# **EE204 Analog Circuits**LockDown Students Survey

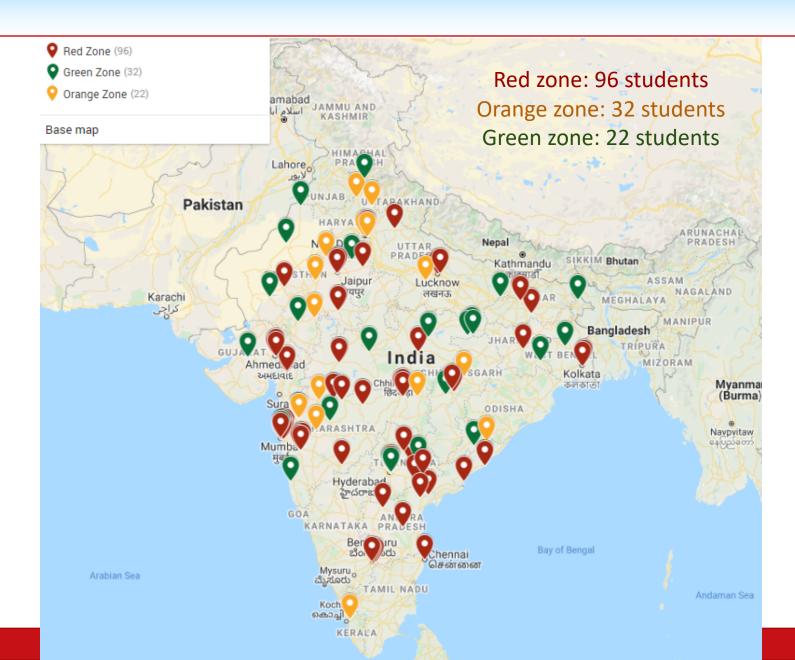
TAs: Anik Batabyal, Sivakumar Elangovan, Shubham Jain, Abhishek Kadam, Nagalakshmaiah Kalva, Sumit Khalapure, Jeevacch Kumar, Vijay Kumar Kanchetla, Pawan Kumar Khanna Ayush Ranjan, Anamika Sharma, Neeraj Sohani, Devyani Verma

Prof. Rajesh Zele

## **IIT Bombay**



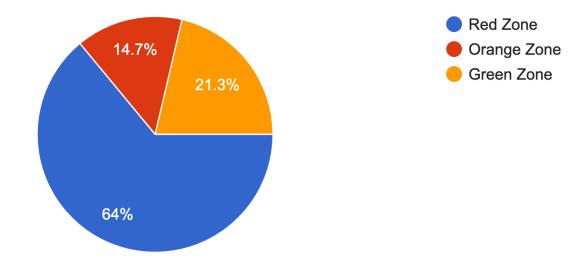
### **EE204 Class Students Zone Wise Location**



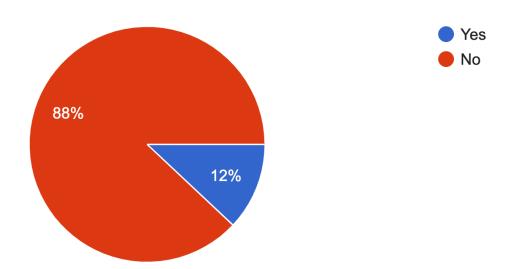
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#### Area Corona Update

150 responses

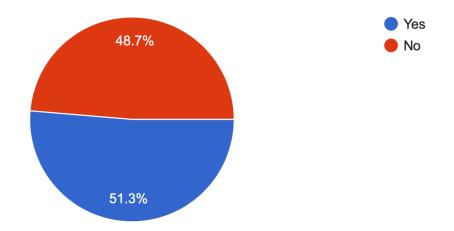


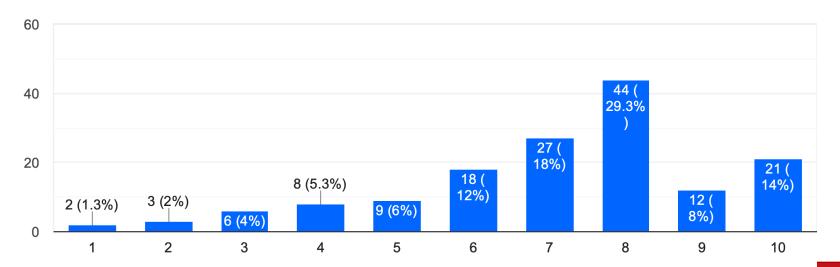
## Were you (or your family) quarantined due to COVID?



