

April 27, 2020

RE: Instructions for successfully managing an IGG Virtual Qualifying Exam

Dear IGG Student,

As you are all aware, [Graduate Studies](#) has mandated that until further notice, all graduate instruction, including qualifying exams, will have to occur remotely. We acknowledge that this adds unique challenges for you to present and defend your research proposal. However, we are confident that these challenges can be mitigated with a little additional preparation and therefore see no reason for any of you to delay your QE. In fact, it is not clear how soon in-person meetings will be allowed again. The purpose of this document is to provide you with some guidance that we hope will help your qualifying exam run as smoothly as possible.

The first step toward organizing a successful virtual QE is to get your committee to agree to a specific virtual meeting format as soon as possible. As you are all aware, there are several possible formats (e.g. Zoom, Skype). Any acceptable format must minimally allow you to simultaneously connect with three separate devices (computer, tablet and phone), allow screen sharing (i.e. yours), have a “whiteboard” feature, and allow for meetings with no time limits. The Chair of the committee (not the student) will host the virtual meeting. Your committee members will be sent explicit instructions on how to do this. As Zoom is currently popular for video conferencing and most UC Davis departments have a license, we will provide details below on how to set up a successful remote QE using this platform.

The second and third steps to a successful virtual QE are preparation and practice! Because the virtual white board has limited real estate, you will need to have a good plan for how you will most efficiently use it during your exam. We suggest practicing first on blank printer paper. Once you have a plan, test it out on your lab and cohort by presenting a virtual practice QE. Remember that you will be given ~10 min of uninterrupted time at the beginning of your exam to lay out the background and relevance of your project. Use that time wisely!

Finally, you will be required to have three devices connected during the meeting. The first is a computer with a functioning camera and microphone. This will be the main device you use when interacting with your committee. The second is a tablet-style computer (e.g. iPad or Kindle Fire; one will be loaned to you if you do not have one). This will serve as your virtual whiteboard. The third is a smartphone with a functioning camera. Notes or reference materials of any kind are not allowed during the exam and the smartphone will allow your committee to confirm that you are adhering to this rule. As such, it will need to be positioned several feet away from you and allow the committee to see the screen of your computer as well as your surroundings. As always, we expect that you strictly adhere to the [UC Davis Code of Academic Conduct](#).

If you have any questions or concerns, please do not hesitate to contact us.

Good luck!

Sean Burgess and Dave Segal
IGG Chairs

Anne Britt
IGG Master Advisor

A. Technology requirements:

1. You will need three devices for your QE: a laptop or desktop computer with a working webcam and microphone, a tablet computer with stylus for whiteboard work, and a smartphone with a functioning camera that will allow the committee to monitor your test taking conditions. If you need to borrow a tablet, please complete the [Remote QEs - request for loaner Kindle Fire 10 tablets](#) form.
2. You will need an active Zoom account (free version is sufficient).
3. Each device you use needs to have the Zoom app installed.
4. Check your internet connection in the room you plan to use prior to the QE, it will need to be strong and stable enough to handle the exam.
5. Headphones are recommended but not required. They will help to avoid audio feedback / echoes.
6. You are not allowed to use a virtual background.
7. Please ensure all devices and wireless headphones are fully charged before the meeting and, if possible, stay plugged in during the meeting.
8. Please arrange the lighting in the room to properly light your face and work area during the exam, and minimize back-lighting (lights or windows behind you).

B. Setting up Zoom:

1. You only need the free version of Zoom. If you have not used Zoom, you will need to set up an account and install it on all three devices.
2. If you would like to better familiarize yourself with Zoom and its many settings and functions, below are links to several useful tutorials:
 - a. [Getting started with Zoom](#)
 - b. [Zoom meeting controls](#)
 - c. [Sharing your screen](#)
 - d. [Create and personalize](#) your own virtual meeting room
3. Your exam committee Chair will be the one scheduling and hosting the Zoom meeting

C. Basic instructions for Zoom:

You will need to set up **three devices** to take of the exam:

1. A laptop or desktop **computer** with a webcam, which will be used as the main device, which you will use to face and speak with committee members
2. A **tablet and stylus** (either your own or borrowed iPad, or a [loaner Kindle Fire 10 and stylus from CBS](#)), with the Zoom app loaded. From this tablet, you will also join the meeting, (as another guest, eg "Emily's Kindle"). Once the Chair has allowed screen sharing, you will be able to select "Share Screen" and select the "Whiteboard" option on the tablet. The whiteboard will provide drawing and sketching functions.
3. A **smartphone** with the Zoom app loaded. From the phone, you will join the meeting as a third instance (eg, "Emily's iPhone"). The phone will be set up 3 feet from you, on the right or left at an angle showing your monitor and the area around your work space, to capture the exam room and prevent accessing notes or cheat sheets.

Please **arrange the lighting in the room** to properly light your face and work area during the exam, and minimize back-lighting (lights or windows behind you)

1. You should schedule a time with your exam committee Chair to practice connecting your various devices into the meeting at least one day prior to the exam
2. Click on the link provided by your QE committee chair). Click on Open Zoom.us or Open Zoom Meetings. The Zoom app will open. The Chair will set up a “Waiting room” that you will go into first. **Make sure to log into the meeting at least 15 minutes before the QE starts in case you experience technical difficulties.**
3. You will have to log into the meeting on each of your three devices. It is also critical that you select the following audio and video settings on each device:
 - a. Computer- Allow both audio and video (default).
 - b. Tablet- Do not allow either audio or video. If audio is allowed, you will hear echoes and feedback.
 - c. Smartphone- Allow video but not audio. If audio is allowed, you will hear echoes and feedback.
4. To further avoid audio feedback / echoes, it is advised that you use headphones, though this is not a requirement. If you use wireless headphones, make sure they are fully charged!
5. The Chair of your committee/ meeting host will place you in the “Waiting room” anytime the committee members need to deliberate in private. This will usually occur 2-3 times during the exam.

Your exam should not be recorded.

E. Troubleshooting

To avoid unnecessary delays due to technical issues, we recommend that you 1) schedule a practice session with your committee members a minimum of one day before the exam, and 2) on the day of the exam everyone should log into the meeting a minimum of 15 minute before the scheduled start time.

If Zoom crashes or has trouble starting up more than once, quit Zoom and try turning your computer off and back on again.

If you are experiencing **audio or video issues** (i.e. other participants cannot see or hear you), first, try leaving and re-entering the room.

If your **connection is poor** or video is not working well (freezing, etc.), try:

1. Moving closer to your wireless router
2. Turning off your video
3. Turning off all video except the person questioning the candidate
4. If suggestions 1-3 above do not resolve the issue, consider asking other members of your household to avoid high-bandwidth activities, i.e. Netflix, other video calls, Fortnite, etc. during the exam.
5. Leave the Zoom meeting and re-join using your phone

If there is substantial audio feedback / echoes, mute your microphones when not speaking and/or switch to headphones.

F. Covid-related Mental Health Services:

Finally, the time preparing for your qualifying exam is one of the more stressful times of graduate school under the best of circumstances, not to mention during a global pandemic! Please do not hesitate to reach out to a professional if you need someone to talk to. COVID-related mental health resources can be found [here](#), and the counseling services at the Student Health Center can be reached [here](#).

Acknowledgments: Adapted from *Defending a Dissertation by Videoconference*, by Ashton Merck, Ph.D., Duke University,
https://docs.google.com/document/d/1ktdFVX0gBVErixR1wWZeguPTw6HQMf_zwPEUYVmuVq/c/mobilebasic