KLE ACADEMY OF HIGHER EDUCATION AND RESEARCH

'Accredited by A+ Grade by NAAC and Placed in Category A MHRD, Govt. of India

Policy

On

Information and Communication Technology

Registrar
KLE Academy of Higher Education
and Research, BELAGAVI

ICT for Learning Transformation and Inspiring Actions

KAHER's Information and Communication Technology Policy

INTRODUCTION

The KLE University was established on 13th April, 2006, which is carved out of KLE Society. KLE is a byword in India's Educational spectrum. Its success story, of nearly ten decades, portrays the dedication with which millions of people worked selflessly in the making of the 'KLE'. The KLE Society is celebrating its centenary year with 246 institutions, 13,000 members of the trust, 1, 10,262 students, and, 16,000 faculty. KLE reach enviable heights and has attained both national and International reputation under the visionary leadership of Chancellor, Dr. Prabhakar Kore. The University is also accredited with 'A+' grade by the NAAC and has been placed in Category 'A+' by the Ministry of Human Resource Development, Government of India. It is one of the few deemed Universities to have both these unique distinctions. The KLE University is located in 100 acres campus that is meticulously planned. The University offers various Undergraduate, Postgraduate, Post-doctoral, Fellowship and Certificate programs in the faculties of Medicine, Dentistry, Pharmacy, Ayurveda, Physiotherapy and Nursing. The campus is very rich and vibrant in terms of a highly impressive infrastructure, renowned and highly experienced teaching faculty, state of the art teaching hospital and medical research center, with 2200 beds and top notch diagnostic facilities under one roof. The Wi-Fi and digital library, e-learning and other facilities are at par with best campuses of the country and abroad. Another milestone achieved is the collaboration with MedRC and establishment of Smart Teach Server for students to access the high quality E-curricular content so that students can learn at their own pace & as supplementary measure to the excellent classroom teaching. Department of Public Health, Department of Clinical Research, Department of Allied Health Sciences ,School of Music starting need based

fellowship programs in various specialties and the commencement of Ph.D programs in health facilities and inter disciplinary research which are the new endeavors of the University in the short span of nine years of its existence.

Information and Communication Technology (ICT) is an umbrella term that encompasses various communication technologies such as internet and other digital media which facilitate access to information and knowledge. The Information and Communication Technology Policy (ICT Policy) is an expression of broad intent and plan of action to putting ICT to use effectively in all university activities. The KAHER is committed and deeply engaged in the application of ICT to enhance administrative efficiency to optimize learning experiences and to innovate.

The Department of Information Technology has been an active and effective part of KLE Academy of Higher Education and Research has a vibrant Department of Information Technology since its inception of the year 2006. IT Department has a significance role in the ramped up growth of the University. With increasing demands of the Digital Mode in Academics and Research, the university established IT department with 13 experienced IT Professionals with upgraded services. Currently, the department provides best infrastructure and resources in the following sections:

1. Learning Student Management(LMS): are powerful tools for the organization and presentation of curricular learning materials, for monitoring of student and faculty member's performance, and for overall quality control.
2. Paper Less Examination Modules: This is one of the reforms in Examinations System in KLE Academy of Higher Education and Research. The usage of Information Technology

has made the examination process secure, robust, student –friendly and infallible. This also included the online payment gateways for exam fee.

3. Human Resource Management System (HRMS): Human resources are one of three principle health system inputs, with the other two major inputs being physical capital and consumables. The performance and the benefits the system can deliver depend largely upon the knowledge, skills and motivation of those individuals responsible for delivering health services. The HRMS has been proved to be an effective way of managing resources.
4. Finance Management Software: an important aspect of the university. It has all necessary automations as per guidelines.
5. The university website is maintained through Content Management System

The Department also developed couple of in-house software's to manage the daily activities of the university viz; Inward-Outward Department, maintenance of Wi-FI Services and monitoring activities in the campus via CCTV, arranging quality video conferences, logistic support to CMEs/Seminars/meetings and so on.

