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Teaching and Learning **Project Plan** during the COVID-19-related restrictions

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1. Introduction

The outbreak of COVID-19 has led to the declaration of a national state of emergency and announcement of a lockdown with a huge impact on the academic project at the University. UKZN has embarked on alternative means of teaching involving mainly blended learning, with learning content made available to all students by online and offline means. Offline means include preloaded flash drives, laptops or paper-based interactive learning content.

Our duty and obligation is to provide full support to our students to continue to learn and complete the academic year, and to our staff to deliver a quality education to our students.

Consequently, we have moved the academic content of our courses onto virtual platforms so that the maximum benefit for students and staff is realised — staff can deliver their mandates while students can learn. This decision was not taken lightly and is not without complications but it is required to address the challenges posed by the pandemic and to drive us forward as an institution.

2. Principles underpinning the remote learning approach

- 2.1 Students are at the centre of all decisions taken and are consulted on whatever solution is proposed.
- 2.2 Equitable access for all students.
- 2.3 Any solution proposed should not be a one-size-fits-all approach.
- 2.4 Moodle is the official Learning Management Solution of UKZN and all content should be uploaded onto the platform.
- 2.5 Statutory body requirements for clinical teaching and similar professional teaching should be adhered to.
- 2.6 Students with disabilities to be managed in accordance with existing policies.
- 2.7 Staff and students should be encouraged to contribute and bring forward any ideas to enhance the solution.

3. Student Challenges

- 3.1 Students who are funded by NSFAS for the first time in 2020 but have not yet received their laptops.
- 3.2 Logistical challenges in getting laptops and digital/hardcopy materials to students who are distributed across the province and beyond.
- 3.3 Data costs of streaming/downloading content at home.
- 3.4 The lack of and quality of network coverage across the province and beyond.
- 3.5 Computer literacy issues, mainly amongst first-year students.
- 3.6 Student orientation on Moodle and other virtual platforms utilised.

4. Staff Challenges

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| 4.1 Capacity in terms of using ICT tools for curation of online materials. | 4.5 Modes of delivery in certain modules and programmes do not lend themselves easily to online delivery. |
| 4.2 Pedagogical approach to teaching and learning will need to be adapted for online teaching and learning. This includes the teaching and learning courses for staff. | 4.6 Practical teaching and learning needs face-to-face contact in laboratories. |
| 4.3 Data restrictions curtail the uploading of materials from home. | 4.7 Work experience and in-service training requirements. |
| 4.4 Support for curation, editing and uploading of videos is necessary. | |

5. Teaching and Learning Plan

5.1	Mode of Delivery	Flexible Blended Learning
5.2	Modes of Assessment	Flexible continuous assessment
5.3	Student engagement	Ongoing
5.4	Practical teaching and learning	Preliminary online, remainder on return, when environments are safe enough for students/staff
5.5	Work Integrated Learning	Preliminary online, remainder on return, when environments are safe enough for students/staff
5.6	Sessional Dates	Adapted as necessary
5.7	Academic Rules	Request Senate for temporary waiver or relaxation of rules where there is need to do so
5.8	Academic governance	DVC T&L, College Deans, Academic Leaders
5.9	Quality assurance	QPA to advise; normal practices adapted
5.10	Communities of practice	UTOP, College, Schools
5.11	Academic monitoring and support	Adapted to online/remote learning
5.12	Student support services	Adapted to online/remote learning, study,
5.13	Student Engagement	SRC President and SG are members of the task team

6. Implications

6.1	Information Technology	Enablers that have been identified for this plan include technology software licences, student and staff gadgets, zero-rated sites and low-cost data bundles. In addition, the central hardware has been upgraded to cater for the expected increase of online traffic and storage requirements. Further technology responses will be effected as M&E data is accumulated.
6.2	Training/Orientation	
6.2.1	Academic and professional staff	Ongoing, UTLO, ICS, vendors, champions,
6.3	Project Resources	UKZN, UCDP

7. Student Training Strategy

The principle of no student and no staff member left behind is vital in the plan; it implies training for staff, which is underway and is now meeting demand through the UTLO, ICS, School and Colleges. Student training, on the other hand, depends on laptop and data distribution. The curriculum for training of students in online learning consists of computer usage for online learning and self-directed learning skills modules, monitored and evaluated by a system consisting of academic-staff-administered student surveys. Students are taken through a flexible series of tutorials provided through online instruction manuals (figure 3).

