

## **Recommendations by the Committee for the Modes of Instructions & Assessments, and Conduct of Labs for the 2021-22-II Semester**

A committee was constituted vide office orders DIR/IITK/2021/OO-54 and DIR/IITK/2021/OO-54-A dated Nov 3, 2021 and Nov 8 2021, respectively, for exploring the modes of instruction (offline/hybrid/other), modes of assessment, and conduct of Labs for 2021-22-II Semester.

The committee met on several occasions, took feedback from students, explored technical options, and analyzed the allocation of classrooms based on pre-registration data.

Institute has also decided to permit all the students (except Y21 BT/BS Batch) to return to the campus. From the student feedback data (Appendix A) about 85% of the respondents (2798) have indicated their willingness to come back to the campus for attending the 2021-22-II Semester, and many students would be interested to attend the classes in-person. Student members in the committee felt that preference should be given to the offline classes in the 2021-22-II Semester.

Based on these the following recommendations are made.

### **1. Conduct of Classes for the 2021-22-II Semester:**

The committee recommends three modes of conduction of classes namely “Fully Offline Mode”, “Hybrid Mode”, and “Fully Online Mode”.

The instructor can decide on the mode of lecture delivery after taking into consideration

- a) number of students who are willing to attend the class in person,
- b) COVID-19 protocols of the institute at any time during the semester, and
- c) own constraints.

The details are given in the following:

- A. **Fully Offline Mode:** The instructor delivers classes in the classroom allotted by the office of DOAA, and all the students attend the classes in person. It is optional for the instructor to use any of the online course platforms in this mode. The instructor need not make the video recording available to the students after delivering the lectures. This mode is only possible if **all (i.e., 100%)** the registered students of the course are present on the campus, and all the students and the instructor(s) are willing (in view of the pandemic) to engage

the classes in offline mode. If COVID-19 protocols, at any instance, do not allow all the registered students to come to the lecture hall to attend the classes, the instructor will shift to Hybrid Mode or Fully Online Mode.

- B. **Hybrid Mode:** In this mode, the instructor delivers online classes or conducts interactive sessions in the allocated classroom. Some students attend the lectures online (from inside or outside the campus), while others attend them in person in the lecture hall. The recordings of the online sessions will be made available on a course platform after the lecture.

If the instructor is delivering lectures in asynchronous mode, where the pre-recorded video contents of the lectures are made available to the students and interactive sessions are conducted in synchronous fashion, then the instructor has the choice of conducting the interactive sessions in hybrid mode, as explained above. Instructors can either conduct one interactive session per week for both online and offline students together, or two separate sessions for online and offline students.

The format of the lecture delivery in this mode will be decided by the instructor.

- C. **Fully Online Mode:** The instructor delivers lectures in online mode (synchronously or asynchronously) as in the 2021-22-I semester. The recorded video contents are to be made available to the students on an online course platform.

Room allocation for the courses which can run in Fully Offline or Hybrid Mode will be made available to the instructors by the LHC Desk of the DOAA office at the beginning of the semester based on the number of registered students and available rooms in which classes can be conducted ensuring the COVID-19 guidelines. Room allocation will not be done for all other courses that will be conducted in Online Mode only. This also will be communicated by the LHC Desk at the beginning of the semester.

Making the classrooms ready for Hybrid Mode lecture delivery requires preparation. Further, the consent of the students has to be taken at the beginning of the semester for deciding on the mode of lecture delivery. Thus, all the classes can start in Fully Online Mode and transition to other modes can happen gradually. A best practices document related to the conduct of the Hybrid Mode classes will be prepared and circulated to the instructors.

Instructors and students have to be prepared for shifting between different modes of

teaching considering the prevailing uncertainty on how the pandemic situation will be evolving during the 2021-22-II Semester.

## **2. Conduct of Labs for the 2021-22-II Semester:**

Labs can be conducted either in (A) **Fully Offline Mode**, (B) **Partly Offline Mode** or (C) **Fully Online Mode**.

Fully Offline mode is only possible if all the students of the course are present on the campus, and all the students and the instructor(s)/tutor(s) are willing to engage the labs in offline mode.

In Partly Offline mode, some of the experiments or a part of the experiment will be conducted in Offline mode and the rest will be conducted in Online mode. This will help in reducing the density of students attending the lab at any point of time and also decrease the contact hours in the lab. This could be realized by dividing the sections into subsections (P1, P2, etc.) and scheduling the labs for subsections at different times. (Example 1: A lab of 2-5 pm may be done as 2-3 pm for P1, 3-4 pm for P2 etc. Example 2: A lab runs on two days of the week. Day 1 Lab is for P1, and Day 2 Lab for P2).

Fully Online mode can be conducted as done during 2021-22, I Semester. The recorded video contents are to be made available to the students on an online course platform.

If the department is able to conduct the labs in Fully Offline/Partly Offline mode for the students on campus, and in the Fully Online mode for the remaining, it should be encouraged. This may involve extensive planning and implementation challenges, in particular, uniformity in evaluation and grading.

Since there is a significant variation in the nature, organization, and conduction of the labs, the best model for a particular lab is left to the department.

If COVID-19 protocols/circumstances, at any instance, do not allow all the students/instructor(s)/tutor(s) to come to the lab, the lab will shift to Fully Online Mode.