Are you feeling anxious or low due to the impact of lockdown on your studies?

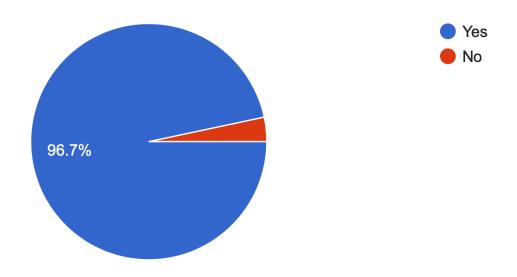
150 responses





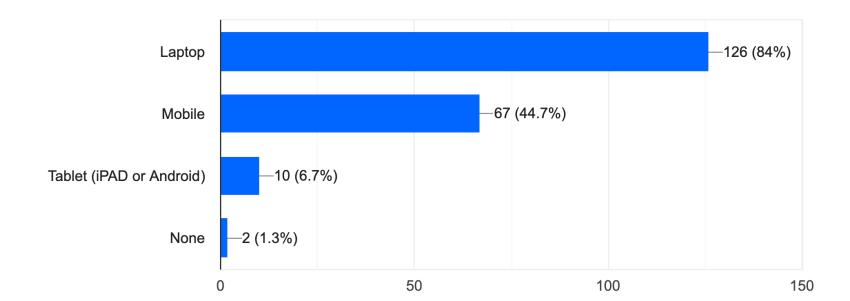
Do you have a functional device to watch online lectures?

150 responses



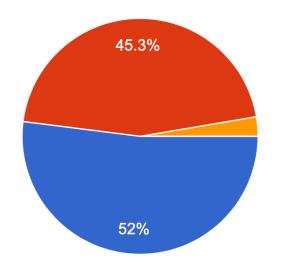
What device do you use to view the video lectures?

150 responses



What type of internet connection do you have?

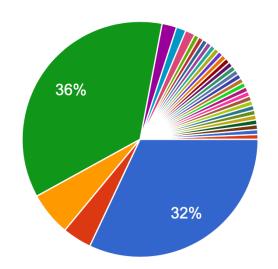
150 responses



MobileBroadband (Home WiFi)WiFi DonglePublic WiFi

No internet

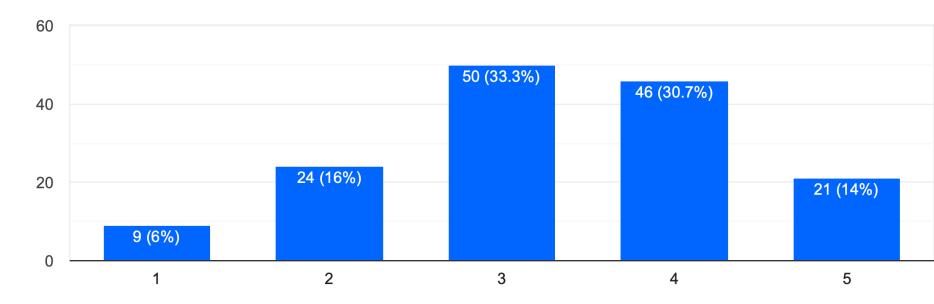
What internet operator do you use?



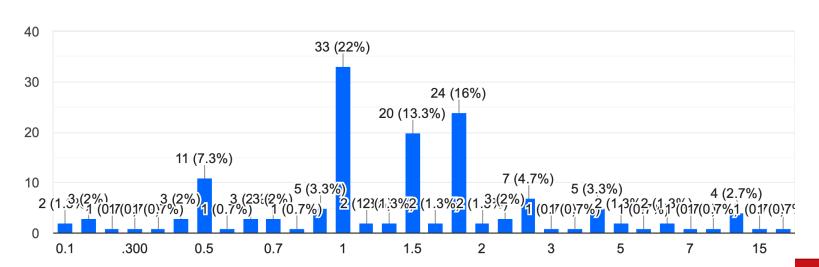


Rate internet connectivity quality at your place. \_\_\_\_\_(1-pathetic ---- 5-Excellent)

