

RAJARSHI JANAK UNIVERSITY



University Digitalization Guidelines

2023

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1. Preface

Rajarshi Janak University (RJU) is dedicated to using digitalization to improve education, research, and administrative processes. To support this commitment, RJU has created the RJU Digitization Policy 2023 and the RJU Digitization Strategy 2023. This document, the RJU Digitization Guidelines 2023, offers practical details alongside the policy and strategy. It provides clear directions and actionable steps for faculty, staff, and stakeholders involved in the university's digital transformation.

Covering various digitalization aspects like connectivity, infrastructure, virtual learning, information management, and more, these guidelines ensure that RJU's digital efforts align with its mission and goals. Each section gives insights, best practices, and recommendations for a successful digitalization journey at Rajarshi Janak University.

2. Objectives

1. Set clear goals for Rajarshi Janak University's digital efforts.
2. Install/ Improve digital infrastructure, like internet and secure Wi-Fi.
3. Create platforms for online learning and options for self-paced learning.
4. Enhance and promote the digital governance of the University.
5. Train and improve the skills of faculty, staff, and students in digital areas.
6. Make specific rules for digital activities, like using the internet, and emails, and keeping information safe.

3. Scopes of the Digitalization Guidelines

1. Policy Guidelines:

- Set rules to guide how Rajarshi Janak University uses digital tools and practices.
- Make sure everyone follows the same standards for digitalization efforts.

2. Infrastructure Improvement:

- Improve the digital setup, like internet, Wi-Fi, data centers, and other tech resources.
- Get the necessary technology to make digitalization work well.

3. Virtual Learning:

- Focus on making and using online platforms, tools for self-paced learning, and digital resources.
- Make learning better for students and faculty with online tools.

4. Digital Resource Creation:

- Encourage RJU to make and share digital learning stuff, like e-books, videos, animations, and interactive tools.
- Improve educational offerings using digital materials.

5. Data Security and Management:

- Make rules to keep data safe, and private, and have plans to back up and recover it.
- Ensure that digital information stays secure and complete.

6. Skills Development:

- Promote learning digital skills for faculty, staff, and students through training.
- Build everyone's abilities in using digital tools.

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7. Specific Guidelines:

- Provide clear rules for different digital activities, like using the internet, and emails, and keeping information safe.
- Make sure everyone knows how to do digital tasks correctly.

8. Consulting with Stakeholders:

- Talk to university leaders, faculty, staff, students, and experts to get everyone's ideas.
- Make the guidelines together to include everyone's input in the process.

4. Key Digitalization Guidelines

4.1. Connectivity Guidelines

Broadband Internet Connection:

- Make sure all campuses and offices have fast and reliable internet.
- Choose an internet provider known for good and stable service based on the market response.

Intranet:

- Create and manage a safe and effective internal network for communication and sharing among faculty, staff, and students.
- The intranet is a central hub for accessing academic resources, course materials, and administrative info.
- Control access to the intranet based on roles to keep data safe and private.

Network Security:

- Use strong security measures, like firewalls and encryption, to protect RJU's network from cyber threats.
- Regularly check and fix any possible security problems to keep the network safe.

Wi-Fi Network Infrastructure:

- Decide where the Wi-Fi should be covered, making sure it reaches all buildings and offices.
- Choose the right Wi-Fi equipment based on the size and layout of the university.

Wi-Fi Security:

- Use strong encryption to keep the wireless network safe.
- Set up a strong Wi-Fi password following security rules.
- Change the Wi-Fi password regularly to keep things secure, at least once per semester or more if needed.

4.2. Digital Infrastructure Guidelines

Hardware and Software Procurement:

- Buy hardware and software based on what each department needs.
- Purchase, subscribe, and install new software for the University which are compatible with existing systems/software.

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- The IT support team will make sure all tech tools are legal and regularly updated for security.

Connectivity with Government Integrated Data Center (GIDC) and Cloud Infrastructure:

- Connect RJU with the Government Integrated Data Center and other authorized sources for data sharing and accessing government services.
- Use cloud systems to store and manage non-sensitive data, making it scalable, cost-effective, and flexible.

