanshubhai	Kamal V. Charan	Priyanshu Agrawal	Kshitij Kumar
7	Lord Shree Krishna Memorial Gold Plated Silver Medal	Patoliya Vivek Maheshbhai	Pandya Hardik Hemanshubhai	Kamal V. Charan	Priyanshu Agrawal	Kshitij Kumar
8	Captain Polyplast Ltd., Gold Plated Silver Medal (highest OGPA)	Patoliya Vivek Maheshbhai	Pandya Hardik Hemanshubhai	Kamal V. Charan	Priyanshu Agrawal	Kshitij Kumar
9	Captain Polyplast Ltd., Gold Plated Silver Medal (highest GPA in IDE)	-	-	-	-	Ritu Raj
10	CAET Alumni Association Gold Plated Silver Medal (highest GPA in SWCE)	Patoliya Vivek Maheshbhai	Pandya Hardik Hemanshubhai	Kamal V. Charan	Priyanshu Agrawal	Kshitij Kumar
11	CAET Alumni Association Gold Plated Silver Medal	-	-	-	Dhruvi Jagdish Asodia	Aditya Kumar Soni

	Overall performance (OGPA + Extra curriculum activities)					
12	Shri BJ Desai, Ashutosh Enterprise, Junagadh Gold Plated Silver Medal	Patoliya Vivek Maheshbhai	Pandya Hardik Hemanshubhai	Kamal V. Charan	Priyanshu Agrawal	Kshitij Kumar
13	Er. Gunvantrai I. Bhatt & Smt. Ramanbala Bhatt's Late Parents Smt. Narmadaben & Ichhashanker Bhatt Memorial Gold Plated Silver Medal	Patoliya Vivek Maheshbhai	Pandya Hardik Hemanshubhai	Kamal V. Charan	Priyanshu Agrawal	Kshitij Kumar
14	Param Poojya Pragdasbapa's Ramvadi No.1, Annakshetra Trust Junagadh & Atmiya Anantharsh Bhagvandas Memorial Trust, Juna Manka, Dist. Patan (NG) Gold Plated Silver Medal	Patoliya Vivek Maheshbhai	Vatsal Vishwakarma	Kamal V. Charan	Priyanshu Agrawal	Kshitij Kumar
15	Ex. V.C., Dr. N.C. Patel's Late Parents Surajben and Chandubhai Memorial Gold Plated Silver Medal	Patoliya Vivek Maheshbhai	Vatsal Vishwakarma	Kamal V. Charan	Priyanshu Agrawal	Kshitij Kumar
16	Late Smt. Kamladevi Uhamraj Mehta Gold Plated Silver Medal	Patoliya Vivek Maheshbhai	Chocha Dhruv	Kamal V. Charan	Mitkumar Maheshbhai Patel	Kshitij Kumar
17	Bhagwati Krushi Udhyog, Ahmedabad Gold Plated Silver Medal	Patoliya Vivek Maheshbhai	Chocha Dhruv	Kamal V. Charan	Mitkumar Maheshbhai Patel	Kshitij Kumar
18	Shri Hasmukhbhai G. Gohil (M.D) Tirth Agro Technology Pvt. Ltd., Rajkot Gold Plated Silver Medal	Patoliya Vivek Maheshbhai	Chocha Dhruv	Kamal V. Charan	Mitkumar Maheshbhai Patel	Kshitij Kumar

19	Late Malaykumar Dhirendrabhai Vaidhya Gold Plated Silver Medal	Patoliya Vivek Maheshbhai	Babariya Parth Pravinbhai	Indrajeet Dutta	Priyanshu Agrawal	Mihirkumar Laljibhai Patel
20	Late Jayendrabal (Mother) and Bhogilal (Father) of Shri Surendrabhai Vaidhya Cash Prize	Patoliya Jenish Arvindbhai	Babariya Parth Pravinbhai	Indrajeet Dutta	Priyanshu Agrawal	Mihirkumar Laljibhai Patel
21	Late Dr. D.K. Antala memorial Gold Plated Silver Medal	Patoliya Vivek Maheshbhai	Vatsal Vishwakarma	Kamal V. Charan	Priyanshu Agrawal	Kshitij Kumar
22	Prof. Abubakar H. Memon Gold Plated Silver Medal	--	Chocha Dhruv	Kamal V. Charan	Mitkumar Maheshbhai Patel	Kshitij Kumar

C. STUDENTS' RECEIVED THE AWARDS/ RECOGNITION /CERTIFICATE FROM VARIOUS ORGANIZATIONS

Table 110. List of students received the awards/ Recognition /Certificate in start-up idea

Sr. No.	Name of the Student	Name of the Award/ Recognition/ Certificate	Year	Awarding Academy / Institution /Organization
1	"Team Savaj" 25 UG Students of B.Tech (Agril. Engg.)	Best Debutant Team with 25,000 cash prize	May 2022	Technology Innovation Foram For Agricultural Nurturing (TIFAN)-2022





D. FACULTY RECEIVED THE AWARDS/ RECOGNITION /CERTIFICATE FROM VARIOUS ORGANIZATIONS

Table 111. List of faculty received the awards/ Recognition /Certificate from various organizations

Faculties received total 45 Awards in last 5 Years

Sr. No.	Name of the Teacher	Name of the Award / Recognition / Certificate	Year	Awarding Academy / Institution / Organization
1	Dr. P. R. Davara	Best Ph. D. Thesis Award	2020-21	GAAS, Ahmedabad
2	Dr. V. K. Chandegara	Best Teacher Award in Agricultural Higher Education for Agricultural Engineering Faculty	2020-21	Junagadh Agricultural University, Junagadh funded by NHEP, ICAR
3	Dr. P H Rank	Best Post Graduate Researcher Award – 2020 For Recognition Of His Outstanding Research And Quality Of The Master's Thesis	2020-21	Society For Biotic And Environment Research (Sber)
4	Dr. P H Rank	I2OR National Eminent Engineer Award For Outstanding Research And Quality In The Agricultural Engineering	2020-21	Field International Institute Of Organized Research (I2OR)
5	Dr. P H Rank	Young Researcher Award For The Research Work In Automation Of Pulse Drip Irrigation	2020-21	The Institute Of Scholars (INSC)
6	Dr. P H Rank	IRSD Prominent Young Aspirant Award For The Research Work	2020-21	IRSD And Western Sydney University And Wakelet, Mancherster
7	Dr. G. V. Prajapati	Awarded Best Sector Officer	2021	Returning Officer, 86-Junagadh Assembly Constituency and Prant Office, Junagadh
8	Dr. P H Rank	Uttam Lekh Award For Best Gujarati Article	2021	Krushi Govidya Magazine Of Anand Agriculture University, Anand
9	Dr. K. M. Gojiya	Poster presentation award	2021	Agri-Gujarat Expo
10	Dr. P H Rank	CII-SERB 'Prime Minister's Fellowship Award For Doctoral Research For Outstanding Ph.D. Research Study	2021	Science & Engineering Research Board (SERB), Department of Science & Technology, Government Of India

11	Dr. V. P. Sangani Dr. P. R. Davara	Best Article Award : Role of Enzymes in Food Processing	2021-22	Agriculture and Food : e-Newsletter, Vol. 3, Issue 10
12	Dr. P H Rank	Awarded for 2nd Best In Elocution Competition	2020-21	Junagadh Agriucltural University, Junagadh
13	Dr. P. R. Davara Dr. V. P. Sangani	Best Article Award : Application of High-Pressure Processing in Food Preservation	2021-22	Agriculture and Food : e-Newsletter, Vol. 4, Issue 2
14	Dr. P H Rank	Awarded for 3rd Best Poster Presentation	2021-22	Junagadh Agricultural University, Junagadh
15	Dr. P H Rank	Awarded for Best Poster Presentation 2021	2021	Junagadh Agricultural University, Junagadh
16	Dr. P. R. Davara	Best Teacher Award in Agril. Higher Education-2020-21 (Received on 08-01-2022)	2021-22	Junagadh Agricultural University, Junagadh
17	Dr. H. D. Rank	Reviewer Excellence Award	2022	Indian Journal of Agricultural Research, ARCC, Karnal
18	Dr. P. S. Jayswal	Appreciation Certificate	2022	Junagadh Agricultural University, Junagadh
19	Dr. P H Rank	Best Oral Presentation Award	2022	Navsari Agriucltural University, Navsari
20	Dr. P H Rank	Best Poster Presentation Award	2022	Navsari Agriucltural University, Navsari
21	Dr. P. S. Jayswal	Certificate of Appreciation" for Guest Speaker	2022	AAU, Dahod
22	Dr. G. V. Prajapati	Awarded Certificate of Excellence	2022	Returning Officer, 86-Junagadh Assembly Constituency and Prant Office, Junagadh
23	Dr. V. P. Sangani Dr. P. R. Davara	Best article award	2022-23	Agriculture and Food : E-Newsletter
24	Dr. K. C. Patel	Appreciation for the commendable thesis work of Ph.D. (Agril. Engg.) and Young Scientist Awar	2023	The Gujarat Association for Agricultural Sciences, Ahmedabad, Gujarat
25	Dr. P H Rank	Best ph.d. Thesis Award	2023	SGT University, Gurugram; Isahrd, Chandigarh And Just Agriculture Group
26	Dr. P. S. Jayswal	Best Paper Presentation - 2023" in International Conference on ICCGFLLES-2023	2023	NAU, Navsari & NADCL, Baramulla

27	Dr. G. V. Prajapati	Best Teacher Award in Agricultural Higher Education 2021-22	2023	Junagadh Agricultural University, Junagadh
28	Dr. P H Rank	Best Oral Presentation Award	2023	CCSHAU, Hissar, Haryana
29	Dr. K. M. Gojiya	Best Poster presentation award	2023	Indian Society of Agricultural Engineers (ISAE), New Delhi
30	Dr. K. M. Gojiya	Oral Paper presentation award	2023	Indian Society of Agricultural Engineers (ISAE), New Delhi
31	Dr. P. R. Davara	Appreciation letter for Constructing the curriculum and credit framework for the B. Voc. (Agro Processing) degree program	2023-24	Lokbharati University for Rural Innovation, Sanosara (Bhavnagar)
32	Dr. P. R. Davara	Certificate of Excellence in Reviewing-2023 (Paper Review)	2023-24	Journal of Advances in Food Science and Technology
33	Dr. P. R. Davara	Letter of Felicitation for Profound Performance and Achievement in the profession of Agril. Engg. (Dt. 02-12-2023)	2023-24	CAET Alumni Association, CAET, Junagadh
34	Dr. P. R. Davara	Certificate of Excellence in Reviewing-2024 (Paper Review)	2023-24	Archives of Current Research International
35	Dr. P. R. Davara	Certificate of Excellence in Reviewing-2024 (Paper Review)	2023-24	European Journal of Nutrition & Food Safety
36	JAU, Junagadh center	Best Centre Award - 2024	2024	AICRP on Plastic Engineering in Agriculture Structures & Environment Management (PEASEM)
37	Dr. S. V. Kelaiya	Best KVK Scientist - 2024"	2024	Joint venture of GNFSU, ICAR and other 9 institutes
38	Dr. S. V. Kelaiya	Best Poster Presentation Award	2024	JAU, Junagadh
39	Dr. G. V. Prajapati	Best Centre Award-AICRP on PEASEM	2024	ICAR-CIPHET Ludhiana
40	Dr. P. R. Davara	Certificate of Excellence in Reviewing	2024-25	Archives of Current Research International
41	Dr. P. R. Davara	Certificate of Excellence in Reviewing	2024-25	European Journal of Nutrition & Food Safety
42	Dr. P. R. Davara	Certificate of Excellence in Reviewing	2024-25	Journal of Advances in Food Science and Technology

43	Dr. P. H. Rank	Reviewer Excellence Award	2024-25	ARCC Journal Group, Karnal, Haryana
44	Prof. B. M. Devani	Best Teacher Award	2025	1st International Conference cum Expo on "HOAAF 2024", Dehradun, Ecofast AgriSolutions
45	Dr. S. V. Kelaiya	Best Oral Presentation Award	2025	Junagadh Agricultural University, Junagadh

6.5.7.4 EMPLOYABILITY

In Gujarat, people are generally more oriented towards business and entrepreneurship. Keeping this in mind, the UG and PG syllabi include various industrial training components. At the undergraduate level, under the Students READY Programme, students undergo several trainings, namely: 1) Skill Development Training – I, (2) Skill Development Training – II (3) Experiential Learning Programme (ELP) – Hands-on Training (4) In-Plant Training (5) Project Work. In addition, a 15-day educational tour is organized to visit various industries and institutions of Gujarat and neighboring states.

The students of the college are entrepreneur-oriented. Hence, many graduates initially prefer to work in private industries for two to three years to gain practical knowledge of markets and business, and later establish their own enterprises. They are particularly exposed to the production of farm equipment and devices, as well as strategies related to manufacturing, marketing, and business management. Students are encouraged to become entrepreneurs and self-employed, in addition to seeking employment in state and central government organizations.

The graduates of the college have an excellent track record and have contributed significantly to the agro-industries of the state and the country. Many alumni have become successful entrepreneurs, managing large-scale businesses in the field of Micro Irrigation Systems (MIS) in Gujarat. Notably, in the leading government agency for MIS the Gujarat Green Revolution Company (GGRC) a majority of the technical experts are alumni of the college. It is a matter of pride that, owing to the technical knowledge and sincere efforts of the alumni, Gujarat has emerged as a leader in MIS implementation in the country. As a result, around 23 lakh hectares have been brought under MIS, benefiting more than 12 lakh farmers.

Graduates have also established agro-processing units that add value to agricultural and horticultural products, thereby enhancing the country's food exports and increasing farmers' incomes. Some alumni have become successful consultants in the fields of

greenhouse and net-house design, as well as solar rooftop installation. These entrepreneurial ventures have further enhanced employment opportunities for agricultural engineering graduates.

To strengthen student preparedness, the college has conducted a series of lectures, personality development programmes, and seminars by prominent speakers on employment opportunities in agricultural engineering across private, public, and government sectors, both in India and abroad.

EXPERIENTIAL LEARNING PROGRAMME

Three Experiential Learning schemes: Hands on Training Agro Processing Centers for Value Addition and Technical Support Services, Design, Planning and Evaluation of Watershed and Production and Management of Alternative Renewable Energy are running in the college. Total 107 student intake capacity of Experiential Learning Programme.

STUDY TOUR

As per the curriculum recommended by the VI Deans' Committee, a 15-day study tour is conducted for 7th semester B.Tech. students. The tour is organized to one or two neighboring states outside Gujarat, such as Rajasthan, Haryana, Delhi, Madhya Pradesh, Maharashtra, and Uttar Pradesh. During the tour, students visit various research institutes/stations, agro-industries, farm machinery manufacturing units, educational institutions, dairy and breeding farms, soil conservation structures, and non-conventional energy research centers. The objective is to familiarize students with the latest developments and activities carried out by reputed institutions and organizations in the field of Agricultural Engineering.

















6.5.8 CERTIFICATE

I the Dean, College of Agricultural Engineering & Technology hereby certify that the information contained in Section 6.4 and Section 6.5 are furnished as per the records available in the college and degree awarding university.

July 16, 2026

(K . C. Patel)
Principal & Dean
College of Agril. Engg. & Tech.
JAU, Junagadh

Annexure-I

Feedback of industries, parents, students, farmers, visitors & others

Feedback of industries

Rainmark Irrigation Industries

Manu. and Supp. : Sprinkler/Drip Irrigation Systems and Fittings, HDPE Pipe, Plastic Valve and Fittings

Factory : Before : Jaipur Goldan Transport, Ruda Transport Nagar, B/h. Sat Hanuman Temple, Kuvadava Road, Rajkot. Yogeshbhai-98252 46540, Ashwinbhai-98252 71540
e-mail : info@rainmarkpolymers.com, Website : www.rainmarkpolymers.com

Ref. Date : 22/09/2025

To,
The Principal and Dean
College of Agricultural Engineering and Technology
Junagadh Agricultural University
Junagadh-362 001, Gujarat (INDIA)

Dear Sir,

I am happy that I have been asked by my parent institute College of Agriculture Engineering and Technology, Junagadh Agricultural University, Junagadh to give reviews as entrepreneur.

This skills on design,installation,operation and maintenance of various micro irrigation system and pressurized irrigation network system obtained by me during my graduation pressurized irrigation network system period are really helping me in every walk of my business like on micro irrigation system.

I also employed undergraduate students in my RainMark Polymers,Rajkot. The skilled manpower engaged by me are knowledgeable, skillful, smart, hard working and honest.

(Harshadbhai Ruparelliya)
Managing Director

captain Irrigation Systems

CAPTAIN POLYPLAST LTD.

REGD.OFFICE : UL-25, Royal Complex, Bhuikhana Chowk, Dhebar Road, Rajkot-360 002 (Guj.) India. Tele : +91-9909035390, +91-9909035391
H.O. & WORKS : Survey No. 267, Plot No. 10A, 10B & 11, N.H. No. 27, SHAPAR (Veraval), Dist. Rajkot-360 024 (Gujarat) India. Telefax : +91-2827-253006, 252056
web : www.captainpolyplast.com | e-mail : info@captainpolyplast.in
CIN NO. : L25209GJ1997PLC031985

Date: 23/09/2025

To Whomsoever It May Concern

Captain Polyplast Limited has recruited undergraduate and postgraduate students from CAET, Junagadh Agriculture University since many years. We are conducting recruitment from CAET through their campus placement program and through referrals from faculty as per our requirements.

We are very satisfied with the graduates/post graduated recruited from CAET. These students are having the necessary technical knowledge and skills for micro irrigation and other agriculture fields. The faculty also helps us by referring students as per our requirement. Thus, we prefer CAET over other similar institutions for recruitment.

I, Ramesh Khichadia, as also a graduate of this college. The technical knowledge I received from my curriculum and support of my faculty was instrumental in my journey as an entrepreneur and my success in the field of micro irrigation.

Regards,
Ramesh Khichadia

Chairman & Managing Director

AN ISO 9001:2015 COMPANY
MFG.: DRIP, SPRINKLER & MINI SPRINKLER IRRIGATION SYSTEM

An ISO 9001-2015 Certified Company

Bhoomi Agro HI TECH Pvt. Ltd.

Mfg Agriculture Equipment & Textile Parts

Survey No. 342 Paiki 1, Kalavad Road, Vill. Khirasara, Tal. Lodhika Dist. Rajkot- 360034 (Guj.)
Web. : www.bhoomiagroindustries.com, E-mail : info@bhoomiagro.in
Ph. 02827 - 287674 / 47 Mo. 8000007087, 97221 14518

Date : 24th September, 2025

Respected Placement Department,

Greetings of the day.

Bhoomi Agro Hi-Tech Pvt. Ltd. is always grateful to the Placement Department of Junagadh Agricultural University for their continuous support.

The students from Junagadh Agricultural University have consistently been a valuable part of Bhoomi Agro Hi-Tech Pvt. Ltd., contributing with dedication, knowledge, and enthusiasm.

We are proud to be associated with an institution that produces such capable and industry-ready graduates.

Our experience with JAU alumni has always been positive, and we look forward to welcoming more in the future.

Thank You.
Mr Vismay Ganatra
Bhoomi Agro
+919978877779
Vismay@bhoomiagro.in

EICHER TRACTORS

(A unit of TAFE Motors and Tractors Limited, a wholly owned subsidiary of TAFE Ltd)
301/302, Sears Tower, Gulbai Tekra, Off C.G. Road / Panchwati, Ahmedabad - 380 006
Tel. : 079 - 2642 3106 / 4032 3001

Date: 25th Sep 2025

To,
The Dean/Principal,
College of Agricultural Engineering & Technology (CAET),
Junagadh Agricultural University (JAU),
Junagadh, Gujarat.

Subject: Feedback regarding the students of CAET, JAU, Junagadh.

Dear Sir,

Eicher Tractors is a pioneer in the Indian tractor industry. A reputed brand in the agricultural vista, Eicher Tractors are renowned for their high value for money proposition, providing cost-effective and versatile products packed with some of the finest global technology. Synonymous with ruggedness and reliability, Eicher Tractors are efficient, economical and a renowned name amidst the Indian farming community.

We are happy to provide feedback on our long-standing association with the College of Agricultural Engineering & Technology (CAET), Junagadh Agricultural University. Our interactions, particularly for our special recruitment of Project officers and industrial training programs, have been highly positive.

The graduates we have engaged with are sincere, hardworking, and quick to adapt to industry requirements.

Thank you for your contributions to shaping the future of agricultural engineering.

Yours faithfully,
For TAFE Motors and Tractors Limited (Eicher Tractors)

Ahmedabad, Gujarat

Head Office : Plot No.1, Sector D, Industrial Area, Mandideep - 462046, Distt. Raisen (MP), Tel: + 91 7480 - 407680/ 1/ 2/ 3/ 4, Fax: + 91 7480 - 403697
CIN No: U29211TN2005PLC059476 email: eichertractorsho@tmtl.co.in
Regd. Office : 77 Nungambakkam High Road, Chennai - 600 034, Tel: + 91 44 6691 9000 Fax: + 91 44 2826 0224

Scanned with CamScanner

Agrinext Consultancy

Office Address : A-517 Plot No 97/5, Near Jalvayu Vihar,sector-6,
Moshi Pradhikaran Pune-411026 (maharashtra)
Mob: -919021266946/7440403736. Mail Id: Agrinext2017@gmail.com

Date: 26 September 2025

Sub: Appreciation Letter

Dear Sir,

It gives us pleasure to share our appreciation for the long-standing professional association with **College of Agricultural Engineering and Technology (CAET), Junagadh Agricultural University, Junagadh** for over many years.

Students from CAET, JAU, Junagadh have successfully undergone **training in Micro Irrigation System Design** with Agrinext. We are delighted to note that the students displayed a high level of dedication, sincerity, and commitment during the training sessions.

The trainees have shown strong grasp of technical knowledge in **Micro Irrigation system design, AutoCAD tools and different software's like Google Earth, Map source, Global Mapper** and have efficiently applied their learning in practical assignments and field-based design exercises. Their enthusiasm and disciplined approach made the training highly effective and impactful.

We are confident that with such skills and exposure, the students will prove to be valuable assets in their future careers, whether in industry, research or entrepreneurial ventures.

We extend our best wishes to the students and the institute for continued success in all future endeavours.

With warm regards,

For AGRINEXT CONSULTANCY

Proprietor

Ms. Madhuri Dixit Ghugari
Director,
Agrinext Consultancy, Pune

SHAKTIMAN
MAKING AGRICULTURE MORE ECONOMICAL

Date : 1st Oct 2025

Subject :- Appreciation Letter

Respected Sir,

On behalf of **Tirth Agro Technology Pvt. Ltd, Rajkot (Brand Name – SHAKTIMAN),** I am very much thankful to you and your college for providing students for In plant/Summer training for my company. All student of CAET JAU Junagadh are hardworking and well knowledgeable in field of Farm Mechanization, also students of CAET JAU Junagadh we have been very efficient in conduction field training, service etc.

JAU & CAET Junagadh always very helpful for farmers and manufacturer, CAET JAU Junagadh always helping to manufacturer in field of Farm Mechanization, also from college CAET JAU Junagadh we have been recruiting students for our company over past many years.

We wish success to the CAET, JAU Junagadh & students in future.

Thanking you

Tirth Agro Technology Pvt Ltd

Mr. Parag Devidas Badgujar
Sr. Manager-Sales & Marketing
Mobile No-9227927969
parag@shaktimanagro.com

TIRTH AGRO TECHNOLOGY PRIVATE LIMITED
Regd.Office: "SHAKTIMAN", Unit-I, Survey No.-108/1,
Plot No. B,NH-27, Nr. Bharudi Toll Plaza,
Bhurawa (Village), Taluka: Gondal,
Dist.: Rajkot. State: Gujarat-INDIA, Pincode-360311
☎ +91 (2827) 234567, +91 (2827) 276527 Fax: +91 (2827) 270457
sales@shaktimagro.com www.shaktimagro.com | CIN: U72900GJ2007PTC 036435

SHAKTIMAN - FOR THE FARMERS BY A FARMER
KRISHI UDAAN @ Pune
World's Largest Manufacturer of Rotary Tiller

राष्ट्रीय नवप्रवर्तन प्रतिष्ठान – भारत
विज्ञान और प्रौद्योगिकी विभाग, भारत सरकार का स्वायत्तशासी संस्थान
National Innovation Foundation – India
An autonomous body of Department of Science & Technology, Govt. of India

Er. Rakesh Maheshwari
Scientist 'E'
Head -VARD and IPM -Engineering

October 06, 2025

To whomsoever it may concern

National Innovation Foundation – India (NIF) is an autonomous institution under the Department of Science and Technology, Government of India, committed to supporting and promoting grassroots innovations across the country. NIF was set up in March 2000. During its journey of 25 years, NIF has scouted and documented over 3.7 lakh innovations from over 680 districts of the country, incubated over 2000 technological innovations, filed close to 1500 patents in the name of innovators (725 patents have been granted in India and 5 in the USA). Thirteen grassroots innovators, supported by NIF, have received the Padma Shri award in the recent years. NIF has been continuously undertaking a gamut of activities across the spectrum of innovation incubation chain to fulfill all its objectives.