150 responses

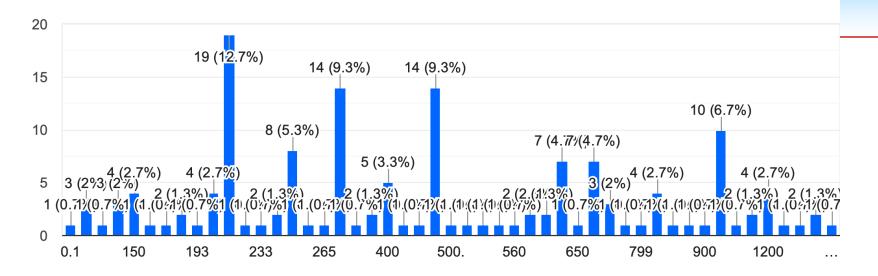


What is your internet data consumption (in GB) per day? 150 responses

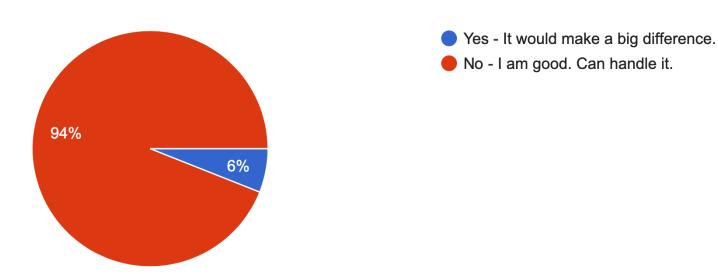


How much are you paying (in INR) for the Internet per month?

150 responses

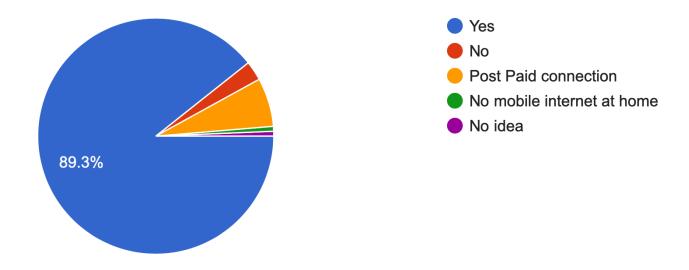


Do you need financial support to get good internet connection? (Prof. will support) 150 responses

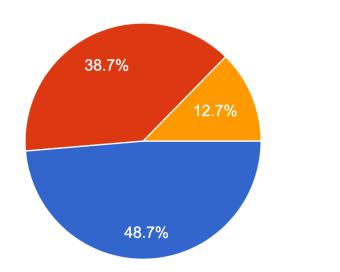


Will you be able to recharge your mobile internet due to LockDown?

150 responses



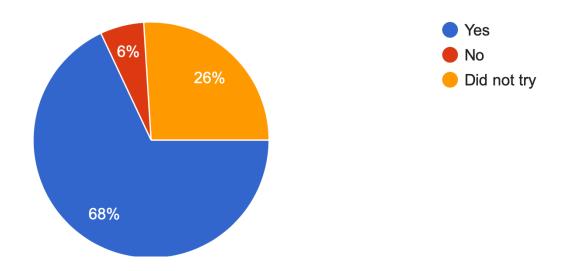
How stable is your network connection?





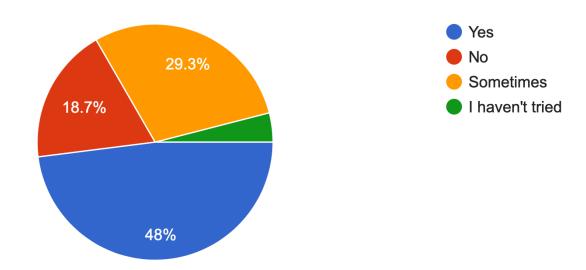
Are you able to download low resolution video of youtube lectures?