Network Security and Data Protection:

- Put strong security in place to protect the network and data from cyber threats.
- Use access controls, encryption, and multi-factor authentication to keep sensitive data safe.

Continuity of the Existing Digital Infrastructure:

- Stick to and encourage using the current digital setup to keep it working well.
- This helps save costs and resources while keeping things running smoothly.

4.3. Virtual Learning Environment Guidelines

Virtual Learning Environment (VLE)/Learning Management System (LMS)

Pick open-source Moodle as the Virtual Learning Environment (VLE) or Learning Management System (LMS) that suits the university's needs.

- The chosen VLE/LMS should be easy to use, support multimedia, and have strong tools for creating courses, assessments, and communication.

Blended Learning Implementation:

- Encourage faculty to use blended learning, mixing online and face-to-face teaching.
- Train faculty to improve their skills in making and delivering online content and managing virtual discussions.

Course Design and Development:

- Help faculty make interactive and interesting online courses.
- Create course materials in different ways like videos, audio lectures, e-books, and interactive quizzes.

4.4. EMIS Operational Guidelines

Data Collection and Entry:

I. Assigned staff at Rajarshi Janak University will gather and enter accurate, up-to-date data into the EMIS system.

II. Standardized forms and templates will be used for data collection to ensure consistency and reliability.

Data Validation and Verification:

I. Implement a strong process to check and verify data, ensuring it is accurate and reliable in the EMIS system.

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- II. Regular checks and audits will identify and fix any mistakes or discrepancies in the data.

Data Security and Privacy

- I. Ensure strict security and privacy for all data in the EMIS system.
- II. Only authorized personnel will have access to sensitive data, and encryption measures will protect against unauthorized access.

Integration with Other Systems:

- I. Integrate the EMIS system with other university systems like finance and HR for smooth data flow and consistent reporting.
- II. Use APIs (Application Programming Interfaces) for seamless data exchange between different systems.

Daily Operations:

The focus of EMIS operations at Rajarshi Janak University will be on updating daily student activities, including personal information, academic details, attendance, and more.

Additionally, it will concentrate on extracting real infographic data, such as gender, ethnic details, batch details, exam performance, dropout rates, and graduation statistics, specific to academic programs or overall student statistics.

4.5. Digital Resource Development and Dissemination

E-Library Development:

- I. Rajarshi Janak University will create an e-library offering a variety of digital resources like e-books, journals, and research papers.
- II. Accessible to all students and staff, the e-library will stay updated with the latest materials. E-books and publications will be available for purchase on the university website.

Digital Studio and Production:

- I. Rajarshi Janak University will set up a modern digital studio with audio and video recording facilities for high-quality educational content.
- II. Trained personnel will produce educational videos, lectures, and multimedia materials to enhance the learning experience.


Publication of E-Books:

- I. Rajarshi Janak University will encourage faculty and researchers to publish academic works as e-books.
- II. Support and resources will be provided for e-book production and publication, ensuring broader knowledge dissemination. Daily operations include student e-check-in, e-checkout, locating books, timely borrowing and returns, and access to the e-library and associated e-libraries. Librarians will facilitate student access to e-resources, generate reports, and upload/integrate eBooks into the database.

4.6. Human Resource Development Guidelines:

Training and Development Programs:

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- I. Rajarshi Janak University will implement programs to enhance ICT skills and competencies for faculty, staff, and administrative personnel.
- II. Training sessions will cover various topics, including digital tools, e-learning platforms, data analysis, and ICT security. Idea exchange programs at the inter-university level will be encouraged for mutual betterment.

Professional Development Opportunities:

- I. The university will encourage and support faculty and staff to attend workshops, seminars, and conferences related to ICT and digitalization.
- II. Funding and resources will be allocated to facilitate participation in national and international events. Rewards will be given for the best IT practices among employees and faculties.

