About this guide

This guide gives you a quick and clear introduction to the usage of the video conferencing tool **zoom** for lectures.

Many pages contain **clickable buttons** to help you navigate through the document.

The blue **Recommendation** and **Note boxes** draw your attention to especially important aspects. This is one of them.

Furthermore, this guide contains red **Legal note boxes**. In these boxes, we refer to aspects that are problematic in terms of data protection and other legal issues and we make suggestions on how you can circumvent these aspects (that are known to us). Below, you find the first Legal note box.

**Legal note:** The RWTH takes the legal mandate to protect privacy and personal data seriously. This document, however, is no legal advice and it cannot substitute for individual legal advice. Therefore, this guide is not part of the corresponding information requirements referring to article 13 et seq. of the General Data Protection Regulation. It only illustrates the use of Zoom.

Please read carefully the legal notes **in chapter 6**.
About this guide

The CLS helps and guides you in the video-based digitalization of teaching and learning.

For guides on **conducting** meetings or **webinars** with Zoom please visit our **homepage**:

![Map Pin Icon]  https://video.cls.rwth-aachen.de/

If you have any problems, please contact our **helpdesk**:

![Chat Bubbles Icon]  video@cls.rwth-aachen.de

Please note that due to constant updates, Zoom is in a dynamic change process. We kindly ask you to send us your feedback on change processes or experience reports that we can include in this guide. This way, we will be able to constantly update the guide. Please also note that the updated version of Zoom also requires an updated operating system.
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## 1 Join a meeting

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1.1 Client or Browser?

You can use Zoom either in the Client software or in the Internet browser. The use of the Client software requires a previous installation on your terminal device. The use of the tool in the browser, however, is possible without installation. You **do not need to create** a Zoom account or **download the Client** to join a RWTH meeting. In some browsers, problems occur when using zoom. In these cases, switching to another browser usually solves the problems.

If you wish to install the Client nevertheless, the Client software is available for terminal devices with Windows, MacOS, Android, iOS, and iPadOS.

https://zoom.us/download.
1.1 Client or Browser?

Please ensure that your Zoom Client is always up to date. For this, click on your profile in the top right corner of the start window of your client and choose *Check for Updates*. You can install a new update with one click (not during meetings). Zoom restarts after completion.

Please note that due to constant updates, Zoom is in a dynamic change process. We kindly ask you to send us your feedback on change processes or experience reports that we can include in this guide. This way, we will be able to constantly update the guide. Please also note that the updated version of Zoom also requires an updated operating system.
1.2 Use Zoom abroad

In most countries, you can use Zoom without any problems. However, there are some countries where users are unable to access Zoom.

🔗 https://support.zoom.us/hc/en-us/articles/203806119-Restricted-countries-or-regions

You can bypass this restriction by using the RWTH VPN connection. Please read the instructions on how to install the VPN:

🔗 https://help.itc.rwth-aachen.de/service/vbf6fx0gom76/article/b2150305019c438c867663ab28307d87

When using the application “Cisco AnyConnect”, it is of utmost importance that you select the option “RWTH-VPN (Full Tunnel)” in the field “Group/Gruppe” (see description on the linked site). This allows you to make regular Zoom calls from restricted countries to the RWTH.
1.2 Use Zoom abroad

**Note:** During peak times, it is possible that the RWTH VPN connection doesn’t continuously provide the required bandwidth. In this case, you have the following options:
1. Deactivate the transmission of your video. This measure drastically reduces the required bandwidth. Tell your participants why you are deactivating the transmission of your video.
2. Disable incoming videos of other participants.
3. Use a different VPN service. There are some free and commercial VPN services that provide a much higher bandwidth than the RWTH VPN connection. For more information, please click on the following link:

   https://www.techradar.com/vpn/best-vpn
1.3 Join a meeting

Joining a meeting is very easy. Simply click on the meeting URL that you find in the Moodle learning room or that your host sent you via email and you are redirected to the Zoom website.

Join Zoom Meeting
https://zoom.us/j/99140866405?pwd=eHljZHdrS1JrTFRybkUwVitidjN3dz09

Meeting ID: 991 4086 6405
Password: 843476

There, you can download the Client. If you want to participate in the Browser, do not click on the download, just wait a moment until the option to participate from your Browser appears. After agreeing to the terms of use and the data privacy policy, you will be prompted to enter the meeting passcode and a user name.
1.3 Join a meeting

Then, you will be prompted to activate your microphone (and camera).

After agreeing, you can either join the meeting immediately or do an audio check first and then join the meeting.

Please note that, to avoid any issues, your browser must be updated at all times.
1.4 Meeting room
1.5 View modes

During the meeting, every participant can switch between different modes of view on his/her own. Participants who join with the Browser, cannot choose between the modes.