150 responses

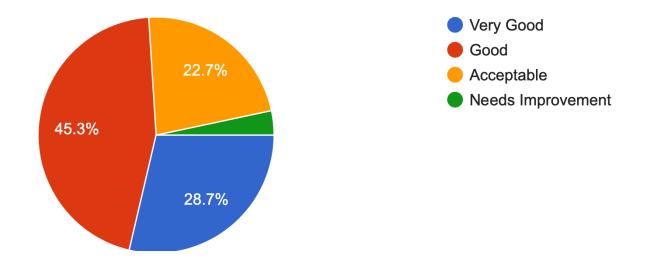


Are you able to watch an hour-long video without a streaming delay?

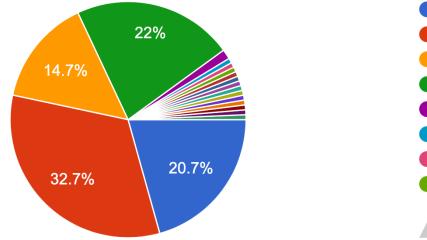
150 responses



Was the audio/video quality crisp and clear to understand? 150 responses



Did you lose interest in the subject due to online study Lec-22 onwards? 150 responses



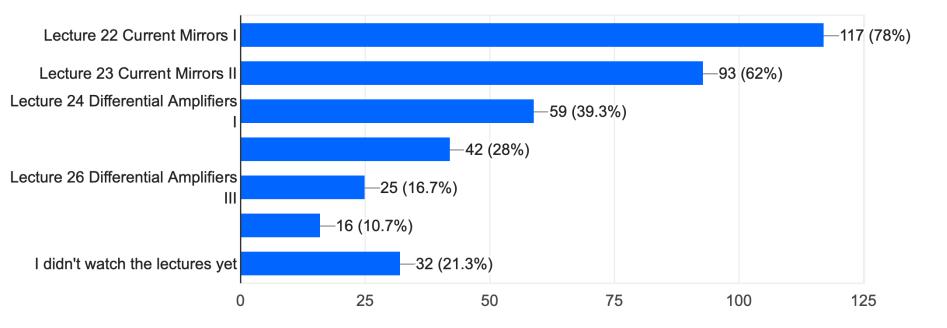
I am really trying hard in the present si... More important things on my mind cur... Will catchup when back on campus. Yes Somewhat, active discussion helped t...

I am able to handle the transition to O...

- I haven't been able to see the lectures...
- Could not keep track very well becaus...

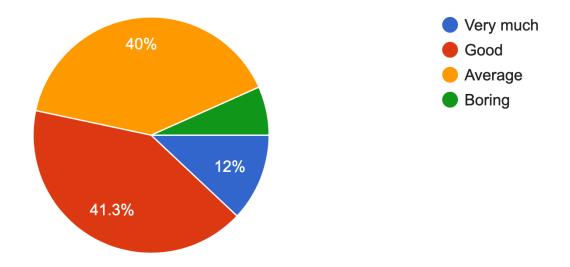


Click on the Lectures you attended online. Please be honest and click only if you watched the entire lecture.

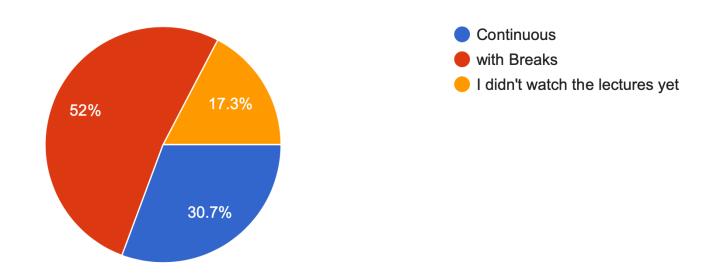


How engaging did you find the online uploaded video lectures?

150 responses

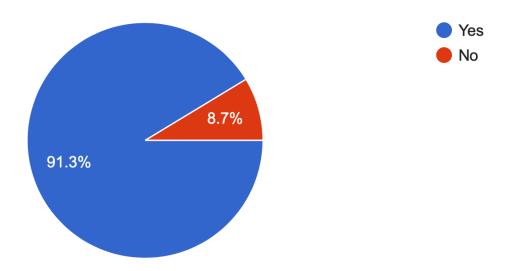


Do you watch each lecture in one sitting or take breaks in between?