All the lecture theatres, lecture halls, seminar rooms and auditorium are equipped with LCD projectors. Laptops are extensively used by the faculty for computer aided training.

The campus is completely enabled with Wi-Fi Services with band width of 1.5Gbps. About 6000 users are availing this facility with access control. The login credentials have been provided to all users.

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The domain of ICT is an evolving one. Considering the frequency of technology updation and obsolescence, the University reviews and updates its ICT Policy every three years. For this the University have a formal setup as follows

- The ICT Center is headed by a senior technical professional.
- The support staff of the ICT Center will have expertise in ICT related fields such as network administration, data center administration, web site design and LMS management etc.
- Each constituent institution will have an ICT coordinator to liaison with the ICT Center.
- The University will constitute an ICT Advisory Council under the chairmanship of the Vice-Chancellor, and some heads of constituent institutions and ICT experts from the field as members.
- A document, describing the available ICT services and their possible use, will be circulated periodically to all concerned. centre

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Objectives of the ICT Policy

- To Increase the accessibility of the KAHER to the present and prospective stakeholders and empowering them through enhanced access to information and quality services while improving governance through the use of ICT.
- To facilitate effective communication for the learning enrichment and student engagement thorough ICT enabled environment.
- To promote and strengthen Information Technology Services across the University by providing assistance in setting up quality IT infrastructure
- To create world class ICT infrastructure for impeccably connecting and integrating all ICT Service Providers and End Users at the KAHER
- To strength teaching, learning and evaluation system and bridging the gaps
- To develop international linkages with a view to facilitate participation in national, regional and international networksstrengthening teaching, learning and research in the University.
- To use appropriate technological systems to improve communication and interaction between University office and its Constituent Institutions

Scope of the ICT Policy:

- This policy applies to people, denoted as 'users' in this Policy,using the University ICT Resources including:
  - Students enrolled at the various constitute units of the University
  - Permanent staff employed by the University
  - Temporary, casual or agency staff working for, or on behalfof, the University
  - Contractors, consultants and suppliers working for, or onbehalf of, the University
  - Visitors to the University.

- This policy applies to ICT resources and systems madeavailable to the users, by or on behalf of, the University including but not limited to:
  - Personal computers, laptops and terminals;
  - Peripherals e.g. printers, copiers, scanners and multimediadevices;
  - Mobile devices e.g. smart phones and tablets;
  - Networks with wired, wireless, dialup and/or internetconnections;
  - Internet services e.g. world wide web, blogs and wikis;
  - Email and other messaging, social networking or collaboration services such as blogs, chats and forums;
  - Application software, services and databases;
  - Removable media including CDs, DVDs and memory sticks

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- The following are the different modes provided under ICT Policy for better learning.

Audio-based models	• Broadcast: IRI • Narrowcast: IAI (via audio tape or CDs) • Two-way radio • Audio conferencing and telephone • Broadcast radio
Televisual models	• Broadcast television (educational and instructional) • Videoconferencing • Video
Computer-based multimedia models	• Interactive video (disc and tape) • CD-ROMs • Digital videodiscs (DVDs/VCDs) • Interactive multimedia • Smart board
Web-based models	• Computer-mediated communication • Internet-based access to World Wide Web resources • Online courses (e-learning) • Online conferences (webcasts and webinars) • Virtual classes/schools (cyber schools) and universities
Mobile models	• Hand-held devices • Portable media players (podcasting) • Cell phones and smart phones • Tablets • E-readers

Guiding Principles for ICT Application

KAHER provided an ICT Application is an ICT resource (hardware, software, or a digital resource) to all its users to:

- Encourages contact between students and faculty
- Develops reciprocity and cooperation among students
- Encourages active learning
- Gives prompt feedback
- Emphasizes time on task
- Communicates high expectations
- Respects diverse talents and ways of learning

The following are guiding principles for ICT Applications

- Access: Provide unrestricted access to teaching, learning andresearch information to its stakeholders using ICT and also access to University services to stakeholders through ICT.
- Economy: Application ICT to improve economy in the practice of the University. The University will use ICT to reduce operation costs and improve teaching, learning and research quality.
- Efficiency and Effectiveness: Use ICT with a veiw to increase University's efficiency in delivery of services and improve effectiveness in achieving the expected results of theUniversity.

