

## Status of Online Teaching and Learning at the Malawi University of Science and Technology

The Malawi University of Science and Technology has adopted online teaching and learning. Currently there are three groups of students that are being taught using online, which are the generic undergraduate students, postgraduate students and ODeL short course students under the USAID funded Strengthening Higher Education Access in Malawi Activity (SHEAMA) project.

Regarding the online undergraduate teaching and learning, MUST adopted emergency online teaching and learning for undergraduates during the mid 2020 due to the covid-19 pandemic. This is the second semester that this mode of learning is used and it has largely been successfully implemented. Moodle is used for the learning platform and the platform can be accessed anywhere by all students for free as data costs are reverse billed to the university. Students can access course material and complete assessments from home (across Malawi). Students on campus use blended learning (face to face learning hand in hand with online learning).

Major challenges on the student side include lack of gadgets by some students, limited digital skills to participate on online learning and mindset resistance to accept online learning. In addition to this, many students stay in rural areas where network signal is a problem and hence high bandwidth videos and video conferencing are not appropriate for content delivery. This reduces interactivity.

On the part of lecturers, challenges include lack of skills to effectively conduct online pedagogy as well as to do online assessments. Others also lack digital skills to create appropriate content e.g., low bandwidth video lectures. There is also need for mindset change among lecturers towards online teaching and learning.

The Covid\_19 pandemic also affected the academic calendar for Postgraduate students. Consequently for the 2020 (cohort 6) and 2021 (cohort 7) intakes, the students are being taught online, using a combination of Moodle and zoom classroom. Unlike the undergraduate students, the postgraduate students, most of whom are working, like the online teaching and learning, as opposed to the face on face, which is blocked for the whole week, meaning they have to be absent from work for the whole week. The online teaching and learning is enabling the PG students to attend their official work during the day and attend the online lessons in the evening.

MUST is among the public universities in Malawi that are implementing the SHEAMA project. Through this project, MUST is offering ODeL short courses. MUST was allocated two CDSS, Chankhanga in Kasungu and Nansomba in Mulanje for the SHEAMA project. These two centers including the MUST main campus at Ndata in Thyolo are used to enroll students that wish to be enrolled on the ODeL short courses. Potential students are also enrolled using any of the centers owned by sister public universities in the north, center and the southern region. A total number of 30 students have completed their studies through ODeL on Entrepreneurship and Business management, which was a 3 month short course (September to December, 2020). The students are waiting for their graduation. Currently, MUST is implementing a short course on GIS and Geo-spatial analysis, which has been funded by the Red Cross. The aim of the course is to train frontline staff in flood monitoring, mitigation and

disaster prevention readiness. For 2021, the following additional courses have been advertised for ODeL;

Pulmonary resuscitation; Data management and analysis using Stata and R; Laboratory Management; GIS and remote sensing and Disaster risk management.

The major constraints with the delivery of these ODeL courses are that most learners do not have enough money to pay the fees, hence mostly depending upon the good will of donors such as USAID and Red Cross. Most learners do not have the gadgets for ODeL learning and also lack basic knowledge to operate smart phones, laptops or ipads during e-learning. Limited internet coverage and the high cost of data bundles that are charged by the service providers is also one of the major challenges, especially to learners from the rural areas. In addition, MUST needs to acquire the requisite furniture and equipment for effective online teaching and learning in the ODeL centers.

MUST therefore welcomes Ruforum for any partnership on the online teaching and learning.