

Teaching with Zoom

A. Keep in mind principles of [inclusive teaching](#) as you use Zoom in the classroom.

- Understand what constraints your students face (e.g. limited bandwidth, inadequate devices).
- Define expectations: Camera on or off? Muted unless speaking? Raise hand to speak?
- Ask for nonverbal feedback via the participants' toolbar.
- Pause for questions or comments.
- Allow participants to join by phone or to turn off the camera.
- Be aware that students may not be in a space where they can safely discuss sensitive issues.
- Ask participants to edit their names to reflect their preferences.
- Log in early so you can check in with students.
- Begin meetings with a check-in or a prompt to be answered via chat.
- For big groups, ask students to raise their hands to speak.
- End meetings by asking students to share a key idea or question via chat.
- Provide asynchronous options, e.g. slides, notes, or a recording of the session (with [transcript](#)). Have students help to create a Google Doc of discussion notes that all can access.

B. Be ready to handle technical issues.

1. Prepare

- Make sure you have sufficient bandwidth (Jane will explain).
- Find the appropriate level of security (Sue will explain).
- Keep it simple.
- Do a test run.
- Have a co-facilitator, TA, or student assistant who can moderate chat and take over if needed—and know how to contact them via text if needed.
- Only run essential applications on your computer while you present.
- Consider pre-recording the lecture and using Zoom for discussion.
- Inform participants of the backup plan.

2. Have a plan B.

- Share an agenda in advance so participants know what to expect.
- Appoint someone to take over if you run into problems
- Connect in alternative ways if your internet service goes down
- Phone in
- Tether to your phone
- Facetime to Zoom
- Go somewhere that has better Internet service (like Rice)
- Keep notes via a collaborative document (such as a Google Doc) so you can keep track of where you are.

3. Adapt.

- Be patient; the problem may resolve itself.
- If your Internet is lagging, turn off the video.
- If your mike won't work, phone in (make sure to mute yourself on the computer to avoid echo).
- You may need to quit Zoom and re-enter or even to reboot your computer; make sure that host responsibilities will be transferred.

- Switch to a phone call (if there aren't more than 5 participants), [chat](#) or a discussion forum, such as the one in Canvas.
- Contact OIT: 713-348-HELP (4357)

C. Learn about Zoom's features to make meetings and classes more interactive. These include:

- **Annotation**

- **Why**

Annotation allows you to:

- Mark up an image or document to highlight key points.
- Use a virtual whiteboard to create a diagram on the fly.
- Make your presentation more dynamic.
- Explain a concept visually.

- **How**

- Share your screen and click the Annotate button. You should have access to a menu of tools such as Text, Draw, and Stamp.
- See Zoom's annotation guide for more information:

<https://support.zoom.us/hc/en-us/articles/115005706806-Using-annotation-tools-on-a-shared-screen-or-whiteboard>

- **Caveats**

- If you let participants annotate, things could get ugly. (There have been incidents of Zoom bombers drawing offensive images.)
- Drawing on a virtual whiteboard can be tricky. You can instead use a tablet or phone, but there may be a lag.
- Annotations are not accessible to students who use screen readers
- Your screen may freeze while you are annotating, especially if there are bandwidth issues.

- **Polling**

- **Why**

- Engage participants.
- Get a quick sense of what is confusing students.
- Prompt recall and reflection.
- Adjust your class session based on feedback.
- Use [peer instruction](#)-- pose a question, run a poll, break students up into small groups to discuss the question, and run the poll again

- **How**

- Create a poll from the Meetings page
- See the Zoom guide to polling:

<https://support.zoom.us/hc/en-us/articles/213756303-Polling-for-Meetings>

- **Caveats**

- Only single answer or multiple choice questions are supported.
- Only original hosts can create a poll.
- You can't edit a live poll.