NIF believes in institutional partnerships and joined hands with state universities, IITs, NITs and other institutes of national importance for getting support in validation and value addition in the innovations by the grassroots innovators. Alongside NIF has also engaged students of graduation and post-graduation in real life problems for their capacity building.

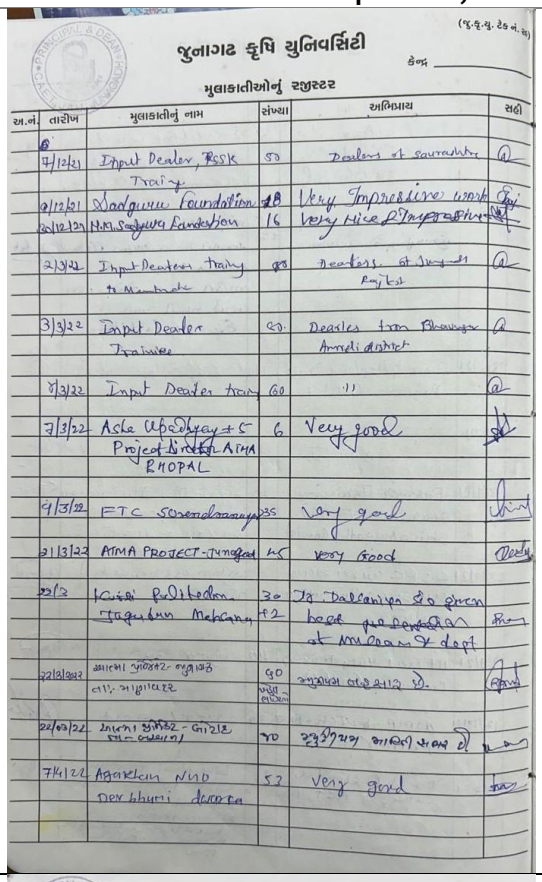
We have been engaging students from College of Agricultural Engineering and Technology (CAET), Junagadh Agricultural University (JAU), Junagadh, Gujarat for over a decade as intern as well as hired number of engineers passes out from there. The students pass out from this college are good in subject knowledge and have passion to work on societal challenges.

We wish CAET, JAU, Junagadh, Gujarat bright future ahead.

(Rakesh Maheshwari)

ग्रामभारती, अमरापुर, गांधीनगर-माहुडी रोड, गांधीनगर – 382650, गुजरात, भारत.
Grambharti, Amrapur, Gandhinagar-Mahudi Road, Gandhinagar– 382650, Gujarat, India.
Ph. +91 2764 350001, 02, 03, 04, 05, 06, Fax: + 91 22 3916 7115, e-mail: rakesh@nifindia.org , web: www.nif.org.in

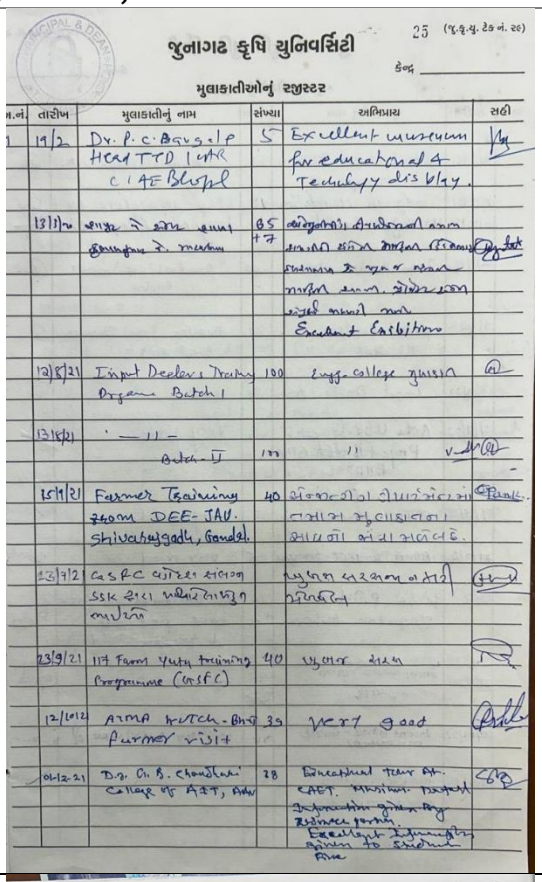
Feedback of parents, students, farmers, visitors & others



જુનાગઢ કૃષિ યુનિવર્સિટી

મુલાકાતીઓનું રજીસ્ટર

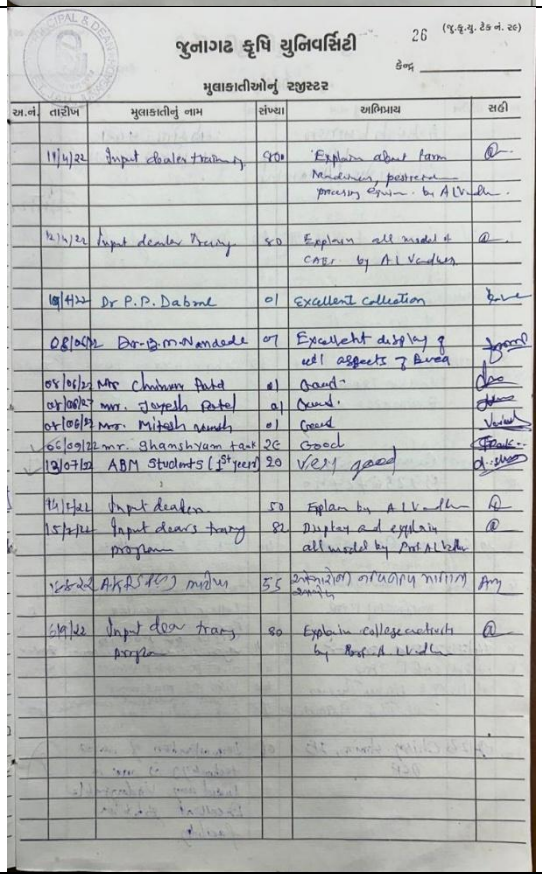
અ.નં.	તારીખ	મુલાકાતીનું નામ	સંખ્યા	અભિપ્રાય	સહી
6	7/12/21	Input Dealer, RSSK Traing	50	Dealers of saurashtra	
	9/12/21 20/12/21	Sadguru Foundation N.M. Sadguru Foundation	18 16	Very Impressive work Very Nice & Impressive	
	2/3/22	Input Dealers Traing to Mumbai	60	Dealers of Surat & Amreli	
	3/3/22	Input Dealer Trainee	60	Dealers from Bhavnagar Amreli district	
	4/3/22	Input Dealer traing	60	〃	
	7/3/22	Aske Updhyay + 5 Project Director ATMA BHOPAL	6	Very good	
	9/3/22	FTC Surendranagar	35	Very good	
	21/3/22	ATMA PROJECT-Junagadh	45	Very Good	
	22/3	ICAR Publication Jagadish Mahanty	30 +2	To Dalsaniya Sir given best publication at ANGRAU & dept	
	22/3/2022	આત્મા પ્રોજેક્ટ- જુનાગઢ તા: માણાવદર	40 મહિલા ખેડૂતો	ખૂબજ સરસ કામગીરી કરો છો.	
	22/03/22	આત્મા પ્રોજેક્ટ - ગોંડલ સ્ટા- વહીવટી	30	ટ્રેનીંગ્સ બાબતે ખૂબ જ સારી	
	7/4/22	Agriculture NHD Dev Bhumi dwarka	52	Very good	



જુનાગઢ કૃષિ યુનિવર્સિટી

મુલાકાતીઓનું રજીસ્ટર

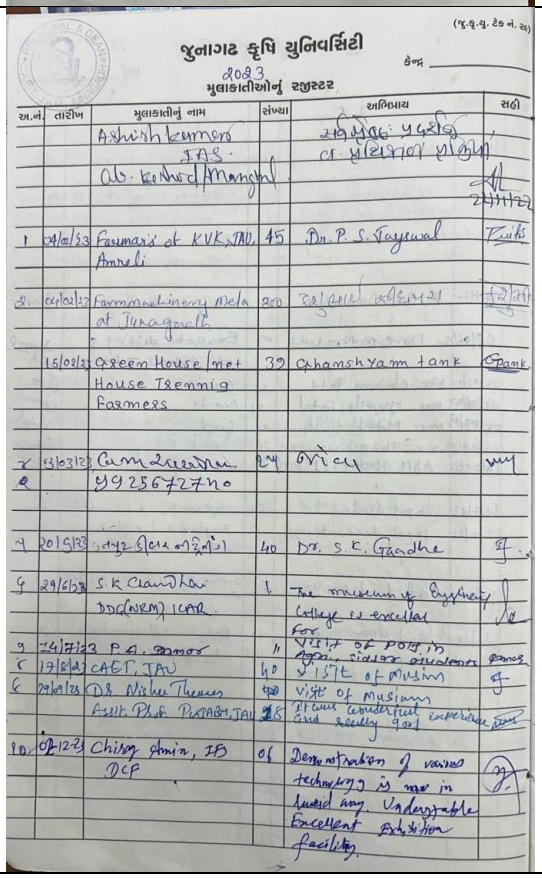
અ.નં.	તારીખ	મુલાકાતીનું નામ	સંખ્યા	અભિપ્રાય	સહી
1	19/2	Dr. P. C. Bavalp Head TTD ICAR C.I.A.E Bhopal	5	Excellent museum for educational & Technology dis play.	
	13/1/22	ખાસ કે ખાસ વ્યવસ્થા કરવામાં આવેલ કે. મારવા	85 +7	વિદ્યાર્થીઓને વિવિધલક્ષી કામગીરી સંશોધન કેન્દ્ર ખેતીવાડી ખાતા દ્વારા કરવામાં આવતા વિવિધ કામો અંગે માર્ગદર્શન આપવા બદલ આભાર Excellent Exhibition	
	13/8/21	Input Dealers Traing Organ Batch I	100	Engg. college junagadh	
	13/8/21	〃 Batch II	100	〃	
	15/9/21	Farmer Training Prog DEE-JAU. Shivashyugadh, Gondal	40	ખેડૂતલક્ષી તાલીમ કાર્યક્રમમાં તમારા ગુરૂવાદાતા આપનો ખૂબ આભાર છે.	
	23/7/21	CASRC પોરબંદર સંચાલન SSK દ્વારા મહિલાલક્ષી આયોજન		ખૂબજ સરસ કામગીરી કરવામાં આવેલ છે	
	23/9/21	117 Farm Yuth training Programme (CASFC)	40	ખૂબજ સરસ	
	12/10/21	ATMA Kutch-Bhuj Farmer visit	35	very good	
	01-12-21	D.R. Ch. B. Chaudhari College of AET, Amreli	28	Educational tour At. CAET. Practical Instruction given by Science person. Excellent Lighting system to Shown Fine	



જુનાગઢ કૃષિ યુનિવર્સિટી

મુલાકાતીઓનું રજીસ્ટર

અ.નં.	તારીખ	મુલાકાતીનું નામ	સંખ્યા	અભિપ્રાય	સહી
	11/4/22	Input dealer training	400	Explain about farm Mandwing pesticide processing Equip. by A.L.Vadher	
	12/4/22	Input dealer Traing	80	Explain all model of CAET by A.L Vadher	
	18/4/22	Dr P.P. Dabhi	01	Excellent collection	
	08/06/22	Dr. B.M. Nandedkar	07	Excellent display of all aspects of Bread	
	08/06/22	Mr. Chinmay Patel	01	Good	
	08/06/22	mr. Jayesh Patel	01	Good	
	08/06/22	mr. Mitesh mandi	01	Good	
	06/09/22	mr. Ghanshyam taak	20	Good	
	12/07/22	ABM Students (1st year)	20	Very good	
	14/7/22	Input dealers	50	Explain by A.L Vadher	
	15/7/22	Input dears traing program	82	Display and explain all model by Prof. A.L Vadher	
		ખેડૂતોની મુલાકાત	55	ખેડૂતોએ ખેતીવાડી અંગેની માહિતી મેળવી	
	19/9/22	Input dear traing progm	80	Explain college activities by Prof. A.L Vadher	

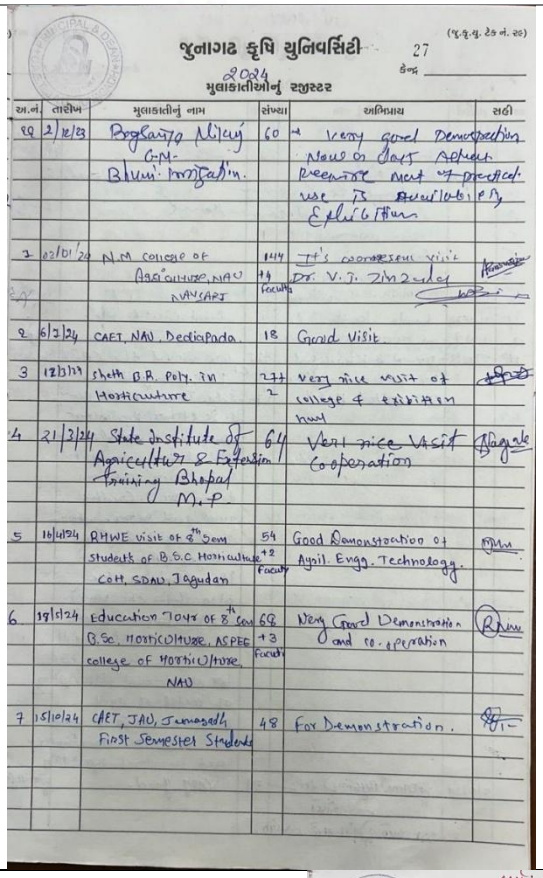


જુનાગઢ કૃષિ યુનિવર્સિટી

8083

મુલાકાતીઓનું રજીસ્ટર

અ.નં.	તારીખ	મુલાકાતીનું નામ	સંખ્યા	અભિપ્રાય	સહી
		Ashish kumar IAS. Adv. Kachch/Mangrol		ખેતીવાડી ખાતાની કામગીરી ખૂબજ સારી છે.	
1	04/02/23	Farmers at KVK, JAU Amreli	45	Dr. P. S. Tayswal	
2	01/02/23	Farmmachinery Mela at Junagadh	200		
	15/02/23	Ageem House/net House Teaming Farmess	30	Ghanshyam tank	
3	13/03/23	Gurudevsinh ૪૪ ૨૫૬૭૭૫૦	24	બરોબર	
4	20/03/23	ખાસ ટ્રેનર તાલીમ	40	Dr. S. K. Gaadhe	
5	29/6/23	S. K Chaudhari Engineering ICAR	1	The museum of Engineering College is excellent For	
6	24/7/23	P. A. Damor	1	Visit of Dept. in Agro. visitor students	
7	17/8/23	CAET, JAU	40	Visit of Musium	
8	29/8/23	Dr. Nisha Thomas Asst. Prof. PGIABM, JAU	400	Visit of Musium	
9			28	It was wonderful experience and really good	
10	01-12-23	Chirag Amin, IFS DCF	01	Demonstration of various technology is use in wood ing. Understable Excellent Exhibition facility.	



જુનાગઢ કૃષિ યુનિવર્સિટી (જ.કૃ.યુ. ટેક નં. ૨૯)

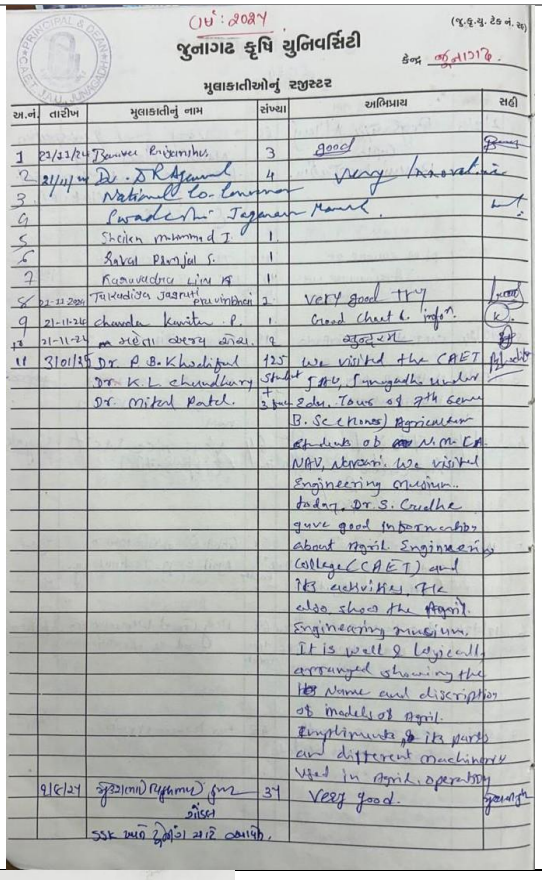
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કેન્દ્ર _____

2024

મુલાકાતીઓનું રજીસ્ટર

અ.નં.	તારીખ	મુલાકાતીનું નામ	સંખ્યા	અભિપ્રાય	સહી
89	2/12/23	Bogsariya Milind G.M- Bluu Irrigation.	60	Very good Demonstration Need of Part Refresher Met of practical use to Executive Officers	
1	02/01/24	N.M College of Agriculture, NAU NAVSARI	144 +4 Faculty	It's coordinated visit Dr. V. J. Jindal	
2	6/2/24	CAET, NAU, Dediapada	18	Good Visit	
3	12/3/24	Sheth B.R. Poly. In Horticulture	277 2	Very nice visit of college & exhibition hall	
4	21/2/24	State Institute of Agriculture & Extension Training Bhopal M.P.	64	Very nice visit Cooperation	
5	16/4/24	RHWE visit of 8th Sem students of B.Sc Horticulture CoH, SDAU, Jagudan	54 +2 Faculty	Good Demonstration of Agril. Engg. Technology.	
6	19/4/24	Education Tour of 8th Sem B.Sc. Horticulture, ASPEE college of Horticulture, NAU	68 +3 Faculty	Very Good Demonstration and co-operation	
7	15/10/24	CAET, JAU, Junagadh, First Semester Students	48	For Demonstration.	



વર્ષ : 2024

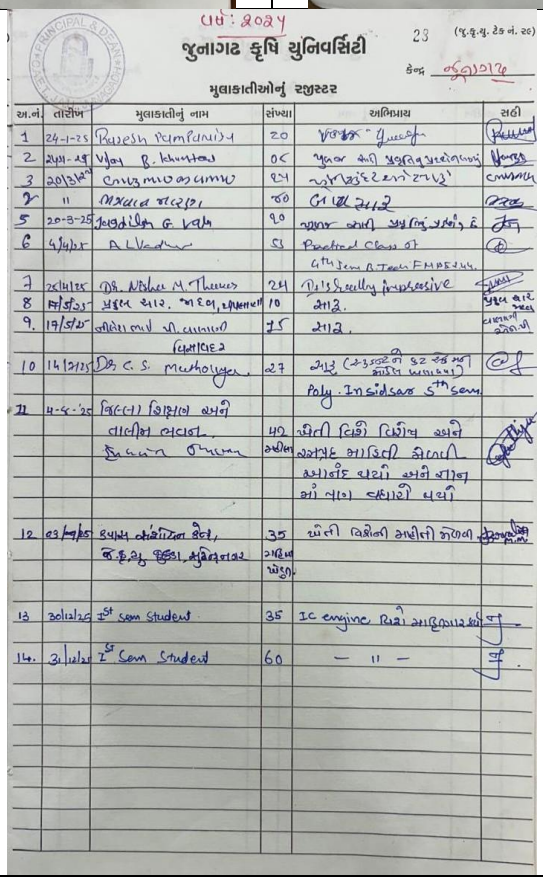
જુનાગઢ કૃષિ યુનિવર્સિટી (જ.કૃ.યુ. ટેક નં. ૨૯)

કેન્દ્ર જુનાગઢ.

મુલાકાતીઓનું રજીસ્ટર

અ.નં.	તારીખ	મુલાકાતીનું નામ	સંખ્યા	અભિપ્રાય	સહી
1	23/12/24	Jaswal Brijmohan	3	Good	
2	21/1/24	Dr. D.R. Agarwal	4	Very Innovative	
3		National Co-ordinator			
4		Swadeshi Jagaran Manch.			
5		Sheikh Mohammad I.	1		
6		Saiyad Rizwanji S.	1		
7		Rajavadiya Lilu M.	1		
8	22-11-2024	Trivedi Jagruti Pravinbhai	2	Very good Try	
9	21-11-24	Chavda Kavita P.	1	Good Chart & info.	
10	21-11-24	[illegible]	2	[illegible]	
11	31/01/25	Dr. P.B. Khadsipal Dr. K.L. Chaudhary Dr. Mitesh Patel.	125 Student + 3 Fac.	We visited the CAET JAU, Junagadh under Edu. Tours of 7th Sem B.Sc (Hons) Agriculture students of M.M. CA, NAU, Navsari. We visited Engineering museum. Today, Dr. S. Chalhe gave good information about Agril. Engineering College (CAET) and its activities. He also show the Agril. Engineering museum. It is well & logically arranged showing the the Name and discription of models of Agril. Implements & its parts and different machinery used in Agril. operation	
	9/6/24	[illegible]	34	Very good.	

SSR માટે ફોટોગ્રાફ મારે જોઈએ.



