



## **National Computing Education Accreditation Council (NCEAC) Policy Guidelines for Online Teaching-Learning and Assessment (TLA) during COVID-19 Pandemic**

### **1. Introduction**

Higher Education Commission has allowed Higher Education Institutes (HEIs) to run online classes during the COVID-19 Pandemic. Many institutes has started their online classes during the Spring 2020 session. This policy guidelines will facilitate NCEAC accredited institutes online and blended education mode during outbreak of COVID-19 pandemic. This policy guideline treated as interim guideline which will be exercised during the current situation of the country.

### **2. General Guidelines**

Accreditation of computing programs is used to assure quality in computing degree programs in educational institutions. It would require an educational institution or program to meet certain defined standards or criteria. The accreditation will be for specific for degree programs. During current situation after outbreak of COVID-19 pandemic institutes are shifted on blended/online mode of education. NCEAC must not compromise on the standards of Teaching, Learning and Assessment (TLA) during the online/blended mode of education.

**Every university must have a written and approved SOP (Standard Operating Procedure) document from their respective board of studies (department or preferably university).** The SOP should encompass the following suggestions to qualify the accreditation standards of NCEAC.

- i. **Attainment of Course Learning Outcomes:** All HEIs must ensure that each course has a set of learning outcomes. These course learning outcomes must be attained during the online/blended educational mode. All TLA mechanism must be designed in such a way that all the course learning outcomes must be addressed. Conceptual based quizzes, assignments and open book exams through specially designed questionnaire designed by specialized faculty could be used as an alternative. All the process of TLA must be designed in such a way to achieve learning outcomes.
- ii. **Lab Work:** Though in computing most of the labs are done on computers and does hardly require additional lab equipment. In case a lab requires some additional hardware (logic design, physics, embedded systems etc.) then concept learning via e-labs or simulated labs can be arranged. But institutes need to arrange the courses in a way that heavily lab based courses (if there are any in a computing program) may not be offered and instead the courses without labs and with labs that can be exclusively performed on computers may only be offered during this scenario. Courses requiring additional equipment may be offered when the normalized educational sessions restores.
- iii. **Students' Assessments:** As we all know that students' assessments are core to learning. All HEIs are advised to design/planned courses in such a manner to replace face-to-face TLAs. Assessments should be regularly given during the course of studies

- in a semester, insuring minimum chances of cheating, they should be checked and managed preferably in a learning management system (LMS) for online evaluation. System controlled MCQs, open book exams, final term projects, quizzes and computer programming based labs should be assigned for assessing students' attainment of learning outcomes during COVID-19 pandemic. A program must substantiate that students are aptly assessed in the semester.
- iv. **Students' Engagement:** A program must ensure to reach its all students and maintain the quality of education. Institute must deploy synchronous/asynchronous system to deliver online education. The program must demonstrate that all students attended all lectures and those who could not access the lecture online or CDs were sent to their home addresses. No student should be left out for any reasons for access to the online lecture.

HEIs who opt online education mode during this situation must ensure ready and tested online TLA system. HEIs who started this mode should provide evidences to NCEAC about their online TLA system approved from statutory bodies. Affiliated institutes follow the instructions of their affiliating institute.

### 3. Essential Requirements

In addition to above mentioned general guidelines institutes should follow the following if opt for online TLA system during this outbreak of COVID-19 pandemic.

- i. **IT infrastructure:** The HEIs must have basic secured LMS, Bandwidth and IT Support to enable satisfactory and sustained delivery of online classes while maintain QA processes including time-tables, class held status, students' participation, availability of course material in real time as well as in recorded fashion (synchronous/ asynchronous mode).
- ii. **Class size:** Online class size should be equal to original class size and not be greater than 50. This flexibility is extended in order to accommodate appropriate number of students/sections in parallel sessions which will require sufficient bandwidth.
- iii. **Content Delivery:** Faculty must be trained and assessed by a senior committee formed within the HEI to deliver courses online properly including handling of basic IT principles, for example, audio, video and sharing of screens and materials.
- iv. **Contact Hours:** Contact hours during online TLA may be considered less. It was suggested that institutes may upload video lectures (1.5 Credit Hours) on LMS before time and then discuss the same (1.5 Credit Hours) during online session. So it will count as 3 Credit Hours. Or other institutions may offer live lecturing while students are attending online and engaged in discussions and question answers. The recorded lectures shall also be uploaded on internet for later review and compliance.
- v. **Attendance:** HEIs are responsible to introduce suitable monitoring & feedback evaluation mechanism to record/ log students' participation and time spent on course

platforms. This may include off-line listening to recorded lectures and timely addressing assignments etc.