- **Breakout Rooms**
 - **Why**
 - Enable small group discussion
 - Use techniques like think, pair and share
 - Allow shyer students to interact with a smaller group
 - Enable project teams to collaborate, then update the larger group
 - **How**
 - Click the Breakout Rooms button, then determine whether you want to manually assign rooms or let Zoom do it automatically
 - See the Zoom guide at <https://support.zoom.us/hc/en-us/articles/206476313-Managing-breakout-rooms>
 - **Caveats**
 - Students may flounder if they aren't given clear instructions (but they can click a button to ask for help.)
 - Participation may be uneven.
 - You can pop in and out of breakout rooms, but you can't monitor all at once.
 - Students won't have access to the main Zoom room, so share the prompt on Canvas or elsewhere. You can also broadcast messages to all rooms.
 - Asynchronous students will not be able to participate.

Security Best Practices

- Meeting Links
 - Make sure you're logged into your Rice University Zoom Profile:
 - Go to: <https://riceuniversity.zoom.us/>
 - Click Sign in (this takes you to your Meetings page)
 - Select "Join a Meeting"
 - Enter the Meeting ID code (found at the end of the link and below the link)
 - Then click "Join"
- Account Settings
 - Make sure to review all settings and make changes based on how you would like your overall meetings set. You can make some setting changes at the meeting level when you select "Schedule a Meeting" under the Meetings option, however your most robust changes will be made under the "Settings" link.
 - Renaming: Toggle this ON or OFF depending on your class/meeting needs. Toggle it ON if you have TAs that your students might need to correspond with during class. Toggle it OFF if you have concerns that participants will rename themselves as a distraction.

- Screen share: Toggle this ON or OFF depending on your class/meeting needs. Toggle Screen share ON and select “Host Only” if you want to allow hosts/co-hosts to share and no one else. Toggle it OFF if you don’t want any participants to be able to share their screen. This affects the following features of screen sharing:
 - Entire desktop or phone screen
 - One or more applications
 - A portion of a screen
 - Whiteboard
 - Device audio
 - Content from a second camera
 - iPhone/iPad screen
- Chat:
 - For highest security, toggle OFF the ability for participants to send a message to all participants and toggle OFF the ability to have private one on one chats. (Participants may still send messages to the hosts.)
- Waiting Room: Enable this feature for greatest security
 - You may send everyone to the waiting room or Guest Participants (those outside of your organization).
 - Customize messages for users that you place in the Waiting Room. You may customize content wherever Zoom provides the pencil icon. Tailor specific messages that will be used for all your meetings. (Customizations are made at the Account level.)
- File transfer:
 - Toggle this OFF if you do not want participants sharing files with others. (The host will be the only participant that may send files to the group.)
- Meeting Settings & Best Practices
 - Log in 15-30 minutes early to review your meeting settings, new features added/removed by Zoom and the ability to prepare yourself to maneuver easily in the application.
 - Always allow Zoom to generate random meeting IDs rather than providing your personal meeting ID.
 - For a ‘Meeting on the Fly’ use Zoom’s “Host a Meeting” link at the top right of your Profile page. This places you in a Zoom meeting without setting up a meeting or calendar invite. You may then add participants to the meeting by copying the invitation and emailing the link, or sending the link via instant messaging systems including Google Chat, Slack, GroupMe, or Discord.
 - Settings you make at the Meeting level override those made at the Account level.
 - For large classes/meetings, make Registration “Required” by ticking the box. This provides a higher level of security and requires a participant to register before being provided login information.
 - For a higher level of class/meeting security Select a Passcode...be creative and create your own. (Alphanumeric and special characters permitted.)