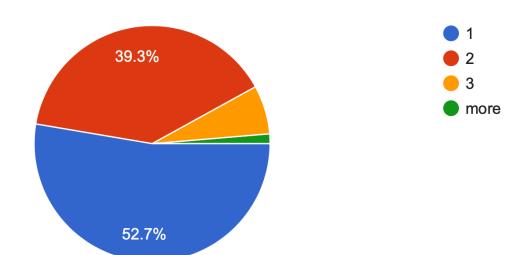


Were the images and text in the online lectures clearly visible?

150 responses

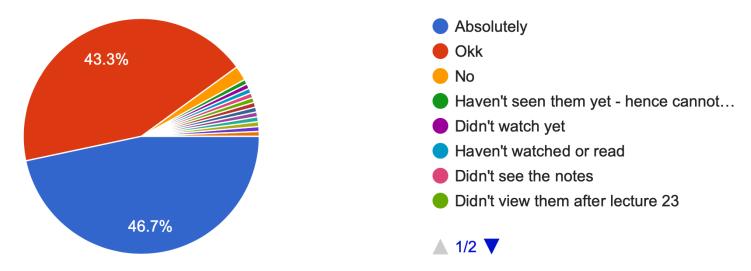


How many times do you watch the video lecture to get a good understanding of the subject matter?

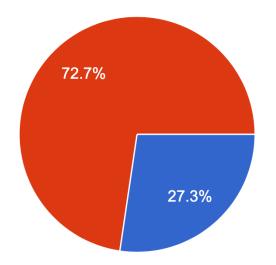


Did the handwritten lecture notes upload on Moodle helped in combination with Videos?

150 responses



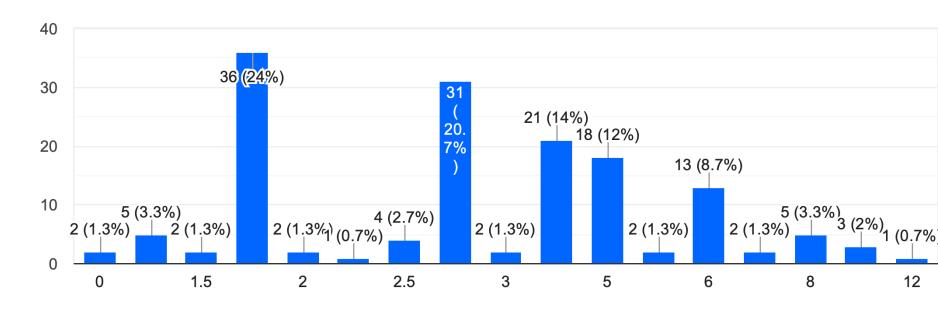
Would you prefer live online lectures instead of videos uploaded? For Live lectures, you need reliable internet connectivity.



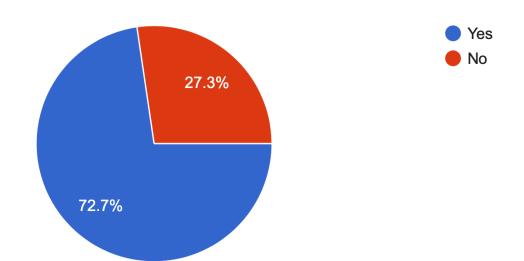
- Live Lectures through Webex are better since it forces me to fixed schedule.
- Uploaded Video Lectures works better because I can set my own pace.

How many hours can you dedicate for study (in general) being at home daily(on average)?

150 responses

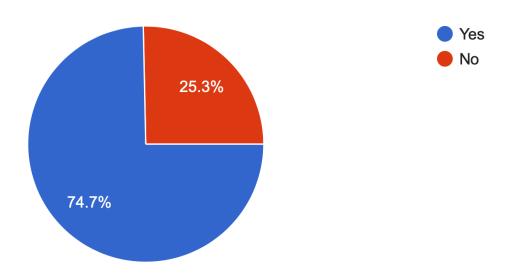


#### Do your doubts get clarified through Moodle?

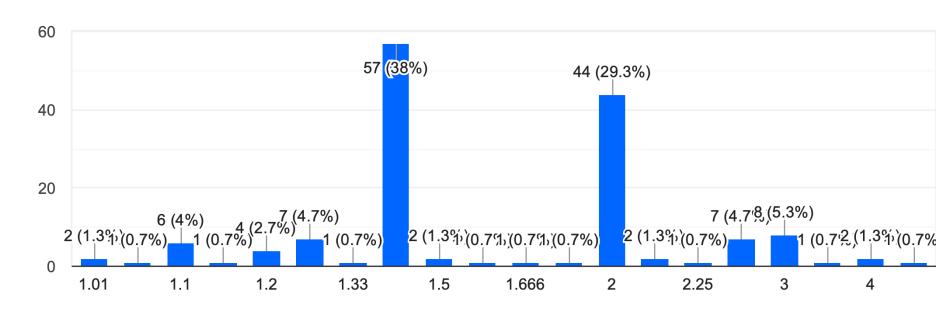


Would a weekly live on-line interaction with Professor/TAs help in clearing your doubts?

