



NUTECH QUALITY ASSURANCE POLICY FOR ONLINE MODE OF EDUCATION

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Introduction

1. Coronavirus Disease (COVID) has changed the style of living, working and studying. Recent wave of COVID-19 has forced educational institutes across the world to switch over to off the campus mode of education, either complete online or a mix of both online and offline. Although, off the campus mode of learning has been there since long but current scenario is entirely different. Pandemic containment policies of the Government, followed by lockdown presents a variety of challenges for all segments of society and educational institutes are no exception.

2. National University of Technology (NUTECH), a university for industry, has proactively mobilized all stakeholders of the university to formulate comprehensive policies to ensure quality education in these testing times. **NUTECH Quality Assurance Policy for online mode of education** provides detailed guidelines to ensure quality of teaching and learning during all facets of off campus academic activities. Few terminologies associated with online education have explained in the ensuing paragraphs.

Asynchronous mode of Learning

3. Asynchronous Learning is a form of education that do not occur in the same place or at the same time. Online learning resources that can be used to support asynchronous learning include email, electronic mailing lists, threaded conferencing systems, online discussion boards, and blogs [1].

Synchronous mode of Learning

4. Synchronous learning is a form of education that occurs concurrently, where students are engaged in learning at the same time. An example of a synchronous learning mode of learning would involve students watching a live web stream of a class, while simultaneously taking part in the discussion. Synchronous learning can be facilitated by having students and instructors participate in a class via a web conferencing tool [1].

Hybrid Mode of Learning

5. Hybrid mode of learning is a form of education where mix of both Asynchronous and Synchronous learning tools are used. In this mode, own time self-study (off line) is supplemented with synchronous components e.g. text and voice chat, telephone conversations, videoconferencing, and even meetings in virtual spaces [1].

Higher Education Commission and Pakistan Engineering Council Guidelines

6. Policy guidelines have been issued by HEC and PEC to address COVID-19 related challenges. These guidelines provide comprehensive details for Higher Education Institutes (HEIs) to manage / execute academic activities in current scenario. Concept of '**Online Readiness**' has been used by HEC to assess quality of online programs [2].

7. **Quality Levels.** In order to distinguish between level of preparedness for good quality online instruction, following three different levels have been explained in HEC Policy Guidelines [2]:-

- **Basic Level:** HEIs not having proper connectivity with the students and faculty with Learning Management System (LMS), either unavailable or dysfunctional, are placed at the Basic Level. Moreover, inadequate facilities for recording of lectures, non-accessible library resources, non-existent quality assessment mechanism etc are main indicators for the Basic level.
- **Effective Level:** HEIs having required technological facilities and tools along with the good supporting systems are placed at Effective Level. Good connectivity and interaction, optimized performance, acceptance of diversity and feedback are the main indicators for this level.
- **Exemplary Level:** HEIs having addressed all requirements associated with online mode of education in true letter and spirit are placed at Exemplary level. Use of technological tools is well practiced, completely synchronized and supporting systems have achieved good level of maturity.

8. All HEIs have been directed to achieve Effective level prior to start of online mode of learning. Journey from Basic to Effective level requires engagement of all stakeholders to focus upon fundamental attributes / standards, identified by HEC for ensuring quality online education. These standards cover eight major areas, namely University, Course, Faculty, Library, Technology, Examination, Laboratory, and Students [2].

9. NUTEC Quality Assurance Program for online education has been formulated in conformance with HEC and PEC guidelines. Necessary details are given in the following paragraphs.

NUTECH Quality Assurance System

10. Based on students' feedback on internet access and availability of required devices, **Hybrid mode of Teaching, Learning and Assessment (TLA) has been adopted by NUTECH** [3]. Quality Assurance aspects for all facets of hybrid mode TLA at NUTECH has been addressed in a professional and methodical manner.

11. Quality Assurance task has been assigned to two entities, as described below:-.

- (a) Department Level Quality Assurance has been assigned to Dean of University (DoU) Office
- (b) University Level Quality Assurance has been assigned to NUTECH Quality Assurance Department (NUQAD)

Quality Assurance at Department Level

12. A three-member Departmental Evaluation Team (DET), comprising HoD, Departmental Quality Manager (DQM) and a faculty member has been formulated by all departments to ensure contents quality. Course folders, having course plan, recorded lectures, assignments, pdf version of lectures slides, in soft form are thoroughly checked by DET for contents quality and completeness.

13. Departmental Quality Manager is responsible for the following [3]:-

- (a) Respond to complaints of students and faculty about the online classes on a daily basis, and maintain a detailed record for audit and accreditation purposes.
- (b) Resolve any issues related to conduct and quality in collaboration with respective teacher, HoD, ICT Office or any other stakeholder.
- (c) Collect, evaluate and maintain all kind of data related to online classes, and make recommendations to LQEC and university' authorities.
- (d) Share the data required by HEC with LQEC.

Quality Assurance at University Level

14. Quality Assurance of all university processes, associated directly or indirectly with the hybrid mode of TLA, has been assigned to NUTECH Quality Assurance Department (NUQAD). Online Readiness Committee (ORC), a university level entity, has been constituted to undertake independent quality assessment of all processes.