વર્ષ : 2024

જુનાગઢ કૃષિ યુનિવર્સિટી (જ.કૃ.યુ. ટેક નં. ૨૯)

23

કેન્દ્ર જુનાગઢ

મુલાકાતીઓનું રજીસ્ટર

અ.નં.	તારીખ	મુલાકાતીનું નામ	સંખ્યા	અભિપ્રાય	સહી
1	24-1-25	Rajesh Pimpalvi	20	Very Good	
2	24-1-25	Vora B. Ishwarlal	05	Good	
3	20/3/25	[illegible]	84	[illegible]	
4	11	[illegible]	60	[illegible]	
5	20-3-25	[illegible]	90	[illegible]	
6	4/4/25	A.L. Vadher	51	Practical Class of 6th Sem A Team FMPE 344	
7	28/4/25	Dr. Nilesh M. Thakur	24	It's Really Impressive	
8	14/5/25	[illegible]	10	[illegible]	
9	19/5/25	[illegible]	75	[illegible]	
10	14/7/25	Dr. C. S. Mathurya	27	[illegible] Poly. Insidsar 5th Sem	
11	4-6-25	[illegible]	40	[illegible]	
12	03/06/25	[illegible]	35	[illegible]	
13	30/11/25	5th Sem Student	35	IC engine [illegible]	
14.	3/12/25	5th Sem Student	60	— " —	

Annexure-II

Feedback of M. Tech. (Agril. Engg.) students of Dept. of Dept. of Soil and Water Conservation Engineering

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	BHAGIRATH RAM, [20502250 05]
Mobile No.:	9352758934
E-Mail:	bhagirath2005200@gmail.com
Campus:	Junagadh Agricultural University, Junagadh
Department:	SWCE
Degree: UG / PG / Ph.D.	PG - M. Tech
Discipline:	Soil and water conservation Engineering
Semester & Academic Year:	1st sem, [2025-26]

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?	✓				
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?		✓			
3. How do you rate the relevance of the units in the Syllabus relevant to the course?	✓				
4. How do you rate the sequence of the units in the course?	✓				
5. How do you rate the allocation of the credits to the courses?		✓			
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?		✓			
7. How do you rate the electives offered regarding their relevance to the specialization streams?		✓			
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.			✓		
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.		✓			
10. How do you Rate the loading of the courses in a semester?	✓				
11. How was the evaluation/exam pattern of the courses?	✓				

	Excellent	Very Good	Good	Average	Poor
12. How do you rate the objectives stated for each of the courses?		✓			
13. How do you rate the skill improvement from the courses?			✓		
14. How do you rate the practical exposure from the courses?			✓		
15. How do you rate the experiments about the real-life Applications?		✓			

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

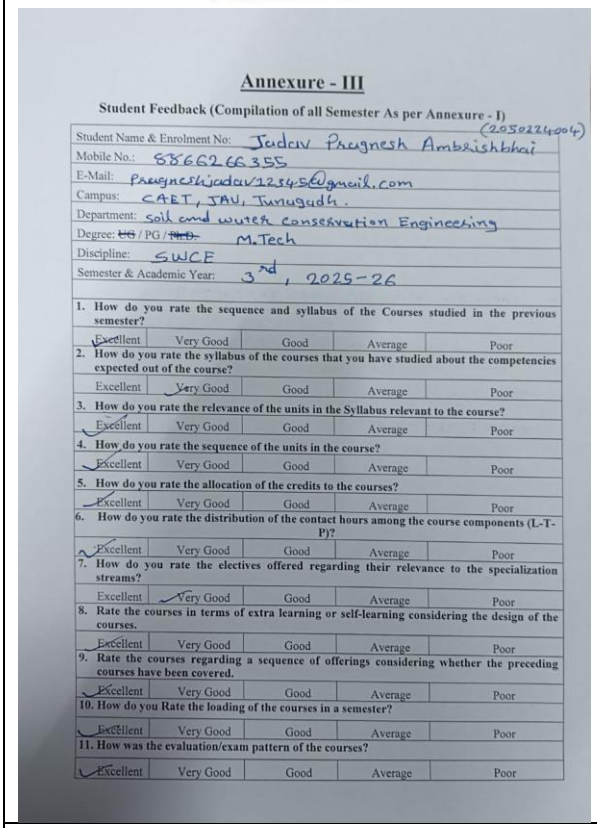
Student Name & Enrolment No:	Hanuman Kanwasara [20502240 11]
Mobile No.:	9352457009
E-Mail:	hanujat99@gmail.com
Campus:	CAET, JAU-Junagadh
Department:	Soil and water conservation Engg.
Degree: UG / PG / Ph.D.	PG [M.Tech]
Discipline:	SWCE
Semester & Academic Year:	3rd, 2025-2026

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?	✓				
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?	✓				
3. How do you rate the relevance of the units in the Syllabus relevant to the course?		✓			
4. How do you rate the sequence of the units in the course?		✓			
5. How do you rate the allocation of the credits to the courses?	✓				
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?		✓			
7. How do you rate the electives offered regarding their relevance to the specialization streams?	✓				
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.			✓		
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.		✓			
10. How do you Rate the loading of the courses in a semester?		✓			
11. How was the evaluation/exam pattern of the courses?		✓			

	Excellent	Very Good	Good	Average	Poor
12. How do you rate the objectives stated for each of the courses?	✓				
13. How do you rate the skill improvement from the courses?		✓			
14. How do you rate the practical exposure from the courses?		✓			
15. How do you rate the experiments about the real-life Applications?		✓			

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

NO

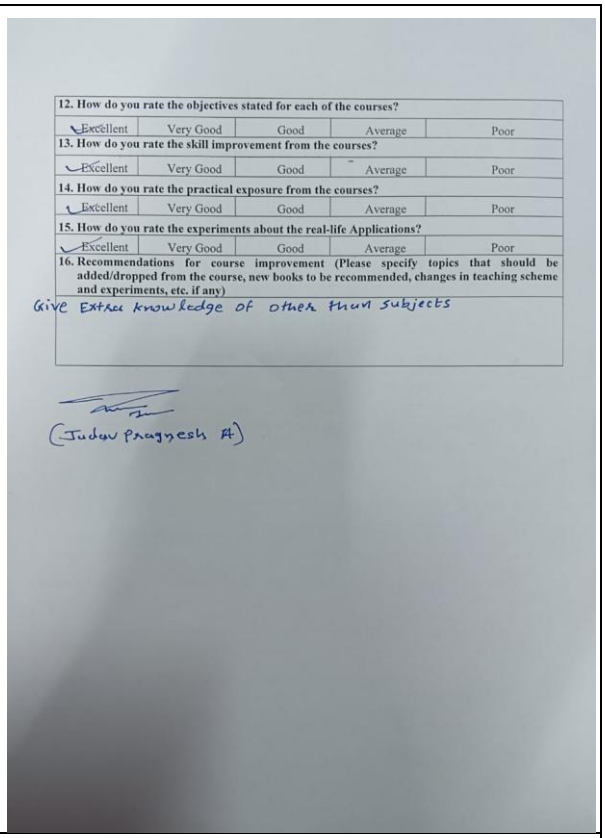


Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	Jadav Pragnesh Ambrishbhai (2050224004)
Mobile No.:	8866266355
E-Mail:	Pragneshjadav12345@gmail.com
Campus:	CAET, JAU, Junagadh.
Department:	Soil and water conservation Engineering
Degree: ~~UG~~ / PG / ~~Ph.D.~~	M.Tech
Discipline:	SWCE
Semester & Academic Year:	3rd, 2025-26

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?	✓				
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?		✓			
3. How do you rate the relevance of the units in the Syllabus relevant to the course?	✓				
4. How do you rate the sequence of the units in the course?	✓				
5. How do you rate the allocation of the credits to the courses?	✓				
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?	✓				
7. How do you rate the electives offered regarding their relevance to the specialization streams?		✓			
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.	✓				
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.	✓				
10. How do you Rate the loading of the courses in a semester?	✓				
11. How was the evaluation/exam pattern of the courses?	✓				

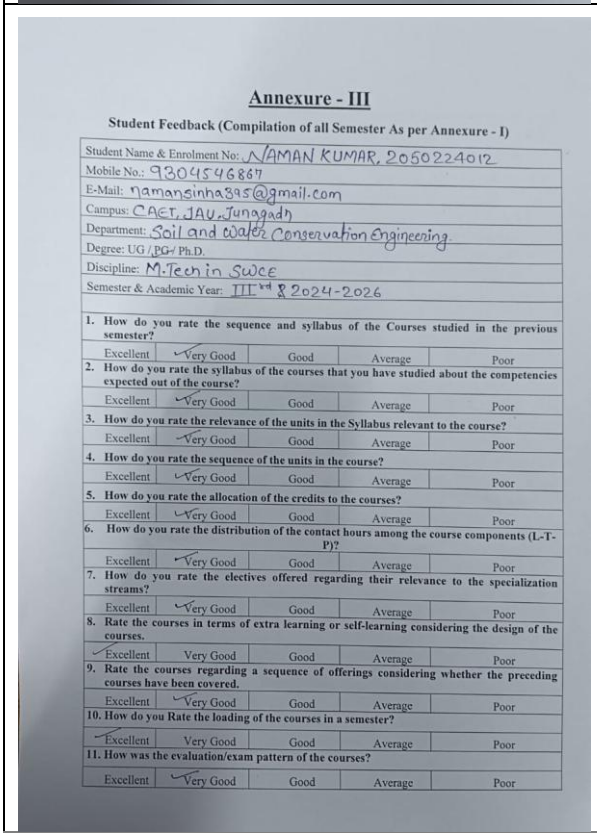


	Excellent	Very Good	Good	Average	Poor
12. How do you rate the objectives stated for each of the courses?	✓				
13. How do you rate the skill improvement from the courses?	✓				
14. How do you rate the practical exposure from the courses?	✓				
15. How do you rate the experiments about the real-life Applications?	✓				

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

Give Extra knowledge of other than subjects

(Jadav Pragnesh A)

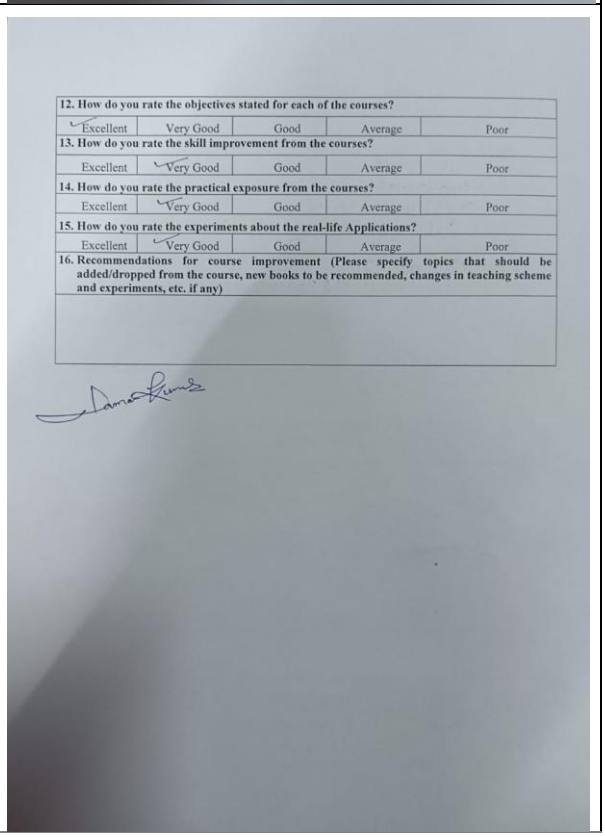


Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	NAMAN KUMAR, 2050224012
Mobile No.:	9304546867
E-Mail:	namansinha395@gmail.com
Campus:	CAET, JAU, Junagadh
Department:	Soil and Water Conservation Engineering
Degree: UG / PG / Ph.D.	
Discipline:	M.Tech in SWCE
Semester & Academic Year:	IIIrd & 2024-2026

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?		✓			
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?		✓			
3. How do you rate the relevance of the units in the Syllabus relevant to the course?		✓			
4. How do you rate the sequence of the units in the course?		✓			
5. How do you rate the allocation of the credits to the courses?		✓			
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?		✓			
7. How do you rate the electives offered regarding their relevance to the specialization streams?		✓			
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.	✓				
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.		✓			
10. How do you Rate the loading of the courses in a semester?	✓				
11. How was the evaluation/exam pattern of the courses?		✓			



	Excellent	Very Good	Good	Average	Poor
12. How do you rate the objectives stated for each of the courses?		✓			
13. How do you rate the skill improvement from the courses?		✓			
14. How do you rate the practical exposure from the courses?		✓			
15. How do you rate the experiments about the real-life Applications?		✓			

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

Aman Kumar

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	Rakhi Kushwaha (2050225016)
Mobile No.:	7828543046
E-Mail:	rakhikushwaha2003@gmail.com
Campus:	JAU
Department:	SWCE
Degree: UG / PG / Ph.D.	Ph
Discipline:	SWCE - Agricultural Engineering
Semester & Academic Year:	1st sem. 2025-26

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?		✓			
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?		✓			
3. How do you rate the relevance of the units in the Syllabus relevant to the course?			✓		
4. How do you rate the sequence of the units in the course?		✓			
5. How do you rate the allocation of the credits to the courses?		✓			
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?		✓			
7. How do you rate the electives offered regarding their relevance to the specialization streams?		✓			
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.		✓			
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.		✓			
10. How do you Rate the loading of the courses in a semester?		✓			
11. How was the evaluation/exam pattern of the courses?		✓			
12. How do you rate the objectives stated for each of the courses?		✓			
13. How do you rate the skill improvement from the courses?		✓			
14. How do you rate the practical exposure from the courses?		✓			
15. How do you rate the experiments about the real-life Applications?		✓			

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

Rakhi
Rakhi Kushwaha

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	Rupshikha Kalita (2050224015)
Mobile No.:	8638361419
E-Mail:	rupshikhakalita250@gmail.com
Campus:	Junagadh Agricultural University, Junagadh
Department:	Soil and Water Conservation Engineering
Degree: UG / PG / Ph.D.	P.G.
Discipline:	Agricultural Engineering
Semester & Academic Year:	3rd Semester (2024-2026)

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?			✓		
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?		✓			
3. How do you rate the relevance of the units in the Syllabus relevant to the course?		✓			
4. How do you rate the sequence of the units in the course?		✓			
5. How do you rate the allocation of the credits to the courses?			✓		
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?		✓			
7. How do you rate the electives offered regarding their relevance to the specialization streams?			✓		
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.			✓		
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.			✓		
10. How do you Rate the loading of the courses in a semester?		✓			
11. How was the evaluation/exam pattern of the courses?			✓		
12. How do you rate the objectives stated for each of the courses?			✓		
13. How do you rate the skill improvement from the courses?			✓		
14. How do you rate the practical exposure from the courses?			✓		
15. How do you rate the experiments about the real-life Applications?		✓			

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

Rupshikha Kalita

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	Sankeerth.K.S 2050225018
Mobile No.:	9988760027
E-Mail:	sankeerthks21@gmail.com
Campus:	Junagadh Agriculture University
Department:	Soil & Water conservation Engineering
Degree: ~~UG~~ / PG / ~~Ph.D.~~	
Discipline:	Soil & water conservation Engineering
Semester & Academic Year:	1st Sem & 1st year (2025-26)

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?		✓			
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?		✓			
3. How do you rate the relevance of the units in the Syllabus relevant to the course?	✓				
4. How do you rate the sequence of the units in the course?		✓			
5. How do you rate the allocation of the credits to the courses?			✓		
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?		✓			
7. How do you rate the electives offered regarding their relevance to the specialization streams?		✓			
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.			✓		
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.	✓				
10. How do you Rate the loading of the courses in a semester?			✓		
11. How was the evaluation/exam pattern of the courses?		✓			
12. How do you rate the objectives stated for each of the courses?	✓				
13. How do you rate the skill improvement from the courses?	✓				
14. How do you rate the practical exposure from the courses?			✓		
15. How do you rate the experiments about the real-life Applications?	✓				

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

Sankeerth.ks

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	SHRADHA BHARADAVDA - 2050224017
Mobile No.:	8866168371
E-Mail:	shradha22122000@gmail.com
Campus:	Junagadh Agricultural University
Department:	Soil and Water Conservation Engineering
Degree: UG / PG / Ph.D.	PG
Discipline:	SWCE - Agricultural Engineering
Semester & Academic Year:	2nd Year - 3rd Semester (2024-2025)

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?			✓		
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				✓	
3. How do you rate the relevance of the units in the Syllabus relevant to the course?			✓		
4. How do you rate the sequence of the units in the course?				✓	
5. How do you rate the allocation of the credits to the courses?		✓			
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?			✓		
7. How do you rate the electives offered regarding their relevance to the specialization streams?			✓		
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.					✓
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				✓	
10. How do you Rate the loading of the courses in a semester?			✓		
11. How was the evaluation/exam pattern of the courses?		✓			
12. How do you rate the objectives stated for each of the courses?			✓		
13. How do you rate the skill improvement from the courses?					✓
14. How do you rate the practical exposure from the courses?				✓	
15. How do you rate the experiments about the real-life Applications?				✓	

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

Respected Sir/Mam,
It is kind request to make available major relevant books in the department library and it would be helpful if the lectures are more practical based.

(Shradha.B)

Annexure-III

Feedback of M. Tech. (Agril. Engg.) students of Dept. of Irrgation and Drainage Engineering

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	Swayam Prakash Dash (2050224018)
Mobile No.:	9777364825
E-Mail:	swayamprakashdash@jau.in
Campus:	CAET, JAU, Junagadh
Department:	Irrigation and Drainage Engineering
Degree: UG / PG / Ph.D.	P.G.
Discipline:	Irrigation and Drainage Engineering
Semester & Academic Year:	3rd Sem (2025-26)

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?	✓				
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?	✓				
3. How do you rate the relevance of the units in the Syllabus relevant to the course?	✓				
4. How do you rate the sequence of the units in the course?	✓				
5. How do you rate the allocation of the credits to the courses?	✓				
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?	✓				
7. How do you rate the electives offered regarding their relevance to the specialization streams?	✓				
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.	✓				
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.	✓				
10. How do you Rate the loading of the courses in a semester?	✓				
11. How was the evaluation/exam pattern of the courses?	✓				
12. How do you rate the objectives stated for each of the courses?	✓				
13. How do you rate the skill improvement from the courses?	✓				
14. How do you rate the practical exposure from the courses?	✓				
15. How do you rate the experiments about the real-life Applications?	✓				

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

—

Swayam Prakash Dash

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	POTPELLY KARTHIK (2050224013)
Mobile No.:	+91 8309950124
E-Mail:	kar291129@gmail.com
Campus:	CAET, JAU, Junagadh
Department:	Irrigation & Drainage Engineering
Degree: UG / PG / Ph.D.	PG
Discipline:	Irrigation & Drainage Engineering
Semester & Academic Year:	3rd Sem (2025-26)

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?		✓			
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?		✓			
3. How do you rate the relevance of the units in the Syllabus relevant to the course?		✓			
4. How do you rate the sequence of the units in the course?		✓			
5. How do you rate the allocation of the credits to the courses?		✓			
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?		✓			
7. How do you rate the electives offered regarding their relevance to the specialization streams?		✓			
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.		✓			
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.		✓			
10. How do you Rate the loading of the courses in a semester?		✓			
11. How was the evaluation/exam pattern of the courses?		✓			
12. How do you rate the objectives stated for each of the courses?		✓			
13. How do you rate the skill improvement from the courses?		✓			
14. How do you rate the practical exposure from the courses?		✓			
15. How do you rate the experiments about the real-life Applications?		✓			

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	Shireen begum and 20502240116
Mobile No.:	9014634508
E-Mail:	Shireenshiruz86.in@gmail.com
Campus:	College of Agricultural Engineering and technology, JA
Department:	Irrigation and Drainage Engineering
Degree: UG / PG / Ph.D.	PG
Discipline:	M.Tech (IDE)
Semester & Academic Year:	3rd and 2025 - 2026

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?		✓			
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?			✓		
3. How do you rate the relevance of the units in the Syllabus relevant to the course?		✓			
4. How do you rate the sequence of the units in the course?		✓			
5. How do you rate the allocation of the credits to the courses?	✓				
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?			✓		
7. How do you rate the electives offered regarding their relevance to the specialization streams?	✓				
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.		✓			
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.		✓			
10. How do you Rate the loading of the courses in a semester?		✓			
11. How was the evaluation/exam pattern of the courses?		✓			

	Excellent	Very Good	Good	Average	Poor
12. How do you rate the objectives stated for each of the courses?		✓			
13. How do you rate the skill improvement from the courses?		✓			
14. How do you rate the practical exposure from the courses?			✓		
15. How do you rate the experiments about the real-life Applications?			✓		

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

Practical Experiments are needed for skill improvement and knowledge.

Shireen begum

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	Tanushree. M. Rathi (20502240114)
Mobile No.:	7796732511
E-Mail:	rathitanushree66@gmail.com
Campus:	CAET, JAU, Junagadh.
Department:	Irrigation and Drainage Engineering.
Degree: UG / PG / Ph.D.	MTech (PG)
Discipline:	Agricultural Engineering
Semester & Academic Year:	3rd 2025 - 26

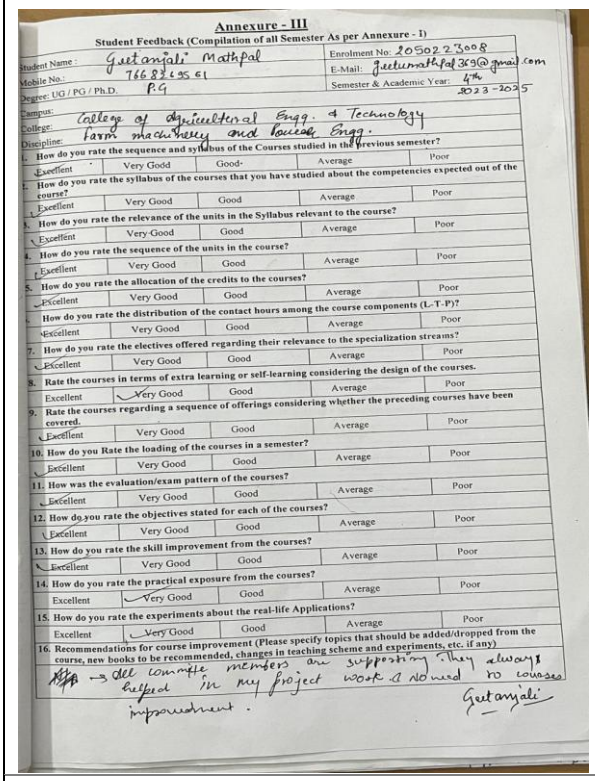
	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?		✓			
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?			✓		
3. How do you rate the relevance of the units in the Syllabus relevant to the course?			✓		
4. How do you rate the sequence of the units in the course?		✓			
5. How do you rate the allocation of the credits to the courses?		✓			
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?			✓		
7. How do you rate the electives offered regarding their relevance to the specialization streams?			✓		
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.			✓		
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.		✓			
10. How do you Rate the loading of the courses in a semester?			✓		
11. How was the evaluation/exam pattern of the courses?		✓			

	Excellent	Very Good	Good	Average	Poor
12. How do you rate the objectives stated for each of the courses?			✓		
13. How do you rate the skill improvement from the courses?			✓		
14. How do you rate the practical exposure from the courses?				✓	
15. How do you rate the experiments about the real-life Applications?			✓		

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

Annexure-IV

Feedback of M. Tech. (Agril. Engg.) students of Dept. of Farm Machinery and Power Engineering



Annexure - III

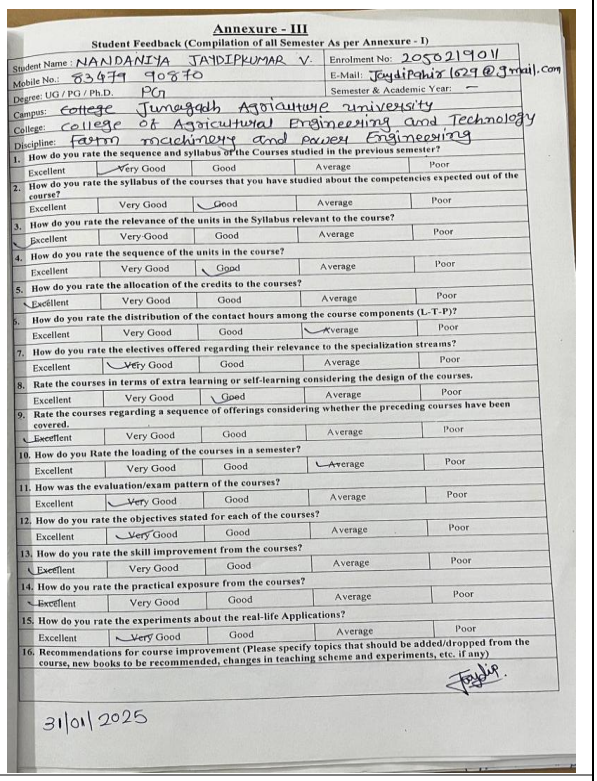
Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name: Geetanjali Mathpal | Enrolment No: 20502230008
Mobile No.: 7668695061 | E-Mail: geetumathpal369@gmail.com
Degree: UG / PG / Ph.D. PG | Semester & Academic Year: 4th 2023-2025
Campus: College: College of Agricultural Engg. & Technology
Discipline: Farm machinery and Power Engg.

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?	Excellent	Very Good	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?	Excellent	Very Good	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?	Excellent	Very Good	Good	Average	Poor
4. How do you rate the sequence of the units in the course?	Excellent	Very Good	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?	Excellent	Very Good	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?	Excellent	Very Good	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?	Excellent	Very Good	Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.	Excellent	Very Good	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.	Excellent	Very Good	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?	Excellent	Very Good	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?	Excellent	Very Good	Good	Average	Poor
12. How do you rate the objectives stated for each of the courses?	Excellent	Very Good	Good	Average	Poor
13. How do you rate the skill improvement from the courses?	Excellent	Very Good	Good	Average	Poor
14. How do you rate the practical exposure from the courses?	Excellent	Very Good	Good	Average	Poor
15. How do you rate the experiments about the real-life Applications?	Excellent	Very Good	Good	Average	Poor

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)
All comple members are suppoting & they always helped in my project work & No need to courses improvement.