8. Online Learning Strategy

Interactive technologies such as Zoom, Microsoft Teams and Skype enable students to take part in live classes, supplemented with live webinars and podcasts. Student-staff consultations may also take place via less data-intensive email, short message services, WhatsApp and social media. Simulated practical and work-integrated learning prepares students for the real experiences when environments are safe enough for staff and

students. Group work and collaboration among students provide peer learning experiences, assessed by means of group presentations and related tasks. Desktop studies are recommended for research projects. Continuous assessment plans listing the blending of the various formative assessment methods are audited and approved by schools and reported through the UTLC (figure 2).

9. Dry-run

In order to test the system, technology, and academic arrangements, as a risk management exercise we shall perform a dry run. The dry run will conduct tests on readiness information and communication, scheduling, availability, type and functionality of devices used by students and staff, adequacy of the data and connectivity and functionality of the continuous and other assessments. The dry run will also be used as a platform for surveying staff and students on a number of online learning-related issues, including the collection of monitoring and evaluation data. The dry run will involve all students in all modules. The plan is shown in table 3. The dry run is now set to run from the 18th of May 2020.

10. Our online learning pedagogy

A blended learning and flipped classroom pedagogy involving a methodology with multiple iterations of the basic cycle of student learning engagements. This will be done with learning resources as individuals or collaborative groups, and with flexible intervention by the teaching teams or consultation by students of the teaching teams. This is presented in a conceptual seven-point learning cycle underpinned by ten key online learning principles (figure 1). Once again, the principle of flexibility on how this actually pans out for the different subjects, specialisations and areas of expertise allows for much discretion at school level.

11. Monitoring and evaluation

Running a new mode of teaching and learning requires monitoring and evaluation as a way to effect continuous improvement and also to provide data for official reporting to structures. A 360-degree approach to monitoring and evaluation is recommended, including self-evaluation, student evaluation, peer evaluation and overall evaluation by relevant academic line managers, as shown in table 3.