15. Composition of ORC is given below:-

- (a) **Chair.** Director NUTECH Quality Assurance Department (NUQAD)
- (b) **Members.** Deputy Registrar, Deputy Director Exams, Assistant Director NUQAD, Assistant Director Local Quality Enhancement Cell, Program Manager Undergraduate Education, Assistant Director ex ICT Office

16. As described in HEC guidelines, Online Readiness is measured in terms of a set of targeted requirements for online programs. These targets cover Online System and Online Class.

17. Online Readiness (institute level) has been divided into two stages [2]:-
- (a) System's Readiness covers university, library, technology and examination.
 - (b) Class's Readiness covers course, faculty, laboratory and students.

18. **System's Readiness.** System's readiness is measured in terms of readiness of university, library, technology and examination, as explained below:-

(a) **University.** Availability of an explicit policy and SOPs for approval of courses, a Learning Management System (LMS) to provide information, track progress, and coordinate activities, and governance system for decision-making and adjudication of complaints are essential parameters for university readiness.

(b) **Library.** Enabling students to access course material (through the LMS) and all required readings and associated materials (optional readings, audiovisual materials) through a library is essential requirement. Concerned office must ensure that students have access to the required material / literature either electronically, through HEC's digital library subscription, or through standalone arrangements.

(c) **Technology.** Latest technological tools and infrastructure are required for efficient execution of online education. It includes LMS, software for classroom meetings (Microsoft Teams, Zoom, Google Classroom etc) and software for conduct of online examinations. Concerned offices are required to certify that university has access to the relevant software and infrastructure and it has been made available to all students and faculty members. A suitably manned office for troubleshooting of anomalies is required to be established as well.

(d) **Examination.** Keeping in view peculiarities associated with online mode of education, robust assessment mechanism is required to be instituted by Concerned office. Moreover, students are required to be informed about assessment system right at the beginning.

19. **Quality Assessment of System's Readiness.** A checklist has been formulated to assess level of readiness of different entities. Based on level of readiness, Satisfactory, Marginally Satisfactory or Unsatisfactory grade is awarded by ORC. Feedback is provided promptly to concerned offices in case of unsatisfactory assessment so that remedial measures are undertaken and desired quality is ensured. Checklist for assessment of university readiness (includes both system and class) is attached as **Appendix I**.

20. **Class's Readiness.** Class's readiness is measured in terms of readiness of course, faculty, laboratory and students, as explained below:-

(a) **Course.** Availability of information about course introduction, learning objectives, grading policy, course prerequisites, lesson plan, assignments, textbooks, reference material / readings, time and mode of physical or virtual class

meetings to students has to be ensured by concerned offices before authorization of a course for online mode.

(b) **Faculty.** Concerned offices are required to pay particular attention to special attributes of online teaching, including its challenges, techniques, and use of supportive resources. Training of the faculty for conduct of online classes has to be ensured as well.

(c) **Laboratory.** Concerned offices are responsible for preparation of comprehensive lab conduct plan for each lab/experiment. Required virtual lab platform, e-lab, simulation-software or a video are to be specified as well. Working of these tools is to be assessed / ensured on students' side also.

(d) **Students.** Complete information about obstacles faced by the students in accessing online materials, including their location, service quality in the area and students' affordability / access to required devices has to be obtained by the concerned offices. A dedicated office has to be established to facilitate the students and timely address their concerns.

21. **Quality Assessment of Class's Readiness.** Checklist of **Appendix I** is used to assess class readiness. Moreover, two additional checklists have been formulated to assess level of readiness of the course. First checklist is used for the assessment of recorded lectures while second one is used for the assessment of course package. These checklists are attached as **Appendix II (Annex I & II)**.

Assessment Procedure

22. Online Readiness Committee members undertake independent quality assessment of all entities associated with system's readiness and class's readiness. With the help of checklists, quality of various facets / shades is assessed and following three grades are awarded:-

Grade	Score
Satisfactory	3
Marginally Satisfactory	2
Unsatisfactory	1

23. Overall score is normalized and passing benchmark has been set at 75%. Feedback is provided to all concerned offices timely for necessary remedial measures, if required.

Final Approval

24. Chairman ORC is required to present an overall summary of system's readiness and class's readiness to Online Academic Council (OAC) for final approval or otherwise.

Feedback

25. Continuous Quality Improvement (CQI) cannot be achieved without a regular and transparent feedback mechanism. NUTECH Quality Assurance Department is responsible for conduct of feedback surveys, in coordination with other stakeholders. Findings of the surveys are required to be presented to OAC for necessary decision making and refinement of different processes.

Conclusion

26. Quality Assurance is a continuous process and can only be accomplished with active engagement of all stakeholders. All processes must be coherent and focused towards organizational excellence. Team work spirit, an essential hallmark of every Quality Assurance System, has to be embedded into all administrative processes and academic activities.

References

1. Wikipedia Website https://en.wikipedia.org/wiki/Asynchronous_learning
2. HEC COVID-19 Policy Papers; Policy Guidelines Note 5
3. NUTECH Policy for online conduct of Spring Semester 2020