Geetanjali



Annexure - III

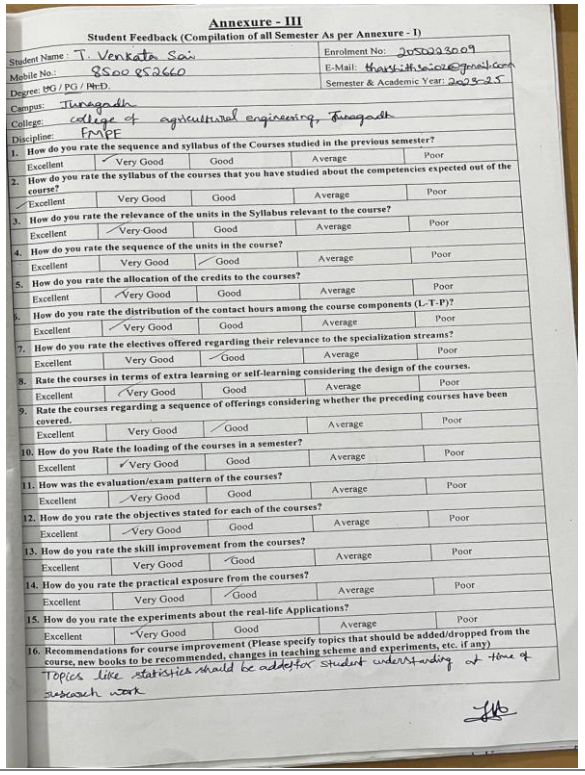
Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name: NANDANIYA JAYDIPKUMAR V. | Enrolment No: 20502190 11
Mobile No.: 83479 90870 | E-Mail: Jaydipnan1629@gmail.com
Degree: UG / PG / Ph.D. PG | Semester & Academic Year: —
Campus: College Junagadh Agriculture university
College: College of Agricultural Engineering and Technology
Discipline: Farm machinery and power Engineering

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?	Excellent	Very Good	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?	Excellent	Very Good	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?	Excellent	Very Good	Good	Average	Poor
4. How do you rate the sequence of the units in the course?	Excellent	Very Good	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?	Excellent	Very Good	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?	Excellent	Very Good	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?	Excellent	Very Good	Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.	Excellent	Very Good	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.	Excellent	Very Good	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?	Excellent	Very Good	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?	Excellent	Very Good	Good	Average	Poor
12. How do you rate the objectives stated for each of the courses?	Excellent	Very Good	Good	Average	Poor
13. How do you rate the skill improvement from the courses?	Excellent	Very Good	Good	Average	Poor
14. How do you rate the practical exposure from the courses?	Excellent	Very Good	Good	Average	Poor
15. How do you rate the experiments about the real-life Applications?	Excellent	Very Good	Good	Average	Poor

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

31/01/2025



Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name: T. Venkata Sai | Enrolment No: 20502230009
Mobile No.: 8500852660 | E-Mail: thatsaisai2626@gmail.com
Degree: UG / PG / Ph.D. | Semester & Academic Year: 2023-25
Campus: Junagadh
College: college of agricultural engineering, Junagadh
Discipline: FMPE

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?	Excellent	Very Good	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?	Excellent	Very Good	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?	Excellent	Very Good	Good	Average	Poor
4. How do you rate the sequence of the units in the course?	Excellent	Very Good	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?	Excellent	Very Good	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?	Excellent	Very Good	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?	Excellent	Very Good	Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.	Excellent	Very Good	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.	Excellent	Very Good	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?	Excellent	Very Good	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?	Excellent	Very Good	Good	Average	Poor
12. How do you rate the objectives stated for each of the courses?	Excellent	Very Good	Good	Average	Poor
13. How do you rate the skill improvement from the courses?	Excellent	Very Good	Good	Average	Poor
14. How do you rate the practical exposure from the courses?	Excellent	Very Good	Good	Average	Poor
15. How do you rate the experiments about the real-life Applications?	Excellent	Very Good	Good	Average	Poor

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)
Topics like statistics should be added for student understanding at time of research work

Annexure-V

Feedback of M. Tech. (Agril. Engg.) students of Dept. of Processing and Food Engineering

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: Arjun Rammalbhai Parmar				
Mobile No.: 9998125758				
E-Mail: arjun.parmar23@gmail.com				
Campus: CAET, JAU, Junagadh				
Department: Department of Processing and Food Engineering				
Degree: UG / PG / Ph.D. – M.Tech.				
Discipline: Processing and Food Engineering				
Semester & Academic Year: M.Tech. (2018-2020)				
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent	Very Good	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
Excellent	Very Good	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent	Very Good	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent	Very Good	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
Excellent	Very Good	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
Excellent	Very Good	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent	Very Good	Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
Excellent	Very Good	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent	Very Good	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
Excellent	Very Good	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
Excellent	Very Good	Good	Average	Poor

12. How do you rate the objectives stated for each of the courses?				
Excellent	Very Good	Good	Average	Poor
13. How do you rate the skill improvement from the courses?				
Excellent	Very Good	Good	Avcrage	Poor
14. How do you rate the practical exposure from the courses?				
Excellent	Very Good	Good	Average	Poor
15. How do you rate the experiments about the real-life Applications?				
Excellent	Very Good	Good	Average	Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)				

Annexure - III

Student Feedback (Compilation of all Semester as per Annexure - I)

Student Name & Enrolment No: **Aashish Kumar (2050223004)**				
Mobile No.: **6265888996**				
E-Mail: ashishpatel6201@gmail.com				
Campus: **Junagarh Agricultural University**				
Department: **Processing and Food Engineering**				
Degree: UG / PG / Ph.D. **PG**				
Discipline: **Processing and Food Engineering**				
Semester & Academic Year: **2023-25**				
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent	Very Good	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
Excellent	Very Good	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent	Very Good	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent	Very Good	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
Excellent	Very Good	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
Excellent	Very Good	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent	Very Good	Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
Excellent	Very Good	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent	Very Good	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
Excellent	Very Good	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
Excellent	Very Good	Good	Average	Poor

12. How do you rate the objectives stated for each of the courses?				
Excellent	Very Good	Good	Average	Poor
13. How do you rate the skill improvement from the courses?				
Excellent	Very Good	Good	Average	Poor
14. How do you rate the practical exposure from the courses?				
Excellent	Very Good	Good	Average	Poor
15. How do you rate the experiments about the real-life Applications?				
Excellent	Very Good	Good	Average	Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)				
Overall, the curriculum is well-structured.				

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: **Thaker Brinda Ashvinbhai (2050220016)**				
Mobile No.: **7016881470**				
E-Mail: **brinda.s.bhuva96@gmail.com**				
Campus: **Junagadh Agricultural University, Junagadh**				
Department: **Processing and Food Engineering**				
Degree: ~~UG~~ / **PG** / ~~Ph.D.~~				
Discipline: **Agricultural Engineering**				
Semester & Academic Year: **2020-2022**				
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent	Very Good	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
Excellent	**Very Good**	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent	**Very Good**	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent	Very Good	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
Excellent	Very Good	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
Excellent	Very Good	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent	Very Good	Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
Excellent	Very Good	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent	**Very Good**	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
Excellent	Very Good	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
Excellent	Very Good	Good	Average	Poor

12. How do you rate the objectives stated for each of the courses?				
Excellent	**Very Good**	Good	Average	Poor
13. How do you rate the skill improvement from the courses?				
Excellent	**Very Good**	Good	Average	Poor
14. How do you rate the practical exposure from the courses?				
Excellent	Very Good	Good	Average	Poor
15. How do you rate the experiments about the real-life Applications?				
Excellent	Very Good	Good	Average	Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)				

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: CHOCHA DHRUV				
Mobile No.: 9714502066				
E-Mail: chochadhruv@jau.in				
Campus: CAET, JAU, JUNAGADH				
Department: PROCESSING AND FOOD ENGINEERING				
Degree: Ph.D.				
Discipline: AGRICULTURAL ENGINEERING				
Semester & Academic Year: 3rd and 2025				
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent	Very Good	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
Excellent	**Very Good**	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent	**Very Good**	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent	**Very Good**	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
Excellent	**Very Good**	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
Excellent	**Very Good**	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent	**Very Good**	Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
Excellent	**Very Good**	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent	Very Good	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
Excellent	Very Good	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
Excellent	**Very Good**	Good	Average	Poor

12. How do you rate the objectives stated for each of the courses?				
Excellent	Very Good	Good	Average	Poor
13. How do you rate the skill improvement from the courses?				
Excellent	Very Good	Good	Average	Poor
14. How do you rate the practical exposure from the courses?				
Excellent	Very Good	Good	Average	Poor
15. How do you rate the experiments about the real-life Applications?				
Excellent	Very Good	Good	Average	Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)				
Aquaculture related courses should be added so that it can be useful for ASRB-NET				

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: Kuldeep P Naghera & 2050221005
Mobile No.: 8140453082
E-Mail: kuldeepnaghera43@gmail.com
Campus: CAET
Department: PFE
Degree: PG
Discipline:
Semester & Academic Year: 2021-2023

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
~~Excellent~~	**Very Good**	~~Good~~	~~Average~~	~~Poor~~
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
~~Excellent~~	**Very Good**	~~Good~~	~~Average~~	~~Poor~~
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
~~Excellent~~	**Very Good**	~~Good~~	~~Average~~	~~Poor~~
4. How do you rate the sequence of the units in the course?				
~~Excellent~~	**Very Good**	~~Good~~	~~Average~~	~~Poor~~
5. How do you rate the allocation of the credits to the courses?				
~~Excellent~~	**Very Good**	~~Good~~	~~Average~~	~~Poor~~
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
~~Excellent~~	~~Very Good~~	**Good**	~~Average~~	~~Poor~~
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
~~Excellent~~	**Very Good**	~~Good~~	~~Average~~	~~Poor~~
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
~~Excellent~~	**Very Good**	~~Good~~	~~Average~~	~~Poor~~
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
~~Excellent~~	**Very Good**	~~Good~~	~~Average~~	~~Poor~~
10. How do you Rate the loading of the courses in a semester?				
~~Excellent~~	**Very Good**	~~Good~~	~~Average~~	~~Poor~~
11. How was the evaluation/exam pattern of the courses?				
~~Excellent~~	~~Very Good~~	**Good**	~~Average~~	~~Poor~~

12. How do you rate the objectives stated for each of the courses?
~~Excellent~~ ~~Very Good~~ **Good** ~~Average~~ ~~Poor~~
13. How do you rate the skill improvement from the courses?
~~Excellent~~ ~~Very Good~~ **Good** ~~Average~~ ~~Poor~~
14. How do you rate the practical exposure from the courses?
~~Excellent~~ ~~Very Good~~ **Good** ~~Average~~ ~~Poor~~
15. How do you rate the experiments about the real-life Applications?
~~Excellent~~ ~~Very Good~~ **Good** ~~Average~~ ~~Poor~~
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)
NA

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: Mevada Anjlai R. (2050223003)
Mobile No.:8320339951
E-Mail:mevadaanjali523@gmail.com
Campus: JAU-Junagadh
Department: CAET- JAU Junagadh
Degree: UG / PG / Ph.D. - PG
Discipline: PFE
Semester & Academic Year: 4th (2023 - 2024)

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent✓	Very Good	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
Excellent✓	Very Good	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent✓	Very Good	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent✓	Very Good	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
Excellent✓	Very Good	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
Excellent✓	Very Good	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent✓	Very Good	Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
Excellent✓	Very Good	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent✓	Very Good	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
Excellent	Very Good	Good✓	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
Excellent✓	Very Good	Good	Average	Poor

12. How do you rate the objectives stated for each of the courses?
Excellent✓ Very Good Good Average Poor
13. How do you rate the skill improvement from the courses?
Excellent✓ Very Good Good Average Poor
14. How do you rate the practical exposure from the courses?
Excellent✓ Very Good Good Average Poor
15. How do you rate the experiments about the real-life Applications?
Excellent✓ Very Good Good Average Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)
In master add training if possible.

Annexure- III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: Poornima Diwate, 2050222011				
Mobile No.:9535854558				
E-Mail:diwatepoornima@gmail.com				
Campus: Junagadh				
Department: Processing and Food Engineering				
Degree: UG/**PG**/Ph.D.-PG				
Discipline: M. Tech (Processing and Food Engineering)				
Semester & Academic Year: 2024				
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent	**Very Good**	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
Excellent	Very Good	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent	**Very Good**	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent	**Very Good**	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
Excellent	Very Good	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
Excellent	Very Good	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent	**Very Good**	Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
Excellent	**Very Good**	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent	Very Good	**Good**	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
Excellent	**Very Good**	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
Excellent	**Very Good**	Good	Average	Poor

12. How do you rate the objectives stated for each of the courses?				
Excellent	**Very Good**	Good	Average	Poor
13. How do you rate the skill improvement from the courses?				
Excellent	**Very Good**	Good	Average	Poor
14. How do you rate the practical exposure from the courses?				
Excellent	**Very Good**	Good	Average	Poor
15. How do you rate the experiments about the real-life Applications?				
Excellent	Very Good	Good	Average	Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)				

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: **PARMAR RAVINABEN GIRISHBHAI & 2050220013**				
Mobile No.: **6353804696**				
E-Mail: **riyuparmar21@gmail.com**				
Campus: **CAET, JAU**				
Department: **Department of Processing and Food Engineering**				
Degree: ~~UG~~ / **PG** / ~~Ph.D.~~				
Discipline: **Processing and Food Engineering**				
Semester & Academic Year: Pass out (2020-2022)				
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent	**Very Good**	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
Excellent	Very Good	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent	**Very Good**	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent	**Very Good**	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
Excellent	**Very Good**	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
Excellent	Very Good	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent	**Very Good**	Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
Excellent	Very Good	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent	**Very Good**	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
Excellent	Very Good	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
Excellent	Very Good	Good	Average	Poor

12. How do you rate the objectives stated for each of the courses?				
Excellent	**Very Good**	Good	Average	Poor
13. How do you rate the skill improvement from the courses?				
Excellent	**Very Good**	Good	Average	Poor
14. How do you rate the practical exposure from the courses?				
Excellent	Very Good	Good	Average	Poor
15. How do you rate the experiments about the real-life Applications?				
Excellent	**Very Good**	Good	Average	Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)				
NIL				

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Registration No: Sirwani Prakash M (2050218023)				
Mobile No.: 9737900567				
E-Mail: prakashsirwani127@gmail.com				
Campus: CAET, Junagadh Agricultural University				
Department: Department of Processing and Food Engineering				
Degree: PG				
Discipline: M.Tech (Processing and Food Engineering)				
Pass out Year: 2021				
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent	**Very Good**	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
Excellent	Very Good	**Good**	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent	Very Good	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent	**Very Good**	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
Excellent	Very Good	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
Excellent	Very Good	**Good**	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent	**Very Good**	Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
Excellent	**Very Good**	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent	**Very Good**	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
Excellent	Very Good	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
Excellent	Very Good	Good	Average	Poor

12. How do you rate the objectives stated for each of the courses?				
Excellent	Very Good	Good	Average	Poor
13. How do you rate the skill improvement from the courses?				
Excellent	Very Good	**Good**	Average	Poor
14. How do you rate the practical exposure from the courses?				
Excellent	Very Good	Good	**Average**	Poor
15. How do you rate the experiments about the real-life Applications?				
Excellent	Very Good	Good	**Average**	Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)				
1) Theory and practical classes should be taught in such a way that both align with each other. Whenever possible, lectures should be arranged at labs to capture practical exposure along with theory knowledge. 2) If possible, research projects should be based on actual problems those are being faced by industries/farmers. Solving them probably will make academic projects more worthy. With that, students will get the way to work with industries for sure. Thank you for asking!				

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: Tejas Haribhai Barad				
Mobile No.: 8980935807				
E-Mail: tejasharibarad@gmail.com				
Campus: CAET, JAU, Junagadh				
Department: Department of Processing and Food Engineering				
Degree: UG / PG / Ph.D. – M.Tech.				
Discipline: Processing and Food Engineering				
Semester & Academic Year: M.Tech. (2018-2020)				
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent	**Very Good**	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
Excellent	Very Good	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent	**Very Good**	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent	**Very Good**	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
Excellent	Very Good	**Good**	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
Excellent	**Very Good**	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent	Very Good	**Good**	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
Excellent	Very Good	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent	**Very Good**	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
Excellent	**Very Good**	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
Excellent	Very Good	Good	Average	Poor

12. How do you rate the objectives stated for each of the courses?				
Excellent	Very Good	Good	Average	Poor
13. How do you rate the skill improvement from the courses?				
Excellent	**Very Good**	Good	Average	Poor
14. How do you rate the practical exposure from the courses?				
Excellent	Very Good	**Good**	Average	Poor
15. How do you rate the experiments about the real-life Applications?				
Excellent	**Very Good**	Good	Average	Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)				

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: V. Vidhya, 2050222012				
Mobile No.: 8526632709				
E-Mail: vidhyav6298@gmail.com				
Campus: Junagadh Agricultural University, Junagadh, Gujarat				
Department: Agricultural Engineering				
Degree: PG				
Discipline: Processing and Food Engineering				
Semester & Academic Year: 2022 - 2024				
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent	Very Good	**Good**	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
Excellent	Very Good	**Good**	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent	**Very Good**	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent	**Very Good**	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
Excellent	**Very Good**	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
Excellent	Very Good	**Good**	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent	Very Good	**Good**	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
Excellent	Very Good	**Good**	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent	Very Good	**Good**	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
Excellent	Very Good	**Good**	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
Excellent	**Very Good**	Good	Average	Poor

12. How do you rate the objectives stated for each of the courses?				
Excellent	Very Good	**Good**	Average	Poor
13. How do you rate the skill improvement from the courses?				
Excellent	Very Good	**Good**	Average	Poor
14. How do you rate the practical exposure from the courses?				
Excellent	Very Good	**Good**	Average	Poor
15. How do you rate the experiments about the real-life Applications?				
Excellent	Very Good	**Good**	Average	Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)				
I suggest that to fit up the course credits within first two semesters for masters students. Also, it is also needed to add advanced core subject courses and in addition, statistics course may be added for masters students.				

Annexure - III

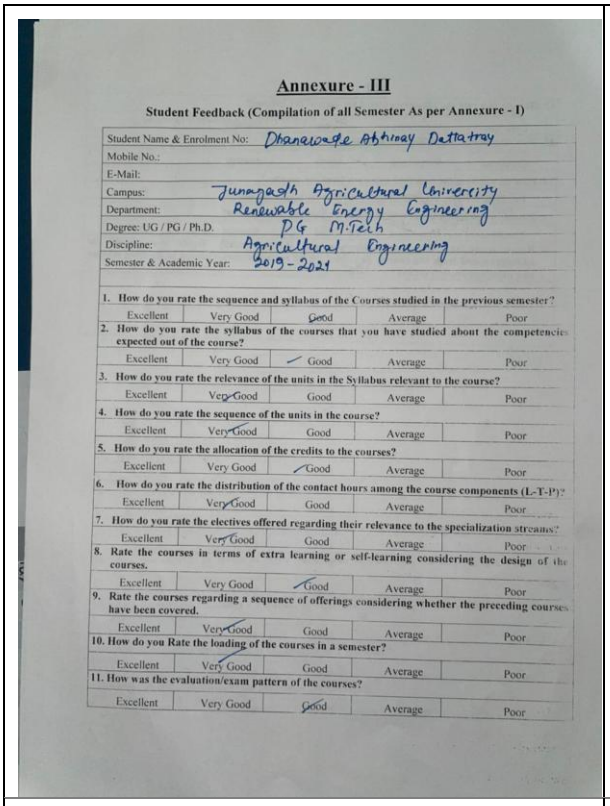
Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: **Vyas Vaibhav Shashikant**, 2050220019				
Mobile No.: 7016949925				
E-Mail: vyasvaibhav10@gmail.com				
Campus: JAU, Junagadh				
Department: Department of Processing and Food Engineering, CAET, JAU, Junagadh				
Degree: ~~UG~~ / PG / ~~Ph.D.~~				
Discipline: Processing and Food Engineering				
Semester & Academic Year: 5th Sem. & 2020-21 to 2022-23				
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent	✓ **Very Good**	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
Excellent	✓ **Very Good**	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent	✓ **Very Good**	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent	✓ **Very Good**	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
Excellent	Very Good	✓ **Good**	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
Excellent	✓ **Very Good**	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent	Very Good	✓ **Good**	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
Excellent	Very Good	✓ **Good**	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent	✓ **Very Good**	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
Excellent	✓ **Very Good**	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
Excellent	Very Good	✓ **Good**	Average	Poor

12. How do you rate the objectives stated for each of the courses?				
Excellent	Very Good	✓ **Good**	Average	Poor
13. How do you rate the skill improvement from the courses?				
Excellent	✓ **Very Good**	Good	Average	Poor
14. How do you rate the practical exposure from the courses?				
Excellent	Very Good	✓ **Good**	Average	Poor
15. How do you rate the experiments about the real-life Applications?				
Excellent	Very Good	✓ **Good**	Average	Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)				
-				

Annexure-VI

Feedback of M. Tech. (Agril. Engg.) students of Dept. of Renewable Energy Engineering

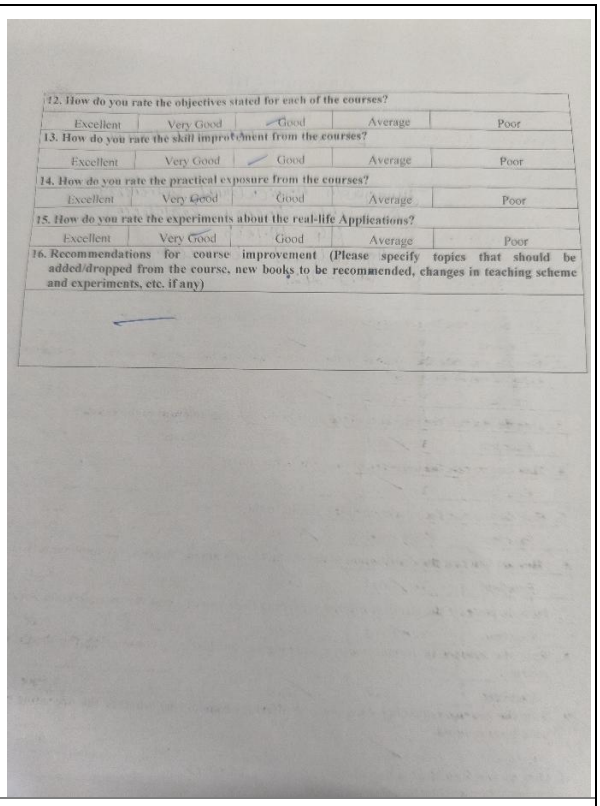


Annexure - III

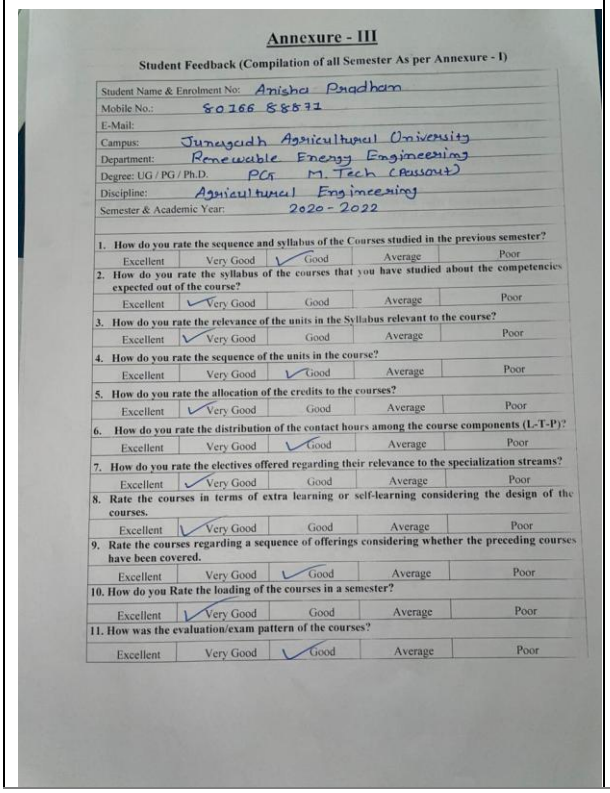
Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: Dhanesvare Abhinay Dattatray
Mobile No.:
E-Mail:
Campus: Junagadh Agricultural University
Department: Renewable Energy Engineering
Degree: UG / PG / Ph.D. PG M.Tech
Discipline: Agricultural Engineering
Semester & Academic Year: 2019 - 2021

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?
Excellent | Very Good | Good | Average | Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?
Excellent | Very Good | Good | Average | Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?
Excellent | Very Good | Good | Average | Poor
4. How do you rate the sequence of the units in the course?
Excellent | Very Good | Good | Average | Poor
5. How do you rate the allocation of the credits to the courses?
Excellent | Very Good | Good | Average | Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?
Excellent | Very Good | Good | Average | Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?
Excellent | Very Good | Good | Average | Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.
Excellent | Very Good | Good | Average | Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.
Excellent | Very Good | Good | Average | Poor
10. How do you Rate the loading of the courses in a semester?
Excellent | Very Good | Good | Average | Poor
11. How was the evaluation/exam pattern of the courses?
Excellent | Very Good | Good | Average | Poor



12. How do you rate the objectives stated for each of the courses?
Excellent | Very Good | Good | Average | Poor
13. How do you rate the skill improvement from the courses?
Excellent | Very Good | Good | Average | Poor
14. How do you rate the practical exposure from the courses?
Excellent | Very Good | Good | Average | Poor
15. How do you rate the experiments about the real-life Applications?
Excellent | Very Good | Good | Average | Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

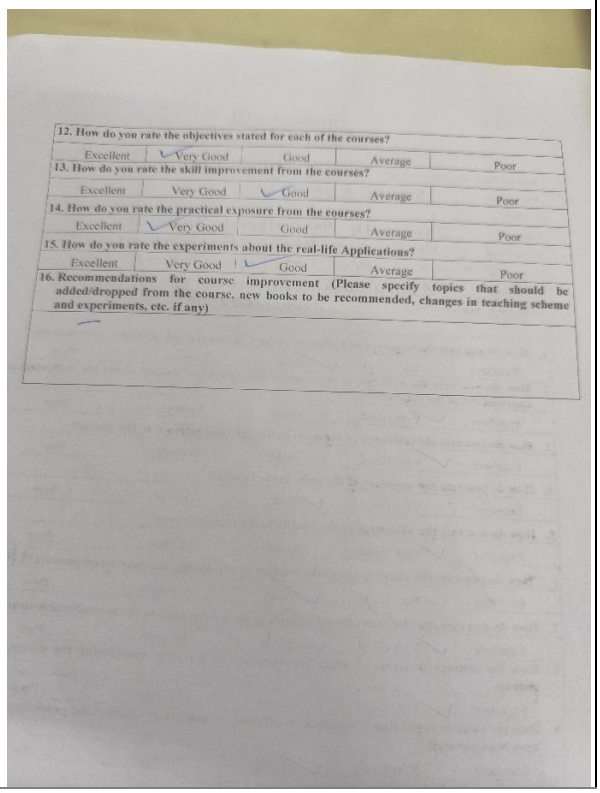


Annexure - III

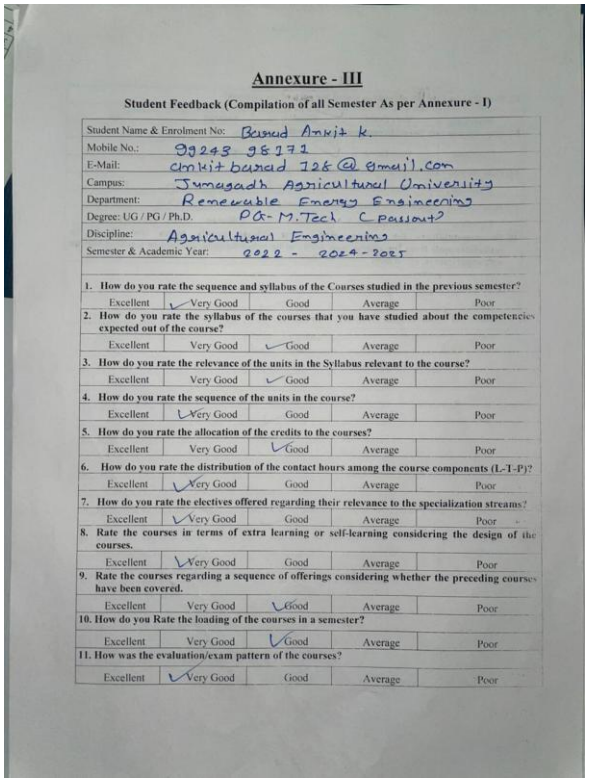
Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: Anisha Pradhan
Mobile No.: 80166 88571
E-Mail:
Campus: Junagadh Agricultural University
Department: Renewable Energy Engineering
Degree: UG / PG / Ph.D. PG M. Tech (Passout)
Discipline: Agricultural Engineering
Semester & Academic Year: 2020 - 2022