Faculty Development in E-Learning:

- I. Identify faculty understanding of E-Learning for teaching.
- II. Provide specialized training to faculty members on developing and delivering online courses through e-learning platforms.
- III. Upgrade traditional pedagogical approaches to E-learning platforms, such as shifting the mode of delivery and sharing resources.

ICT Mentoring and Coaching:

- I. Establish an ICT mentoring program at Rajarshi Janak University, pairing experienced professionals with staff and faculty seeking guidance.
- II. Provide personalized coaching to help individuals overcome challenges and achieve their digitalization goals.

Collaboration with External Experts:

- I. Collaborate with external ICT experts and professionals for specialized training and workshops.
- II. Partner with industry experts to bring the latest knowledge and best practices to the university's ICT development initiatives.

4.7. University and Campus Office Automation Guidelines

ERP System Implementation:

- I. Rajarshi Janak University will use an Enterprise Resource Planning (ERP) system to automate administrative functions like finance, human resources, and student information management.
- II. The ERP system streamlines processes, improves data accuracy, and enhances overall efficiency in university operations.

Finance Integration, HR Management, and Payroll Integration:

- I. The ERP system integrates financial processes, ensuring real-time access and transparency.
- II. It centralizes employee information, including attendance, leave records, performance evaluations, and payroll management.
- III. HR and administrative staff at Rajarshi Janak University will be trained to use the ERP system effectively for seamless personnel management.

Automation of Administrative Workflows:

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- I. Automate administrative workflows such as approvals, purchase requests, and leave applications, to reduce manual paperwork and speed up decision-making.

4.8. IT System Security, Privacy, and Surveillance

Incident Response:

- I. Have a clear incident response plan to address and mitigate security breaches or cyberattacks.
- II. This includes reporting procedures, impact assessment, and appropriate actions for resolution.

Privacy Protection:

- I. Ensure compliance with data protection laws to protect individuals' personal information.
- II. Conduct privacy impact assessments when implementing new IT systems or processes involving personal data.

Network Security:

- I. Use robust firewalls and intrusion detection/prevention systems to protect the university's network.
- II. Regularly conduct network security audits to identify and address vulnerabilities.
- III. Utilize cloud monitoring tools like Cloudwatch and Wahuz for live monitoring.

Surveillance and Monitoring:

- I. Deploy strategic surveillance cameras on campus to enhance security and monitor potential threats, responding immediately through the dedicated IT team.

4.9. Data Protection, Backup, and Disaster Recovery Guidelines

Data Classification:

Classify data based on sensitivity, with specific access controls and protection measures for each category.

Data Encryption:

- I. Encrypt sensitive data in transit and at rest to prevent unauthorized access and data breaches.
- II. Securely manage encryption keys separately from the encrypted data.

Regular Data Backup:

- I. Implement a robust data backup policy for regular and incremental backups.
- II. Store backups securely in geographically separate locations to mitigate data loss risks.
- III. Capture at least one snapshot of the main server daily.

Disaster Recovery Plan:

- I. Develop a comprehensive disaster recovery plan for various scenarios, including system failures, natural disasters, or cyberattacks.
- II. Cooperate with the Disaster Recovery Center (DRC) for server breakdowns.

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Incident Response for Data Breach

- I. Establish a clear incident response plan for data breaches, including detection, response, and recovery.
- II. Include procedures for notifying affected individuals and authorities, cooperating with government cyber units.

4.10. University Centralized E-Attendance Guideline

Daily Usage:

- I. Students at Rajarshi Janak University use RFID (University smart card) cards for attendance.
- II. Faculty and employees use RFID and biometrics for attendance.
- III. Remote attendance through the HR system will be available for online check-in and checkout.
- IV. Permission from the admin is required for exemption from E-attendance.

Implementation of Centralized E-Attendance System:

- I. Implement a centralized E-Attendance System using biometric terminals or RFID cards for faculty, staff, and student attendance.
- II. Integrate the system with the university's HR and student information systems for real-time data synchronization.

