



Mbarara University of Science and Technology

Open Distance and E-Learning Policy

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1.0 Introduction

The Open Distance and E-Learning (ODEL) Policy of Mbarara University of Science and Technology (MUST) is set out to provide opportunities of accessing and using Open Distance and E-Learning platforms and technologies for both staff and students.

This policy spells out the mandate of stakeholders (students, staff, MUST, government, partners and collaborators) in delivering Open Distance and E-Learning at Mbarara University of Science and Technology.

This policy is hinged on a number of guidelines that shall be followed for its implementation in relation to other policies of MUST and the nation. Decisions on ODeL at MUST will be guided by this policy.

In line with its mission, to provide quality and relevant education at national and international level with particular emphasis on science and technology and its application to community development, Mbarara University of Science and Technology (MUST), guided by this ODeL policy, shall aim at providing ODeL-based learning opportunities which anticipate and satisfy market demand.

This policy meets one of the University's strategic Objectives to take a national lead in offering learning opportunities to all those who can benefit, at a range of levels and in a variety of modes to suit individual needs.

This policy therefore seeks to ensure that there is a consolidated view on how ODeL should be effectively implemented within MUST to enhance teaching and learning.

The Policy covers the following broad areas;

- i. E-Learning Platforms or Software Management
- ii. E-Learning Infrastructure Management
- iii. E-Learning Support Services
- iv. Information Security
- v. Data Management
- vi. Remote Access
- vii. Open Distance Learning

Definitions:

- E-Learning** is the use of electronic information and communication technologies to effectively enhance teaching and learning.
- Blended learning** is accomplished by using multiple teaching and learning strategies, a range of technologies in combination with face-to-face interaction and the deployment of both physical and virtual resources;
- Distance education** is a set of methods or processes for teaching a diverse range of students located at different places and physically separated from the learning institution, their tutors/teachers as well as other students;
- Learning** is an active process of construction of knowledge, attitudes and values as well as developing skills using a variety of resources including people, printed material, electronic media, experiential and work-integrated learning, practical training, reflection, research, etc. Learning is also associated with personal change and empowerment as an aspiration to improve oneself in order to help others;
- Open distance learning** is a multi-dimensional concept aimed at bridging the time, geographical, economic, social, and educational and communication distance between student and institution, student and academics, student and courseware and student and peers. Open distance learning focuses on removing barriers to access learning, flexibility of learning provision, student-centeredness, supporting students and constructing learning programs with the expectation that students can succeed;
- Open learning** is an approach to learning that gives students flexibility and choice over what, when, where, at what pace and how they learn. Open learning is all encompassing and includes distance education, resource-based learning, correspondence learning, flexi-study and self-paced study;

2.0 Context and Problem Statement

With the shift in the learning paradigm, many universities both nationally and internationally are trying to cope with high staff attrition rates and competition for student enrollment and retention. Universities are also realizing an increasingly competitive environment with changing student expectations.

The current students are living in a world that is surrounded by a technological environment that requires them to utilize Open Distance and ICT in most sectors of their lives.

3.0 Justification

Today, there is great emphasis of students' centered learning and not the teacher centered learning that can easily be realized through the numerous technologies. Therefore, a need for a policy on streamlining the use of technologies for learning is inevitable.

The policy will encourage academic staff to utilize Open Distance and ICT during their teaching, learning and assessment of students.

4.0 Goal

To incorporate ODeL in MUST's teaching, learning and research activities so that its role is clear and apparent to staff and learners at all levels.

5.0 Objectives

- a) To enhance teacher to student teaching and learning experience, through the use of technology
- b) To improve electronic communication between academic staff and students as a means of effective teaching, learning and research.
- c) To increase opportunities for distance, to self-directed and independent learning
- d) To enhance the university's potential to recruit and retain more students.
- e) To commit MUST to an ongoing, responsive interaction with current and emerging national and international imperatives and developments with relevance to quality ODeL provision.

