

UNIVERSITY LIBRARY & INFORMATION TECHNOLOGY



Chapter - VII



7.1 University Library

The University Library acquaints services to the faculty, scholars, scientists and extension activists under 8 constituent colleges as well as research stations and extension education centres of Junagadh Agricultural University, Junagadh.

Collection:

The University Library possesses around 56000 books. These books are very valuable and helpful in studies, research and preparation for competitive examinations. It provides 06 foreign journals and around 16000 back volumes, 3100 theses, 10 newspaper, 700 e-books.

Services:

Cyberary services with 100 mbps LAN connectivity facilitates to users for access online database like J-Gateplus (Complete) online which has full text journals and Commodities (CMIE) which has economical data. Our library has 700 e-books and this year we have subscribed 62 more e-books, Facility by ICAR for foreign Journals through Online Access of Journals through Consortium for e-Resources in Agriculture (CeRA) and KRISHIKOSH are available and CD-ROM databases like CAB, AGRICOLA, AGRIS. The RFID system is implemented in the university library to make fully computer based book issue system and catalogue with book lending details. Full time internet, scanning and CD writing facilities are available for the students in the Cyberary in which there are 40 work stations are available with internet access. These facilities are being extensively utilized by both faculty and students on an average of daily 50 to 300 users for about 12 hours per day. Students are provided with books of their concerned subject of respective semesters through BOOK BANK facility, additional 37 more books were purchased of agricultural faculty this year for the book bank. The Library runs through RFID with the software KOHA & LIBSYS.

The library renders its services to the users from 8:00 to 18:30 h. A separate Air Conditioned Reading Room is developed with the best facilities which

accommodates approximately 100 students. The Reading Room remains open for its users from 8.00 to 23.00 hours on working days whereas 8.00 to 13.00 hours on holidays.







7.2 Information Technology



The Junagadh Agricultural University has made significant development in the use of internet technologies for administration, education, research and extension education activities. The Information Technology (IT) services to the university students, faculty, research scientists, extension workers, and other administrative staffs are centrally managed by the Information Technology Cell.

The Information Technology Cell of the university has highly qualified personnel and utilises cutting-edge technology. High-speed internet access is available across the campus as well as at sub centres located outside of the university region.

The university website www.jau.in is an important source of information and the content is up-to-date and enables the students to get the information they need to see themselves becoming a student at the university. The website also, contains responses to queries raised by farmers to scientists, weather-based agricultural advices, education in the agricultural area, a video gallery, and so on. During reporting year 1,82,171 persons visited the University website.

The in-house developed and other online resources are placed under single umbrella through the portal "Online JAU". The IT Cell also manages an assistance centre for students who are applying for scholarships through the "Mukhyamantri Yuva Swavalamban Yojana (MYSY) and Scheme of Developing High Quality Research (SHODH)," a scholarship programme launched by the Government of Gujarat.

The purchase of goods and services through the Government eMarketplace (GeM) by government users has been authorised and made mandatory by the Ministry of Finance through the addition of a new Rule No. 149 to the General Financial Rules, 2017. This has been done in order to make governance more transparent. The IT Cell has built an online system for registration and user administration in order to facilitate university purchases made through GeM.

1. IT infrastructural facilities at IT Cell

The Information Technology Cell is equipped with high-end technology and computing devices, such as servers, workstations, firewalls, routers, computer systems, and a variety of additional resources. A well-equipped University Video Conference Hall is also a part of IT Cell, which is housed with high quality video conferencing gear and three large size interactive monitors.

2. High-speed Internet Access

There are 305 Mbps dedicated 1:1 Internet Lease Line (ILL) connections available at JAU, which are provided by different internet service providers. Out of which 100 Mbps 1:1 Internet Leased Line (ILL) is provided by Railtel under the National Knowledge Network (NKN), which encourages the use of specialised applications and allows sharing of high-performance computing facilities, e-libraries, virtual classrooms, and large databases. For uninterrupted redundant internet connectivity, a stand by 25 Mbps 1:1 ILL is provided by BSNL.

As a solution of centralized networks, 25 sub-centers of the University are connected to the campus network through the use of WAN (Wide Area Network) with the help of 180 Mbps 1:1 ILL provided by Private Firm. As a result, sub-centers are managed under the supervision of IT Cell centrally.

