**MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES**



**STUDENTS ACADEMIC RECORDS INFORMATION SYSTEM (SARIS)**

**POLICY AND OPERATIONAL PROCEDURES**

**March 2021**

## ACRONYMS

| | |
|---|---|
| CEPD | Continuing Education and Professional Development |
| DCEPD | Directorate of Continuing Education and Professional Development |
| DICT | Directorate of Information and Communication Technology |
| DLS | Directorate of Library Services |
| DPGS | Directorate of Postgraduate Education |
| DUE | Directorate of Undergraduate Education-Learning    Electronic Learning |
| GePG | Government electronic payment gateway |
| HEIs | Higher Education Institutions |
| ICT | Information and Communication Technology |
| IMS | Information Management System |
| ISP | Internet Service Provider |
| MUHAS | Muhimbili University of Health and Allied Sciences |
| R&D | Research and Development |
| SARIS | Students academic information system |
| SDGs | Sustainable Development Goals |
| SOP | Standard Operating Procedures |
| VPN | Virtual Private Network |

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# 1. INTRODUCTION

## 1.1. Background

In current university activities, Information and Communication Technology (ICT) has increasingly been central in facilitating research, curricular development and implementation, administration and management. Accelerated developments in ICT have created new opportunities for higher education institutions (HEIs) to make optimal use of these developments. The Muhimbili University of Health and Allied Sciences (MUHAS) like other HEIs is challenged to appropriately deploy ICT infrastructure, systems and services to achieve its core functions. For MUHAS to attain its vision of becoming, *"A University excelling in quality training of health professionals, research and public services with conducive learning and working environment",* it will have to adopt and implement extensive use of ICT to perform the University's core functions which include training, research and consultancy.

MUHAS foresees the need to continue expanding student enrolment and academic programs to meet the national needs for human resource for health. This is markedly demonstrated by the effort to expand into a more spacious Mloganzila campus. However, this expansion in enrolment and academic programs needs to match with the expansion of existing facilities and resources at MUHAS. Use of ICT provides opportunities for the University to cope with the challenges of training increased numbers of competent health professionals in this era of knowledge society. It is thus imperative for MUHAS to put in place appropriate infrastructure and processes that will facilitate optimal deployment of ICT services to enable implementation of MUHAS core objectives. Furthermore, the University has to ensure that its ICT resources and facilities are used solely for the purposes for which they were intended.

The Directorate of ICT at MUHAS is mandated to harness and mainstream information and communication technologies (ICT) into all the University's core functions (teaching, research and consultancy services) as well as operational and management functions. MUHAS Senate ICT Committee oversees the Directorate of ICT. ICT services are being introduced and managed in line with the Tanzania eGovernment standards and guidelines as well as MUHAS ICT Policy and Guidelines, ICT Security Policy and Guidelines, as well as ICT Disaster Recovery Plan. MUHAS developed and maintains an ICT Service Catalogue with over 120 ICT services. Large

proportions (83%) of the services are hosted and managed locally at MUHAS in two data centres with power backup of up to 72 hours. One of the major services is Student's Academic Records Information System (SARIS). SARIS has three sub-systems namely: online application and selection; online registration, payment and academic progress as well as alumni databases.

Thus, formulation of this policy and procedures is to guide proper planning, management, maintenance and use of SARIS and related data at the University. The context of this policy and procedures originates from other existing policies and strategies at MUHAS including MUHAS Five Years Rolling Strategic Plan 2015/16 to 2019/20, MUHAS Ten Years Corporate Strategic Plan 2014/2015 to 2023/24, MUHAS ICT Policy and Procedures, MUHAS ICT Security Policy and Guidelines, as well as MUHAS ICT Disaster Recovery Plan, Report of a Technical Assessment of ICT Infrastructure, Systems and Services at MUHAS (2017), e-Learning Policy and Guidelines as well as eGovernment related regulations, strategies, policies, guidelines and standards, MUHAS Undergraduate and Postgraduate prospectus as well as General Regulations and Guidelines to Postgraduate Programmes and Guidelines and Tools for the Assessment and Monitoring of Teaching Practices at MUHAS:

## 1.2. Rationale

MUHAS needs to meet its objective of improving its services and increasing productivity by leveraging on new technologies. The University has been investing in ICT to facilitate its core functions of teaching, research and consultancy to attain its strategic goals. As the university expands, there is increasing dependence on ICT in streamlining operations ranging from admission, distance learning to long-term storage and retrieval of student information. Further, this increasing reliance on ICT renders the university vulnerable to ICT related risks such as security of academic records. In this regard, MUHAS has developed and is operationalizing comprehensive ICT Policy to direct ICT adoption and usage within the Institution. As part of improving implementation of its ICT policies and guidelines, MUHAS needs to develop and implement specific policies and operational procedures for management of mission-critical systems such as SARIS.

## 1.3. Purpose and Context

This document provides the highest-level directives and operational procedures for the

Muhimbili University of Health and Allied Sciences (MUHAS) for the main purpose to ensure that students' records are collected, stored, managed and secured in SARIS. The policy is based on standard policy framework issued by MUHAS and had taken into consideration other existing university level policies and National policies for the purpose of ensuring institutional-wise and national policy linkages.

## 1.4. Scope of the SARIS Policy and Operational Procedures

This policy and operational procedures are applicable to all MUHAS staff responsible for managing records of applicants, students and other related records. The policy provides guidance on ensuring SARIS is effectively used for managing student's application, admission, registration, payment, assessment and examination as well as certification processes and long-term storage of alumni information. The policy also stipules operational procedures on ensuring security, confidentiality and privacy in the system, create awareness and build capacity of staff and students to properly use the system as well as perform monitoring and evaluation of the system.

## 1.5. Relevant Government Policies and Legislations

The ICT policy and procedures are in-line with the following National Frameworks and key policy documents:

(i)   The Tanzania's National ICT Policy of 2016, which emphasizes the use of ICT to enhance and improve the quality of delivery of education in all areas.

(ii)   The Education and Training Policy (2014) that emphasizes the importance of the application of ICT in the Universities to improve teaching and learning and other related functions.

(iii)   The Universities Act (2005) which advocates on the need for the availability of adequate ICT facilities and services in terms of quality and quantity to support the core functions of the University.

(iv)   Government Circular No. 3 of 2013 on the implementation of various ICT systems.

(v)   Government Circular No. 5 of 2009 on proper use and ICT security.

(vi)   Government Circular No. 6 of 2009 on storage and disposal of information on ICT devices.

### 1.6. Policy Objectives and Outcomes

This document provides the highest-level directives on management of SARIS at MUHAS and aims to improve use of SARIS to effectively handle student's records from application, admission, registration, examination to certification processing and long-term storage of alumni data. The specific objectives of this policy are: -

(i)  To ensure a functioning system exists to support different processes in student information management including the following activities

   a. Application, selection, admission, registration, clearance for graduation, billing and payment
   b. Accommodation allocation and payment
   c. Tracking of students' status regarding health insurance payment, loan allocation and sponsorship
   d. Academic processes (interactive central timetable – activity, time, venue), examinations (booking of exam venues, generation of examination numbers, uploading and storage of examination results) and certification processes (academic records, certificates and transcripts)
   e. Preparation of academic status (registered [continuing and X-students], those who froze studies or are discontinued) and graduands list. Should be interactive for report making.
   f. Upgrading all students in cohort into subsequent year making sure that those registered are active and those not registered be inactive but should be in the database for records and decision making
   g. Generation of various appropriate reports for the University and other government authorities.

(ii)  To improve integration of SARIS with other systems including TCU, NECTA, NACTE, HESLB, GePG, eLearning and NHIF systems.

(iii)  To define roles and responsibilities of different users in using SARIS to support management of student information

(iv)  To improve data security, and confidentiality in the system

(v)  To create a monitoring and evaluation system

(vi)  To increase awareness and build capacity of staff and students to properly use the system

(vii)    To continually improve the system to meet new demands.