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- Relevance: Improve relevance of the learning experiences of the students at the University, and continuously use and adoptrelevant ICT for the University.
- Transparency: Use ICT to foster openness in University system management and delivery of services to the stakeholders.
- Privacy: Use of ICT within the University to protect individual privacy as per the applicable law.
- Accountability: ICT application in the University shall improve accountability of the system for its operation.
- Sustainability: Reduce the costs of ICT related energy consumption as well as promote the sustainability of ICT solutions and sustainability through the application of ICT.
- Learner Centered: Provide ICT tools that empower the students and enable them to be responsible for their own learning.
- Pedagogy Driven: Develop ICT resources that would support subject and course specific pedagogical innovations and create new learning experiences in classroom practices.
- Quality Assurance: Integrate quality assurance strategies and their continuous development into ICT processes and services.

ICT Application

The following is a description of areas where ICT resources may be developed and made available to stakeholders for their efficient use.

a) **Admissions:** ICT has enabled the KAHER to ensure effectiveness, efficiency and transparency of the admission process. The following processes are involved during admissions of the candidates to the university:

- Publication of admission related information over the Internet for better reach and visibility
- Provide online registration facility for prospective students
- Maintain a follow up and help prospective students through online support system and FAQs
- Conduction of Entrance Tests for admission to University programmes
- Allocation of Seats depending upon merits in different courses and disciplines

b) **Human Resources:** To manage Human resources IT department has procured Human Resource Management Software (HRMS), TCS.

- This software allows the individual faculty to maintain their academic, research and clinical growth and profile on regular basis after generation of employer registration ID from IT Department.
- The leave is sanctioned via the KAHER after applying through this portal.

- Support the non-teaching staff by standardizing routine administrative activities, and automating their process flow
- Provide advance learning and up-gradation opportunities to the teaching staff through online training programmes and support
- It also provides DASH board with key parameters and controls for all role on the systems including Principal, HOD and University officials.

c) **Teaching and Learning**: The use of ICT to provide support to the teaching and learning process has become an ingrained activity in educational institutions.

- A major benefit of ICT for the teachers is that they can make their classroom teaching more effective with the help of various ICT modules.
- The students are also benefited due to possibilities for interaction beyond the classroom through ICT. KAHER has procured CONTINEO software wherein academic calendar is being uploaded on regular basis for all the courses.
- The timetable based contact hours tracking for every faculty is done regularly. It also helps to track the punctuality of faculty attendance.
- OBE Based Internal Assessment is entered by individual faculty and IA marks are tracked and monitored at regular basis. This enables the faculty to identify the slow learners and help them to plan the remedial measures.
- ICT also enabled LDPR i.e Linked Data Platform for portion coverage assessment for each faculty and courses. This helps to understand the progress

and timely competition of syllabus as per calendar of events in each discipline.

- ICT enabled environment also encourage teachers to develop digital learning resources of their own by sung a another software **IMPARTUS Lecture Capture System**. This provided a facility of automatic recording of complete classroom experience.
- Facilitates accessibility to secured videos from the portal. The digital resources may include documents, presentations, animations, audio recordings and video clips. University needs to setup a media wing to professionally help teachers in this endeavor.
- Facilitate a platform for collaborative learning, content sharing, advanced search and analysis.
- Create appropriate online learning space through Learning Management System (LMS) to share the learning modules created by the teachers. Through LMS students will have authorized access to relevant modules.
- Provide recorded sessions across the campuses through podcasts (for audio sessions) and webcasts (for video sessions).