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?
Excellent | Very Good | ✓ Good | Average | Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?
Excellent | ✓ Very Good | Good | Average | Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?
Excellent | ✓ Very Good | Good | Average | Poor
4. How do you rate the sequence of the units in the course?
Excellent | Very Good | ✓ Good | Average | Poor
5. How do you rate the allocation of the credits to the courses?
Excellent | ✓ Very Good | Good | Average | Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?
Excellent | Very Good | ✓ Good | Average | Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?
Excellent | ✓ Very Good | Good | Average | Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.
Excellent | ✓ Very Good | Good | Average | Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.
Excellent | Very Good | ✓ Good | Average | Poor
10. How do you Rate the loading of the courses in a semester?
Excellent | ✓ Very Good | Good | Average | Poor
11. How was the evaluation/exam pattern of the courses?
Excellent | Very Good | ✓ Good | Average | Poor



12. How do you rate the objectives stated for each of the courses?
Excellent | ✓ Very Good | Good | Average | Poor
13. How do you rate the skill improvement from the courses?
Excellent | Very Good | ✓ Good | Average | Poor
14. How do you rate the practical exposure from the courses?
Excellent | ✓ Very Good | Good | Average | Poor
15. How do you rate the experiments about the real-life Applications?
Excellent | Very Good | ✓ Good | Average | Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

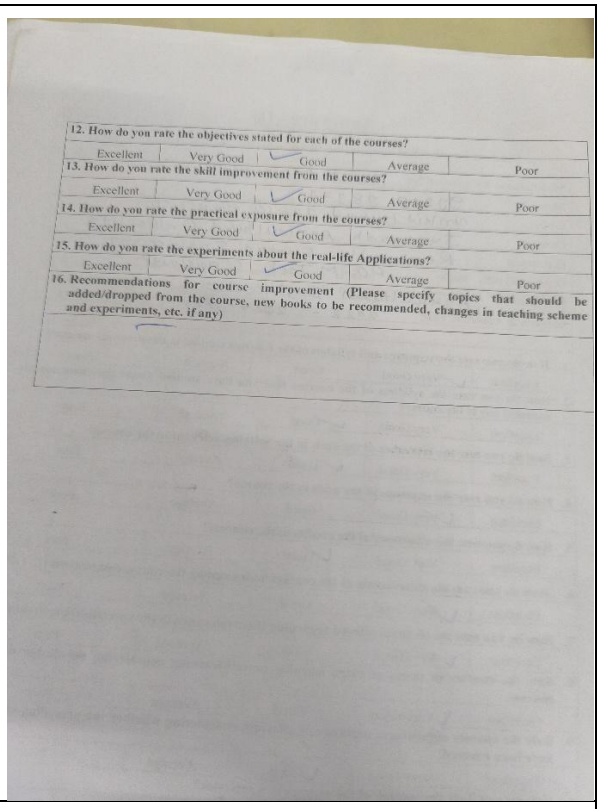


Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

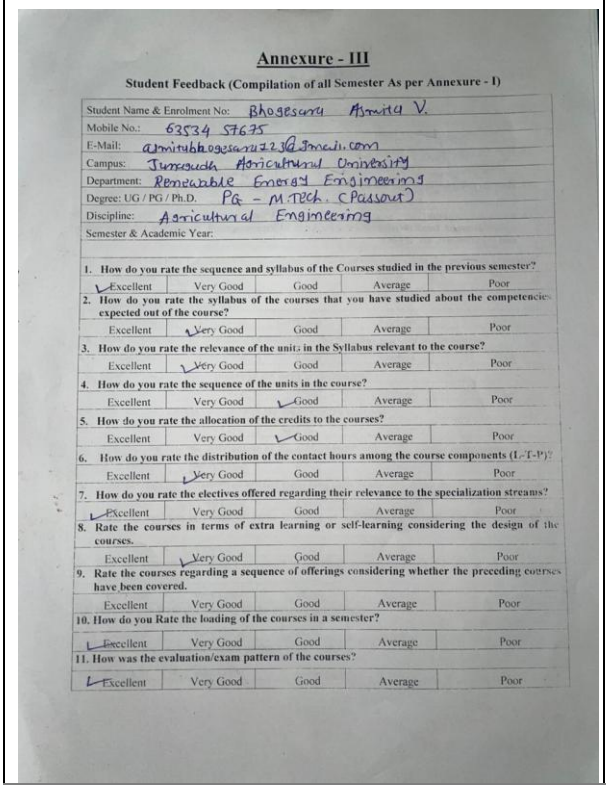
Student Name & Enrolment No: Bansud Ankit k.
Mobile No.: 99243 98171
E-Mail: ankitbansud 126 @ gmail.com
Campus: Junagadh Agricultural University
Department: Renewable Energy Engineering
Degree: UG / PG / Ph.D. PG - M.Tech (Passout)
Discipline: Agricultural Engineering
Semester & Academic Year: 2022 - 2024-2025

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?		✓			
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?			✓		
3. How do you rate the relevance of the units in the Syllabus relevant to the course?			✓		
4. How do you rate the sequence of the units in the course?		✓			
5. How do you rate the allocation of the credits to the courses?			✓		
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?		✓			
7. How do you rate the electives offered regarding their relevance to the specialization streams?		✓			
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.		✓			
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.			✓		
10. How do you Rate the loading of the courses in a semester?			✓		
11. How was the evaluation/exam pattern of the courses?		✓			



	Excellent	Very Good	Good	Average	Poor
12. How do you rate the objectives stated for each of the courses?			✓		
13. How do you rate the skill improvement from the courses?			✓		
14. How do you rate the practical exposure from the courses?			✓		
15. How do you rate the experiments about the real-life Applications?			✓		

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

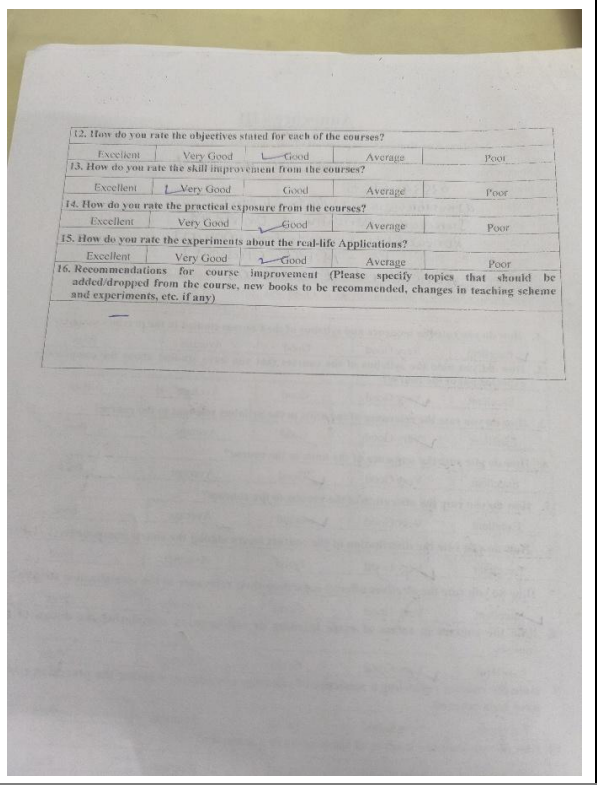


Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

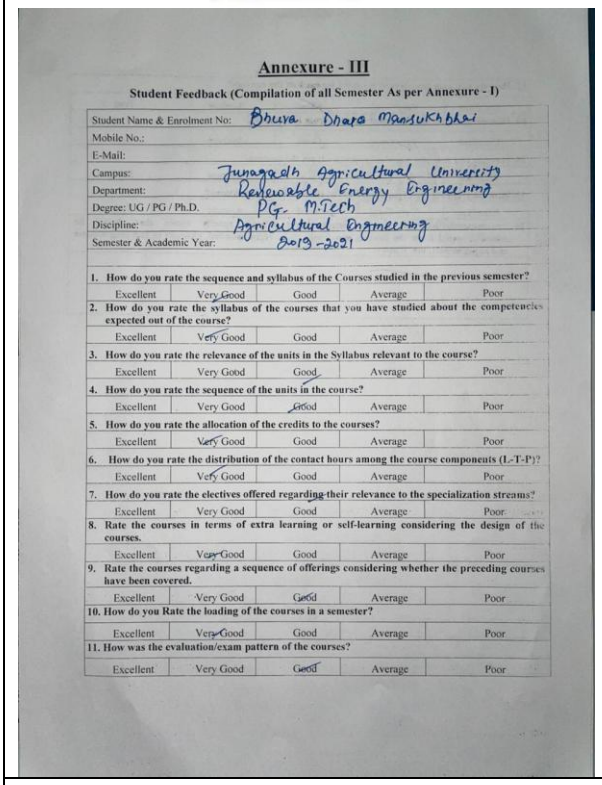
Student Name & Enrolment No: Bhogesara Amita V.
Mobile No.: 63534 57675
E-Mail: amitabhogesara123@gmail.com
Campus: Junagadh Agricultural University
Department: Renewable Energy Engineering
Degree: UG / PG / Ph.D. PG - M.Tech. (Passout)
Discipline: Agricultural Engineering
Semester & Academic Year:

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?	✓				
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?		✓			
3. How do you rate the relevance of the units in the Syllabus relevant to the course?		✓			
4. How do you rate the sequence of the units in the course?			✓		
5. How do you rate the allocation of the credits to the courses?			✓		
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?		✓			
7. How do you rate the electives offered regarding their relevance to the specialization streams?	✓				
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.		✓			
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.					
10. How do you Rate the loading of the courses in a semester?	✓				
11. How was the evaluation/exam pattern of the courses?	✓				



	Excellent	Very Good	Good	Average	Poor
12. How do you rate the objectives stated for each of the courses?			✓		
13. How do you rate the skill improvement from the courses?		✓			
14. How do you rate the practical exposure from the courses?			✓		
15. How do you rate the experiments about the real-life Applications?			✓		

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)



Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	Bhuva Dharo Mansukhbhai
Mobile No.:	
E-Mail:	
Campus:	Junagadh Agricultural University
Department:	Renewable Energy Engineering
Degree: UG / PG / Ph.D.	PG. M.Tech
Discipline:	Agricultural Engineering
Semester & Academic Year:	2019-2021

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?

Excellent	Very Good	Good	Average	Poor

2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?

Excellent	Very Good	Good	Average	Poor

3. How do you rate the relevance of the units in the Syllabus relevant to the course?

Excellent	Very Good	Good	Average	Poor

4. How do you rate the sequence of the units in the course?

Excellent	Very Good	Good	Average	Poor

5. How do you rate the allocation of the credits to the courses?

Excellent	Very Good	Good	Average	Poor

6. How do you rate the distribution of the contact hours among the course components (L-T-P)?

Excellent	Very Good	Good	Average	Poor

7. How do you rate the electives offered regarding their relevance to the specialization streams?

Excellent	Very Good	Good	Average	Poor

8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.

Excellent	Very Good	Good	Average	Poor

9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.

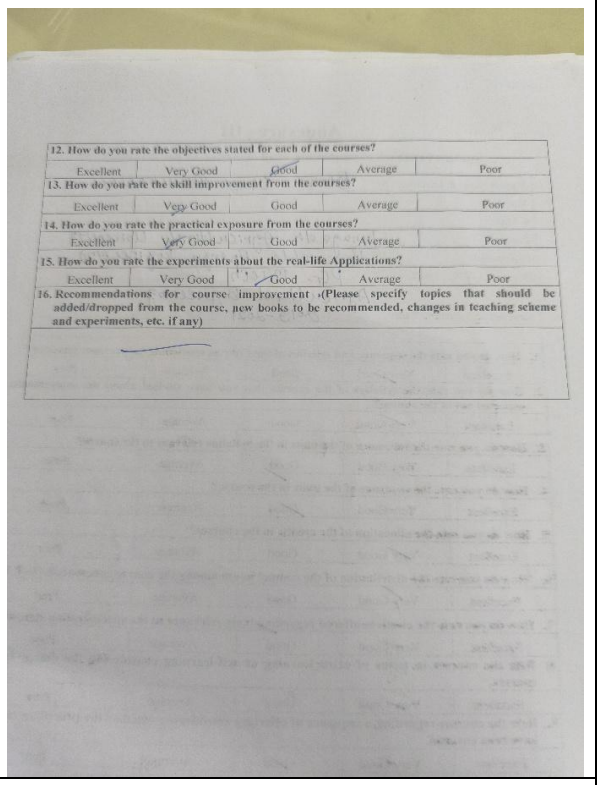
Excellent	Very Good	Good	Average	Poor

10. How do you Rate the loading of the courses in a semester?

Excellent	Very Good	Good	Average	Poor

11. How was the evaluation/exam pattern of the courses?

Excellent	Very Good	Good	Average	Poor



12. How do you rate the objectives stated for each of the courses?

Excellent	Very Good	Good	Average	Poor

13. How do you rate the skill improvement from the courses?

Excellent	Very Good	Good	Average	Poor

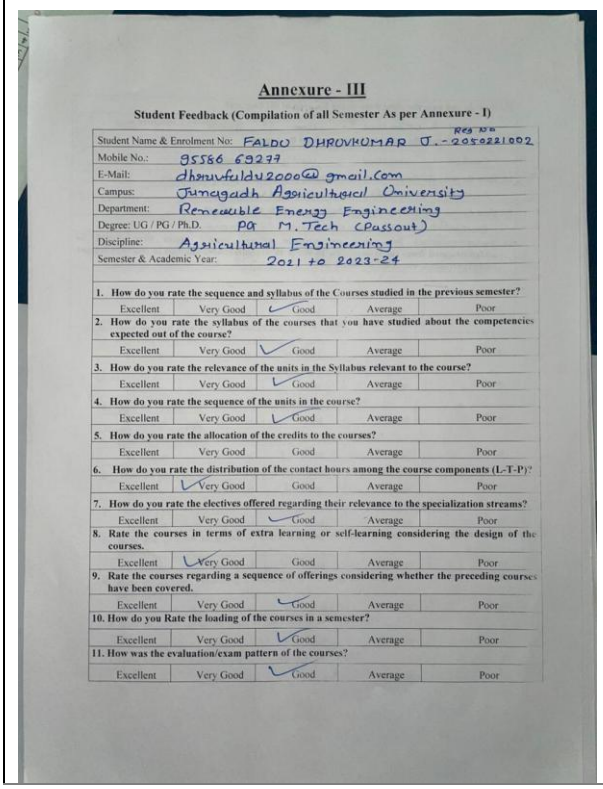
14. How do you rate the practical exposure from the courses?

Excellent	Very Good	Good	Average	Poor

15. How do you rate the experiments about the real-life Applications?

Excellent	Very Good	Good	Average	Poor

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)



Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	FALDU DHRUVKUMAR J. - 205022100 2 (Reg No)
Mobile No.:	95586 69277
E-Mail:	dhruvfaldu2000@gmail.com
Campus:	Junagadh Agricultural University
Department:	Renewable Energy Engineering
Degree: UG / PG / Ph.D.	PG M.Tech (Passout)
Discipline:	Agricultural Engineering
Semester & Academic Year:	2021 to 2023-24

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?

Excellent	Very Good	✓ Good	Average	Poor

2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?

Excellent	Very Good	✓ Good	Average	Poor

3. How do you rate the relevance of the units in the Syllabus relevant to the course?

Excellent	Very Good	✓ Good	Average	Poor

4. How do you rate the sequence of the units in the course?

Excellent	Very Good	✓ Good	Average	Poor

5. How do you rate the allocation of the credits to the courses?

Excellent	Very Good	Good	Average	Poor

6. How do you rate the distribution of the contact hours among the course components (L-T-P)?

Excellent	✓ Very Good	Good	Average	Poor

7. How do you rate the electives offered regarding their relevance to the specialization streams?

Excellent	Very Good	✓ Good	Average	Poor

8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.

Excellent	✓ Very Good	Good	Average	Poor

9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.

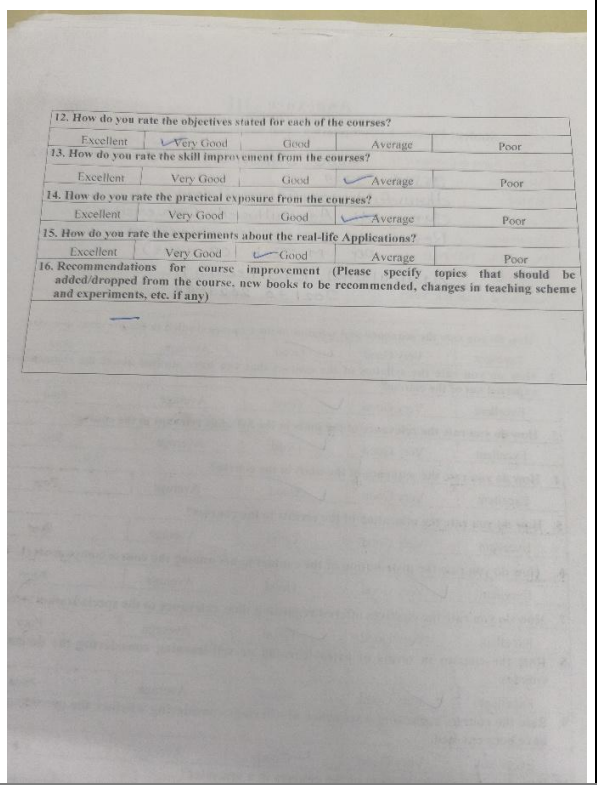
Excellent	Very Good	✓ Good	Average	Poor

10. How do you Rate the loading of the courses in a semester?

Excellent	Very Good	✓ Good	Average	Poor

11. How was the evaluation/exam pattern of the courses?

Excellent	Very Good	✓ Good	Average	Poor



12. How do you rate the objectives stated for each of the courses?

Excellent	✓ Very Good	Good	Average	Poor

13. How do you rate the skill improvement from the courses?

Excellent	Very Good	Good	✓ Average	Poor

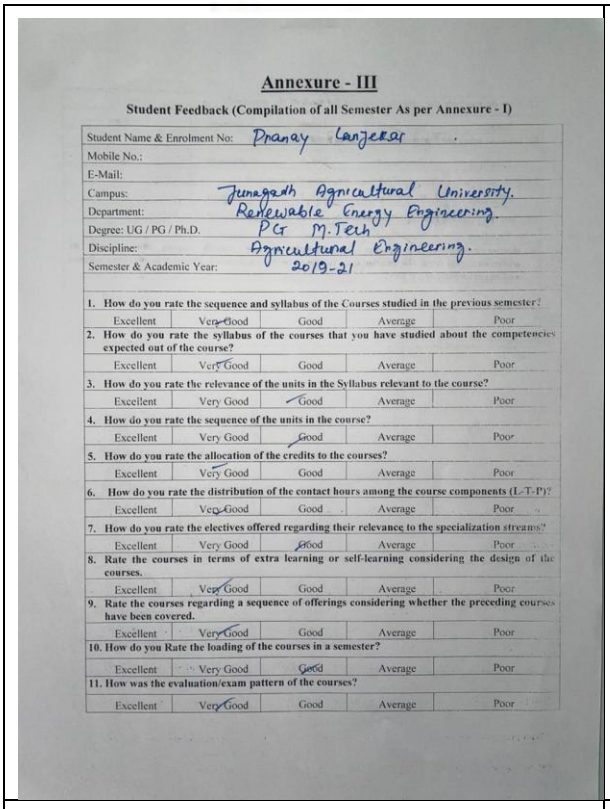
14. How do you rate the practical exposure from the courses?

Excellent	Very Good	Good	✓ Average	Poor

15. How do you rate the experiments about the real-life Applications?

Excellent	Very Good	✓ Good	Average	Poor

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)



Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	Pranay Lanjekar
Mobile No.:	
E-Mail:	
Campus:	Junagadh Agricultural University.
Department:	Renewable Energy Engineering.
Degree: UG / PG / Ph.D.	PG M.Tech
Discipline:	Agricultural Engineering.
Semester & Academic Year:	2019-21

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?

Excellent	Very Good	Good	Average	Poor

2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?

Excellent	Very Good	Good	Average	Poor

3. How do you rate the relevance of the units in the Syllabus relevant to the course?

Excellent	Very Good	Good	Average	Poor

4. How do you rate the sequence of the units in the course?

Excellent	Very Good	Good	Average	Poor

5. How do you rate the allocation of the credits to the courses?

Excellent	Very Good	Good	Average	Poor

6. How do you rate the distribution of the contact hours among the course components (L-T-P)?

Excellent	Very Good	Good	Average	Poor

7. How do you rate the electives offered regarding their relevance to the specialization streams?

Excellent	Very Good	Good	Average	Poor

8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.

Excellent	Very Good	Good	Average	Poor

9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.

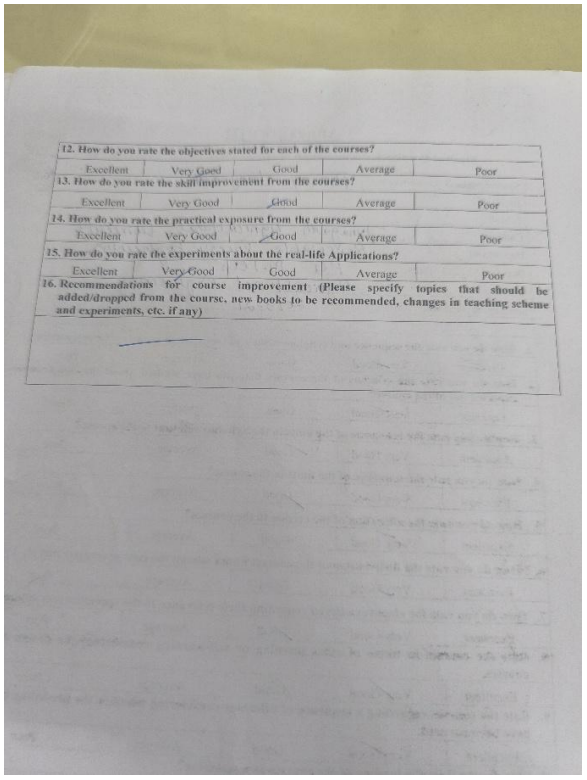
Excellent	Very Good	Good	Average	Poor

10. How do you Rate the loading of the courses in a semester?

Excellent	Very Good	Good	Average	Poor

11. How was the evaluation/exam pattern of the courses?

Excellent	Very Good	Good	Average	Poor



12. How do you rate the objectives stated for each of the courses?

Excellent	Very Good	Good	Average	Poor

13. How do you rate the skill improvement from the courses?

Excellent	Very Good	Good	Average	Poor

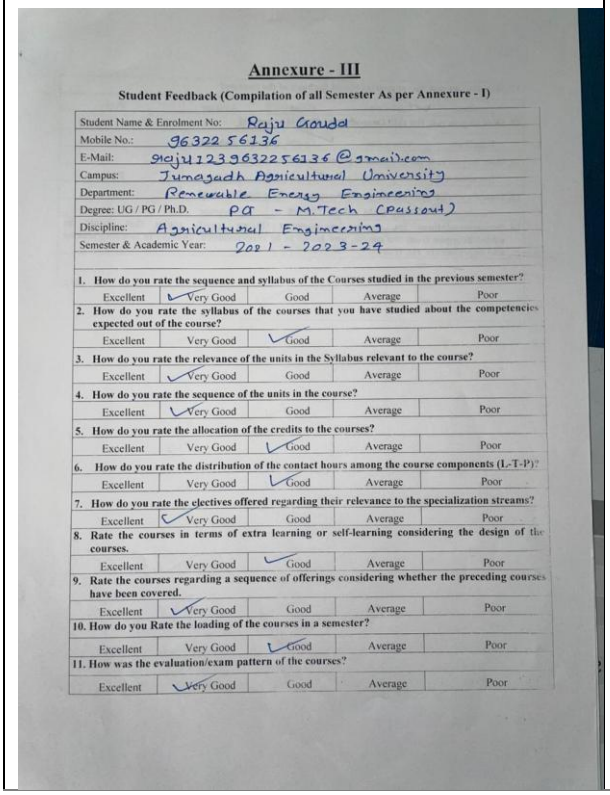
14. How do you rate the practical exposure from the courses?