Speaker View:

When a person speaks for a long time (e.g. in a speech) the speaker view is appropriate. The speaker video covers the entire screen. The videos of the other participants appear hidden. You can also pin the video of the main speaker in Participants (up to nine persons). For this, move your mouse to the video image of the person, click the blue button with three white dots and select pin video.
1.5 View modes

Gallery View:

When speakers change frequently (like in discussions), the gallery view is appropriate. All video thumbnails have the same size and are displayed all over your screen, depending on the number of participants (max. 25 / 49 per page). The person currently speaking will have a colored box around their image.

Every participant can change the order of the videos via click-and-drag.
1.6 Join by phone

When you do not have a stable internet connection, you can also participate by phone if your host has enabled this.

In this case, you receive a few phone numbers in your meeting invitation.

When dialing in with your mobile phone, you can copy and paste the *One tap mobile* into your number field.

When dialing in with your landline, select one of the phone numbers. You will be asked to insert Meeting-ID and passcode with the phone buttons.

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**Join Zoom Meeting**

https://rwh.zoom.us/j/99278683885?pwd=eGFuR1N6ejB2!

Meeting ID: 992 7868 3885
Passcode: KEac8.

One tap mobile
+496971049922,,99278683885,,,0,,426081# Germany
+493056795800,,99278683885,,,0,,426081# Germany

Dial by your location
+49 69 7104 9922 Germany
+49 30 5679 5800 Germany
+49 69 3807 9883 Germany
+49 695 050 2596 Germany

Meeting ID: 992 7868 3885
Passcode: 426081

Find your local number: https://rwh.zoom.us/u/ata2liE8E
1.7 Join a “webinar”

With a large number of participants (>300), your host may use a webinar licence*. For you as a participant, webinars differ from web conferences in the following aspects:

- You cannot share your camera image
- To engage your microphone, you have to request permission to speak from the host
- You cannot change the view mode or pin a video – the host sets the view mode for all participants
- Using the F&A tool, you can ask (written) questions and get answers in a structured way
- Your chat messages are only visible to the speakers, not for other participants

*We use the term webinar in this document, because it is used by Zoom.
1.8 Encryption

By default, the shared content of your Zoom meeting is encrypted with 256-bit AES-GCM encryption. For dial-in participants joining by phone, the audio is encrypted until it leaves Zoom's data centers and is transferred to the participant's phone network.

For additional protection, your host can enable end-to-end encryption (E2EE). End-to-end encryption requires meeting participants to join from the Zoom desktop client, mobile app, or Zoom Rooms (e.g. not the Browser).

During the meeting, you will see an icon in the top left corner of the Zoom window indicating encryption:

- Meeting is encrypted
- Meeting is partially encrypted
- Meeting is end-to-end-encrypted

More information: https://support.zoom.us/hc/en-us/articles/201362723
Meetings shall not be recorded without your prior agreement. When a recording starts, you will see a recording indicator in the upper left corner.
In the participants menu, a recording indicator appears next to the user who is actively recording the meeting.

**Note:** Only if the recording indicator is **visible** in the meeting, the conference is being recorded.

**Legal note:** Without prior approval of all persons concerned, it is generally prohibited to make video and audio recordings.

Making video and audio recordings without the prior approval of all persons concerned can constitute a criminal offense pursuant to Section 201 of the German Criminal Code (StGB) (violation of privacy of spoken word), pursuant to Section 201a of the German Criminal Code (StGB) (violation of intimate privacy), and / or a violation of Section 33 of the German Art Copyright Act (KunstUrhG).

In general, transferring video recordings to third parties is only permitted with the prior approval of the persons concerned. A consent to the video and audio recording is not equivalent to a consent to a subsequent transfer of the recording to third parties and is therefore not sufficient.
3. Interact during a meeting

3.1 Interact through chat

3.2 Interact through Raise Hand

3.3 Share files between participants

3.4 Interact within small groups
3.1 Interact through chat

If activated by the host in the settings, all participants can use the chat feature during the meeting.
You can send a message to all participants or to specific participants only.
The latter is possible only if the lecturer has activated this feature.

If you receive new messages while the chat is closed, you will be notified.
3.2 Interact through Symbols

As a meeting participant, you can use the “Raise Hand” feature and other symbols in the Reactions menu.

Take down your hand after speaking. The host can also lower a participant’s hand. The same applies to the symbols Yes, No, Slower and Faster.

The Emojis will disappear automatically after a few seconds.

Note: If you cannot find this feature, your host did not activate it. In webinars, you cannot use this feature.
3.3 Share files between participants

If the host has activated Share Files in the settings, you will see this option in the chat window. In this case, you can share files with all participants or with specific participants only.
3.4 Interact within small groups: Breakout Rooms

The host can use this feature to create small groups that work individually, e.g., for group discussions or projects. In this case, the following window opens and you are prompted to enter a Breakout Room.