12. How we shall approach assessments in this plan

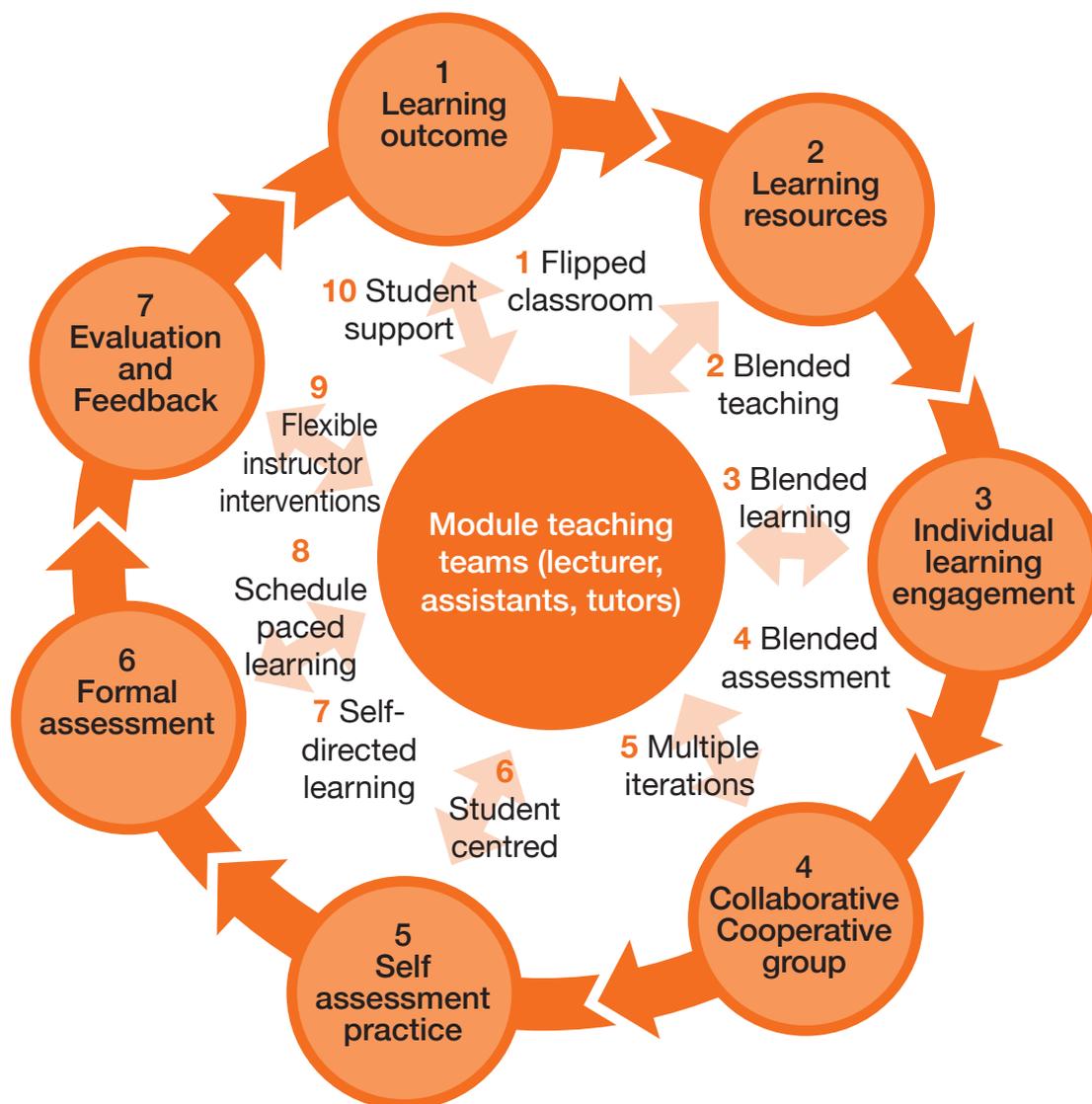
The plan provides for continuous assessment. The traditional sit-down forms of assessment is not used. The plan also provides for catch-up assessments in the continuous assessment mode. The catch-up assessment serves the same purpose as the traditional UKZN supplementary examinations and special examinations. All assessments are quality assured using the approved policies and procedures. Some general assessment principles and some of the important online assessments principles for this plan are shown in figure 2.

13. How we shall assist International students

International students are a significant cohort, especially in postgraduate studies. In order to serve these students with this emergency remote teaching and learning plan, the important considerations include the current physical address and location of these students, access to digital signal and devices, and the plan for their academic activities, including the teaching and learning as well as the online supervision agenda for each. Therefore, while the supervisors of postgraduate students will attend to the latter category, the former category is provided for in terms of the emergency remote teaching and learning plan and are all included in the phases 1-8 shown in figure 1 of the plan. These students are also included in the device, data roll-out project and the plan for return of students to campus. Table 1 shows a Summary by College/School/UGPG of UKZN international students enrolled in 2020.

14. How we shall assist students with disabilities

The requirements for students with disabilities are more detailed and focused on the nature of the disability. The needs of these students are dealt with by the student disability unit which ensures that in addition to the emergency remote learning needs, their specific needs in response to their individual disability are catered for. Typically, blind students require brail, deaf students require sign language interpretation and students with physical challenges require locomotive and related assistance devices. UKZN prides itself on providing for each student.



1. A blended learning and flipped classroom pedagogy
2. Multiple iterations of the basic cycle of learning engagement
3. With flexible intervention by, or consultation of the teaching team
4. A seven-point learning cycle
5. Underpinned by ten key principles