Biometric Terminals and RFID Cards:

- I. Provide biometric terminals (fingerprint or facial recognition) or RFID cards for attendance tracking.
- II. Link biometric terminals or RFID cards to individual profiles for accurate attendance tracking.

Regular Monitoring and Reporting:

- I. Regularly monitor the E-Attendance System for proper functioning and address technical issues promptly.
- II. Generate periodic attendance reports for faculty, students, and administrative staff for monitoring and analysis.

4.11. Email System/Services

Official Email Account Provision:

- I. Provide official email accounts to all faculty, administrative staff, and students at Rajarshi Janak University.
- II. Use email accounts for official communication within the university and with external stakeholders.

Email Account Activation and Management:

- I. The IT department is responsible for activating and managing email accounts for all users.
- II. Account activation requires valid identification and authentication for data security.

Email Account Naming:

- I. Follow a standardized naming convention for email accounts for consistency and ease of identification (first.lastname@rju.edu.np).

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- II. Include the user's first name, last name, and a unique identifier in the naming convention. For students, use firstname.programshortform@rju.edu.np.

Password Policy:

- I. Users create strong and secure passwords for email accounts.
- II. Change passwords periodically and enforce password complexity requirements.

Data Confidentiality and Privacy:

- I. Ensure the confidentiality and privacy of email communication, especially when exchanging sensitive information.
- II. Do not share confidential information over email unless encrypted.

Proper Use of Email:

- I. Use email communication for official and academic purposes only.
- II. Refrain from sending unsolicited emails (spam) or engaging in unethical or illegal activities using university email accounts.

Security Awareness:

- I. Be vigilant about security threats/phishing attempts and avoid clicking on suspicious links or downloading attachments from unknown senders.
- II. Report any suspicious emails to the IT department for investigation.

User Filter and Deletion:

- I. The IT department will filter, and clear users based on activity, accessibility, graduation, resignation, or retirement from Rajarshi Janak University.
- II. Students who graduated or no longer have access to university activities will be given three months to access data before permanent account deletion.
- III. Authorities, faculties, and employees will have one year before permanent account deletion.

4.12. Responsibilities and Roles

Steering Committee:

The Steering Committee comprised of five members, led by the Vice-Chancellor and other top officials, guides the vision and direction of Rajarshi Janak University's digitalization guidelines. They ensure alignment with the university's strategic goals.

IT Department:

The IT department takes a lead role in developing the guidelines, conducting research, and gathering input. They draft the guidelines based on best practices and industry standards.

Faculty and Staff:

Faculty and administrative staff actively contribute by providing insights on digitalization needs and challenges. They play a vital role in implementing and adhering to the guidelines.

University Grants Commission (UGC):

UGC, as the advisory body, guides Rajarshi Janak University. They ensure the guidelines align with national policies and standards.

Stakeholders and Experts:

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External stakeholders and experts offer valuable insights through workshops, seminars, and focus groups, enriching the development process.

Monitoring and Evaluation Team:

A dedicated team monitors the implementation of digitalization guidelines, assessing impact, and recommending improvements.

4.13. Compliance and Reporting

Compliance Monitoring:

The IT department, with the legal and compliance team, ensures adherence to digitalization guidelines. Actions are taken for any violations.

Reporting Mechanism:

A confidential reporting system allows faculty, staff, and students to report concerns. It helps with clarification on guidelines.

Regular Audits:

Periodic audits assess the effectiveness of digitalization guidelines.

Reporting to the Steering Committee:

Regular reports from the IT department inform university management about compliance status and challenges.

Reporting to UGC:

Periodic reports to the University Grants Commission assess digitalization efforts, identifying areas for improvement or support.

Training and Awareness:

Regular training programs educate stakeholders on digitalization guidelines, fostering a culture of responsible practices.

Review and Updates:

Periodic updates maintain guideline relevancy. Changes are communicated to stakeholders, and necessary training is provided.

Non-Compliance Consequences:

Non-compliance may result in disciplinary actions, as outlined in university policies. Severity determines disciplinary measures.

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