- vi. **Assessments and Quizzes:** Assessments, number of quizzes and type of assignments must be innovative enough to cover Learning Outcomes of the courses appropriately. They should be assessed on time and the assessments must be shared with students online. The results and evidence must be maintained by the HEIs for record.
- vii. **Final Year Project (FYP):** For NCEAC accredited programs, FYP projects can be conducted/considered utilizing appropriate modern tool usage and technologies.
- viii. **Grading:** In order to cater for the circumstances that the partial assessments through assignments, quizzes, exams are conducted in virtual environment, it is therefore, proposed that relative grading system within class may be adopted to avoid any discrepancy for those students who are not well versed with this new paradigm of implementing TLA for the time being.
- ix. **Quality Assurance:** HEIs will be responsible to record all evidence of class delivery, assignments and quizzes of all online courses. All approvals of the conduct of online classes will be subjected to a confirmation of the HEI Online Coordination/Quality Committee responsible for training and assessment of the course instructor. Evidence to this effect will also be made available to NCEAC as and when required. The entire QMS/LMS be shared with NCEAC as advised in General Guideline above after internal review mechanism by the Online Coordination/Quality Committee.
- x. **Practical Labs:** Lab-intensive courses, where labs are to be conducted on specialized HW, can be replaced later when the situation permits/normalizes to demonstrate. Universities may defer practical component of such labs courses in-line with general guidelines.
- xi. **Acceptability and Accessibility:** Feedback of students for a guided response to motivate them for online TLA be exercised to a reasonable sample of enrolled students in a program. Students are more conscious about well-preparedness/ delivery mechanism to be ensured from the internal QMS/LMS system and capacity building of concerned faculty to respond students' questions and interactive engagement.

Those students who cannot attend due to unavailability of internet in their homes, the institute shall device mechanism of sending these students all recorded lectures and reference materials on CDs/ USBs at some periodic intervals in time.

In order to ensure student accessibility, all lectures and course material must be available online in recorded format as well to the students (synchronous/ asynchronous mode). Still, if a student wants to withdraw based on inaccessibility or any other inability, he/she may be allowed to do so, without having any adverse impact on the promotion of the student, provided a minimum of 2.0/4.0 CGPA is maintained. In such a case, the course(s) will be treated as "frozen" and

no fee shall be charged by the HEI for re-enrolment at a later stage for the students who are interrupted in an ongoing semester.

**4. Accreditation:** Documents submitted by HEIs will be evaluated in two phases for the purpose of granting provisional accreditation followed by a normal accreditation mode reference to the following two conditions elaborated as under:

i. If an institute is already accredited and apply for reaccreditation and its final year batch is yet not accredited then NCEAC will conduct accreditation visit online.

ii. If an institute is not already accredited but applied for accreditation then NCEAC will not conduct accreditation visit online and wait for the situation to be normalized.

**Phase-I:** Provisional grant of accreditation for graduating batch only through preliminary desk review by Accreditation Standard Committee (ASC) based on its previous accreditation history and general compliance level of the program provided no deficiency is reported.

**Phase-II (Physical visit):** Execution of normal accreditation in physical mode after normalization of the lockdown situation.

**OR**

**Phase-II (online):** NCEAC to assign an accreditation team to perform online accreditation by assessing attainment on all the criteria online. The institute opting for virtual accreditation must have the following:

- a. An approved SOP for online teaching aligned with the guidelines provided by HEC and NCEAC.
- b. Adoption of an LMS and access to LMS to evaluators for reviewing course folders, quizzes, exams, projects, online lectures.
- c. Online interviews with the students, faculty members, administration, alumina and employers.
- d. Online access to all the information that is required for accreditation of computing programs.

## **5. Validity**

The above General Guidelines and Essential Requirements are the guiding principles to be applicable to all NCEAC accredited programs with effect from the stipulated date/schedule for an HEI opting paradigm of online TLA system in intimation to NCEAC/HEC until the COVID-19 pandemic is under adequate control by the respective Provincial and Federal Government of Pakistan.