Figure 1: Conceptual presentation of the proposed online learning pedagogy



Legend: ■ = general ■ = online

Figure 2: Principles of continuous assessment

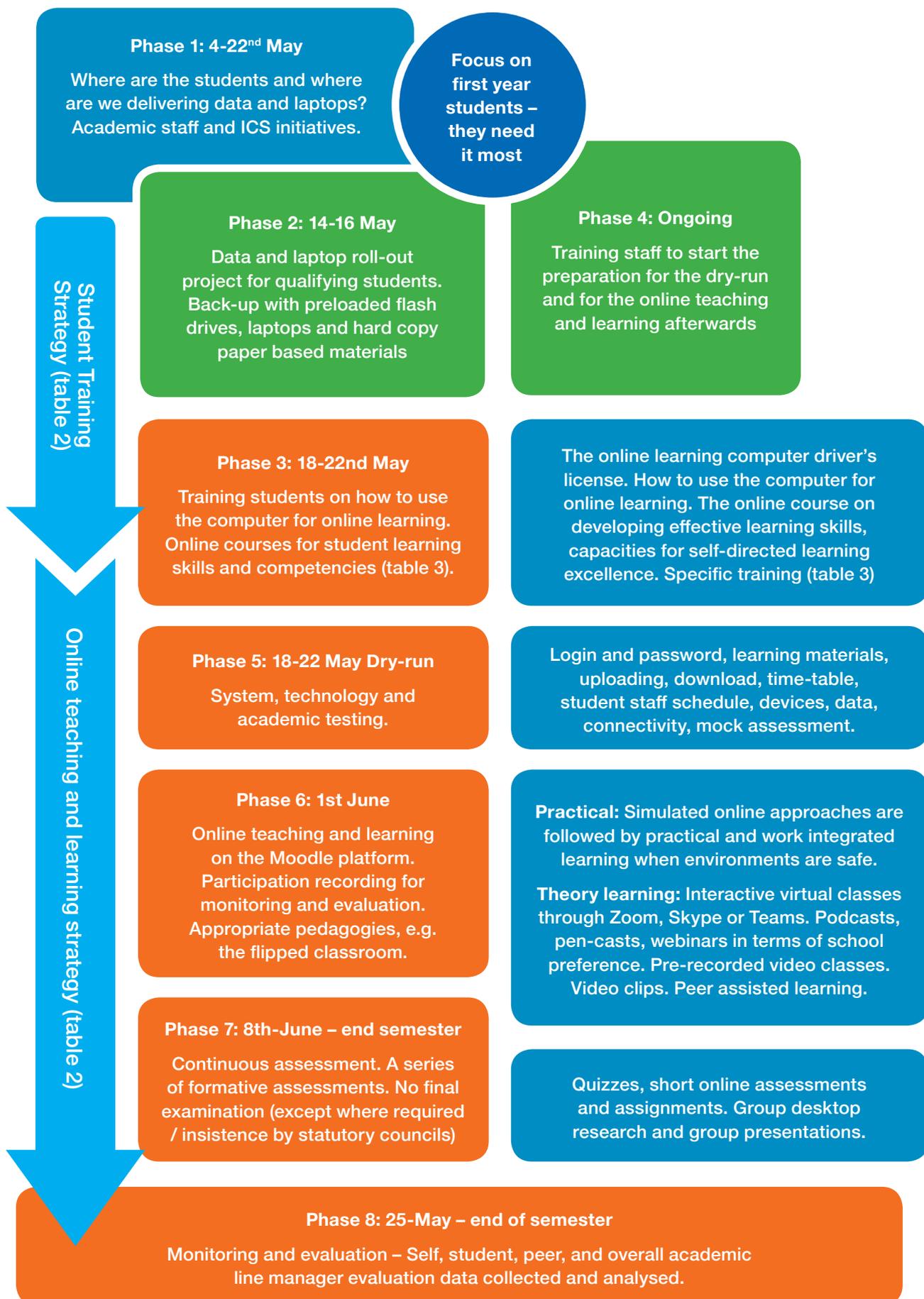


Figure 3: Student training and emergency remote learning plan of action

TEACHING AND LEARNING PROJECT PLAN DURING THE COVID-19-RELATED RESTRICTIONS

Excluding Permanent Residents – Data as at 2020-05-21

COLLEGE NAME	SCHOOL NAME	PG	UG	Grand Total
COLLEGE OF AGR, ENG & SCIENCE	SCHOOL OF AGRI, EARTH & ENV SC	90	9	99
	SCHOOL OF CHEMISTRY & PHYSICS	69	3	72
	SCHOOL OF ENGINEERING	82	30	112
	SCHOOL OF LIFE SCIENCES	58	4	62
	SCHOOL OF MATHS, STATS & COMP SC	74	4	78
		373	50	423
COLLEGE OF HEALTH SCIENCES	SCHOOL OF CLINICAL MEDICINE	103	12	115
	SCHOOL OF HEALTH SCIENCES	121	7	128
	SCHOOL OF LAB MED & MEDICAL SC	52		52
	SCHOOL OF NURS & PUBLIC HEALTH	164	1	165
		440	20	460
COLLEGE OF HUMANITIES	COLLEGE ADMIN OFFICE: HUM		2	2
	SCHOOL OF APPLIED HUMAN SC	54	11	65
	SCHOOL OF ARTS	32	5	37
	SCHOOL OF BUILT ENV & DEV STUD	38	5	43
	SCHOOL OF EDUCATION	138	2	140
	SCHOOL OF REL, PHIL & CLASSICS	53	2	55
	SCHOOL OF SOCIAL SCIENCES	84	17	101
		399	44	443
COLLEGE OF LAW & MAN STUDIES	GRAD SCHOOL OF BUS & LEADERSHIP	32		32
	SCHOOL OF ACC, ECONOMICS & FIN	49	5	54
	SCHOOL OF LAW	19	26	45
	SCHOOL OF MAN, INFO TECH & GOV	91	10	101
		191	41	232
Grand Total		1403	155	1558

Table 1: UKZN International Students 2020 – Summary by College / School / UGPG

KPA	Action	Responsibility	Target Date	% Complete	Comment	
1	Teaching	Content uploaded on Moodle	Academic staff / D / HoS, monitoring by CDTL	At least 2 weeks content uploaded by 4 May	90% also waiting for the audit	The work of academic staff in the colleges/schools is commended. Digital/coursework materials ready