Excellent	Very Good	Good	Average	Poor

15. How do you rate the experiments about the real-life Applications?

Excellent	Very Good	Good	Average	Poor

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)



Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	Raju Gouda
Mobile No.:	96322 56136
E-Mail:	raju123963225613 6@gmail.com
Campus:	Junagadh Agricultural University
Department:	Renewable Energy Engineering
Degree: UG / PG / Ph.D.	PG - M.Tech (Passout)
Discipline:	Agricultural Engineering
Semester & Academic Year:	2021 - 2023-24

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?

Excellent	Very Good	Good	Average	Poor

2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?

Excellent	Very Good	Good	Average	Poor

3. How do you rate the relevance of the units in the Syllabus relevant to the course?

Excellent	Very Good	Good	Average	Poor

4. How do you rate the sequence of the units in the course?

Excellent	Very Good	Good	Average	Poor

5. How do you rate the allocation of the credits to the courses?

Excellent	Very Good	Good	Average	Poor

6. How do you rate the distribution of the contact hours among the course components (L-T-P)?

Excellent	Very Good	Good	Average	Poor

7. How do you rate the electives offered regarding their relevance to the specialization streams?

Excellent	Very Good	Good	Average	Poor

8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.

Excellent	Very Good	Good	Average	Poor

9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.

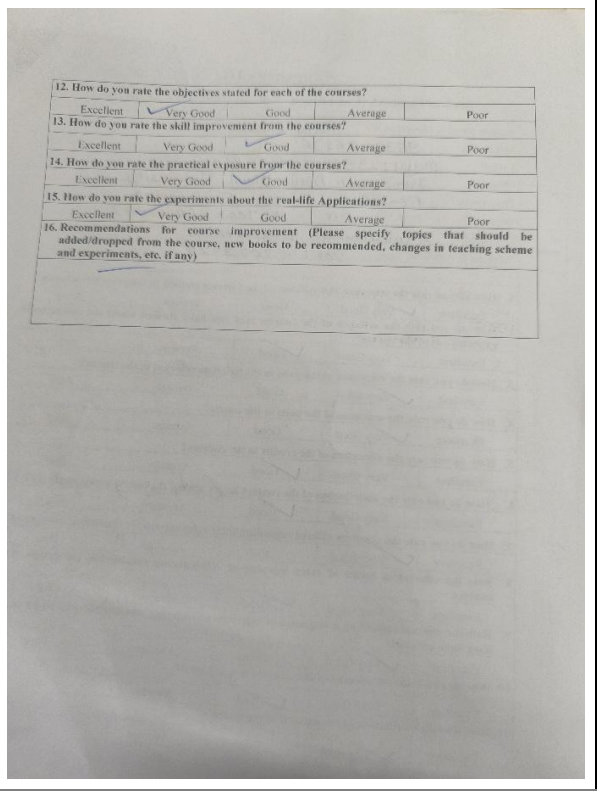
Excellent	Very Good	Good	Average	Poor

10. How do you Rate the loading of the courses in a semester?

Excellent	Very Good	Good	Average	Poor

11. How was the evaluation/exam pattern of the courses?

Excellent	Very Good	Good	Average	Poor



12. How do you rate the objectives stated for each of the courses?

Excellent	Very Good	Good	Average	Poor

13. How do you rate the skill improvement from the courses?

Excellent	Very Good	Good	Average	Poor

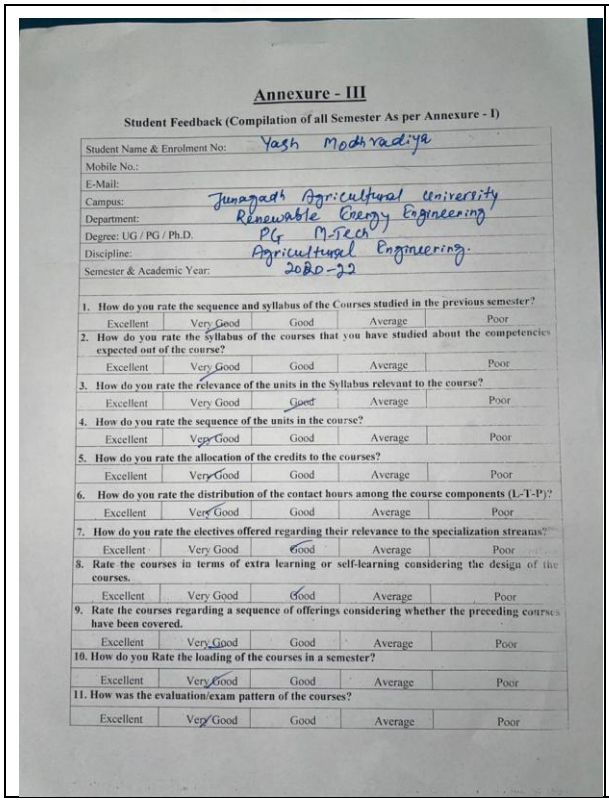
14. How do you rate the practical exposure from the courses?

Excellent	Very Good	Good	Average	Poor

15. How do you rate the experiments about the real-life Applications?

Excellent	Very Good	Good	Average	Poor

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)



Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	Yash Modhvadiya
Mobile No.:	
E-Mail:	
Campus:	Junagadh Agricultural University
Department:	Renewable Energy Engineering
Degree: UG / PG / Ph.D.	PG M.Tech
Discipline:	Agricultural Engineering.
Semester & Academic Year:	2020-22

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?

Excellent | Very Good | Good | Average | Poor

2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?

Excellent | Very Good | Good | Average | Poor

3. How do you rate the relevance of the units in the Syllabus relevant to the course?

Excellent | Very Good | Good | Average | Poor

4. How do you rate the sequence of the units in the course?

Excellent | Very Good | Good | Average | Poor

5. How do you rate the allocation of the credits to the courses?

Excellent | Very Good | Good | Average | Poor

6. How do you rate the distribution of the contact hours among the course components (L-T-P)?

Excellent | Very Good | Good | Average | Poor

7. How do you rate the electives offered regarding their relevance to the specialization streams?

Excellent | Very Good | Good | Average | Poor

8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.

Excellent | Very Good | Good | Average | Poor

9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.

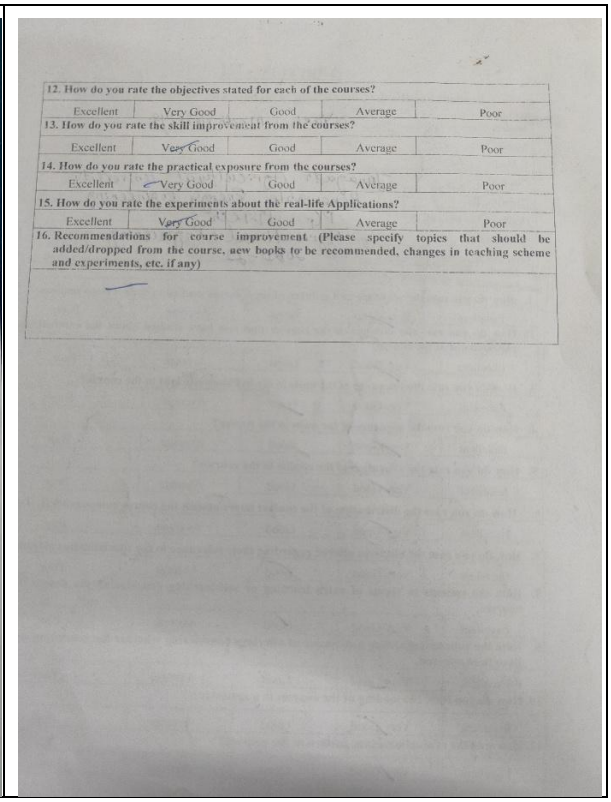
Excellent | Very Good | Good | Average | Poor

10. How do you Rate the loading of the courses in a semester?

Excellent | Very Good | Good | Average | Poor

11. How was the evaluation/exam pattern of the courses?

Excellent | Very Good | Good | Average | Poor



12. How do you rate the objectives stated for each of the courses?

Excellent | Very Good | Good | Average | Poor

13. How do you rate the skill improvement from the courses?

Excellent | Very Good | Good | Average | Poor

14. How do you rate the practical exposure from the courses?

Excellent | Very Good | Good | Average | Poor

15. How do you rate the experiments about the real-life Applications?

Excellent | Very Good | Good | Average | Poor

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

Annexure-VII

Feedback of Ph. D. (Agril. Engg.) students of Dept. of Soil and Water Conservation Engineering

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	PINIPE AKHILA SHANEY, 105050009
Mobile No.:	9173092087
E-Mail:	Pinipeakhila@gmail.com
Campus:	CAET, JAU
Department:	Soil and Water Conservation Engineering
Degree: UG / PG / PhD.	
Discipline:	Soil and Water Conservation Engineering
Semester & Academic Year:	3rd Sem, 2025

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?		✓			
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?		✓			
3. How do you rate the relevance of the units in the Syllabus relevant to the course?		✓			
4. How do you rate the sequence of the units in the course?		✓			
5. How do you rate the allocation of the credits to the courses?		✓			
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?			✓		
7. How do you rate the electives offered regarding their relevance to the specialization streams?		✓			
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.		✓			
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.		✓			
10. How do you Rate the loading of the courses in a semester?		✓			
11. How was the evaluation/exam pattern of the courses?	✓				

	Excellent	Very Good	Good	Average	Poor
12. How do you rate the objectives stated for each of the courses?	✓				
13. How do you rate the skill improvement from the courses?		✓			
14. How do you rate the practical exposure from the courses?			✓		
15. How do you rate the experiments about the real-life Applications?		✓			

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

Respected Sir,
More practical knowledge and field experience should be improved. Some books (P.N. Modi's book) from FEE are not sufficient in the library. Departmental library (common room) is not spacious for all students.

P.A.Shaney
(P. AKHILA SHANEY)

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	AYUSH RANJAN (205022 5004)
Mobile No.:	6205621346
E-Mail:	ayush-ranjan7874@gmail.com
Campus:	Junagadh Agricultural University
Department:	SWCE (Soil and Water Conservation Engineering)
Degree: UG / PG / Ph.D.	PhD
Discipline:	Agril Engg. (SWCE)
Semester & Academic Year:	1 semester 7 1st Year.

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?	✓				
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?		✓			
3. How do you rate the relevance of the units in the Syllabus relevant to the course?		✓			
4. How do you rate the sequence of the units in the course?		✓			
5. How do you rate the allocation of the credits to the courses?	✓				
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?		✓			
7. How do you rate the electives offered regarding their relevance to the specialization streams?		✓			
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.		✓			
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.	✓				
10. How do you Rate the loading of the courses in a semester?		✓			
11. How was the evaluation/exam pattern of the courses?	✓				

	Excellent	Very Good	Good	Average	Poor
12. How do you rate the objectives stated for each of the courses?	✓				
13. How do you rate the skill improvement from the courses?		✓			
14. How do you rate the practical exposure from the courses?		✓			
15. How do you rate the experiments about the real-life Applications?		✓			

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

Ayush Ranjan

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: Dheerajkumar. S. H (1050224007)
Mobile No.: 6362836100
E-Mail: hanamapured@gmail.com
Campus: CAET, JAU
Department: SWCE
Degree: UG / PG / Ph.D. Ph. D.
Discipline: SWCE
Semester & Academic Year: 3rd Semister 2nd Year

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent	Very Good ✓	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
Excellent	Very Good	Good ✓	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent	Very Good	Good ✓	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent	Very Good ✓	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
Excellent	Very Good	Good ✓	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
Excellent	Very Good	Good ✓	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent	Very Good	Good ✓	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
Excellent	Very Good	Good ✓	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent	Very Good ✓	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
Excellent	Very Good ✓	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
Excellent	Very Good ✓	Good	Average	Poor

12. How do you rate the objectives stated for each of the courses?				
Excellent	Very Good ✓	Good	Average	Poor
13. How do you rate the skill improvement from the courses?				
Excellent	Very Good ✓	Good	Average	Poor
14. How do you rate the practical exposure from the courses?				
Excellent	Very Good	Good ✓	Average	Poor
15. How do you rate the experiments about the real-life Applications?				
Excellent	Very Good	Good ✓	Average	Poor

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

- NA -

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: Dhodia Jugnuben Bhikhubhai 1050224002
Mobile No.: 9265367624
E-Mail: jugnudhodia@gmail.com
Campus: JAU
Department: Soil and Water Conservation Engineering
Degree: UG / PG / Ph.D.
Discipline: Soil and Water Conservation Engineering
Semester & Academic Year: 3rd Sem 2025

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent	✓ Very Good	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
✓ Excellent	Very Good	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent	✓ Very Good	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent	✓ Very Good	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
Excellent	✓ Very Good	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
✓ Excellent	Very Good	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent	✓ Very Good	Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
Excellent	✓ Very Good	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent	✓ Very Good	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
Excellent	✓ Very Good	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
✓ Excellent	Very Good	Good	Average	Poor

12. How do you rate the objectives stated for each of the courses?				
✓ Excellent	Very Good	Good	Average	Poor
13. How do you rate the skill improvement from the courses?				
✓ Excellent	Very Good	Good	Average	Poor
14. How do you rate the practical exposure from the courses?				
Excellent	✓ Very Good	Good	Average	Poor
15. How do you rate the experiments about the real-life Applications?				
Excellent	✓ Very Good	Good	Average	Poor

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

Respected Sir,
Sir as we are pg students it would be very helpful if there is some on training programme will be there for few days or months.

Dhodia Jugnu B.

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	Niraj Kumar : 1050223002
Mobile No.:	7062088869
E-Mail:	nirajkumar13may@gmail.com
Campus:	Junagadh Agricultural University
Department:	Soil and water Conservation Engineering
Degree: UG / PG / Ph.D.	Ph.D.
Discipline:	Agricultural Engineering
Semester & Academic Year:	5th and 3rd year

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
✓Excellent	Very Good	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
✓Excellent	Very Good	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
✓Excellent	Very Good	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
✓Excellent	Very Good	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
✓Excellent	Very Good	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
✓Excellent	Very Good	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
✓Excellent	Very Good	Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
✓Excellent	Very Good	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
✓Excellent	Very Good	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
✓Excellent	Very Good	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
✓Excellent	Very Good	Good	Average	Poor
12. How do you rate the objectives stated for each of the courses?				
✓Excellent	Very Good	Good	Average	Poor
13. How do you rate the skill improvement from the courses?				
✓Excellent	Very Good	Good	Average	Poor
14. How do you rate the practical exposure from the courses?				
✓Excellent	Very Good	Good	Average	Poor
15. How do you rate the experiments about the real-life Applications?				
✓Excellent	Very Good	Good	Average	Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)				

Niraj Kumar

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	Bogaydy Parimkumar J. 1050225001
Mobile No.:	8980807693
E-Mail:	pjbogaydy@jau.in
Campus:	JAU
Department:	Soil & water conservation Engineering dept
Degree: UG/PG/Ph.D.	Ph.D.
Discipline:	Soil & water conservation Engineering.
Semester & Academic Year:	1st sem 2025

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent	Very Good	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
Excellent	Very Good	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent	Very Good	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent	Very Good	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
Excellent	Very Good	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
Excellent	Very Good	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent	Very Good	Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
Excellent	Very Good	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent	Very Good	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
Excellent	Very Good	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
Excellent	Very Good	Good	Average	Poor
12. How do you rate the objectives stated for each of the courses?				
Excellent	Very Good	Good	Average	Poor
13. How do you rate the skill improvement from the courses?				
Excellent	Very Good	Good	Average	Poor
14. How do you rate the practical exposure from the courses?				
Excellent	Very Good	Good	Average	Poor
15. How do you rate the experiments about the real-life Applications?				
Excellent	Very Good	Good	Average	Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)				

Excellent teaching process

P. J. Bogaydy

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	Poonam Sahu
Mobile No.:	7024798941
E-Mail:	pSahu.Swce@gmail.com
Campus:	Junagadh Agricultural University, Junagadh
Department:	Soil and Water Conservation Engineering
Degree: UG / PG / Ph.D.	Ph.D.
Discipline:	Soil and Water Conservation Engineering
Semester & Academic Year:	1st semester (2025-26)

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?		✓			
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?		✓			
3. How do you rate the relevance of the units in the Syllabus relevant to the course?		✓			
4. How do you rate the sequence of the units in the course?		✓			
5. How do you rate the allocation of the credits to the courses?					
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?	✓				
7. How do you rate the electives offered regarding their relevance to the specialization streams?		✓			
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.			✓		
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.	✓				
10. How do you Rate the loading of the courses in a semester?	✓				
11. How was the evaluation/exam pattern of the courses?	✓				

	Excellent	Very Good	Good	Average	Poor
12. How do you rate the objectives stated for each of the courses?		✓			
13. How do you rate the skill improvement from the courses?			✓		
14. How do you rate the practical exposure from the courses?			✓		
15. How do you rate the experiments about the real-life Applications?		✓			

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

As a PhD student, I recommend Organizing short-term, hands on workshops related to our discipline specialization. (GIS & RS, Modelling, Planning) Such programs will simultaneously strengthen students technical & soft skill like problem solving, team work, communication there by, enriching overall academic and professional competence.

(Poonam Sahu)

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

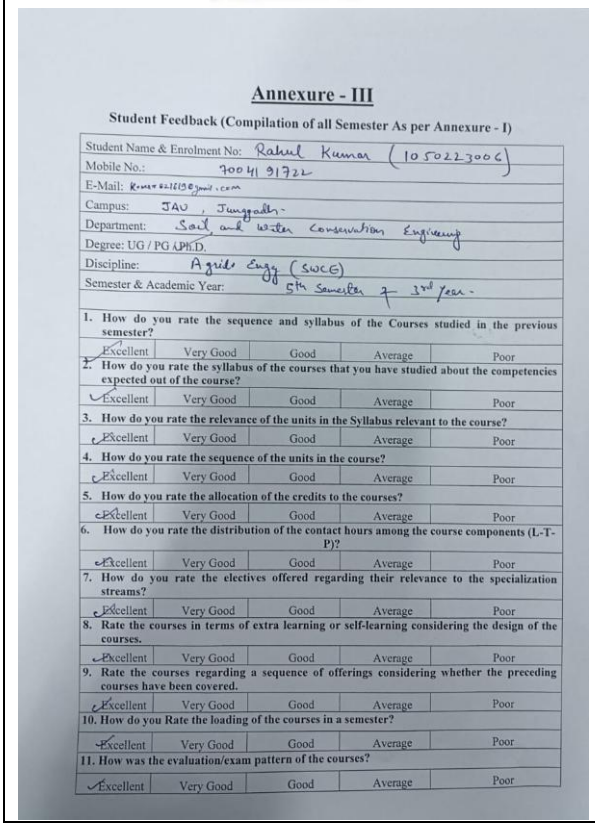
Student Name & Enrolment No:	Gowit Priyanka Laxman 1060225006
Mobile No.:	8200050667
E-Mail:	priyanka1998@gmail.com
Campus:	JAU
Department:	Soil and water conservation Engineering
Degree: UG / PG / Ph.D.	Ph.D
Discipline:	Soil and water conservation Engineering
Semester & Academic Year:	1st Sem 2025

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?		✓			
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?			✓		
3. How do you rate the relevance of the units in the Syllabus relevant to the course?		✓			
4. How do you rate the sequence of the units in the course?		✓			
5. How do you rate the allocation of the credits to the courses?		✓			
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?		✓			
7. How do you rate the electives offered regarding their relevance to the specialization streams?		✓			
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.		✓			
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.		✓			
10. How do you Rate the loading of the courses in a semester?		✓			
11. How was the evaluation/exam pattern of the courses?		✓			

	Excellent	Very Good	Good	Average	Poor
12. How do you rate the objectives stated for each of the courses?					
13. How do you rate the skill improvement from the courses?		✓			
14. How do you rate the practical exposure from the courses?		✓			
15. How do you rate the experiments about the real-life Applications?		✓			

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

Gowit Priyanka L.

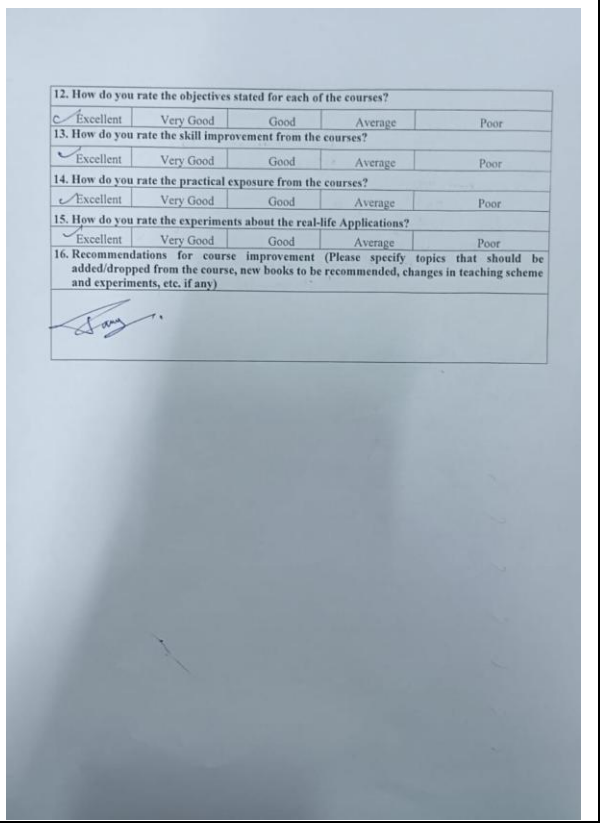


Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	Rahul Kumar (105022006)
Mobile No.:	70041 91722
E-Mail:	Kumar62161@gmail.com
Campus:	JAU, Junagadh.
Department:	Soil and Water Conservation Engineering
Degree: UG / PG /Ph.D.	
Discipline:	Agricl Engg (SWCE)
Semester & Academic Year:	5th Semester & 3rd Year.