- Facilitate synchronous and asynchronous communication channels amongst students for peer learning via GOTO meeting, ZOOM and GOOGLE MEET.
- Provide real time sessions across the campuses through webinars and virtual classrooms via via GOTO WEBINAR, ZOOM and CISCO WEBEX
- Allow online completion academic activities and submission of assignments,

progress reports etc.

- Organize training on effective use of ICT for teaching and learning for every teacher. Such training may be organized within the University or faculty members may be deputed toattend external workshops.
- Provide training on effective use of ICT and social media in the University to the students.
- KAHER also procured TURNITIN Plagiarism software to evaluate all research outcomes of the students, post graduates and faculty members. In each college the core team has been trained for effective use of this software.
- KAHER has also procured the paid version of SPSS software for data analysis at Department of Biostatistics and Epidemiology.

d) **Student Performance Evaluation:** Student performance evaluation is the most critical aspect of University system as the gatekeeper of academic quality and credibility of the organization. Use of ICT has improved administration of tests in both online and offline scenario. The objective of the student evaluation system using ICT should include: providing an efficient mechanism to conduct examinations, improve transparency and credibility of the system, help declare the results error-free and in timely manner, and evaluate the students in a valid and reliable manner. The University may undertake a range of activities to support student evaluation through the use of ICT, but not limited to the following:

- Provide facilities for online registration for examinations, and share results online with in a weeks time.

- Students is informed about examination schedules and changes to schedules, if any, online.
- Create online systems for internal assessment and integratethe same with final student examination.
- Encourage teachers to use online testing system to be provided by the University for internal assessment.
- Provide feedback to students on their performance on aregular basis, on-line.
- Create question banks and share them through a repository.
- Use ICT for improving the credibility of the examination byputting practices in place to check impersonation and other malpractices.
- Use ICT to analyses evaluation data for preparing reports on student performance, evaluator performance etc.

e) **Student Support:** A support mechanism helps the students to excel and achieve their full potential. The traditional student support systems need to be supplemented with ICT to increase its scalability and availability. The University may undertake a range of activities to support students through use of ICT:

- Online support is required to drive University's centralized training and placement activity. It should integrate placement related services at University level, while providing institute- level programme-specific services to students through the activities such as Placement training, Placement related activities and management of students' portfolios.
- Continuous strategic contacts can be maintained with alumni throughthe use of ICT.

An exhaustive alumni database needsto be prepared and made available to all the constituentinstitutions for use.

- Use ICT to provide various supplementary skills to students including soft skills, personality development. A blended learning approach can be adopted to facilitate online learningof such skills.
- Facilitate the data mining on learning analytics for student support Use ICT to provide required information regarding hostel accommodation and to handle related complaints and feedbacks.
- ICT can be used to encourage students to actively participate in extracurricular activities. Individual student participations in these events can be recorded and made a part of their individual portfolios.

f) **Administration:** Apart from research and teaching, a major application of ICT can be in administration of the University. It will endeavor to connect all its Constituent Institutions to the University network and provide the services in a phased manner. It will develop a strategic plan to provide access to its key resources to all its students and teachers. The University may undertake a range of activities to support administration through use of ICT:

- Provide a communication channel between University and its constituent institutions for information exchange
- Standardize and automate the activities involved in academic administration for class and course management

- Standardize and automate the administrative processes of the University and its constituent institutions through an integrated system. The stakeholders should be able to accessthe required information through personalized dashboards

- KAHER has a online gateway platform for smooth transaction of payment portals and receipt of fee
- Automate the generation of various compliance reports
- Provide need based automation support to University's staffto perform specific tasks
- Promote the use of office computing to support general officetasks

g. Quality Assurance: The University may undertake a range of activities to support quality assurance through the use of ICT:

- ICT will help to improve the quality of administration and bring in transparency in the related processes through automated systems at regular intervals.
- ICT will be used to facilitate data mining on learning analytics of students for programme improvements; to encourage cooperation amongst teachers; to standardize study material across the campuses through learning modules and LMS; andlike.
- The University will enhance transparency in evaluation processes and the quality of evaluation through the use of ICT for collaboratively preparing question banks, developing automatic question paper generation systems,

conducting online examinations wherever feasible, and for providing timely feedback to students etc.