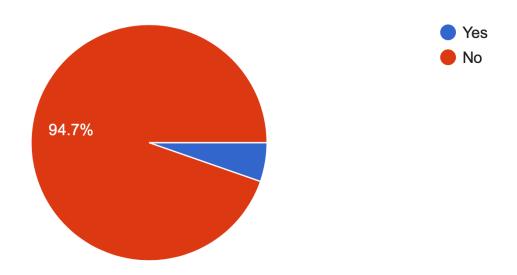
150 responses



How much time did you require to watch a one-hour video lecture? in Hours 150 responses

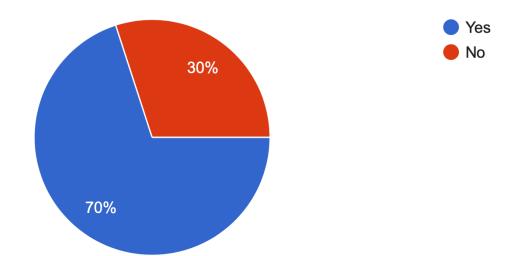


Did you attempt the practice questions provided? (Please be honest)
150 responses



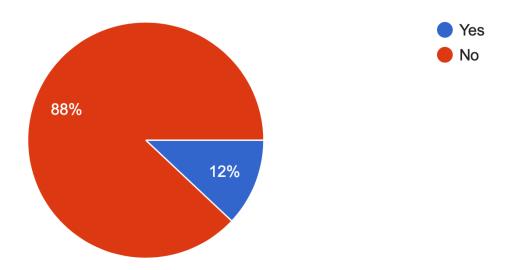
Are you willing to submit assignments regularly from home?

150 responses

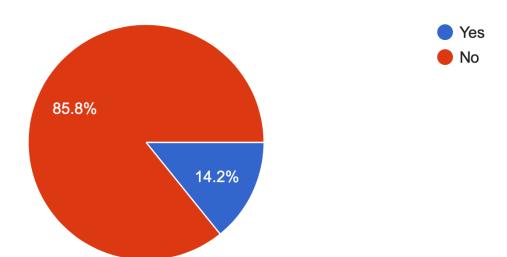


Do you think the online exam will be a fair method of assessment for all students?

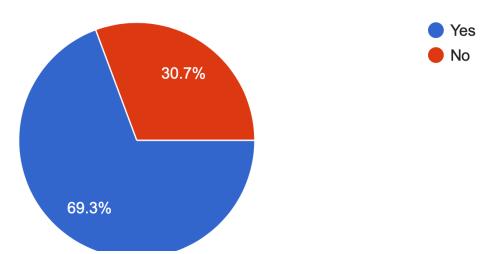
150 responses



Do you think everyone in the class will not cheat if take-home exams are given due to the current situation?

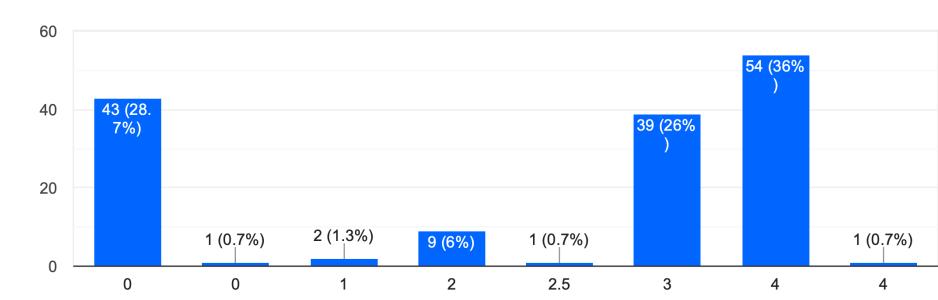


Is it possible to work on a team project from home?