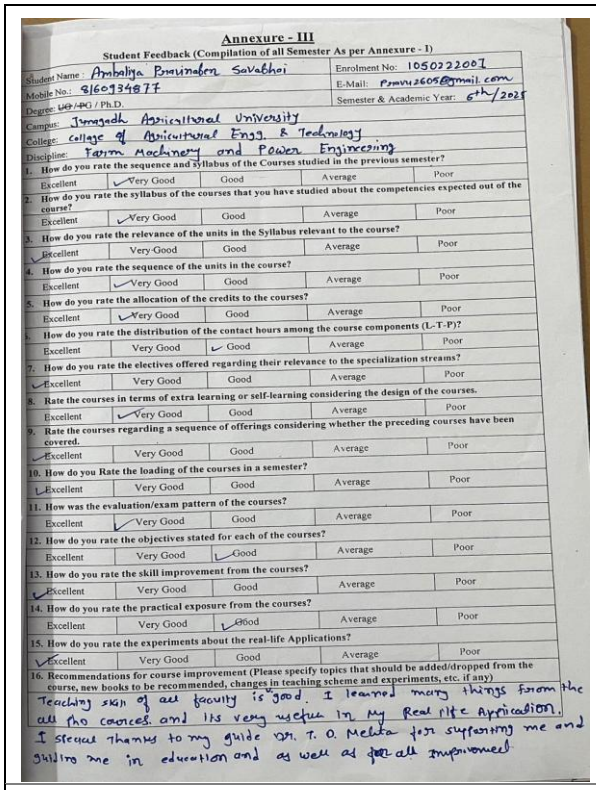
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
✓Excellent	Very Good	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
✓Excellent	Very Good	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
✓Excellent	Very Good	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
✓Excellent	Very Good	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
✓Excellent	Very Good	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
✓Excellent	Very Good	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
✓Excellent	Very Good	Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
✓Excellent	Very Good	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
✓Excellent	Very Good	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
✓Excellent	Very Good	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
✓Excellent	Very Good	Good	Average	Poor



12. How do you rate the objectives stated for each of the courses?				
✓Excellent	Very Good	Good	Average	Poor
13. How do you rate the skill improvement from the courses?				
✓Excellent	Very Good	Good	Average	Poor
14. How do you rate the practical exposure from the courses?				
✓Excellent	Very Good	Good	Average	Poor
15. How do you rate the experiments about the real-life Applications?				
✓Excellent	Very Good	Good	Average	Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)				

Annexure-VIII

Feedback of Ph. D. (Agril. Engg.) students of Dept. of Farm Machinery and Power Engineering



Annexure - III

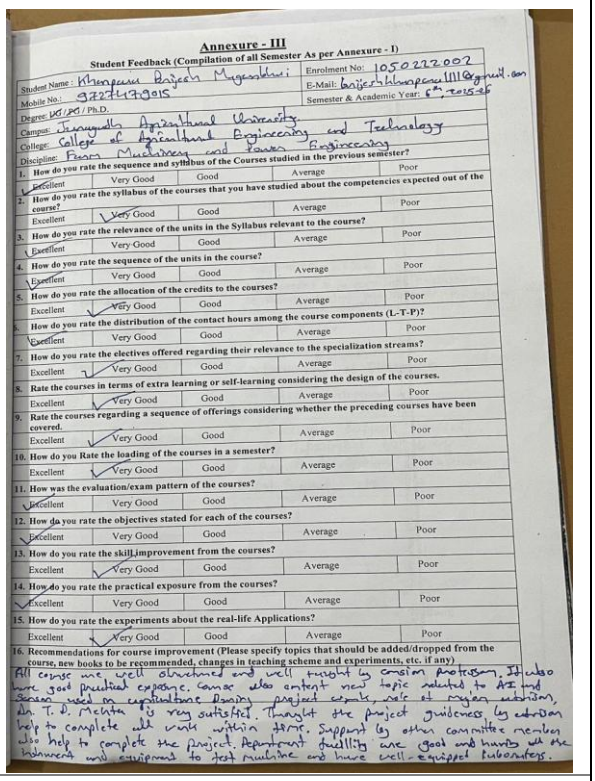
Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name : Ambaliya Pravinaben Savabhai | Enrolment No: 105022007
Mobile No.: 8160934877 | E-Mail: Pravin2605@gmail.com
Degree: UG / PG / Ph.D. | Semester & Academic Year: 6th / 2025
Campus: Junagadh Agricultural University
College: College of Agricultural Engg. & Technology
Discipline: Farm Machinery and Power Engineering

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?		✓			
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?		✓			
3. How do you rate the relevance of the units in the Syllabus relevant to the course?	✓				
4. How do you rate the sequence of the units in the course?		✓			
5. How do you rate the allocation of the credits to the courses?		✓			
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?			✓		
7. How do you rate the electives offered regarding their relevance to the specialization streams?	✓				
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.		✓			
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.	✓				
10. How do you Rate the loading of the courses in a semester?	✓				
11. How was the evaluation/exam pattern of the courses?		✓			
12. How do you rate the objectives stated for each of the courses?			✓		
13. How do you rate the skill improvement from the courses?	✓				
14. How do you rate the practical exposure from the courses?			✓		
15. How do you rate the experiments about the real-life Applications?	✓				

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

Teaching skill of all faculty is good. I learned many things from the all the courses. and its very useful in My Real life Application.
I special thanks to my guide Dr. T. D. Mehta for supporting me and guiding me in education and as well as for all improvement.



Annexure - III

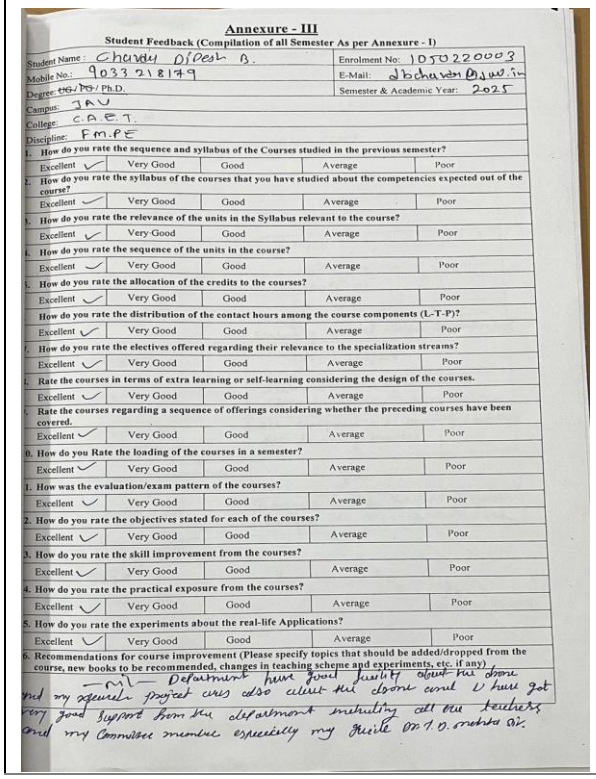
Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name : Khanpara Rajesh Mageshbhai | Enrolment No: 105022202
Mobile No.: 9727479015 | E-Mail: rajeshkhanpara1111@gmail.com
Degree: UG / PG / Ph.D. | Semester & Academic Year: 6th, 2025-26
Campus: Junagadh Agricultural University
College: College of Agricultural Engineering and Technology
Discipline: Farm Machinery and Power Engineering

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?	✓				
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?		✓			
3. How do you rate the relevance of the units in the Syllabus relevant to the course?	✓				
4. How do you rate the sequence of the units in the course?	✓				
5. How do you rate the allocation of the credits to the courses?		✓			
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?	✓				
7. How do you rate the electives offered regarding their relevance to the specialization streams?		✓			
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.		✓			
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.	✓				
10. How do you Rate the loading of the courses in a semester?		✓			
11. How was the evaluation/exam pattern of the courses?	✓				
12. How do you rate the objectives stated for each of the courses?	✓				
13. How do you rate the skill improvement from the courses?		✓			
14. How do you rate the practical exposure from the courses?		✓			
15. How do you rate the experiments about the real-life Applications?		✓			

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

All course are well structured and well taught by onsite professors. It also have good practical exposure. Course also content new topic related to AI and Screen used in examinations. During project work, we'r at regular interval Dr. T. D. Mehta is very satisfied. Through the project guidances by each one help to complete all work within time. Support by other committee members also help to complete the project. Department facility are good and having all the instrument and equipment to test machine and have well-equipped laboratories.



Annexure - III

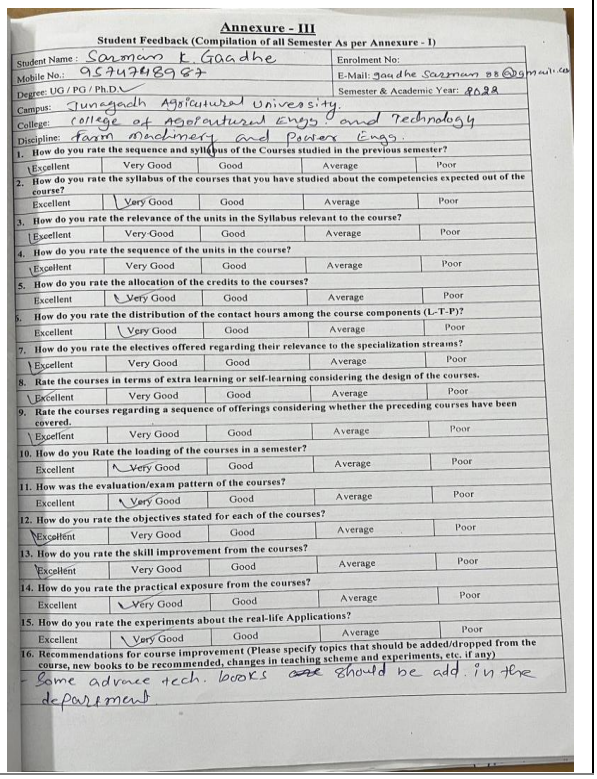
Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name : Chavda Dipesh B. | Enrolment No: 105022003
Mobile No.: 9033218149 | E-Mail: dbchavda@jau.in
Degree: UG / PG / Ph.D. | Semester & Academic Year: 2025
Campus: JAU
College: C.A.E.T.
Discipline: FM.PE

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?	✓				
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?	✓				
3. How do you rate the relevance of the units in the Syllabus relevant to the course?	✓				
4. How do you rate the sequence of the units in the course?	✓				
5. How do you rate the allocation of the credits to the courses?	✓				
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?	✓				
7. How do you rate the electives offered regarding their relevance to the specialization streams?	✓				
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.	✓				
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.	✓				
10. How do you Rate the loading of the courses in a semester?	✓				
11. How was the evaluation/exam pattern of the courses?	✓				
12. How do you rate the objectives stated for each of the courses?	✓				
13. How do you rate the skill improvement from the courses?	✓				
14. How do you rate the practical exposure from the courses?	✓				
15. How do you rate the experiments about the real-life Applications?	✓				

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

—Nil— Department have good facility about the course and my research project work also allot the course and I have got very good support from the department including all the teachers and my Commitee member especially my guide Dr. T. D. Mehta Sir.



Annexure - III

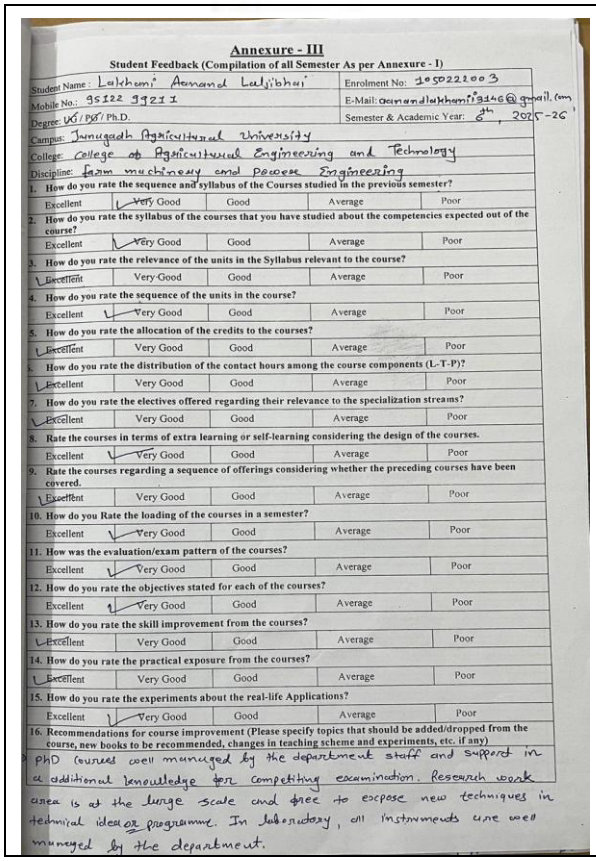
Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name : Sarman K. Gadhe | Enrolment No:
Mobile No.: 9547418987 | E-Mail: gadhe sarman 88@gmail.com
Degree: UG / PG / Ph.D. | Semester & Academic Year: 8th 22
Campus: Junagadh Agricultural University
College: College of Agricultural Engg. and Technology
Discipline: Farm Machinery and Power Engg.

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?	✓				
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?		✓			
3. How do you rate the relevance of the units in the Syllabus relevant to the course?	✓				
4. How do you rate the sequence of the units in the course?	✓				
5. How do you rate the allocation of the credits to the courses?		✓			
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?		✓			
7. How do you rate the electives offered regarding their relevance to the specialization streams?	✓				
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.	✓				
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.	✓				
10. How do you Rate the loading of the courses in a semester?		✓			
11. How was the evaluation/exam pattern of the courses?		✓			
12. How do you rate the objectives stated for each of the courses?		✓			
13. How do you rate the skill improvement from the courses?		✓			
14. How do you rate the practical exposure from the courses?		✓			
15. How do you rate the experiments about the real-life Applications?		✓			

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

- Some advance tech. books are should be add. in the department



Annexure - III

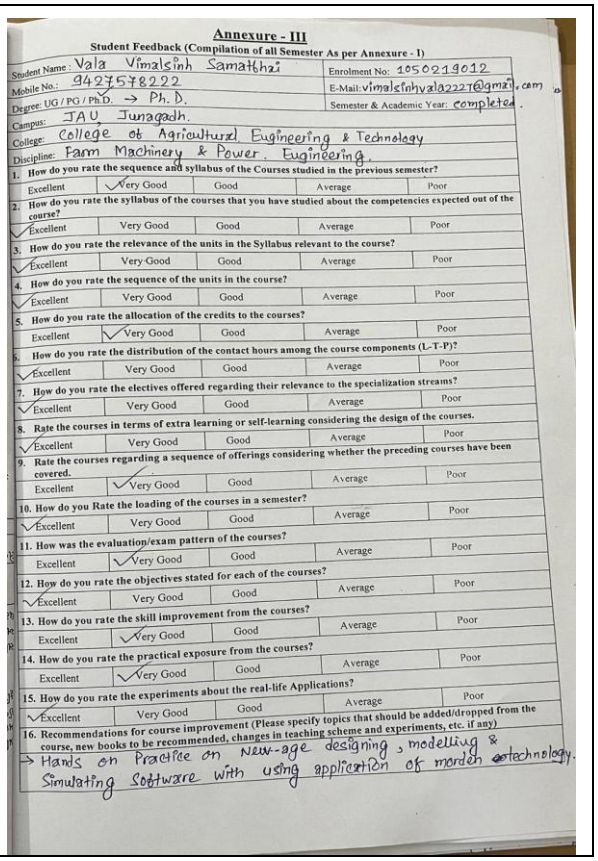
Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name: Lakhani Anand Laljibhai | Enrolment No: 105022003
Mobile No.: 95122 99211 | E-Mail: anandlakhani3146@gmail.com
Degree: UG / PG / Ph.D. | Semester & Academic Year: 8th, 2025-26
Campus: Junagadh Agricultural University
College: College of Agricultural Engineering and Technology
Discipline: farm machinery and power Engineering

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?		✓			
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?		✓			
3. How do you rate the relevance of the units in the Syllabus relevant to the course?	✓				
4. How do you rate the sequence of the units in the course?		✓			
5. How do you rate the allocation of the credits to the courses?	✓				
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?	✓				
7. How do you rate the electives offered regarding their relevance to the specialization streams?	✓				
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.		✓			
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.	✓				
10. How do you Rate the loading of the courses in a semester?		✓			
11. How was the evaluation/exam pattern of the courses?		✓			
12. How do you rate the objectives stated for each of the courses?		✓			
13. How do you rate the skill improvement from the courses?	✓				
14. How do you rate the practical exposure from the courses?	✓				
15. How do you rate the experiments about the real-life Applications?		✓			

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

PhD courses well managed by the department staff and support in additional knowledge for competing examination. Research work area is at the large scale and free to expose new techniques in technical idea or programme. In laboratory, all instruments are well managed by the department.



Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name: Vala Vimalsinh Samathbhai | Enrolment No: 105021901 2
Mobile No.: 9427578222 | E-Mail: vimalsinhvala2227@gmail.com
Degree: UG / PG / Ph.D. → Ph. D. | Semester & Academic Year: completed.
Campus: JAU, Junagadh.
College: College of Agricultural Engineering & Technology
Discipline: Farm Machinery & Power. Engineering.

	Excellent	Very Good	Good	Average	Poor
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?		✓			
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?	✓				
3. How do you rate the relevance of the units in the Syllabus relevant to the course?	✓				
4. How do you rate the sequence of the units in the course?	✓				
5. How do you rate the allocation of the credits to the courses?		✓			
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?	✓				
7. How do you rate the electives offered regarding their relevance to the specialization streams?	✓				
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.	✓				
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.		✓			
10. How do you Rate the loading of the courses in a semester?	✓				
11. How was the evaluation/exam pattern of the courses?		✓			
12. How do you rate the objectives stated for each of the courses?	✓				
13. How do you rate the skill improvement from the courses?		✓			
14. How do you rate the practical exposure from the courses?		✓			
15. How do you rate the experiments about the real-life Applications?	✓				

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

→ Hands on Practice on New-age designing, modelling & Simulating Software with using application of modern biotechnology.

Annexure-IX

Feedback of Ph. D. (Agril. Engg.) students of Dept. of Processing and Food Engineering

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: **Shingala Abhishaben Mukeshbhai**				
Mobile No.: 7069152866				
E-Mail: amshingala@jau.in				
Campus: Junagadh Agricultural University				
Department: Processing and Food Engineering				
Degree: Ph.D.				
Discipline: Processing and Food Engineering				
Semester & Academic Year: 4 yr				
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent	**Very Good**	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
Excellent	Very Good	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent	Very Good	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent	**Very Good**	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
Excellent	Very Good	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
Excellent	Very Good	**Good**	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent	**Very Good**	Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
Excellent	**Very Good**	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent	**Very Good**	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
Excellent	**Very Good**	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
Excellent	Very Good	Good	Average	Poor

12. How do you rate the objectives stated for each of the courses?				
Excellent	**Very Good**	Good	Average	Poor
13. How do you rate the skill improvement from the courses?				
Excellent	**Very Good**	Good	Average	Poor
14. How do you rate the practical exposure from the courses?				
Excellent	**Very Good**	Good	Average	Poor
15. How do you rate the experiments about the real-life Applications?				
Excellent	Very Good	Good	Average	Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)				
NIL				

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: Arjun Ranmalbhai Parmar				
Mobile No.: 9998125758				
E-Mail: arjun.parmar23@gmail.com				
Campus: CAET, JAU, Junagadh				
Department: Department of Processing and Food Engineering				
Degree: UG / PG / Ph.D. – Ph.D.				
Discipline: Processing and Food Engineering				
Semester & Academic Year: Ph.D. (2020-2023)				
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent	**Very Good**	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
Excellent	**Very Good**	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent	Very Good	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent	Very Good	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
Excellent	Very Good	**Good**	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
Excellent	**Very Good**	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent	Very Good	**Good**	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
Excellent	**Very Good**	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent	Very Good	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
Excellent	**Very Good**	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
Excellent	**Very Good**	Good	Average	Poor

12. How do you rate the objectives stated for each of the courses?				
Excellent	Very Good	Good	Average	Poor
13. How do you rate the skill improvement from the courses?				
Excellent	Very Good	Good	Average	Poor
14. How do you rate the practical exposure from the courses?				
Excellent	**Very Good**	Good	Average	Poor
15. How do you rate the experiments about the real-life Applications?				
Excellent	Very Good	Good	Average	Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)				

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: Popalia Chandani Jitendrabhai & 1050219007
Mobile No.: 7984921911
E-Mail: popaliyachandani@gmail.com
Campus: College of Agricultural Engineering and Technology, Junagadh Agricultural University
Department: Processing and Food Engineering
Degree: Ph.D
Discipline: Processing and Food Engineering
Semester & Academic Year: 2019-2023

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent	Very Good	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
Excellent	Very Good	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent	**Very Good**	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent	**Very Good**	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
Excellent	**Very Good**	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
Excellent	**Very Good**	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent	**Very Good**	Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
Excellent	**Very Good**	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent	**Very Good**	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
Excellent	Very Good	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
Excellent	Very Good	Good	Average	Poor

12. How do you rate the objectives stated for each of the courses?				
Excellent	Very Good	Good	Average	Poor
13. How do you rate the skill improvement from the courses?				
Excellent	Very Good	Good	Average	Poor
14. How do you rate the practical exposure from the courses?				
Excellent	Very Good	Good	Average	Poor
15. How do you rate the experiments about the real-life Applications?				
Excellent	Very Good	Good	Average	Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)				
No				

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: Charan Singh & 1050219002
Mobile No.: 7671877151
E-Mail: ckamboj9671@gmail.com
Campus: College of Agricultural Engineering and Technology, Junagadh Agricultural University
Department: Processing and Food Engineering
Degree: Ph.D
Discipline: Processing and Food Engineering
Semester & Academic Year: 2019-2022

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent	Very Good	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
Excellent	Very Good	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent	**Very Good**	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent	**Very Good**	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
Excellent	**Very Good**	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
Excellent	**Very Good**	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent	**Very Good**	Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
Excellent	**Very Good**	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent	**Very Good**	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
Excellent	Very Good	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
Excellent	Very Good	Good	Average	Poor

12. How do you rate the objectives stated for each of the courses?				
Excellent	Very Good	Good	Average	Poor
13. How do you rate the skill improvement from the courses?				
Excellent	Very Good	Good	Average	Poor
14. How do you rate the practical exposure from the courses?				
Excellent	Very Good	Good	Average	Poor
15. How do you rate the experiments about the real-life Applications?				
Excellent	Very Good	Good	Average	Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)				
No				

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: Joshi Nirav Umeshbhai
Mobile No.: 7567101376
E-Mail: joshinirav30@gmail.com
Campus: Junagadh
Department: Processing and Food Engineering
Degree: UG / PG / **Ph.D**
Discipline: Agricultural Engineering (Processing and Food Engineering)
Semester & Academic Year: Passed Out (2019-2023)

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent	**Very Good**	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
Excellent	**Very Good**	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent	**Very Good**	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent	**Very Good**	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
Excellent	**Very Good**	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
Excellent	**Very Good**	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent	**Very Good**	Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
Excellent	**Very Good**	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent	**Very Good**	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
Excellent	**Very Good**	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
Excellent	**Very Good**	Good	Average	Poor

12. How do you rate the objectives stated for each of the courses?				
Excellent	**Very Good**	Good	Average	Poor
13. How do you rate the skill improvement from the courses?				
Excellent	**Very Good**	Good	Average	Poor
14. How do you rate the practical exposure from the courses?				
Excellent	**Very Good**	Good	Average	Poor
15. How do you rate the experiments about the real-life Applications?				
Excellent	**Very Good**	Good	Average	Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)				
Objective type Question Bank on Food Process Engineering and Technology by Md Irfan Ahmed Ansari, Jain Brothers				

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: Sapariya Parthkumar S. (1050220010)
Mobile No.: 7600399411
E-Mail: parthsapariа0@gmail.com
Campus: JAU
Department: Processing and Food Engineering
Degree: Ph.D.
Discipline: Agricultural Engineering
Semester & Academic Year: 2020/21-2024/25

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent	**Very Good**	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
Excellent	Very Good	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent	**Very Good**	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent	**Very Good**	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
Excellent	**Very Good**	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
Excellent	**Very Good**	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent	**Very Good**	Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
Excellent	**Very Good**	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent	**Very Good**	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
Excellent	Very Good	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
Excellent	**Very Good**	Good	Average	Poor

12. How do you rate the objectives stated for each of the courses?				
Excellent	Very Good	Good	Average	Poor
13. How do you rate the skill improvement from the courses?				
Excellent	Very Good	Good	Average	Poor
14. How do you rate the practical exposure from the courses?				
Excellent	Very Good	Good	Average	Poor
15. How do you rate the experiments about the real-life Applications?				
Excellent	**Very Good**	Good	Average	Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)				
Everything is well done. However, it is suggested to design the syllabus with a focus on industrial applications, which will be more beneficial for students aspiring to join the food industry."				

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: Sabalpara Rinaben Hareshbhai				
Mobile No.: 87585 18495				
E-Mail: sabalpararina1707@gmail.com				
Campus: Junagadh Agricultural University				
Department: Processing and Food Engineering				
Degree: UG / PG / Ph.D.: Ph.D.				
Discipline: Agricultural University				
Semester & Academic Year: 2022-2025				
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent	✓ Very Good	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
✓ Excellent	Very Good	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent	Very Good	✓ Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent	✓ Very Good	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
✓ Excellent	Very Good	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
Excellent	✓ Very Good	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent	Very Good	✓ Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
✓ Excellent	Very Good	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent	✓ Very Good	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
✓ Excellent	Very Good	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
✓ Excellent	Very Good	Good	Average	Poor

12. How do you rate the objectives stated for each of the courses?				
Excellent	Very Good	✓ Good	Average	Poor
13. How do you rate the skill improvement from the courses?				
Excellent	Very Good	✓ Good	Average	Poor
14. How do you rate the practical exposure from the courses?				
Excellent	Very Good	✓ Good	Average	Poor
15. How do you rate the experiments about the real-life Applications?				
Excellent	✓ Very Good	Good	Average	Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)				
Nil…..				

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: **Bhuva Sachin Sanatkumar (1050220002)**				
Mobile No.: **8128752931**				
E-Mail: **sachinbhuva9594@gmail.com**				
Campus: **Junagadh Agricultural University, Junagadh**				
Department: **Processing and Food Engineering**				
Degree: ~~UG / PG /~~ **Ph.D.**				
Discipline: **Agricultural Engineering**				
Semester & Academic Year: **2020-2023**				
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent	**Very Good**	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
Excellent	**Very Good**	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent	**Very Good**	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent	**Very Good**	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
Excellent	Very Good	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
Excellent	Very Good	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent	Very Good	Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
Excellent	**Very Good**	Good	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent	**Very Good**	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
Excellent	Very Good	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
Excellent	Very Good	Good	Average	Poor

12. How do you rate the objectives stated for each of the courses?				
Excellent	**Very Good**	Good	Average	Poor
13. How do you rate the skill improvement from the courses?				
Excellent	**Very Good**	Good	Average	Poor
14. How do you rate the practical exposure from the courses?				
Excellent	Very Good	Good	Average	Poor
15. How do you rate the experiments about the real-life Applications?				
Excellent	Very Good	Good	Average	Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)				
There is a need of syllabus redesigned to include recent technologies and practical applications of those technologies for exposure, research and innovations that can be carried out by the scholars to pilgrimage themselves to compete globally.				

Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No: SEJANI VIRAJ MAHENDRABHAI & 1050218003
Mobile No.: 90332 34801
E-Mail: virajsejani@gmail.com
Campus: CAET, JAU
Department: PROCESSING AND FOOD ENGINEERING
Degree: ~~UG~~ / ~~PG~~ / Ph.D.
Discipline: PROCESSING AND FOOD ENGINEERING
Semester & Academic Year: PASSED OUT & 2019-2023

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?				
Excellent	Very Good	Good	Average	Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?				
Excellent	**Very Good**	Good	Average	Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course?				
Excellent	Very Good	Good	Average	Poor
4. How do you rate the sequence of the units in the course?				
Excellent	**Very Good**	Good	Average	Poor
5. How do you rate the allocation of the credits to the courses?				
Excellent	**Very Good**	Good	Average	Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)?				
Excellent	Very Good	Good	Average	Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams?				
Excellent	**Very Good**	Good	Average	Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.				
Excellent	Very Good	**Good**	Average	Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.				
Excellent	Very Good	Good	Average	Poor
10. How do you Rate the loading of the courses in a semester?				
Excellent	Very Good	Good	Average	Poor
11. How was the evaluation/exam pattern of the courses?				
Excellent	Very Good	**Good**	Average	Poor

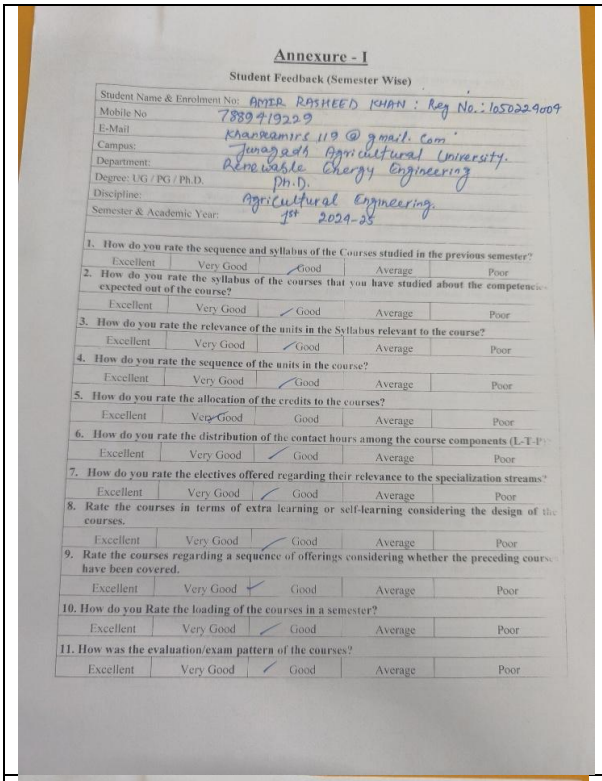
12. How do you rate the objectives stated for each of the courses?				
Excellent	Very Good	Good	Average	Poor
13. How do you rate the skill improvement from the courses?				
Excellent	Very Good	Good	**Average**	Poor
14. How do you rate the practical exposure from the courses?				
Excellent	Very Good	Good	**Average**	Poor
15. How do you rate the experiments about the real-life Applications?				
Excellent	Very Good	**Good**	Average	Poor

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

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Annexure-X

Feedback of Ph. D. (Agril. Engg.) students of Dept. of Renewable Energy Engineering



Annexure - I

Student Feedback (Semester Wise)

Student Name & Enrolment No:	AMIR RASHEED KHAN : Reg No.: 105022 9004
Mobile No	7889419229
E-Mail	Khanramirs 119 @ gmail. Com
Campus:	Junagadh Agricultural University.
Department:	Renewable Energy Engineering
Degree: UG / PG / Ph.D.	Ph.D.
Discipline:	Agricultural Engineering.
Semester & Academic Year:	1st 2024-25

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?
Excellent | Very Good | Good | Average | Poor

2. How do you rate the syllabus of the courses that you have studied about the competences expected out of the course?
Excellent | Very Good | ✓ Good | Average | Poor

3. How do you rate the relevance of the units in the Syllabus relevant to the course?
Excellent | Very Good | ✓ Good | Average | Poor

4. How do you rate the sequence of the units in the course?
Excellent | Very Good | ✓ Good | Average | Poor

5. How do you rate the allocation of the credits to the courses?
Excellent | Very Good | Good | Average | Poor

6. How do you rate the distribution of the contact hours among the course components (L-T-P)?
Excellent | Very Good | ✓ Good | Average | Poor

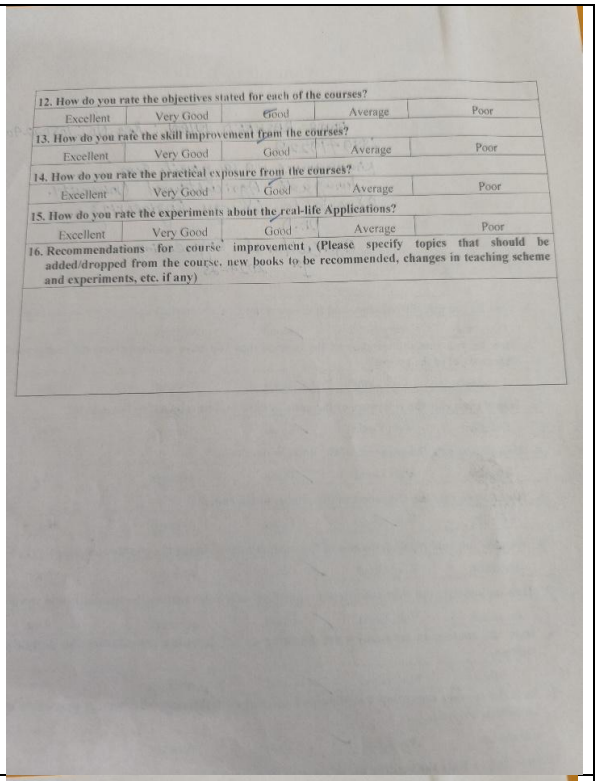
7. How do you rate the electives offered regarding their relevance to the specialization streams?
Excellent | Very Good | ✓ Good | Average | Poor

8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.
Excellent | Very Good | ✓ Good | Average | Poor

9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.
Excellent | Very Good | ✓ Good | Average | Poor

10. How do you Rate the loading of the courses in a semester?
Excellent | Very Good | ✓ Good | Average | Poor

11. How was the evaluation/exam pattern of the courses?
Excellent | Very Good | ✓ Good | Average | Poor



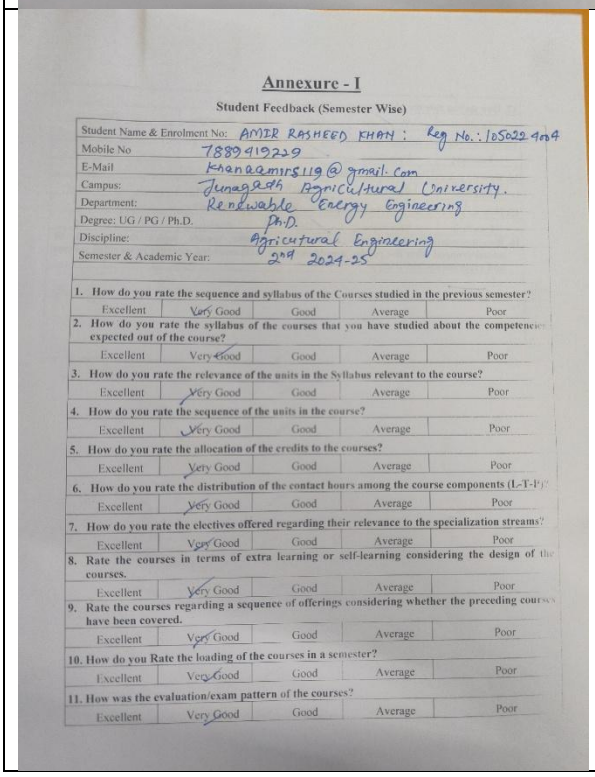
12. How do you rate the objectives stated for each of the courses?
Excellent | Very Good | ✓ Good | Average | Poor

13. How do you rate the skill improvement from the courses?
Excellent | Very Good | ✓ Good | Average | Poor

14. How do you rate the practical exposure from the courses?
Excellent | Very Good | ✓ Good | Average | Poor

15. How do you rate the experiments about the real-life Applications?
Excellent | Very Good | ✓ Good | Average | Poor

16. Recommendations for course improvement, (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)



Annexure - I

Student Feedback (Semester Wise)

Student Name & Enrolment No:	AMIR RASHEED KHAN : Reg No.: 105022 9004
Mobile No	7889419229
E-Mail	Khanramirs 119 @ gmail. Com
Campus:	Junagadh Agricultural University.
Department:	Renewable Energy Engineering
Degree: UG / PG / Ph.D.	Ph.D.
Discipline:	Agricultural Engineering
Semester & Academic Year:	2nd 2024-25

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?
Excellent | Very Good | Good | Average | Poor

2. How do you rate the syllabus of the courses that you have studied about the competences expected out of the course?
Excellent | ✓ Very Good | Good | Average | Poor

3. How do you rate the relevance of the units in the Syllabus relevant to the course?
Excellent | ✓ Very Good | Good | Average | Poor

4. How do you rate the sequence of the units in the course?
Excellent | ✓ Very Good | Good | Average | Poor

5. How do you rate the allocation of the credits to the courses?
Excellent | ✓ Very Good | Good | Average | Poor

6. How do you rate the distribution of the contact hours among the course components (L-T-P)?
Excellent | ✓ Very Good | Good | Average | Poor

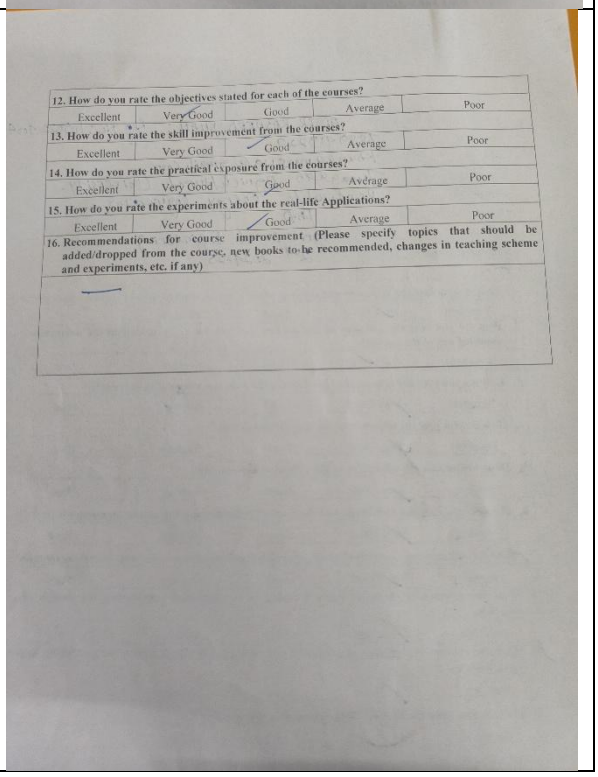
7. How do you rate the electives offered regarding their relevance to the specialization streams?
Excellent | ✓ Very Good | Good | Average | Poor

8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.
Excellent | ✓ Very Good | Good | Average | Poor

9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.
Excellent | ✓ Very Good | Good | Average | Poor

10. How do you Rate the loading of the courses in a semester?
Excellent | ✓ Very Good | Good | Average | Poor

11. How was the evaluation/exam pattern of the courses?
Excellent | ✓ Very Good | Good | Average | Poor



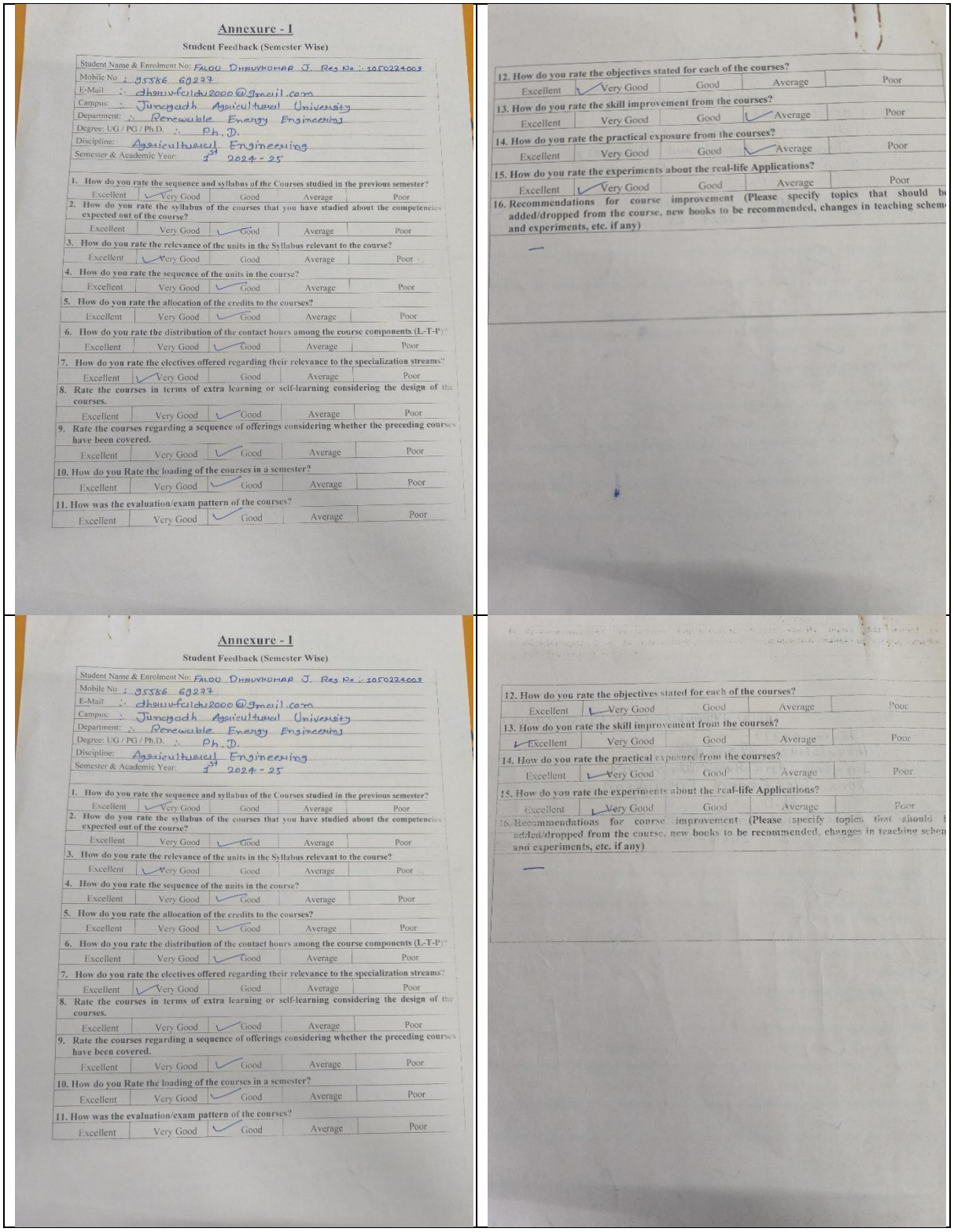
12. How do you rate the objectives stated for each of the courses?
Excellent | ✓ Very Good | Good | Average | Poor

13. How do you rate the skill improvement from the courses?
Excellent | Very Good | ✓ Good | Average | Poor

14. How do you rate the practical exposure from the courses?
Excellent | Very Good | ✓ Good | Average | Poor

15. How do you rate the experiments about the real-life Applications?
Excellent | Very Good | ✓ Good | Average | Poor

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)



Annexure - I

Student Feedback (Semester Wise)

Student Name & Enrolment No: FALDU DHRUVKUMAR J. Reg No :- 2050224003
Mobile No : 95586 69277
E-Mail :- dhruvfaldu2000@gmail.com
Campus: :- Junagadh Agricultural University
Department: :- Renewable Energy Engineering
Degree: UG / PG / Ph.D. :- Ph.D.
Discipline: Agricultural Engineering
Semester & Academic Year: 1st 2024 - 25

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?
Excellent | ✓ Very Good | Good | Average | Poor

2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?
Excellent | Very Good | ✓ Good | Average | Poor

3. How do you rate the relevance of the units in the Syllabus relevant to the course?
Excellent | ✓ Very Good | Good | Average | Poor

4. How do you rate the sequence of the units in the course?
Excellent | Very Good | ✓ Good | Average | Poor

5. How do you rate the allocation of the credits to the courses?
Excellent | Very Good | ✓ Good | Average | Poor

6. How do you rate the distribution of the contact hours among the course components (L-T-P)?
Excellent | Very Good | ✓ Good | Average | Poor

7. How do you rate the electives offered regarding their relevance to the specialization streams?
Excellent | ✓ Very Good | Good | Average | Poor

8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.
Excellent | Very Good | ✓ Good | Average | Poor

9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.
Excellent | Very Good | ✓ Good | Average | Poor

10. How do you Rate the loading of the courses in a semester?
Excellent | Very Good | ✓ Good | Average | Poor

11. How was the evaluation/exam pattern of the courses?
Excellent | Very Good | ✓ Good | Average | Poor

12. How do you rate the objectives stated for each of the courses?
Excellent | ✓ Very Good | Good | Average | Poor

13. How do you rate the skill improvement from the courses?
Excellent | Very Good | Good | ✓ Average | Poor

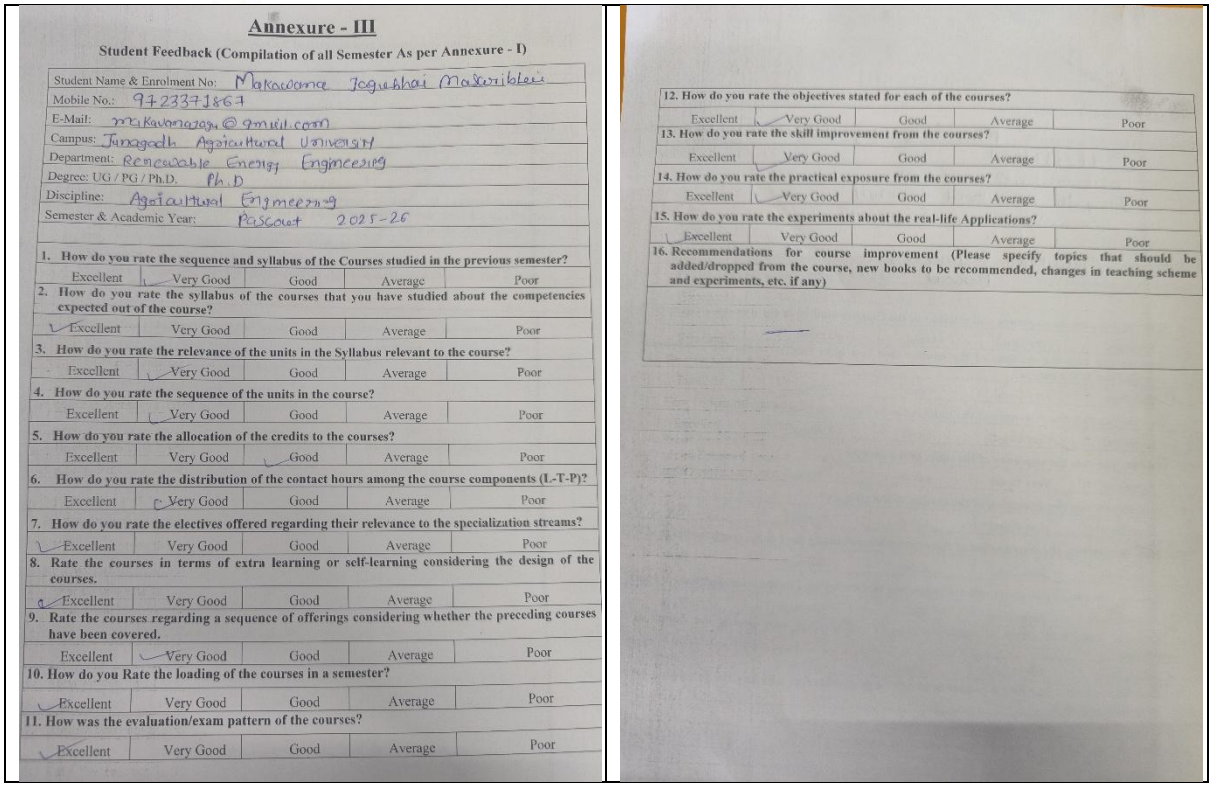
14. How do you rate the practical exposure from the courses?
Excellent | Very Good | Good | ✓ Average | Poor

15. How do you rate the experiments about the real-life Applications?
Excellent | ✓ Very Good | Good | Average | Poor

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

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Annexure - I
Student Feedback (Semester Wise)
Student Name & Enrolment No: FALDU DHRUVKUMAR J. Reg No :- 2050224003
Mobile No : 95586 69277
E-Mail :- dhruvfaldu2000@gmail.com
Campus: :- Junagadh Agricultural University
Department: :- Renewable Energy Engineering
Degree: UG / PG / Ph.D. :- Ph.D.
Discipline: Agricultural Engineering
Semester & Academic Year: 1st 2024 - 25
1. How do you rate the sequence and syllabus of the Courses studied in the previous semester? Excellent | ✓ Very Good | Good | Average | Poor
2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course? Excellent | Very Good | ✓ Good | Average | Poor
3. How do you rate the relevance of the units in the Syllabus relevant to the course? Excellent | ✓ Very Good | Good | Average | Poor
4. How do you rate the sequence of the units in the course? Excellent | Very Good | ✓ Good | Average | Poor
5. How do you rate the allocation of the credits to the courses? Excellent | Very Good | ✓ Good | Average | Poor
6. How do you rate the distribution of the contact hours among the course components (L-T-P)? Excellent | Very Good | ✓ Good | Average | Poor
7. How do you rate the electives offered regarding their relevance to the specialization streams? Excellent | ✓ Very Good | Good | Average | Poor
8. Rate the courses in terms of extra learning or self-learning considering the design of the courses. Excellent | Very Good | ✓ Good | Average | Poor
9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered. Excellent | Very Good | ✓ Good | Average | Poor
10. How do you Rate the loading of the courses in a semester? Excellent | Very Good | ✓ Good | Average | Poor
11. How was the evaluation/exam pattern of the courses? Excellent | Very Good | ✓ Good | Average | Poor
12. How do you rate the objectives stated for each of the courses? Excellent | ✓ Very Good | Good | Average | Poor
13. How do you rate the skill improvement from the courses? Excellent | Very Good | Good | ✓ Average | Poor
14. How do you rate the practical exposure from the courses? Excellent | Very Good | Good | ✓ Average | Poor
15. How do you rate the experiments about the real-life Applications? Excellent | ✓ Very Good | Good | Average | Poor
16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)
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Annexure - III

Student Feedback (Compilation of all Semester As per Annexure - I)

Student Name & Enrolment No:	Makadiya Jagrutbhai Nathabhai
Mobile No.:	9723371867
E-Mail:	mrkavanaraja@gmail.com
Campus:	Junagadh Agricultural University
Department:	Renewable Energy Engineering
Degree: UG / PG / Ph.D.	Ph.D
Discipline:	Agricultural Engineering
Semester & Academic Year:	Passout 2025-26

1. How do you rate the sequence and syllabus of the Courses studied in the previous semester?

Excellent	Very Good	Good	Average	Poor
	✓			

2. How do you rate the syllabus of the courses that you have studied about the competencies expected out of the course?

Excellent	Very Good	Good	Average	Poor
✓				

3. How do you rate the relevance of the units in the Syllabus relevant to the course?

Excellent	Very Good	Good	Average	Poor
	✓			

4. How do you rate the sequence of the units in the course?

Excellent	Very Good	Good	Average	Poor
	✓			

5. How do you rate the allocation of the credits to the courses?

Excellent	Very Good	Good	Average	Poor
		✓		

6. How do you rate the distribution of the contact hours among the course components (L-T-P)?

Excellent	Very Good	Good	Average	Poor
	✓			

7. How do you rate the electives offered regarding their relevance to the specialization streams?

Excellent	Very Good	Good	Average	Poor
✓				

8. Rate the courses in terms of extra learning or self-learning considering the design of the courses.

Excellent	Very Good	Good	Average	Poor
✓				

9. Rate the courses regarding a sequence of offerings considering whether the preceding courses have been covered.

Excellent	Very Good	Good	Average	Poor
	✓			

10. How do you Rate the loading of the courses in a semester?

Excellent	Very Good	Good	Average	Poor
✓				

11. How was the evaluation/exam pattern of the courses?

Excellent	Very Good	Good	Average	Poor
✓				

12. How do you rate the objectives stated for each of the courses?

Excellent	Very Good	Good	Average	Poor
	✓			

13. How do you rate the skill improvement from the courses?

Excellent	Very Good	Good	Average	Poor
	✓			

14. How do you rate the practical exposure from the courses?

Excellent	Very Good	Good	Average	Poor
	✓			

15. How do you rate the experiments about the real-life Applications?

Excellent	Very Good	Good	Average	Poor
✓				

16. Recommendations for course improvement (Please specify topics that should be added/dropped from the course, new books to be recommended, changes in teaching scheme and experiments, etc. if any)

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