When host and all participants use the Zoom client (update 5.3.0 or higher), the host can let participants choose the breakout room they want to participate in.
3.4 Interact within small groups: Breakout Rooms

While in a Breakout Room, you can contact the host by clicking on *Ask for help* in the Zoom panel. The host can then enter the Breakout Room and talk to you.
## 4 Tips for video and audio use

### 4.1 Tips for video use

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### 4.2 Tips for audio use

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4.1 Tips for video use

- Place your laptop or smartphone so that the camera is at or just below eye level. This creates a natural conversation atmosphere.

- Turn on all lights in the room and do not sit directly in front of a light source.
4.1.1 Virtual background

If you prefer an anonymous environment, you can create a virtual background.

To do so, click on the arrow next to the camera and select Choose Virtual Background.

**Note:** The effect works best when you place yourself against a neutral background, e.g. a white wall, and when the lighting in the room is good. Your outlines may appear pixelated. A greenscreen gives the best result but is not necessary.

**Legal note:** For your own personal rights, the option of virtual backgrounds is always activated by the hosts. Students will be only asked to switch off the virtual background during online exams.
4.1.1 Virtual background

You can also blur your background to obscure details since version 5.5.0 (February 2021).
4.1.2 Disable video

You can deactivate the transmission of your video at any time by clicking on the video symbol in the menu bar.

You can also disable incoming videos of other participants, for example, if the Internet bandwidth is too low. However, this function is only available in the browser, not in the Client.
4.1.3 Using a Smartphone for transmission

If you need a device for video transmission from another angle during an exam, you can use your smartphone in addition to your laptop/PC.

You need a tripod to set up your smartphone. If you do not own a tripod, you can build a tripod with a bottle and a rubber band as in the image on the right. You can place this construction on a cupboard or on a shelf behind or beside you – as necessary.
4.2 Tips for audio use – Built-in laptop microphone

- You can use the built-in microphone of your laptop. However, we recommend that you use a headset.

- Make sure that the area around you is quiet, otherwise you will hear background noises in the meeting.

- When using a laptop, do not use the built-in keyboard or touchpad, since they are too close to the microphone and the participants will hear the noise.

- Instead, we recommend that you connect a **USB keyboard and mouse**.
4.2 Tips for audio use – External microphone

If you have a headset, you should use it as it can improve the sound quality considerably. We recommend, e.g.:

- Sennheiser PC 8 USB Headset
- Sharkoon Skiller SGH2 Stereo Gaming Headset

Common headphones with an integrated headset also deliver better sound quality than the built-in microphone of the laptop.

- Before you start a meeting, we recommend that you check the sound quality of the headset with Zoom:
  Settings ➔ Audio ➔ Check Microphone & Speaker Settings
  or Audio Menu ➔ Test Microphone & Speaker
4.2.3 Push to Talk (only in the Client)

The Push to Talk feature mutes you by default, removing all background noises and echo problems. Activate the feature as follows:
In the lower left corner, click on the microphone until it is crossed out (muted).

When you want to talk during the meeting, press and hold the SPACE key. You remain unmuted as long as you hold the space key.

Note: If you switch to another application during the meeting, you must bring Zoom back to the front before pressing the space bar.
5 Share content

5.1 Screen content

5.2 Whiteboard

Legal note: In this context, please also note the aforementioned. When sharing your own screen, you also have to protect copyrights. Even a "brief" display of your own screen can represent a violation of third-party rights.
During a meeting, it can be useful to show content to all participants. To do so, select the *Share Screen* feature in the bottom menu bar. This feature is available only if the host has enabled it.

You can share various contents, such as the meeting agenda, presentation slides, process visualizations or text templates.

If you have been granted permission to share your screen, please note that you have to open the documents on your computer before sharing them.
5.1 Share screen content

You can choose several windows to share simultaneously. For this, you choose the first window and press Shift while choosing the second window. You can arrange the windows freely.

Hold ⌘ Shift to select multiple windows
5.1 Share screen content

Under *Advanced*, you can find more options to share your screen, e.g.

- Share only a part of your screen (e.g. if you have notes next to the content to be shared but do not want to share them)
- Play Computer Audio only
- Play a video from your computer (MP4, MOV)
- Share the feed from a second camera
5.1 Share screen content

**Attention:** When you share your screen, the menu bar moves to the top of the screen. However, you can move it, if required.

Stop sharing screen

Participants video view (can be moved or minimized)
You can also share a whiteboard, which allows you to develop new content together with all participants and write it down.

*Share Screen ➤ Basic ➤ Whiteboard*
5.2 Whiteboard

You can use the pencils to draw or write something on the whiteboard or on the shared screen.