		Train teachers	UTLO/ ICS	Started and Ongoing	80% also waiting for the audit	Large proportion that don't require basic training.
		Engagement	Lecturers	Ongoing	Ongoing	Student feedback
2	Assessment	Blended/ Continuous	Academic staff	30 May, but we must know how each module will be assessed by the 4th of May.	100% final changes after dry-run	Planning phase-basic structure (formative and summative including weightings) Multiple forms Engage Moderators/ Examiners Evaluating Pass/Fail option
3	Academic year 2020	Academic programme	Registrar	Integrity	0%	Awaiting information- re-assess mid-May: Target to end semester 1 at the end of July
4	Technology	Technology Implementation	ICS	Complete	100%	The work of ICS is commended/appreciated
		Staff Data Package Deal	ICS	16 March-6 April	100%	Multiple deals negotiated- 2300 staff taken up deal
		Student Data Package Deal	ICS	16 March-24 April	100%	Multiple deals negotiated with all 4 service providers
		Zero Rated Deals	ICS	16 March-27 April	100%	11 URLs zero rated with all 4 service providers
		Student Geo-Mapping Portal	ICS	20 April-30 April	100%	Portal to 'Go-Live' on the 2 April
		Laptop roll-out plan	ICS	27 April-28 May	40%	Logistical contingencies being finalised. EMC to approve financial implications for distribution.
		Digital and hard copy materials	ICS/Colleges	27 April-28 May	0%	Piggy back on other distribution plans for laptops
5	Student Engagement	Consult SRC on approach to emergency remote learning	DVC T&L	21 April	On track and ongoing	DVC TL and Prof. Mkhize in consultation with the VC will first engage the President and the Secretary General
		Train students	UTLO/ ICS/ Colleges	4-8 May	25%	Planning phase-dependency on data and laptop rollout
6	Return to campus	Safety measures	All departments	Phased	25%, 100% for MBChB final	Currently under planning by other task team.

