We are sharing advice developed by the Division of Social Sciences on some technical aspects of remote teaching, and some provisions for mitigating the costs for such instruction.

• Our best recommendation for teaching over Zoom is:
  - use your computer for PowerPoint and other digital presentations
  - use a “document camera” to project paper documents, handwriting, etc.

• Our best recommendation for a “document camera” is to use your phone, according to the attached instructions. The cameras on most phones are far superior to those available in standalone products. Instructors can purchase a “gooseneck” phone holder ($15) to support the phone above the writing surface. By starting with this low-cost option, instructors can later add additional equipment if needed.

• Instructors could also consider a dedicated document camera (some cost around $100, but might be sold out), or a high-quality webcam with microphone, if the phone or computer camera is insufficient. Audio quality is very important for online teaching—a Bluetooth headset might be ideal.
Using your phone to share paper documents over Zoom

For teaching or other collaborations in which the primary mode of instruction involves handwritten teaching or annotation of paper documents, we recommend the following approach:

1. Get some kind of device that will hold your phone above the writing surface. A “gooseneck” phone holder costs about $15 on Amazon; see image at right.

2. Install the Zoom app on your phone.

3. Launch a Zoom meeting from your computer as the host. Connect with audio and (optionally) video.

4. Open Zoom on your phone, but do not sign in. (If you are signed in, sign out by going to “settings” and signing out from your account.) Then click “Join a Meeting.” Enter the 9-digit meeting number from your computer. Type a descriptive name for Zoom such as “Kim’s doc cam.”

5. When you join the meeting, do not connect audio on your phone. You may need to tap “cancel” when asked to join audio. Set “Do Not Disturb” on your phone settings so that incoming calls and messages will be silenced during your meeting.

6. Tap the screen of your phone and select the icon to flip to the rear-facing camera. If necessary, tap the small inset image on the phone screen so that the image from the rear camera fills the screen. You might get better results if you rotate your phone to “landscape” orientation.

7. Mount the gooseneck phone holder on a sturdy table or counter. Try to minimize vibrations. If you are using a wobbly table, mount the phone on an independent object such as a nearby chair.

8. Mount the phone in the holder so that its camera captures the image of the paper that you wish to display. You will probably need to plug in your phone—Zoom drains the battery quickly.

9. On your host computer, you should pin the video to display the image from your phone. Pin a video by double-clicking on the video thumbnail in Zoom. If the video is pinned, you will see in the corner of your Zoom screen. Pinning the video will ensure that the video from your phone can be recorded. Your students or colleagues may also need to pin the video to view your handwriting.

10. You can now teach using the paper and pen. All audio will run through the computer.

11. Use the Zoom controls on your computer to manage the meeting. You can view participants, mute or unmute microphones, type in the chat window, etc. The “document camera” acts as an independent participant. Each viewer can view any document by pinning it (double-clicking the thumbnail).

12. If you are interacting with a large number of participants, you might ask a TF to host the meeting on a remote computer while you focus on teaching on paper using the phone camera.