

## **Preventative and preparative measures for electronic examinations in CUAs** **[Version January 2018]**

*These procedures cover the preventative and preparative measures that should be implemented by lecturers, exam invigilators, CUA managers and technical personnel (including Information Technology and SOL/SUNLearn) to prevent irregularities during electronic exams in CUAs (computer user areas). A related document on tests and exams on the personnel portal is available at <http://my.sun.ac.za> under "Policies, Procedures & Forms".*

### **1. Responsibilities prior to the exam**

- a) Dates for electronic exams should be booked at least 15 working days in advance with the CUA managers or their appointed deputies as well as the SUNLearn administrators. These bookings are available for public viewing in an Exchange shared resource calendar as well as SUNLearn's own calendar function.
- b) Any specialised software or setup required for the exam must be provided to the CUA managers at least 15 working days prior to the exam. Examiners must store materials required for the exam (*like spreadsheets and statistical data*) in a secure, password-protected environment like SUNLearn.
- c) Examiners should communicate the guidelines and protocols listed below (Sections 2 and 5) as well as any special conditions to the exam candidates and invigilators before the commencement of the exam. (*For example: negative marking, attempt numbers*)
- d) Special material required for the exam, like sets of slides, statistical data, working documents, etc., should be provided to the CUA personnel at least two working days prior to the examination, together with clear instructions on where the data should be stored and made available to the students (*network drive, secure webserver, etc.*). It is the CUA personnel's responsibility (*once they have received the data*) to ensure that the data is not accessible or visible to any exam candidate prior to the examination already. The data should be immediately removed from the network once the exam is concluded.

### **2. Responsibilities applicable to exam candidates**

- a) Exam candidates must ensure that they know which group they have been allocated to – in the case of exams that have multiple sessions – as well as where they must report to and at what time. Group allocations, reporting times and reporting locations will be displayed on SUNLearn at least 24 hours before the commencement of the exam.
- b) Access to the exam and the exam room is granted to exam candidates only. Candidates shall gain access to the exam room only by swiping their student cards through the CUA's magnetic card readers. Exam candidates are required to display their student cards at all times during the exam. At the cessation of the examination, candidates must again use their student cards to exit the exam room.
- c) No exam candidate may use or attempt to use any form of electronic means to communicate with any of the other exam candidates in the examination room, or third parties or devices outside the examination room. This includes cell phone messaging services, such as SMS and MMS, as well as any form of wireless communication (*including Bluetooth and Wi-Fi*).
- d) Only programs and browser windows applicable to, and required by the exam are permitted to be run or opened on the computers in the examination room during the exam.
- e) No notes, written, printed or electronic, or any type of electronic apparatus, wearable technology or medium may be brought into the examination room [*including cell phones, MP3 players, flashdisks, SD (Secure Digital) cards, PDAs (personal digital assistants), smartwatches, smartphones and any other device capable of cell phone, wireless or Bluetooth wireless communication*]. All cell phones and electronic

apparatuses must be switched off and stored in a designated safe place within the examination area under the supervision of the invigilators, and may not be kept on candidates' person or at their designated workstation.

- f) No exam candidate may access the exam from any area or any computer outside the designated exam room. This includes home PCs, hostel-connected computers or Internet café computers. *(The only exception to this rule is if the examiners specify the exam or assessment as open to the general public domain, such as distance-education students.)*
- g) All exam candidates should be given adequate opportunity to go to the toilet before the start of the exam. In the case of emergencies, exam candidates leaving the exam room must be accompanied by a designated exam invigilator, and those exam candidates details and time of vacating the exam room recorded.
- h) The use of screen- capturing/recording software/hardware/function of any sort is not permitted to record or capture any part of the electronic exam, for later personal review or for distribution to other students.
- i) Exam candidates will be required to electronically sign *(by means of a checkbox at the beginning of the exam window)* that they accept the conditions and restrictions of the exam. These conditions should be verbally communicated and listed at the start of the electronic exam in SUNLearn. Students who do not accept the conditions and restrictions of the electronic exam should not be permitted to write the exam.