## 2. DEFINITION OF TERMS

i. **Antivirus** is a "protective software designed to defend your computer against malicious software. Malicious software, or "malware" includes: viruses, Trojans, key loggers, hijackers, dialers, and any other code that vandalizes or steals your computer contents"

ii. **Bandwidth** is the amount of data that can be transferred over a network in a given time period (usually a second). Bandwidth is usually expressed in bits per second (bps), or as some larger denomination of bits, such as Megabits per second (Mbps), or Gigabits/second (Gbps).

iii. **Distance learning** is defined as "Provision of learning opportunities to learners situated away from a University campus".

iv. **e-Learning** is use of information and communication technologies to enhance and support teaching and learning. This definition encompasses e-learning which supports teaching and learning through the provision of online resources to support classroom-based learning, distance learning, and distributed learning models.

v. **Electronic mail** is a system of world-wide electronic communication in which a computer user can compose a message at one terminal that can be regenerated at the recipient's terminal when the recipient logs in.

vi. **Firewall** is a set of related programs, located at a network gateway server that protects the resources of a private network from users from other networks. The integrity of this protective barrier depends on the effective deployment, configuration and capabilities of individual firewall programs.

vii. **Free and opensource software (F/OSS, FOSS)** is software that is, liberally licensed to grant the right of users to use, study, change, and improve its design through the availability of its source code.

viii. **Hardware** is a comprehensive term for all the physical parts of a computer, as distinguished from the data it contains or operates on, and the software that provides instructions for the hardware to accomplish tasks.

ix. ICT Assets/Resources cover all ICT facilities including the University and hospital network, all computers, computing laboratories, all associated networks in classrooms, lecture theatres, and video conferencing rooms across the University. It also covers internet access both wired and wireless, email, hardware, data storage, computer accounts, software (both proprietary

and those developed by the University), audio visual system including telephone services and voicemail.

x.    **Information and Communication Technology (ICT)** refers to all those instruments, modes, and means through which information or data is captured, processed, stored and transmitted or communicated from one person to another or from place to place.

xi.   **Information management systems** is a computer program (consisting of data storage systems, software and services, providing automated networked storage solutions) that lets one or more computer users create and access data in a database, having extensive transaction processing capabilities.

xii.  **Institutional repository** is an online locus for collecting, preserving, and dissemination in digital form of the intellectual output of an institution, particularly a research institution.

xiii. **Internet** is a computer network consisting of worldwide interconnected networks of computers that use the standard Internet Protocol (TCP/IP) to facilitate data transmission and exchange,

xiv.  **Intranet** is a private computer network that uses Internet Protocol technologies to securely share any part of an organization's information or operational systems within that organization, often protected from Internet traffic.

xv.   **Online learning** means that the whole course is conducted online and students can follow their courses from any geographical location.

xvi.  **Proprietary software** is a, "computer software licensed under exclusive legal rights of its owner"

xvii. **Software** is a collection of various kinds of programs that are used to operate computers and related devices.

## 3. POLICY STATEMENTS AND PROCEDURES

The policy statements are presented in thirteen thematic policy issues followed by the operational procedures under each policy statement.

### 3.1. Students Admission Management

MUHAS publishes information on application and admission and registration of diploma, undergraduate and postgraduate programmes on its website. There are online application systems for diploma, undergraduate and postgraduate programmes. The systems which are sub-systems integrated with SARIS have automated handling of application and selection. The online application systems as well as SARIS are integrated with TCU Universities Information Management System (UIMS). The links to the systems will be posted on the MUHAS website (https://www.muhas.ac.tz/) during the application cycles. The online application system will also be linked with NECTA and NACTE.

#### 3.1.1. Policy Statement 1: Application and selection of students

The University shall ensure all key admission processes are automated to increase efficiency and transparency.

**Operational Procedures**

(i)     Admission Office will prepare and publish information on application and admission of diploma, undergraduate and postgraduate programmes on its website.

(ii)    DICT will configure SARIS to ensure all applicants are required to pay a non-refundable application fee as indicated in the fee structure in the University Prospectus before submission of application.

(iii)   DICT will ensure posting of hotlines during the application process inclusive of staff from DICT, Admission Office, Finance and host Directorate (DUE or DPGS)

(iv)    Admission Office will set in SARIS student selection criteria for each programme as per requirements in the Undergraduate and Postgraduate Prospectus.

(v)     Admission Office in collaboration with Schools/Academic Directorates will conduct selection of students for admission.