## **3. Conduct of Exam:**

The committee is recommending two modes for conducting examinations and quizzes for the 2021-22-II Semester:

A) **Fully Offline Exam Mode:** In the Fully Offline Exam Mode, a student appears for the assessments (typically pen & paper exam) in a pre-allocated lecture hall, and in-person invigilation will be done.

B) **Fully Online Exam Mode:** In the Fully Online Exam Mode a student appears for the assessments on an online platform. Third-party remote proctoring tools will be made available.

### **3.1 Conduction of Mid-Sem and End-Sem Examinations:**

The committee recommends that mid-sem and end-sem exams are to be conducted in Fully Offline Mode for all the students (except Y21 BT/BS) if the COVID-19 protocols/circumstances are permitting the students to return to the campus for appearing in the exams.

If the COVID-19 protocols/circumstances do not permit this, the committee recommends the following for the conduction of mid-sem and end-sem exams:

(i) For classes which are conducted in Fully Offline Mode, the mode of conduct of the exams will be decided by the instructor, taking into account any prevailing COVID-19 guidelines.

(ii) For classes which are conducted in Fully Online Mode/Hybrid Mode, the mode of exams will be Fully Online. Services of professional proctors will be explored for the mid-sem and end-sem examinations.

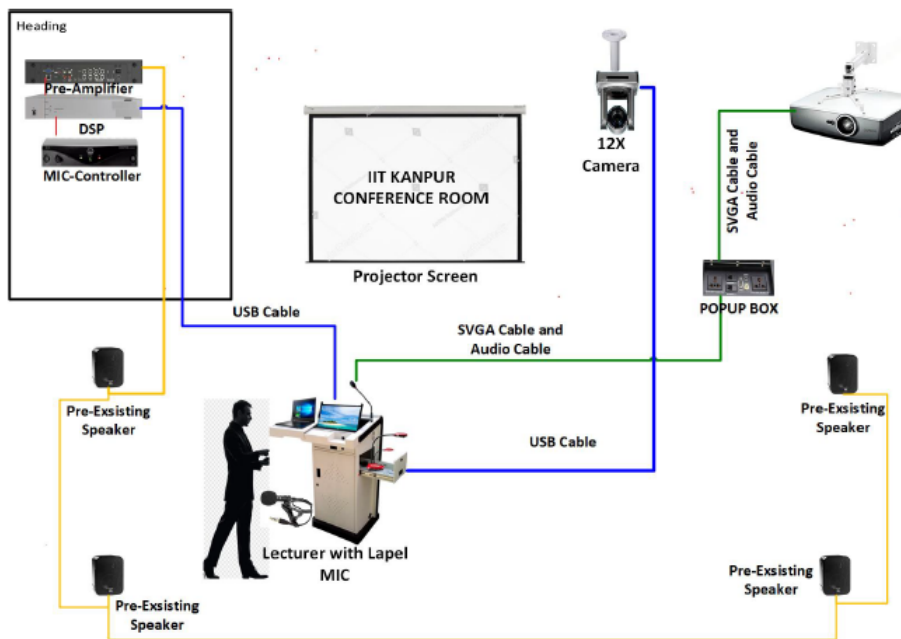
This will be reviewed by the Dean of Academic Affairs, and the decision will be informed to the students/instructors well in advance before the start of the mid-sem and end-sem exams.

### **3.2 Conduction of Quizzes:**

For classes which are conducted in Fully Offline Mode, the mode of conduct of the quizzes will be decided by the instructor, taking into account any prevailing COVID-19 guidelines. For the classes which are conducted in Fully Online Mode/Hybrid Mode, quizzes will be Fully Online.

## **4. Technical Infrastructure for Hybrid Mode Classes:**

The LHC Rooms and Tutorial Block rooms will be made ready for the conduct of hybrid mode classes progressively. Departments may implement the same in their lecture rooms.



**Figure 1:** Typical arrangement in a class room equipped for Hybrid Mode of lecture delivery (subject to change).

Lecture rooms will have a podium with an interactive tablet and a computer. Students attending the class in online mode can see the writings on the tablet through screen sharing. The same will be projected on a screen for the students attending in-person classes. The instructor can also connect his/her laptop/tablet to the podium for screen sharing. A camera will capture the video of the instructor delivering the lecture. The camera can also be used for delivering lectures using the blackboard.

The audio setup will ensure that both offline and online students are able to interact with the instructor as well as with each other.

TAs and LHC employees need to be trained to operate these facilities.

## 5. Lecture Room Allocation

Based on the pre-registration data, there are about 500 courses in the next semester for which a lecture room has to be allocated. Out of this, about 380 courses are to be assigned in LHC/Tutorial Block and the rest are to be assigned in the lecture halls of the departments.

Out of the 380 courses, lecture components of about 260 courses can be scheduled in LHC/Tutorial Block lecture halls with  $\leq 50\%$  occupancy, about 70 courses with 50-70% occupancy, and the rest with  $>75\%$  occupancy.

Considering large number of tutorials being done simultaneously, and nonavailability of large enough rooms to maintain sufficiently low occupancy, tutorials are to be conducted in Fully Online Mode. Wherever possible rooms will be allocated to conduct tutorials in Fully Offline/Hybrid mode.

Based on the course registration data, the allowed threshold of occupancy depending on the COVID-19 protocols, certain courses have to be run in the Fully Online Mode. This list will be provided by the LHC Desk of DOAA at the beginning of the semester.

Scheduling of lectures in departmental seminar rooms may follow COVID-19 protocols and the allowed threshold of occupancy which will be decided by the institute time-to-time.