Press \textit{Ctrl}+Z to undo.

The content can be saved as a png file if needed.
5.2 Whiteboard

All participants can work together on the whiteboard, provided that the host allows this in the settings.

To work on the whiteboard, participants go to

*View Options ➤ Annotate.*

Participants can also create and save whiteboards in Breakout Rooms to share them with the entire group via Share Screen.

**Note:** The *annotate* feature may not work when using the Browser to join a meeting.
While using Zoom, data will be transferred to the USA. The RWTH Aachen cannot assume any responsibility for the confidential handling of your personal data that is used for external services, as the RWTH Aachen has no influence on whether the companies comply with the data protection regulations or not.

For further information about the handling of your personal data by these companies, please visit their websites. RWTH University has concluded a Data Process Agreement (DPA) with the company Zoom. This agreement shall guarantee a level of data privacy according to the EU regulations.

Zoom statement regarding the GDPR:
https://zoom.us/de-de/privacy.html
6 Legal notes

RWTH takes the legal mandate to protect data seriously. Fulfilling this mandate, however, will not be possible without the help of our employees and students.

This document is not part of the corresponding information requirements referring to article 13 et seq. of the General Data Protection Regulation. It only illustrates the use of the tool.

As part of the consent, every user must read and agree to a separate information and declaration for the processing of data before the actual use of the tool. The declarations for lecturers and students can be found at:

https://video.cls.rwth-aachen.de/gebrauchsanweisungen/#rechtliche-hinweise
The RWTH has a clear position on student rights in the context of the invitation to web conferences and webinars:

(1) Participation in a Zoom lecture is voluntary. If a student refuses to use Zoom, they may not be able to attend the lecture and an evaluation of their achievements in the lecture subjects may be impossible. In this case, the student has to attend the lecture at a later time.

(2) In general, students cannot be obliged to indicate their real names in all lectures.

(3) In general, students cannot be obliged to indicate their real email address in all lectures.

(4) In general, students cannot be obliged to create a Zoom account in all lectures.

(5) In all lectures that require class attendance, lecturers can oblige students to activate their video transmission or to use their own avatar picture either during the attendance check at the beginning of the lecture, randomly or constantly during the lecture.
6 Legal notes

Legal note I: Lecturers have to clearly communicate that attendance is voluntary, as pointed out in (1), and which consequences may result from not attending the lecture.

Despite the anonymization pointed out in (2) to (4), there is no legally free space online. If you, as a student, abuse anonymity for criminal offenses, it is possible to ask for information about your user data.

In the further course, criminal and civil law consequences can arise in the case of insults, such as compensation payments. The university is also entitled to impose sanctions, such as exclusion.

For example, in a proceeding, the Green politician Renate Künast asked for information about the user data of those users of Facebook who had previously insulted her on this platform.

Legal note II: Please note that no participant may share objectionable or possibly illegal content.
Legal note: Before the meeting, you can indicate a user name. You are not obliged to use your real name. We strongly recommend anonymized participation in order to minimize data.

The anonymization must not, however, deceive the users into assuming that there is a legally free space online. If individual participants abuse anonymity for insults within the meaning of Section 185 of the German Criminal Code (StGB), it is possible under Section 14(4) of the Telemedia Act (Telemediengesetz) to request their user data from "Zoom", in order to enforce further rights. (Recent judgment of the Berlin Court of Appeal with a decision of March 11, 2020 Ref.: 10 W 13/20. In this proceeding, the Green politician Renate Künast asked for information about the user data of those users of Facebook who had previously insulted her on this platform.)

In the further course, criminal and civil law consequences can arise in the case of insults, such as compensation payments for the violation of personal rights, cf. Section 823 of the German Civil Code (BGB). The university is also entitled to impose sanctions, such as exclusion.
7 Further information and help

If you want further information and watch video tutorials from Zoom, please click on the following links:

https://support.zoom.us/hc/en-us
https://zoom.us/resources
https://support.zoom.us/hc/en-us/articles/206618765-Zoom-Video-Tutorials
https://www.youtube.com/playlist?list=PLKpRxBfeD1kEM_l1lld3N_XI77fKDzSXe

or read the written instructions:

https://support.zoom.us/hc/en-us/categories/201137166
7 Further information and help

For information, instructions and news around our services, please visit our homepage:

https://video.cls.rwth-aachen.de/

If you have any problems, please contact our helpdesk:

video@cls.rwth-aachen.de

Please note our separate guides to

- Conducting webinars using Zoom, and
- Participating in web conferences and meetings with Zoom.

You can find these guides under https://video.cls.rwth-aachen.de/gebrauchsanweisungen.
Center for Teaching and Learning Services CLS
Kackertstraße 15, 52072 Aachen

info@cls.rwth-aachen.de
https://cls.rwth-aachen.de