If yes, then what would be ideal size of the group? Enter Zero if you don't think group idea works for you.

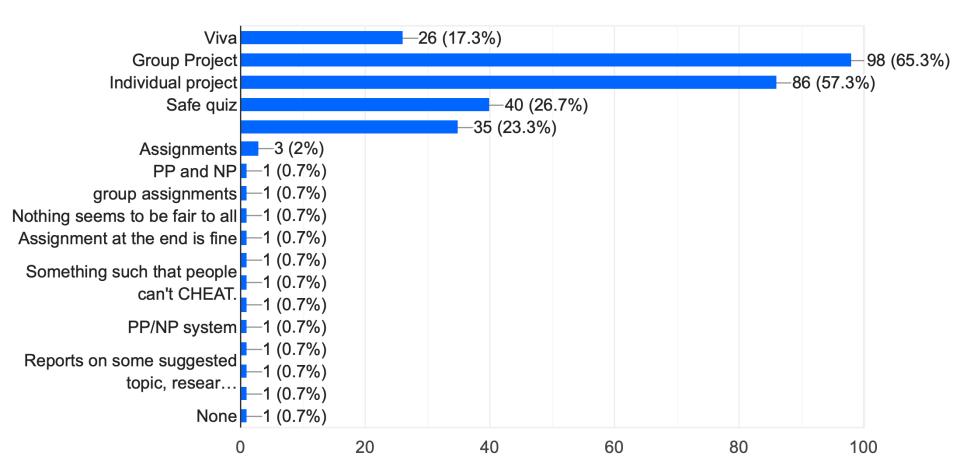
150 responses



What other evaluation method can be used in addition to what has been done already, in case you need to improve your grades?

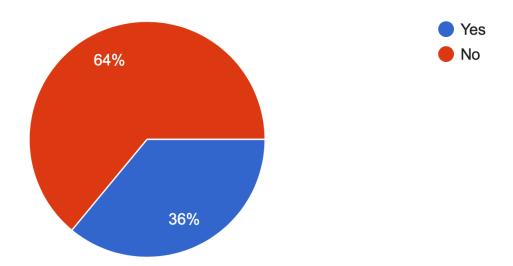
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150 responses



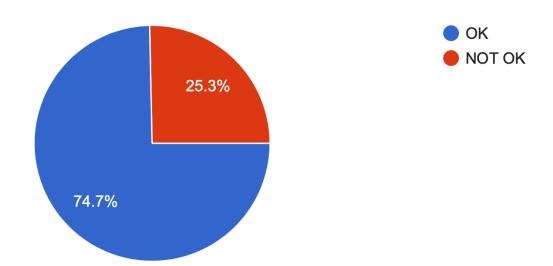
We are going through very difficult times. In the event that the lockdown continues and you are unable to come back to IITB, the current semester ...e evaluations done so far. Are you okay with this?

150 responses



What is your opinion on PP/NP grading in the current situation?

150 responses



## About EE204 Online Teaching so far...

 Most of the students: Customized pace and flexibility in terms of lecture speed

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- Most of the students: One can rewind (or go back) parts or entire lecture multiple times, if necessary
- 2 students : Highly structured, so lesser doubts arise
- Many students: Easier to take down notes which helps later in efficient revision
- 2 students: Online lectures are less engaging, tedious and stressful for eyes and brain (especially if they are lengthy)
- 2 students: Prefer short duration lectures and didn't get enough motivation to watch the recent one at home because of its long duration
- 2 students : Will prefer live lectures to be recorded too
- 1 student : Social distancing

## About EE204 Online Teaching so far...

• 1 student: Didn't find much difference except that the in-lectures doubt weren't solved but moodle helped with that

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- 1 student: Online lectures helped clear doubts in the notes uploaded in advance
- 5 students: Would prefer books if live teaching is unavailable
- Many students : Can refer to other side resources (or google) on the fly
- Many students : Can take breaks in between
- 15 students: Absolutely nothing and it is incomparable to classroom teaching
- 3 students : Problematic when doubts arise
- 2 students: Prefer live sessions because they are more focussed and time bound
- 8 students: Attend lectures any given time, complete them at their convenience, Comfort