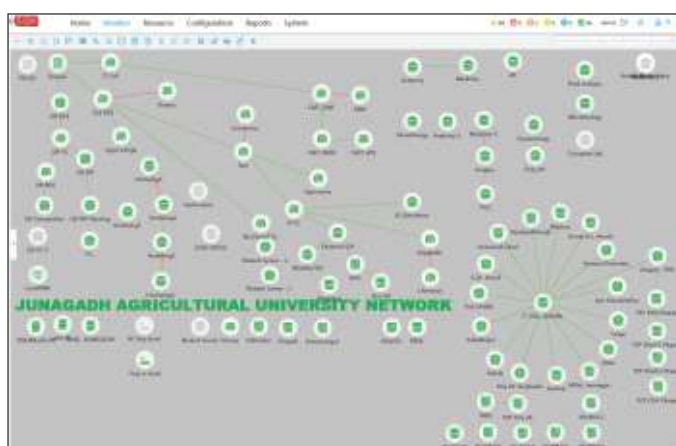
3. JAU IT Network and Surveillance Setup

The university has implemented a highly secure network design, which includes a firewall, IDS (Intrusion Detection System), analyzer, content filtering, and other security measures. The University Campus Network has a wide range of coverage, with



more than 1000 network points and more than 50 wireless access points spread across the campus. Network Management Software is used for network monitoring and issue detection, as well as for troubleshooting the network problems. Furthermore, more than 6500 metres of fibre optic cable have been laid throughout the campus to offer high-speed network access. The University is also connected to Asia's largest network, the "Gujarat State wide Area Network (GSWAN), Gandhinagar," by optical fibre cable to access online government programmes and services.

The university has a well-established surveillance system, which contains more than 750 CCTV cameras with central as well as distributed monitoring system.



JAU IT Network Layout



CCTV Surveillance System

4. Network Services

Secure Wi-Fi access is provided with the help of more than 50 wireless access points at various colleges, departments, hostels and university canteen. Intranet has been setup for the university users to access various useful freeware software and services like Online Circular Management System, Billing and Accounting, HRD/Tour Management System, Provident Fund (PF) Management, IT Asset Management Solutions, Salary Management, Online Management for “Mera Gaon Mera Gaurav (MGMG)” Scheme of Government of India, IT Grievance System, Information Retrieval System (IRS), Job Application System, Centralized Network Solutions using WAN (Sub centers Connected with Campus), Online Fee Collection System, eLearning Solution for students, Online Placement Solution, Online Alumni Management System, Online Mock Test System and many other services. IT Cell also manages various Google Apps through which users can access various Google services like Gmail, Google Drive, and Video Conferencing through Google Meet etc.

An online system, which caters the services to the farmers include online weather update, online seed distribution system, online allocation system for coconut sapling, FAQs for farmers, etc. A portal is developed to archive the programmes broadcasted through Community Radio Station (Junagadh Janvani 91.2 MHz) of JAU and to display various activities carried out under “Junagadh Janvani” programme. These archived programmes are accessible at any time by visiting the portal. Agriculture related information is provided to the farmers through various Kiosks placed at “Krushi Darshanalay”.

5. Video Conference Room

Video conferencing technologies have made virtual meetings almost as good as face to face meetings. University Video Conferencing setup made at IT Cell, allows for face-to-face interaction with sites virtually anywhere in the world.



A dedicated conference room is fully equipped with both software based and hardware based video conferencing solution along with uninterrupted high bandwidth solutions, which includes HD Cameras, full duplex voice communication system, flat panel displays and acoustic room. More than 100 University level video conferences were organized at newly developed Video Conference Room during COVID-19 pandemic situations.



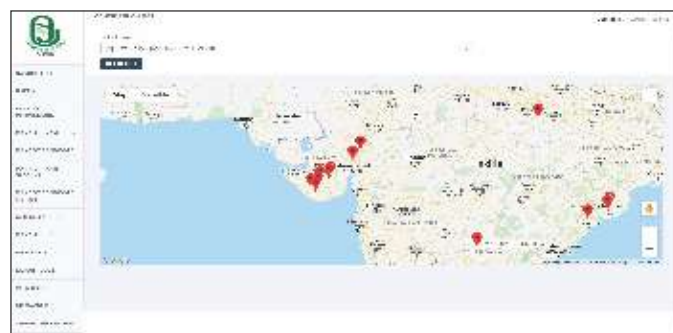
University Video Conference Hall



Interactions with the faculties of JAU through online mode during Covid-19 pandemic

6. Online Examination System

Online examinations, commonly referred to as e-exams (electronic examinations), underwent a considerable progression, getting adapted ubiquitously among higher education institutions worldwide. Their preferment was rapid due to the emergence of the COVID-19 pandemic. The process of conducting exams online is being opted as the appropriate way of assessment, ensuring the students' safety and well-being. The different colleges of Junagadh Agricultural University had conducted more than 700 examinations for UG, PG and Polytechnic with the strength of 32000+ peer students under virtual supervision during and post COVID-19 pandemic. This online examination system portal is managed by IT Cell. The students also actively participated for online exam from their home places across India.