6.0 Legal Framework

The ODeL policy is in line with the following Institutional & National Policies:

6.1 Institutional Policies

- MUST Human Resource Manual 2018
- MUST ICT Policy 2019
- MUST Quality Assurance Policy 2010 (As amended)
- MUST Examinations Rules and Regulations 2016 (As amended)
- MUST Research Policy 2019

6.2 National Policies

- Universities and Other Tertiary Institutions Act, 2001 (As amended)
- National ICT Policy (2014)
- The Computer Misuse Act, 2010
- The Electronic Transaction Act 2010
- Data Protection and Privacy Act, 2019

7.0 Strategies

7.1 STRATEGY 1: E-Learning Platforms (Software) Management

Objective: To ensure utilization of an appropriate E-Learning Platform (s) for effective and authoritative teaching and learning

7.1.1 The E-Learning Platform(s)

- a) Shall be developed in line with the proven pedagogical instructional design concepts selected by MUST.
- b) Shall be Open Source to allow easy sustainability
- c) Shall have guidelines, for the effective adoption, testing and evaluation.
- d) Shall be used in line with the Software Management guidelines of the MUST ICT Policy 2019

7.1.2 Propriety Software

- a) Shall be procured in accordance with the University's Procurement and Disposal regulations. This shall begin with documented business requirements justified by a stated business case by a Unit with the approval of the Computing Services Unit.
- b) Shall be maintained in an inventory of all University, including licenses, installations, licensing keys, copies of agreements, media and permitted users, by The Computing Services Unit will maintain an

7.2 STRATEGY 2: E-Learning Infrastructure Management

Objective: To provide an E-Learning infrastructure to facilitate teaching, research and innovation.

The University shall ensure the effective and efficient use of E-resources following quality assurance standards by;

- a) Ensuring that there is an appropriate and sufficient physical infrastructure (i.e. classroom, computer laboratories and learning spaces) to support access to e-learning which meet staff and student needs and expectations.
- b) Ensuring supply and maintenance of the technical equipment for teaching, research, learning technologies both software and hardware.
- c) Ensuring that E-Learning Infrastructure Management is guided by the MUST ICT Policy 2019.

7.3 STRATEGY 3: E-Learning Support Services

Objective: To provide documentation, training, continuous support and service level agreements to both staff and students.

The University, through the University Computing Services Unit, shall;

- (a) Provide central support for e-learning through Staff Training and Development.
- (b) Support creation and maintenance of an e-learning directory.
- (c) Support the university library in creation and maintenance of a digital library.

7.4 STRATEGY 4: E-Learning Security

Objective: To develop mechanisms, guidelines and procedures to support IT Security Function.

The University recognizes the need to protect her IT resources against various security risks that could lead to data loss and affect business continuity. The university;

- a) Shall uphold the principles of Information Security through the preservation of the confidentiality, Integrity and Availability of the university's information.
- b) Shall ensure that the developed e-learning content, complies to the MUST and National Copyright and Intellectual Property Rights, policies and guidelines.
- c) Shall ensure that the provisions of Information and IT Security will be in line with the Security guidelines of the MUST ICT Policy 2019 including, but not limited to;
 - I. Information Security Infrastructure
 - II. Information Access
 - III. Security of Third-Party Access
 - IV. Protection of Key Data and Information
 - V. Personal Security of Information
 - VI. Communications Management
 - VII. Virus Protection
 - VIII. Password and Privilege Management
 - IX. Unattended User Equipment
 - X. Disposal of Information Storage Media
 - XI. Disaster Recovery
 - XII. Expectation of Privacy
 - XIII. Security Testing Tools
 - XIV. Incident Handling
 - XV. Monitoring
 - XVI. Physical Security

7.5 STRATEGY 5: E-Learning Data Management

Objective: To develop e-learning content standards

The university shall develop e-learning content standards. All e-learning content shall be in a format described in the E-Learning Content standards manual.