(vi)    DICT shall configure SARIS to submit a list of selected students for degree and diploma programmes to TCU and NACTE systems, respectively.

(vii)   DICT will be available to troubleshoot technical challenges during the application and selection process.

### 3.1.2.   Policy Statement 2: Handling of registration of students and payment of fees

(i)   Students will be responsible to
- Register in the system as per MUHAS prospectus
- Create an invoice for tuition fees and other payments
- Pay the minimum amount allocated per semester
- Check her/his registration status
- Regular update her/his profile in the system

(ii)   Admission office (DUE, DPGS) will be responsible to
- Generate student's payment verification
- Update students records in the system
- Maintain student records in the system and paper forms to ensure consistency

(iii)   Directorate of Finance will be responsible to
- Set up students' fees structure in the system as per academic programmes and semesters
- Confirm system generates bills as per the fees structures
- Generate student's payment verification
- Generate and confirm various payment reports

(iv)   Departments/Schools will responsible to
- Generate the list of registered students for support in uploading results.

(v)   DICT will be responsible
- Configure automation of the registration processes of all continuing students, students defreezing studies and students in last year of tenure (X-students), both local and international
- Update students' status of freezing studies, defreezing or discontinuation from studies as it will be directed in writing by DVC-ARC.
- Troubleshoot technical challenges during the registration process

### 3.1.3.   Policy Statement 3: Handling of student loans allocation

MUHAS Loan Officer will be responsible for the following
(i)   Processing of student loan or grant requests in the system
(ii)   Defining loan and or grant categories in the system
(iii)   Uploading or editing loan allocation in the system Accessing remarks of the examination results for submission to HESLB for allocation of loans
(iv)   Accessing the list of registered/not registered students in the system for submission to HESLB and processing loan payments
(v)   Processing of students' loan or grant requests from the system

### 3.2. Assessment and Examination Management in SARIS

ICT infrastructure is the backbone for supporting the University business operations by enabling information exchange and providing secure access to different applications. This consists of all hardware devices such as network devices, servers, security devices, workstations, laptop computers, storage, back-up, operating facilities and supporting platforms like operating systems and databases.

The objective of managing ICT Infrastructure is to ensure that the University's ICT infrastructure operations are optimized in order to deliver higher level service quality and support business-relevant operations based on ICT planning and management best practices.

#### 3.2.1. Policy Statement 4: Publication of Examination Results in SARIS

The University shall publish in SARIS, all examination results soon after being approved by the University SENATE as per the University prospectus (diploma, undergraduate and postgraduate programmes).

**Operational Procedures**

(i)    Head of Academic Department/Unit shall ensure continuous assessment and examination results for every assessment and examination have been properly uploaded onto SARIS before School or Institute Board meeting within two weeks after the examination

(ii)   Head of Academic Department/Unit shall not upload supplementary examination results to SARIS before end of audit year

(iii)  Dean of School or Director of an Academic Institute shall publish provisional results soon after the School or Institute Board meeting, but the results shall not be regarded as final until they are approved by Senate.

(iv)   Deans and Directors of Academic units shall ensure that results presented at School/Institute Boards, and subsequently to SUEC, SHDC and Senate, are those downloaded from SARIS and NOT raw results.

(v)    DVC-ARC shall inform in writing DICT to publish in SARIS results approved by the Senate thereafter.

(vi)   No any changes shall be made in examination results after Senate approval unless

directed by the Chairman of the Senate in writing, the request having passed through relevant University organs

(vii) SARIS shall notify DVC-ARC, Dean, Head of department and lecturer who upload the results via email any changes in the examination results made after Senate approval

(viii) SARIS shall log all changes in the examination results made after Senate approval

(ix) SARIS shall confirm that the information in the interface is correct with all features included in the printout.

(x) DICT shall ensure SARIS is properly configured for entering and publishing results, including limitation of ability to upload results of continuing and X-students to only those registered on SARIS.

(xi) DICT shall provide adequate and timely technical support to SARIS users including training and troubleshooting.

### 3.2.2. Policy Statement 5: Generation of Transcripts and Certificates

The University shall ensure that SARIS is properly used to generate academic transcripts, certificates and list of students graduating in each academic year.