Table 2: Emergency Remote Learning: Implementation Plan

Required technical support for remote teaching/learning	Student levels	Target achievable measures	Achievable operations (Lecturer role requisite throughout)	Considerations (Lecturer role requisite throughout)
Moodle and ICS prescription of low- cost tools	All levels	Accessing Moodle; Uploading assignments; attempting tests and other emergency remote assessments; Moodle forum discussions, etc	Should be run through ICS central as they have expertise to train Training videos and resources to be uploaded to UTOP website College training to curate any school specific content on training	ICS will work with Colleges to access existing Moodle data and match with Corporate Relations survey data for improvement: 27 Apr – 01 May ICS will expand more into Colleges with active involvement of leadership and staff: 03 -08 May Readiness will be confirmed between 08 and 10 May . Announcement of emergency remote teaching launch dates in the week 4 - 8 May 2020 Students will need to be classified into three (3) broad categories of capability-risk nexus: High, Medium and Low. High level-low risk: students are ready: no assistance needed to go emergency remote; have devices and data provision by ICS may be the only need: waiting for lecturer guidance. Medium level-significant risk: student devices have limitations that may require more ICS and “other” technical support before reaching the “high” status. Low level – high risk: students do not have access to devices and data; need extensive ICS support with tools and data; or tools, data and delivery services (power connection limitations). Collaboration with local government and other (buildings; trading stations/stores) may be required.
Basic training on Microsoft office applications	Level 1	Word, Excel, PowerPoint, Outlook	Central ICS Training videos and resources to be uploaded to UTOP College training to curate any school specific content on training	ICS will produce a plan and schedule for immediate action by College task team representatives and staff. This will be scheduled with due consideration of student positions.
VPN access	All levels	Downloading VPN and accessing zero-rated webpages	Central ICS	Preliminary results on tuition dry run will be available and assist early decisions of full implementation of emergency remote tuition by Colleges, with significant control at School level to manage risk.

Table 3: Training Plan for Students for Emergency Remote Learning

Required technical support for remote teaching/learning	Student levels	Target achievable measures	Achievable operations (Lecturer role requisite throughout)	Considerations (Lecturer role requisite throughout)
Zoom	Level 3 and Honours	How to join and attend zoom webinars with all the features such as chat, Q&A	Central UTLO Training videos and resources to be uploaded to UTOP website College training to curate any school-specific content on training	This will somewhat overlap with VPN access and is expected to occur where necessity is motivated and confirmed by lecturers and academic leaders, respectively.
PowerPoint with narration	Level 3 and Honours	How to use it for presentations or seminars and uploading it to Moodle	Central UTLO Training videos and resources to be uploaded to UTOP website College training to curate any school-specific content on training	This will somewhat overlap with VPN access and Zoom. It is expected to take place smoothly because of the level of student experience from first and second years of study.
HandBrake and VLC	Level 3 and Honours	Use of HandBrake and VLC to compress files for students to compress and upload seminar presentations	Central UTLO Training videos and resources to be uploaded to UTOP website College training to curate any school specific content on training	This will somewhat overlap with VPN access and Zoom. It is expected to take place smoothly because of the level of student experience from first and second years of study.
Google classroom	All levels	Lecturers have become more independent in skills – normal ICS support is available	Central UTLO Training videos and resources to be uploaded to UTOP website College training to curate any school specific content on training	At this stage, emergency remote tuition is a known new experience and there are manageable challenges for students and lecturers. Student lecturer evaluation is optional.

Table 3: Training Plan for Students for Emergency Remote Learning (continued)

Required technical support for remote teaching/learning	Student levels	Target achievable measures	Achievable operations (Lecturer role requisite throughout)	Considerations (Lecturer role requisite throughout)
Microsoft Teams	All levels	Lecturers have become more independent in skills – normal ICS support is available	Central UTLO Training videos and resources to be uploaded to UTOP website College training to curate any school-specific content on training	At this stage, emergency remote tuition is becoming commonplace experience and there are manageable challenges for students and lecturers. Student lecturer evaluation is encouraged – MANCO decision.
Big Blue Button	All levels	Lecturers have become more independent in skills – normal ICS support is available	Central UTLO Training videos and resources to be uploaded to UTOP website College training to curate any school-specific content on training	At this stage, emergency remote tuition is commonplace and there are manageable challenges for students and lecturers. Student lecturer evaluation is necessary for initial QPA analysis of emergency remote tuition strategy of UKZN.

Table 3: Training Plan for Students for Emergency Remote Learning (continued)