- a) MUST will ensure that staff and students have appropriate access to electronic teaching and learning tools and materials, including materials stored locally and those held elsewhere.
- b) MUST will establish an infrastructure for the creation and maintenance of electronic resources.
- c) MUST will manage its own electronic resources by creating a repository for archiving, access and reuse of digital materials created for teaching, learning and research.
- d) MUST will ensure that Data Management is in line with the guidelines of the MUST ICT Policy 2019;

7.6 STRATEGY 6: Remote Access

Objective: To develop procedures and guidelines to support remote connectivity.

The university will;

- a) Provide a networked environment that supports remote connectivity to both staff and students.
- b) Provide remote access rights, to its eLearning contents authorized users.
- c) Ensure remote access follows the principle of, “at least access”, to users.
- d) Ensure remote access by users is monitored and evaluated.
- e) Develop comprehensive guidelines for remote connectivity to E-Learning platforms.

7.7 STRATEGY 7: Open Distance Curricula Development

The curricula will:

- a) Have academic integrity and be responsive to the vision and mission of MUST,
- b) Be aligned with the community needs and students’ profiles,
- c) Be articulate clear exit level outcomes,
- d) Design teaching, learning and assessment strategies to meet these outcomes.
- e) Be developed by a team(s) involving academics, relevant external stakeholders and, where possible, representatives of current and past students.

7.8 STRATEGY 8: Admission Procedures

Admission to Open and Distance Learning programs shall follow the university's Admission Policy

7.9 STRATEGY 9: Open Distance Learning (ODL) Teaching Methods

The ODL teaching and learning methods for a particular program or course:

- a) Will be determined by the nature of the program, the profile of the students, students' access to resources and level of the program.
- b) Will include independent study of learning materials, completion of various activities, formative assessment tasks, tutorials, practical work and opportunities to interact with others as well as research activities.

7.10 STRATEGY 9: Open Distance Learning (ODL) Assessment

The assessment strategy:

- a) will ensure that students develop effective cognitive, reflective, self-management and practical skills,
- b) will include formative assessment which is designed to support the teaching and learning processes or support research skills,
- c) will include formative and summative assessment aspects that will be used for making a judgment about the achievement of the learning outcomes,
- d) will assist students and tutors to monitor their learning in relation to formative assessment tasks and feedback.

8.0 Implementation Framework

8.1 Institutional Framework

8.1.1 Role of Management

The University, through Senate and Council, shall determine and approve On-line and Distance Learning Programs for all Faculties/Schools/Institutes.

University Management shall champion the implementation of e-learning within all MUST programs as gradual process.

The University Management shall ensure that students taking E-Learning courses have equity opportunity with those taking courses delivered in traditional ways, and that its marketing, recruitment, administrative and support procedures and provision are fully aligned to the needs of the e-Learner.

The University Management shall establish a University e-Learning Unit under the MUST Computing Services, the unit shall be adequately staffed with professionally trained staff to provide and support e-Learning at the university.

8.1.2 E-Learning Support Unit

The unit shall ensure;

- a) That e-learning growth is in line with the strategic focus of MUST in respect to teaching and learning.
- b) That there is continuous provision of a reliable E-Learning Platforms Management
- c) That there is a robust E-Learning Infrastructure Management strategy
- d) Provision of E-Learning Support Services including continuous training of both staff and students
- e) Security of both Infrastructure and E-Learning Content
- f) Provision of Remote Access of the E-Learning Platform for both staff and students
- g) The return on investments in e-Learning, like all forms of teaching, should be monitored and evaluated.
- h) Monitoring and reviewing progress made against target outcomes at least every three months.
- i) Assistance in the management of the student enrolment processes
- j) Assistance in the management of improvements related to student and course management
- k) There is a point of contact for platform users who may have queries

- l) That Communication of support issues is done in a timely manner and escalated where necessary
- m) That support emails and calls from users are answered on a day-to-day basis

The University shall ensure that, by using effective costing models and market research, the pricing of e-learning offerings is competitive and appropriate to the target populations.