#### Summary of Responses to - Grading based on evaluation done so far.

 Some students may not have been able to concentrate well during the first half of the semester. Grading on the basis of the performance in first half of the semester does not do equal justice to all the students

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- Not satisfied with performance till now
- If only midsems are considered, I will get a huge grade loss
- I was unable to give any exams due to medical reasons, if given grades by evaluation so far, I will be failed even tho I do know the subject to a good extent.
- I'm one of those students who require some time to get comfortable with the subject, so I generally perform better after the midsems
- It will be extremely unfair if the relative grading scheme is applied since then it will all boil down to midsem marks when it is very common that students cover up for silly mistakes in midsem by a good performance in endsem.
- The grading heavily depend on midsem and the exam was on the low scoring side

#### Summary - Conducting exams in current situation

Screen sharing, audio and video recording; Online monitoring using webcams by TA's

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- Openbook test
- Build a cheating detection system using Deep Learning (Creative :P)
- Online MCQs like in Placement tests/ Speed Test
- Project/Assignment
- Safe App test; Short interval.
- Individual Viva; Test + Telephonic interviews;
- One different question per student/ Different set of questions
- Online exams on a portal which does not allow other tabs to be open and needs the webcam to be on compulsorily
- Online circuit simulation and understanding and submit Report
- Limitation- No proper internet connection
- Do not conduct online exam, take it offline when we come back/No Idea
- Cheaters would cheat anyway

## Summary - What other eval methods to improve grades?

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- Maximum students opt for either kind of project with bias towards Group
   Projects
- Only 5 students consider assignments but might be because we didn't provide that option
- Three students suggested Pass/Fail grade but two of them are okay with projects too. The one student who is not okay with projects among the three says,
- "Since some students (including me) are doing their internships from home it is not possible to couple this with academics. I believe PP/NP is the only option fair to everyone.".
- Three students feel that there is nothing we can do that can be considered fair
- One student suggest research paper analysis as assignment

#### Summary - Ideas for Reaching out to students with low internet connectivity

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- Make a ultra highly structured handwritten notes/latex notes. Also provide some small questions after each sub topic. And a good set of questions at the end of main topic (with solutions)
- Handwritten Lecture Notes and PDFs
- PDFs of video lecture in script format? Maybe speech-to-text can help
- Uploading videos in chunks instead of uploading the whole lecture at once. Like they
  do in online courses like coursera
- pdf of notes and low quality videos(which can be downloaded from youtube) should suffice. Then, the video should be such that it should not contain any fine details and should be able to be viewed in low resolution
- I think materials and contents from various text books can be suggested. A weekly plan of which page numbers to be read and which questions to solve after that can be conveyed by phone in extreme situations. Since. most of them have downloaded the textbook referred to us in the beginning of the course.
- Youtube videos, as it is easy to download and does not require much data. Cdeep lectures buffer a lot. youtube videos don't buffer at all.

#### Misc Feedback

- Past marks should not decide the grading completely (13)
- Thanks for caring (11)
- Project instead of online exams (9)
- Hectic internship, not available in office hours, course will be burden (7)

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- Quiet isolated place not available, disturbance in home so no online quiz/exam, internet issues (7)
- Instruction should not stop as course is fundamental for future courses (6)
- Learning in primary, grading secondary but important (4)
- Marks not updated (3)
- Online study may not be feasible. Medical worker in home, Chances of contact, Worried (2)
- Internship withdrawn (2)

#### Misc Feedback

- Everyone will get similar marks in any online exam conducted due to cheating (1)
- Analog is not first choice, ML is. Shouldn't be too heavy (1)
- Liberal grading, Exception ot bell curve (1)
- Group project can prevent cheating, group as per wish (1)
- Buffer for revision before starting online lectures (1)
- Option between PP/NP/S and letter grade (1)
- Safe quiz helped in regular reading (1)
- Burden of summer course. Others are free (1)
- Online exam + One exam after returning to the institute for those having poor internet if failed (1)

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- Missed a few midsems. Went home for treatment with HODs permission, Tensed (1)
- Didn't comment roll number on youtube video (1)
- MIssed exam, don't want to fail (1)
- Sensitisation of consequences of PP/NP through mail (1)
- Option between grading/redoing the course (1)
- Re-exam at the start of new semester (1)

## Thank You