**Operational Procedures**

(i) Graduands shall submit requests for transcripts or academic certificates and pay required fees online.

(ii) Directors of Undergraduate Education and Postgraduate Studies shall receive requests from DVC-ARC's office and generate provisional academic transcripts from SARIS.

(iii) DVC-ARC shall confirm and sign academic transcripts generated from SARIS

(iv) Graduands shall be required to collect academic transcripts or certificates in person or submit legal authorization of another person to collect on behalf

(v) Directors of Undergraduate Education and Postgraduate Studies shall generate list of students to be included in the graduation book and included in preparation of academic certificates for each programme from SARIS.

### 3.3. Policy Statement 6: SARIS integration with other related systems

SARIS should be integrated with other systems for secured and simple information exchange.

DICT shall ensure SARIS is integrated with

(i) TCU UIMS to submit student's selection, enrolment and lists of graduates for degree programmes and NACTE system for diploma programmes

(ii) NACTE system to submit student's selection, enrolment and lists of graduates for diploma programmes

(iii) GePG for managing billing and payment of different student fees as per MUHAS prospectus

(iv) HESLB system to facilitate students' loan data exchange

(v) MUHAS billing system

(vi) Moodle Learning Management System for exchange student and programme information

(vii) Online booking system, central timetabling, alumni database.

### 3.4. Data Security and Business Continuity Management

Ensuring SARIS systems and data contained therein are secured and properly maintained to ensure its integrity is of utmost importance. SARIS security covers all the processes by which SARIS and its related ICT equipment, information and services are protected from unintended or unauthorized access, change or destruction throughout an organization in the short and long-term. The general objective of managing SARIS security is to provide MUHAS with student information security mechanism so that University's business activities need not be interrupted by foreseen and unforeseen events (natural disasters, technological failures or human error) due to sensitivity of information and services provided to the general public and other institutions. For this to happen, Business continuity management need to be well planned and implemented to minimize the impact on business operation to an acceptable level and facilitate quick recovery of SARIS.

#### 3.4.1. Policy Statement 7: SARIS Data Security

The University shall ensure that all ICT resources (software, hardware, data, system users) and services are maintained, controlled, protected and secured to enable the University functions run smoothly.

**Operational Procedures**

(A) The DICT shall ensure that

(i)      Required security tools and techniques are deployed to ensure SARIS data security

(ii)     All computing devices (desktop and laptop computers, servers, etc.) and systems using in managing SARIS are protected against malicious software through the installation of up-to-date antivirus and firewall software.

(iii)    SARIS System administrators will respect the privacy of personal communications in all forms including telephone, electronic mail and file transfers.

(iv)    All SARIS users are reminded to change passwords regularly and store passwords in secure locations.

(v)     SARIS is designed and implemented with effective ICT security controls to safeguard the integrity, confidentiality and continual availability throughout the entire life cycle.

(vi)    ICT security risks are mitigated and controlled in SARIS.

(vii)   SARIS data are daily backed in secure servers in the University data centres (both onsite and offsite), and servers are maintained for secure long-term storage of data

(viii)   All persons effecting changes in SARIS (systems and data) have appropriate authorization and all changes are logged (staff making changes, changes made, date, time)

(ix)    Printed transcripts, academic records and other outputs from SARIS have appropriate security features to safeguard against forgery and manipulation (single page transcript, student identifiers on every page)


(B) The SARIS Administrator shall ensure that

(i)      Each user respects the privacy and integrity of other users. No user shall be able to access, view, copy, alter or destroy another person's account and electronic files

(ii)     Users' accounts will be monitored in order to maintain and protect the integrity, security and functionality of SARIS.

(iii)    A robust business continuity and service recovery plans are implemented and regularly reviewed and tested.

(iv)    SARIS data are regularly backed up in secure servers in the University data centres (both onsite and offsite)

(v)     Any request for changes in SARIS shall be submitted in writing to DVC-ARC through Heads of Departments, Deans or Director, and DUE or DPGS and finally reviewed and

endorsed by DVC-ARC for effecting the changes in SARIS.

### 3.4.2.  SARIS Hosting

The University shall ensure SARIS is deployed and hosted in secured Data Centre to enhance availability and accessibility.