8.1.3 Role of the Deans and Directors

Deans and Directors shall;

- a) Provide strategic direction that will encourage all academic staff to utilize ODeL in the teaching and assessment of Learners.
- b) Ensure provision of pedagogy training for staff as the major influencing factor for a given ODeL technology.
- c) Develop positive leadership and change management strategies towards ODeL implementation.
- d) Ensure that e-Learning is utilized to enhance other teaching and learning approaches such as lectures, seminars and therefore should be linked with learning, course delivery and assessment.
- e) Provide support and facilitation to staff to ensure successful implementation of.
- f) Develop effective methods of internal communication, collaboration and consultation about ODeL.
- g) Recognize and reward best practice staff involved in using e-learning technologies (content development, training).

8.1.4 Role of the Academic Staff

Academic staff shall;

- a) Manage the teaching and learning of their respective courses using available technologies
- b) Manage and guide all course activities, processes and tasks
- c) Impart information to students using different media types
- d) Provide assignments, tests and exams to students
- e) Enable active participation of learners and engagement of ideas
- f) Lead discussions amongst students
- g) Host and manage live class sessions
- h) Record and upload lectures and tutorial sessions
- i) Seek technical help, if need be, from the eLearning Support Unit

8.1.5 Role of Students

Students shall;

- a) Personally, acquire the necessary electronic devices required to participate in their respective course eLearning activities
- b) Enroll for courses
- c) Attend live class sessions
- d) Access and download learning materials posted by academic staff
- e) Undertake assignments, tests and exams
- f) Participate in online class discussions
- g) Seek technical help, if need be, from the eLearning Support Unit

8.2 Action Plan

Some staff members in the University are already implementing some form of ODeL with excellent examples of the use of e-learning. However, in order to completely rollout ODeL across the entire University, there is need to undertake its implementation in clear key phases, namely:

8.2.1 Phase 1–Consolidation of existing capacity and infrastructure

- (i) Launch the ODeL Policy.
- (ii) Enhance infrastructure to ensure stability of ODeL platforms
- (iii) Provide training and support to academic staff and students.
- (iv) Appoint person(s) in-charge of ODeL support under the University Computing Services Unit
- (v) Explore advances in ODeL methods and tools through case studies.
- (vi) Explore opportunities for integrating ODeL in at least three degree and diploma courses for each department/faculty across the University.
- (vii) Explore at least two content authoring techniques and have them adopted across MUST.
- (viii) Report on impact of rolling out the ODeL Policy and E-learning platforms.

8.2.2 Phase 2 – Embedding

- i) Enhance learning to support tools and templates from phase1.
- ii) Seek to embed new ODeL practices within the entire University degree and diploma courses.
- iii) Seek to produce one new distance learning course, as a pilot of training from a distance.
- iv) Embed e-assessment in at least three degree and diploma courses across the entire University.
- v) Introduce training and support activity to raise the base level of ODeL provision across all courses.

8.2.3 Phase 3 – Main Streaming of Enhancements

- i) Introduce policies to encourage and support mainstream ODeL provision.
- ii) Mainstream use of e-assessment as a formative and summative evaluation instrument across all degree and diploma courses within the University.
- iii) Review and update ODeL policy and guidelines to support mainstream use of ODeL.