- Ensure video is turned OFF for hosts and participants upon entry.
- Mute hosts and participants upon entry.
- Establish one or more co-hosts by entering their email addresses (must be in your organization), to help monitor, present, or address technical issues while you are running your class/meeting.
- Security Icon
 - This area allows a host to make changes while in a live Zoom session.
 - You may toggle ON the Waiting Room, and toggle OFF the Share Screen, Chat and Rename features.
 - Toggle ON “Lock Meeting” for greater security over unknown individuals entering your class/meeting once you have started.
 - Take swift and immediate action of disruptive behaviors by clicking “Removing Participant” or “Suspend Participant Actions”
- Managing Participants
 - Clicking the Participants link allows additional control.
 - Clicking the ellipsis provides additional options.
 - Tick Mute participants upon entry or select “Mute all” or “Unmute all”.
 - Remind users that they are muted, and if they would like to speak, they can unmute themselves by clicking on their microphone icon. The selection “Allow Participants to Unmute Themselves” must be checked. If it is not, the host/co-host must unmute participants.
 - If you do not want participants renaming themselves, make sure the selection “Allow Participants to Rename Themselves” is unchecked. You as the host/co-host can rename participants. This is especially helpful for participants dialing in by phone.
 - If you want to admit participants individually or in groups, make sure the selection “Enable Waiting Room” is checked.
 - Hovering next to the name of a participant allows you the following options:
 - Chat with that person (privately)
 - Make Host/Co-Host
 - Allow that individual to set a recording of the class/meeting
 - Rename an individual
 - Put them in a waiting room
 - Remove the participant
 - If you remove a participant, they will not be able to rejoin unless you have the option “Allow Removed Participants to Rejoin” toggled ON under your account settings.

For the most secure class/meeting use meeting registration, meeting passwords, waiting room, disable chat and screen sharing, and lock your meeting after all participants have joined, or contact OIT to host a webinar for a more controlled environment. If you want an even more secure experience, contact OIT and request webinar options.

How to Look and Sound Your Best on Zoom

- Upgrade your microphone and webcam
To have a better audio and video quality than what your computer's built-in mic and camera can provide, refer to the following buying guides
 - [DMC buying guide for external mic and webcam](#)
 - [Campus IT buying guide for remote teaching](#)
- Make sure your Internet connection is stable and fast enough
 - If you are experiencing any issue(s) with choppy audio, frozen screen, or meeting getting disconnected, it might be caused by slow Internet speed
 - General measures to improve your Internet connection
 - Upgrade your home Internet connection to a faster plan
 - Use a wired connection when possible (have an Ethernet cable connect your computer to a router)
 - Stay closer to the Wifi router if you are on a wireless network. Distance matters!
 - Avoid using website that has dynamic content on your computer
 - Limit high data transfer activities by others at your location such as playing online games and watching online videos
 - Check your Internet bandwidth using an online speed test, such as [nperf](#), [Speedtest](#), or [Comparitech](#).
 - Learn Zoom bandwidth requirements [here](#)
 - > 3Mbps, both receiving and sending 1080p HD video is fine.
 - <3Mbps, budget your bandwidth wisely
 - A good rule of thumb is that audio is more important than video when video conferencing over Zoom
 - Turn off camera if seeing each other is not important
 - Disable HD video to reduce data transfer (720p video only requires 1.5Mbps uploading and downloading Internet speed)
 - Only share screen when it is necessary
 - Mute your mic when not speaking
- Adjust audio and video settings
 - *My Video -> Touch up my appearance*, this is a software smooth and softened filter that makes you look better, you might want to leave it on.
 - Use virtual background to ensure your personal work environment is not shown during Zoom meetings if [your computer supports the feature](#)