- The quality assurance initiatives need to be supported by aptmechanisms for online feedback from various stakeholders and its analysis using ICT.
- Databases of teachers and domain-experts will be maintained and made available to constituent institutions as per their teaching, evaluation and research requirements.

h. Student Parent Communication: This ICT feature enables effective communication between parent and students through web portal. Typical Information included, attendance, exam results, internal assessments, timetables and calendar of events. The SMS facility is also made available for events like Absente intimation to parents.

ICT Infrastructure and Maintenance

ICT Infrastructure

KAHER ensures the integrity,security and availability of ICT enables environment to o promote academic freedom and free exchange of ideas among its all peers. The following are the guidelines:

- ICT systems and infrastructure is managed by the University's ICT Center.
- University creates adequate budgetary provision for maintenance of the ICT infrastructure and to implement thisPolicy.
- KAHER ensures and provide for appropriate security, antivirus and password

management systems.

- While the University is taking all the necessary care to maintain its systems and servers, it accepts no responsibility for any loss or damage, consequential or otherwise, or loss of data arising from the use of its ICT Resources or due to the maintenance of its ICT Resources.
- Wherever possible, the University is using Open Source applications for providing services and reduce the total cost of running the ICT infrastructure.

ICT Maintenance

- Attempt to access computers for which the concerned individual is not authorized
- Unauthorized access to another user's files
- Attempting to circumvent Network Access Control, including by-passing proxies and firewalls
- Monitoring or interception of network traffic without permission
- Probing for the security weaknesses of systems by methods such as port scanning, password cracking, without permission
- Unauthorized extension or retransmission of network traffic including the installation of unauthorized wireless access points, routers or switches
- Unauthorized reselling of University's ICT Systems and Services
- Unauthorized modification of university's data
- Using the network to break into other networks
- Creation, retention, downloading or transmission of any offensive, obscene or indecent images or data, or any data capable of being resolved into obscene or

indecent images ormaterial

- Infringement of Intellectual property rights including copyright, trademark, patent, design and moral rights
- Sending electronic mail that purports to come from an individual other than the person actually sending the messageusing, for example, a forged address

- Deliberate unauthorized access to networked resources, localor remote
- Deliberate activities that may result in either wasting of support staff time in support of systems or corrupting or destroying other users data violating the privacy of other users
- Download, installation and use of unlicensed software on the University network and computers
- Any activity which comes within the purview of cyber laws of the land.

Maintenance of physical infrastructure

- All the constituent units and offices are required to define an 'owner' of each piece (e.g. a computer, laptop, printer in an office) or group (say in a computer lab or server room) of equipment and that individual shall take the responsibility of ensuring its security
- All backbone equipment (except that housed within units) are the responsibility of ICT Center
- All the students and staff required to identify themselves (either physically or electronically) for access toany common University computing facilities
- Only authorized staff are permitted to open computer or related systems
- Students and other staff shall not tamper with any componentsof computer systems for whatever reason beyond what is required to carry out the basic user services
- No computer equipment and related accessories be carried out of the computer labs without explicit permission from an authority
- The heads of the constituent units and sectional heads in the University shall maintain ICT asset registers in order to monitor and track the assets.

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Data Security

The purpose of these guidelines is to identify and disseminatethe framework and principles that guide institutional actionsand operations in generating and sharing data and information.