8.2.4 Enforcement Guidelines

- a) Staff who breach the provisions of this policy shall be liable to sanctions in accordance with the MUST Human Resource Manual.
- b) The University Community shall not use the E-Learning Platform for personal reasons, otherwise this, shall be an offense liable to sanctions in accordance with other relevant MUST policies and Ugandan Laws.
- c) Transmitting, retrieving, downloading, or storing messages or images that are offensive, derogatory, sexual in content, or otherwise inappropriate in a business environment shall be an offense liable to sanctions in accordance with other relevant MUST policies and Ugandan Laws.
- d) Making threatening or harassing statements to another employee or to a student, or other outside party shall be an offense liable to sanctions in accordance with other relevant MUST policies and Ugandan Laws.
- e) Transmitting, retrieving, downloading, or storing of images relating to race, religion, color, sex, national origin, citizenship status, age, handicap, disability, sexual orientation, or any other status protected under the Uganda Government laws shall be an offense liable to sanctions in accordance with other relevant MUST policies and Ugandan Laws.
- f) Communicating confidential University information to individuals inside or outside the University or to other organizations, without specific authorization from relevant university authorities shall be an offense liable to sanctions in accordance with other relevant MUST policies Manual and Ugandan Laws.
- g) Sending or receiving confidential or copyrighted materials without prior authorization shall be an offense liable to sanctions in accordance with other relevant MUST relevant policies and Ugandan Laws.
- h) Soliciting personal business opportunities, or personal advertising Gambling, monitoring sports scores, or playing electronic games shall be an offense liable to sanctions in accordance with other relevant MUST policies and Ugandan Laws.

9.0 Monitoring and Evaluation

9.0.1 Role of the University Quality Assurance Committee

The University Quality Assurance (QA) Committee will:

- a) Develop guidelines for monitoring and evaluation of ODeL based programs.
- b) Evaluate implementation of ODeL in all academic programs yearly.
- c) Find out whether ODeL provisions meet the standards set by the University and other stakeholders.
- d) Carry out regular university wide ODeL self-assessments and provide reports to Senate every two years.

Below are some indicators that will be used by QA committee for monitoring and evaluating ODeL policy implementation;

- a) Number of courses created on university ODeL platforms
- b) Number of students enrolled on to courses offered through university ODeL platforms
- c) Number of ODeL programs accredited and implemented
- d) Number of students enrolled on to ODeL based programs
- e) Number of staff trained to teach using ODeL technologies and platforms
- f) Number of content types uploaded on to university ODeL platforms
- g) Number of lecturer-student interactions using university ODeL platforms
- h) Number of assessments done using university ODeL technologies and platforms
- i) Number of staff and students who use / log-in to university ODeL platforms

10.0 Communication of the policy

This policy shall be made known to the staff, students and other stakeholders by the office of DVC-AA assisted by AR and Computing Services Unit, by;

- a) Making it visible on and downloadable from the university's main website
- b) Sending soft-copies to the relevant stakeholders by e-mail
- c) Printing and circulating copies.
- d) Organizing workshops and seminars for staff and students.

11.0 Interpretation

The provisions of this Policy shall be interpreted in accordance with the laws governing the Government of Uganda including the 1995 Uganda Constitution, Employment Act, 2006, The Public Service Act and the Public Service Standing Orders, existing university policies inter alia.

12.0 Commencement and Amendment

This Policy shall come into force on the date of approval by the University Council. The policy can be amended by the University Council as and when deemed necessary.

13.0 Conclusion

This policy is just a guide on how e-learning should be streamlined across the entire University. Having stipulated out what should be done by MUST in order to effectively implement ODeL, it is apparent that resources have to be committed by all stakeholders. Establishing and staffing of an E-Learning Unit is essential for effective implementation and monitoring of the policy. Eventual establishment of the E-Learning Directorate at MUST shall streamline timely reporting to MUST management on the progress of the implementation of the ODeL based programs and the success of this policy.