FAQs

- Using mobile device as secondary/document camera
 - You can be signed in to a Zoom meeting on one computer, one tablet, and one phone at a time.
 - **Joining your Zoom meeting with video on, audio disconnected to avoid echo**
 - Name your mobile device camera with a unique name
 - Ask your students to “pin” your mobile device’s camera when needed
- Use the dual-monitor display feature to allow the video layout and screen share content to be placed on two separate monitors/screens.
 - To enable this feature, after login to Zoom desktop client, go to Gear-> General -> Use dual monitors
 - Gallery or speaker view can be displayed on one monitor while the other monitor displays a content share.
 - Go to Zoom support page to see if your computer supports this feature <https://support.zoom.us/hc/en-us/articles/201362583-Using-Dual-Monitors-with-the-Zoom-Desktop-Client>
 - Be aware you can run a PowerPoint presentation within a window to take advantage of dual monitors setup. The Zoom video panel (i.e. speaker’s view or gallery view) is not available for slide show and presenter’s view for dual monitors.
 - To adjust the settings, go to PowerPoint, Slide show -> Set up Slide Show -> Browsed by an individual (window)
 - With this setup, the slide show view is not full screen, instead it is a resizable window.
 - Start PowerPoint slide show first, then start sharing screen in Zoom.
- *Cloud Recordings* since it offers more options than *Local Recordings*
 - Local Recordings - only a video .mp4 file saved to your local computer
 - Cloud Recordings
 - Video mp4 files for different layouts, an audio .mp3 file for audio stream, and a text .txt file for chat can be recorded separately and saved to the cloud
 - You can set up playback range before sharing
 - Sharing can be public, signed in required, or password protected.
 - All the files can be downloaded and edited, then shared with Box or Google Drive.
 - Cloud recording only records the main room, regardless of what room the meeting host is in.

<https://support.zoom.us/hc/en-us/articles/206476313-Managing-breakout-rooms>

- Live polls including the polling questions, responses, and results will not be recorded.
- Publish cloud recordings in Canvas
https://canvas.rice.edu/courses/31333/pages/how-do-i-use-zoom-in-canvas?module_item_id=204141#publishing
 - Locate the Zoom area in your canvas course
 - Click on Cloud Recordings tab (note: in order for the recording to appear in your Canvas course, you must record to the cloud).
 - Make sure “Publish” button is on. Students will go to this "Cloud Recordings" tab to view Zoom recordings that you have published.
- Zoom Retention Policy | Rice Zoom Users
<https://kb.rice.edu/news.php?id=11690>
- [Host vs Alternative Host vs Co-host](#)
 - A Zoom meeting can only have one host
 - Licensed users on Enterprise, Business, and Education accounts can host up to 2 meetings at the same time. Rice Zoom users belong to Education accounts so we can host up to 2 meetings concurrently.
<https://support.zoom.us/hc/en-us/articles/206122046-Can-I-Host-Concurrent-Meetings->
 - An alternative host can be assigned when scheduling the Zoom meeting, so an alternative host can start the meeting. If an alternative host starts the meeting, he/she becomes the host. But he/she still can't create and edit polls since he/she is not the original host.
 - A co-host can only be assigned during the meeting, so a co-host can't start a meeting
- Screen sharing
 - Sharing an application is considered a security best practice since it doesn't reveal your personal desktop
 - Sharing a desktop is more convenient if you have to switch between applications frequently. You want to make sure your desktop is not cluttered and appropriate to share.
- [Scheduling meetings for others is doable if given the scheduling privilege](#)

Teaching Resources

- CTE, [Inclusion, Equity, and Access While Teaching Remotely](#)
- Kelly A. Hogan and Viji Sathy, "[8 Ways to Be More Inclusive in Your Zoom Teaching](#)"
- Aimi Hamraie, "[Accessible Teaching in the Time of COVID-19](#)"
- The Carpentries, [Resources for Online Workshops](#)
- University of Washington History Department, [Online Teaching Resources](#)

- [Recommendations for Teaching Carpentries Workshops Online](#)
- Derek Bruff, [Active Learning in Hybrid and Physically Distanced Classrooms](#)
- [Teaching Effectively During Times of Disruption](#)

Zoom Resources

- [U of Minnesota, Zoom: Teach Online Class Sessions](#)
- [Participant's Guide to Improving Your Zoom Experience](#)
- Harvard School of Continuing Studies, [Zoom Training](#)
- Harvard Law School, [Teaching Remotely with Zoom: FAQ and Instructions](#)
- Harvard, [In-depth Guide: using Zoom to teach online class sessions](#)
- University of Arizona, ["Inclusivity in the Zoom Classroom: A Practical Guide"](#)
- Rice virtual background images
<https://wiki.rice.edu/confluence/display/DMCGUIDES/Using+Zoom+Virtual+Backgrounds>