User Responsibilities:

- All University data is stored on centrally maintained corporate networked disc storage. In the event that such data is stored on user desktops, laptops and other mobile devices, it is the responsibility of the user to ensure its security, confidentiality and integrity with regular backup, password protection etc.
- All access to data stored in the central databases must be through standard interfaces provided for by the various information systems. Any attempt to gain access through any other means other than those sanctioned by the university constitutes security breech.
- Requests for access to all administrative data and the central systems in general need to be authorized by the relevant Data Owner after recommendation by the head of constituent institution or the section head.
- In the event that confidential information is protected by technical security mechanisms (physical or electronic) using passwords etc. and these mechanisms fail or are absent, users themselves are obliged to protect confidential information from public access.

Technical staff Responsibilities

- All University data residing on the central network storage must be kept backed up on a regular basis.
- Frequency of backup needs to be determined by the frequency with which the data changes and the effort required to recreate the information if lost.
- Backup must be tested periodically to ensure that they supportfull system recovery. All restore procedures must be properlydocumented and tested on a regular basis, at least annually. Backup media must be stored in an off-site location and retrievable within 24 hours, 365 days a year.
- Data owners in their role as custodians of University data are responsible for defining and documenting the length of timeduring which data must be retained.

Web content publishing:

- The web content publishingguidelines facilitate usability and consistency.
- Each constituent institution, unit, department, forum, and office, while having its own agenda, as a part of the whole, needs tobe clearly identified with the University brand.

Avoid redundancy:

- Constituent institutions should not repeat static information maintained elsewhere by the University.
- Instead their websites should provide link to that specific University information.
- Redundant information, especially different published versions, often causes

confusion among the audience and there may be severe consequences if incorrect information is posted.

- The University controlled sites must be registered accordingto the guidelines
- Individual units at the University are responsible for the content on all of their Web pages
- Content must be continuously updated. It will follow all sections of this policy, as well as national laws and codes
- No official unit may go outside the University Web structure and represent itself on another Web server or domain without written approval from the University

Copyright:

- All University Web pages should follow copyright laws
- Publishers of content must obtain permission from copyright holders to use text, photos, graphics, sounds, or movies to which the University does not hold copyrights.

Capacity Building

- For the ICT Center staff to perform effectively and efficiently
- , they shall be continuously trained to enhance their skills so that they can meet the changing needs of the users.
- The ICT Centre shall put in place training and development plans to address the skill competencies of the staff
- Appoint at least one member of staff from each constituent institution as ICT Coordinator. ICT Coordinators will act as links between ICT Center of the University and respective constituent institutions
- Provide technical training, on efficient use of ICT services, to all teaching and non-teaching staff from all constituent institutions
- Provide training to the faculty on content development and to develop e-learning modules
- Provide functional training to all teaching and non-teaching staff to improve their ICT competency.
- Train researchers on University's ICT Ecosystem for Research to enable them to use ICT in their research process
- Train all the faculty members in the use of ICT for administration and for teaching and learning purposes.
- Train at least one staff members from each of the constituent institutions in software, hardware and network maintenance

Disaster recovery (DR) plan

The University shall establish a disaster recovery planning capability which will develop and maintain coordinated plans, procedures and technical measures that would enable essential systems to be recovered following a disaster and provide assurance that these plans, procedures and measures are effective. A framework for disaster recovery may consider the following.

- The University shall develop Standards for DR Planning based on generally accepted good practices.
- The University shall establish a DR team to implement continual improvement of the DR planning capacity, the DRPlans and Standards.
- The DR Plans shall be peer-reviewed every two years and to follow any significant change to the architecture.
- The DR Plans shall be regularly audited for its compliance with the Standards.
- Recovery capabilities and plans shall be tested every two years in accordance with the Standards.
- The University shall identify capability and capacity measures designed to mitigate the consequences of a disaster.
- The University shall acquire and maintain resources necessary to ensure viability of the DR procedures.
- Compliance of the DR Plans with the Standards shall be reported through the Director,

ICT Center. The Director, ICT Center shall ensure that this Policy is regularly reviewed.