JAU Online Examination System



In-house Developed Programmes:

- **Online IT Asset Management Solutions:**
Online process of technical recommendation towards purchase, repair and write-off of IT items become faster.
- **Online Fee Receipt Software:**
Students can get computerized receipts and accurate accounting can be obtained at the college.
- **Information Retrieval System (IRS):**
University Staff are 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 analyze fresh information and use it properly.
- **“Junagadh Janvani” Radio Station (91.2 MHz):**
A portal is developed to archive all the broadcasted programmes and to display various activities carried out under “Junagadh Janvani” programme. This archived programmes are accessible at any time by visiting the portal.
- **JAU Information Online App:**
Agriculture related information are provided to the farmers through various Kiosks placed at “*Krushhi Darshanalay*”. These information are also provided online through portal “JAU Information Online”. It also includes answers of questions asked by farmers to the scientist, weather based agro-advisory, education in agriculture field, video gallery, etc.
- **Online allocation system for Coconut Saplings & Seed Sales:**
Hybrid Coconut DxT seedlings are raised and distributed every year at the Agricultural Research Center (Fruit Crops), Mahuva and Selling of developed Seed are distributed every year at the Mega Seed, JAU, Junagadh. Farmers have to apply within the time limit before allotment, which is earmarked for seeds/planting on an earlier basis. Because of the high demands of the farmers for these varieties, a system of online

registration is developed. Through advertisement, farmers are informed to apply online. Based on the quantity available at farm and number of application received online, an random or first come first served based allotment as per requirement is made to the farmers by informing them through SMS and notification on JAU website.

- **Online Salary Management Software:**
There are about 58 withdrawal and payment officers of different offices in the University campus / off campus. These officers often required to come to the Office of Comptroller for approving changes in their employees' salaries. With the use of Online Salary Management System, these officers can do this process online through proper channel. As a result, the salary bill passing process became faster and reduced the travelling expenses. Also, the facility is included in this online system to view salary slip by individual employee using their login credentials.
- **Online Mock Test Examination System:**
This system is very useful for the university students to prepare themselves for various competitive examinations like NET/ARS, GATE, etc.
The material in vernacular language is also placed on the university website with the goal of informing farmers about the different activities of the university in the agricultural area, and as a result, farmers are able to make proper and timely use of the information that is made accessible.

5. Reference Services

In collaboration with the University Library, e-Resources in agriculture, including CAB, AGRIS, and AGRICOLA, are made available to UG/PG students for their research projects and to University personnel engaged in research and teaching activities over a local area network (LAN). An online access to the Consortium for eResources in Agriculture (CERA) is available over the entire university network, which allows users to browse and search for national and international journals. Also, an access to *Krishi Prabha*, an online doctoral theses service of the All India Agricultural University and access to the J-Gate online database is provided to the users.



e-Resources facilities for UG/PG students

6. Beneficiaries

A user friendly network access environment with wired and wireless network connectivity has been developed to provide seamless IT access to University teachers, staff, and students for the purposes of education, research, and extension education, as well as for other administrative purposes. The University Examination Hall is also utilised by the different institutions for their placement operations as well as for online tests. In addition, the facility developed under the Online Examination System (OES) is used for the recruitment of various posts at JAU, which is more transparent due to real-time announcement of results.

7. Training

On a regular basis, the IT Cell provides various trainings on the use of computers and internet connection for the purpose of providing agricultural information to rural youth and rural women. The

training is also provided to the faculty and students on how to use the resources available through network services.

Additionally, the Information Technology (IT) Cell provides several other trainings for University personnel whenever digital initiatives are adopted by the University, such as training for Online Salary, Online Fee Collection System, Online Admission, and procurement through the Government e-Marketplace (GeM), etc.

8. University Web Site

The University's web site www.jau.in is hosted in university owned server and managed by the IT Cell, which is updated regularly. It contains information on academic information such as admission, education rules and regulations, scholarships, library facilities, student results, medals etc. Also, significant announcements/events, university circulars, tenders, advertisements, RTI, Farmers' Corner, current news and the upcoming and past activities are regularly updated on this site. On this website, information about research, research recommendations, new varieties released, university publications, memorandums of understanding, and other extension education activities are made available and updated timely. Throughout the year, the website is maintained and updated on a regular basis.

The material in vernacular language is also placed on the university website with the goal of informing farmers about the different activities of the university in the agricultural area, and as a result, farmers are able to make proper and timely use of the information that is made accessible.

9. Qualified Personnel

All the services at IT Cell are managed by qualified / trained IT personnel of the university.

10. Visitors

The IT Cell has been visited by a number of eminent persons and appreciated the activities. The students of IT courses of various colleges of Junagadh city are taking frequent visit as a part of their project work.