### **3. Responsibilities applicable to CUA managers and their appointed deputies**

- a) Times of examinations as well as requirements of technical support required must be logged with a. Information Technology HelpDesk and b. SUNLearn Support at least 10 working days prior to the commencement of the examination.
- b) If practically possible, all computers should be re-imaged with the latest stable and secured software and operating system prior to the start of the exam. The removal of spyware, illegal software installations, keyloggers, screen capturing software and any software that might compromise the security of the computer and its user in any way is imperative before the examination starts. (DeepFreeze, Norton GoBack, etc. are solutions.)
- c) All computers must be set up and configured identically to allow exam candidates an equal chance at completing the examination. This includes the installation of any specialised software required for the exam. If desktop virtualisation is utilised for electronic exams, only a standard "Exam Desktop" should be made available for students to utilise. *(See Sections 1b and 1d with regard to the examiners' responsibilities in this regard.)*
- d) Individual usernames and/or passwords for one-time access (if required) are to be provided before the commencement of each exam, and should be done in a random manner as the candidates enter the room.
- e) Wastepaper and any printed material in the CUA printers' output trays must be removed or shredded prior to the exam.
- f) Scrap paper for scribbling notes during the exam may be provided at the examiners' discretion. This should be listed on the SUNLearn exam conditions *(See Section 1c)* In such case, only date-stamped paper provided by the Exam Office should be permitted but not the candidate's own notepaper.
- g) The entire area must be checked and cleaned of waste paper, and any other items (such as flashdisks, stationery) removed after the end of each exam, and the all computers checked and re-imaged. Computers not available for examination purposes, due to technical faults should be either removed from the examination room, or clearly identifiable as not available.
- h) Printers/printer queues within the CUA used for electronic exams must be disabled or shut down for the duration of the exam to prevent students from printing exam

questionnaires and distributing them among other students. Printer queues on the network must be flushed before reopening the area/s for normal computer use. In the case of virtual desktops, or special operating systems for examinations, no printer queues or drivers should be installed or allowed.

- i) Because of the inherent security risks of the position of the CUA managers and their appointed deputies, the management of access to the exam modules, the rights assigned to students, and the viewing/maintenance of marks/passwords within SUNLearn is not be the responsibility of the CUA managers and CUA assistants. Management of exam access/passwords and marking are the responsibilities of the examining department and supervising lecturer/convening examiner.
- j) In the case of a failure of the network or the SUNLearn system, the possibility of converting an online assessment into a traditional written test (on printed exam papers) must be communicated to the exam conveners. Should the conveners elect to run a written exam, a hard copy of the paper must be provided to each student to complete (*see Section 5e*).

#### **4. Responsibilities of Information Technology/SUNLearn**

- a) Technical support must be provided during examinations, and this support must be at least contactable telephonically, or via e-mail with a maximum response time of five minutes from initial detection of a technical issue. (*See Section 3a*)
- b) Logs must be kept of network activities and incidents to allow a possible audit in the event of suspicious activities, technical and network failures.

#### **5. Responsibilities of examiners (or department admin tasked with exam setup)**

- a) Examiners should ensure that, should exams require a unique password, these passwords are set ahead of time and kept secure until the day of the exam.
- b) Passwords must be set to expire (to a maximum of 30 minutes) after the commencement of the exam, to prevent further access after the exam has closed.
- c) Where exam have multiple sessions groups, each group must have its own, unique password.
- d) The examiners must inform students via SUNLearn Announcements/News Forums at least 24 hours ahead of time in which group they will be examined. Last-minute changes by students (*swapping groups or times*) should not be allowed. *Check the "Tests & Examinations" policy document on the personnel portal for the responsibilities of students and examiners in this regard.*
- e) A hard copy or an electronic version of the exam paper (*the latter in the form of a Word or PDF document stored on a clean/formatted USB flashdisk*) must be available in the exam room for each test, for emergencies (*see Section 3j*).
- f) Restricting exam candidates from accessing the exam from any area other than the designated exam room (*See Section 2e*) by using [Require network address] (*Found in the Extra restrictions on attempts section of Quiz settings on SUNLearn.*) The permitted range of network addresses for GERGA are **146.232.120.0/23** and **10.30.0.0/23** and **10.30.8.0/22** for wireless-connected devices. (*specify a comma-separated list of these IP addresses.*)

#### **6. Responsibilities of exam invigilators**

- a) Invigilators must be able to distinguish between the allowable activities and program/browser windows of the exam, and illegal programs/browser windows and/or applications. Illegal activities include screen capturing and recording software, non-SUNLearn browser windows, e-mail (Outlook Web Access), IM (instant messaging), IRC (internet relay chat), chat rooms, ping, etc.

- b) During exams, there should never be more than one Internet browser windows open on the desktop (or virtual desktop) of the computer (SUNLearn' main window and the exam/assessment tab).
- c) Invigilators should not be permitted to use cellphones, PDAs or any electronic communication devices within the examination room, unless a fixed-line telephone is not available. Bleepers or paging devices are however permitted.
- d) Invigilators are required to do a roll call of all exam candidates. Each candidate is required to sign on a class list to prove that he/she was present at the exam, and the invigilator should be able to verify that the person signing is in fact the person authorised to write the exam. This is done by means of the candidate's student card on display (*Section 2a*).
- e) Invigilators must ensure that all exam candidates submit their exams on SUNLearn before permitting them to exit the exam room.