13.0 Appendices

13.1 Budget

Budget for Infrastructural Enhancements for E-Learning				
Item	Qty	Unit Price	Amount	Remarks
Infrastructure				
Dell PowerEdge R840 Rack Server	2	45,000,000	90,000,000	Increased dynamic content and usage of the Learning Management System shall result into increased demand on the server resources of the system. This calls for a complete overhaul of the current server to improve on the Hard disk size, disk rpms, RAM upgrade, processor upgrade, software upgrade and as such a complete overhaul. 2 high performance servers are therefore recommended. The use of multiple mirrored servers of the same capacity and balance the load between them. Our load is not naturally balanced because we are running a system with all our audience in the same time zones so access is almost concurrent, this explains the need for 2 servers to be procured. Also to improve on data safety an external data storage system needs to be installed to handle the much volumes of data expected to build up from the many users.
IBM flashSystem 5000H Backup storage	2	27,000,000	54,000,000	
Windows Server 2019 Datacenter server License	10	3,800,000	38,000,000	
Cisco 2960 Switch	1	8,200,000	8,200,000	This network access infrastructure requires restructuring as it has previously been designed on the assumption that staff and students access these services will at the university (in offices, labs and through wireless). The new circumstances dictate that many shall be accessing services from outside the university's physical premises/network. It is important to improve the border access layer to ensure that increased access to the university network from the outside is suitably handled
Cisco ISR4451-X-AX/K9 Router	1	45,000,000	45,000,000	
Single mode Fibre patch codes	10	110,000	1,100,000	
Cisco FSP single mode fibre modules	10	1,200,000	12,000,000	
Air-conditioners	5	5,000,000	25,000,000	
Sub-Total			273,300,000	
Power Backup				

240 AH 12V AGM Deep cycle Battery	20	3,500,000	70,000,000	One of the greatest current challenges are the power outages. The servers need an uninterruptable power supply and a power backup is looked at to handle this challenge. A robust and reliable power backup solution is considered with emphasis on remote monitoring of the power solution, we have planned for a system that can remotely be troubleshot, the batteries will provide the much-needed power backup, the inverter will provide a faster change over switch when its much required.
Victron Cerbo GX	1	4,000,000	4,000,000	
Victron BMV 712 smart	1	3,000,000	3,000,000	
Victron Quattro 15000VA 48V Inverter/Charger	1	40,000,000	40,000,000	
Cabling and Installation	1	7,000,000	7,000,000	
Sub-Total			124,000,000	
<u>Licensing- Annual</u>				
Annual Zoom for Education License	2	6,840,000	13,680,000	
Annual Windows/Application Licenses for Staff and student labs	500	300,000	150,000,000	
Annual Antivirus Licenses	500	34,000	17,000,000	
Simulation and other Software	50	800,000	40,000,000	
Sub-Total			220,680,000	
<u>Audio/Video Recording Equipment- 1 Unit</u>				
24.2 MP Camera; 18-135mm+64GB SD Card	1	5,000,000	5,000,000	
DMK T690 Tripoda stand	1	600,000	600,000	
Tripod with 3-way HeadTripod	1	550,000	550,000	
Rode RodeLink FM Wireless Filmmaker system	1	3,500,000	3,500,000	
Rode VideoMic Studio Boom Kit with windmuff-VM, windmuff Boom Stand,	1	2,500,000	2,500,000	

Adapter, 25' cable			
Photo Backpack Digital DSLR Camera baf Mochila Fotografia	1	550,000	550,000
Vidpro LED-330X Variable-Color On- Camers LED Video Light Kit	2	780,000	1,560,000
Hosa YMM-261 3.5 mm TRS to Dual 3.5 mm Mic Spiltter	1	180,000	180,000
Mobile Workstation Laptop 1 TB HDD+ 256GB SSD- i7- 16GB RAM	1	12,500,000	12,500,000
USB-C Multiport Ada[ter for Laptops	1	650,000	650,000
Vello V-Rig 4.1" Triple Shoet	1	350,000	350,000
2 TB External Hard Drive	1	600,000	600,000
16GB Pen Drive	1	150,000	150,000
Polsen HPC-A30 Closed back camera monitor headphones	1	600,000	600,000
USB 3.0 CD/DVD RW External Drive	1	250,000	250,000
Room/Studio/accoustics preparation/design	1	20,000,000	20,000,000
Sub-Total			49,540,000
Bandwidth Enhancement- Annual- Have atleast 500 Mbps	12	95,000,000	1,140,000,000
Grand-Total			1,807,520,000