**Operational Procedures**

The DICT shall:

(i)    Regularly assess the requirements for hosting SARIS as one of the mission critical ICT systems

(ii)   Securely host SARIS in the University Data Centre and a mirror server in the University ICT Disaster Recovery Site (at Mloganzila).

## 3.5. Capacity Building in the use of SARIS

Automation of the management and administrative functions and processes in student's records management needs to go hand in hand with creating awareness and training of users to ensure they have right knowledge and skills to effectively use the system. For the University to ensure good and efficient usage of SARIS services, faculty, administrators and students need to be equipped with adequate knowledge and skills on the proper use of the system. In this regard, policy guidance is necessary to develop and implement awareness creation and training programmes in order to keep up with the changing application and usage of SARIS.

### 3.5.1.  SARIS Training

The University shall ensure that staff and students are equipped with adequate knowledge and skills in the use of SARIS.

**Operational Procedures**

The DICT in collaboration with the Admission Office, Deans, Directors and Heads of Departments/Units shall create enabling environment for the SARIS use among prospective students, students, faculty and administrators. They shall

(i)     Constantly identify SARIS training needs for MUHAS students and staff

(ii)     Develop and implement awareness creation programs for prospective students

(iii)    Train admission and administrative officers on the use of SARIS for managing student admission processes

(iv)    Create awareness among prospective students on the use of MUHAS online application system

(v)    Develop and run short trainings on SARIS to all students on the use SARIS on online registration, payment and monitoring their academic progress

(vi)    Train faculty on the use of SARIS for managing students' academic records.

(vii)    Develop short educational videos on application and registration processes which will be deployed on MUHAS website and social media.

## 4.  POLICY STATUS

This is a new policy requiring approval to be operational.

## 5.  KEY STAKEHOLDERS

5.1. The stakeholders who were consulted during revision of this policy include the following:

(i)    Vice Chancellor, Deputy Vice Chancellors

(ii)    Deans and Directors,

(iii)    Heads of Academic Departments and Administrative units

(iv)    DICT Management and the ICT staff

(v)    Staff and Students.

5.2. The main stakeholders of this policy are:

(i)    All MUHAS staff and students

(ii)    Vice Chancellor, Deputy Vice Chancellors

(iii)    Deans and Directors

(iv)    Heads of Academic Departments and Administrative units

(v)    School Examination Coordinators

(vi)    Prospective students and other beneficiaries.

## 6. APPROVAL DETAILS

The policy was approved by the University Council at its ……… meeting held on ……..

## 7. RELATED LEGISLATION

   (i)     The Universities Act (2005)

   (ii)    e-Government Act No.10 of 2019

## 8. RELATED DOCUMENTS

   (i)     MUHAS University Charter (2007)

   (ii)    MUHAS Competency-based Programmes Undergraduate Prospectus 2019/2020–2020/2021

   (iii)   MUHAS Postgraduate Prospectus 2019/2020

   (iv)   MUHAS Student bylaws (2013)

   (v)    MUHAS ICT Policy and Guidelines (2017)

   (vi)   MUHAS ICT Security Policy and Guidelines (2017)

   (vii)   MUHAS Assessment Handbook

   (viii)  MUHAS Quality Assurance Policy and Guidelines

## 9. EFFECTIVE DATE FOR THE POLICY

The policy will be effective upon such date approved by the University Council or such date stated by the University Council for the policy to be in use.

## 10. NEXT REVIEW DATE

The MUHAS SARIS policy and operational procedures will be reviewed after every three years or when deemed necessary to assess the effectiveness of its implementation and determine policy areas that need to be revised. The periodic review will ensure the policy is in line with the University, national and international changes that might have taken place.

## 11. POLICY OWNER

The University Council shall own the MUHAS SARIS Policy and Operational Procedures.

## 12. CONTACT PERSON

The contact person for issues related to the SARIS Policy and Operational Procedures shall be:
The Director, Information and Communication Technology (DICT)

Muhimbili University of Health and Allied Sciences

P.O. Box 65001

United Nations Road, Dar es Salaam, Tanzania.

Email: dict@muhas.ac.tz

Telephone: +255 22 2152271 Ext. 1032