Hold online lectures with Zoom and record if necessary

last update: 27.10.2020

Using Zoom, data is transferred to the USA. KIT does not operate the service itself and, therefore, cannot guarantee the confidential handling of your personal data. However, due to its Privacy Shield certification and the standard stipulations of the EU Commission concluded with KIT, Zoom Video Communications Inc. is obliged to ensure a level of data protection that is in line with the EU (see the Privacy Statement for the use of Zoom at KIT: https://my.scc.kit.edu/shib/zoom.php).
For lecturers and university staff the use of Zoom is voluntary.
For further information concerning data protection and IT security of Zoom at KIT, please refer to http://www.zml.kit.edu/corona-live-vortrag.php.
The voluntariness also applies to students. They may not be forced to participate in Zoom-sessions. Students are allowed to and should participate with an alias of their own choice in order not to have to divulge their name to Zoom. Registration and, thus, the creation of a Zoom-account is not necessary for students.

At the end of the document you will find a checklist that clearly summarizes the procedure. However, please familiarize yourself intensively with the entire information.

Zoom offers the option to hold both lectures and seminars online with up to 300 students¹. This document describes a proper procedure for holding a lecture with optional recording or interaction with and amongst students.

There is a separate manual for conducting seminars with Zoom. Alternatively, real-time communication via screen conference can also be realised with MS teams. This option is available to students as well. For MS Teams see http://www.zml.kit.edu/corona-online-seminare.php and http://www.scc.kit.edu/dienste/ms-teams.php.

To enable recording, the lecture is divided into two phases:

Phase A: Only the lecturer(s) speak(s) and shares her/his screen or slides and optionally her/his their video. Students can ask questions in the chat with an alias name or take part in surveys. Due to these precautions regarding data protection, lecturers can record the lecture and later publish it in their ILIAS-classroom. With the settings recommended in this manual, the recording does not contain the chat window or other personal data of students. Recording by third parties without explicit consent would constitute a criminal offence and, thus, strictly forbidden.

¹ On the basis of a previous enquiry, licences for larger lectures are also available for individual cases.
**Phase B:** After the recording has finished, for more interaction, students can turn on their microphones. This allows a discussion or a question and answer session, which makes it easier for the students to participate. This procedure avoids that students are not recorded without their consent.

With this procedure, the data is used as sparingly as possible, if you want to deviate from this, please check beforehand for possible problems arising from this.

**Overview**

- Hold online lectures with Zoom and record if necessary ................................................................. 1
  - Notes on data protection .................................................................................................................. 3
  - First steps ......................................................................................................................................... 3
    - Install the client ............................................................................................................................. 3
  - Lecture planning ............................................................................................................................... 3
    - Important settings before planning an online lecture ................................................................. 4
    - Schedule an online lecture = plan a meeting ............................................................................... 5
  - Invite students to the lecture ......................................................................................................... 8
  - Further preparations for a meeting ................................................................................................. 8
    - Using poll ........................................................................................................................................ 8
  - Execution of a date of the online lecture ......................................................................................... 11
    - Prepare yourself about 10 minutes before the lecture ................................................................. 11
    - Start the non-interactive (first) part of the lecture ...................................................................... 16
    - Go to the discussion part (last part of the lecture) ..................................................................... 20
  - Dealing with disruptive participants ............................................................................................... 24
  - Downloading the Recordings and Providing on ILIAS ................................................................... 24
  - Info & Contact Details .................................................................................................................... 27
    - License indications ......................................................................................................................... 27
    - Impressum ..................................................................................................................................... 27

---

Important notes are marked yellow.

Additional information is marked in blue.
Notes on data protection

Zoom is currently a good way to carry out the teaching despite corona measures. Nevertheless, it is important to point out that ...

- Zoom is a cloud-based service
- data are transmitted to servers in the USA
- Zoom is subject to the common data protection guidelines
- Students should participate in lectures and seminars without their own Zoom-account and registration
- every user decides for himself/herself whether he/she wants to use Zoom.
- No user (as usual regarding concerns of internet usage) should transmit sensitive data via Zoom - neither spoken nor in chat.
- Participation in online lectures or online seminars must always be voluntary
- You can also participate without the Zoom-app using your browser (Edge or Chrome).
- This security information should also be forwarded to the students in advance. A sample text for this is in progress and will be made available at http://www.zml.kit.edu/hinweise-zoom.php.

First steps

These instructions require a licence provided by the KIT and the successful activation of the new KIT-account. In the following, the default settings for KIT-accounts at Zoom are described. Accounts created independently may differ from the options and settings regarding very important aspects.

Install the client

To hold a lecture, the installation and use of the Zoom app is recommended for lecturers (not for students). You can download it here: https://zoom.us/download. Further information on downloading the clients can be found on https://support.zoom.us/hc/de/articles/201362233-Wo-lade-ich-die-neueste-Version-herunter- (Link zur englischen Seite nötig). Students can participate with the Chrome browser for example.

Lecture planning

On the website www.zoom.us you can log in to plan the lecture with the account associated to your KIT-licence. If you already have another Zoom account, e.g. for private purposes, please have a look at your profile to see whether you are logged in with the correct account. The registration e-mail should be in the KIT-pseudonymous form ab1234@(partner.)kit.edu.

Zoom is a meeting service. Therefore, in the following text, whenever the settings of Zoom are concerned, the term Meeting used on the Zoom website will be used instead of Lecture.
Important settings before planning an online lecture

Some security settings have already been made by the KIT. Some of these settings can be changed, others are locked against changes for reasons of data protection. With a click on "Settings" (left) you can make basic presets for your online lectures.

You only need to make these settings once. They apply to all meetings that have been created with your account.

Settings for optional recordings

The recording is done via the Zoom-cloud. With local recording, it is not possible to prevent recording students in case of accidentally switching on their cameras.

These settings, which you need to change in advance, are absolutely necessary to ensure that no personal data of third parties is recorded. Such a recording without consent to the recording would be a punishable offence. Therefore, please check your settings carefully.

A recording is recommended to allow as many students as possible to have access to the lecture content during this exceptional situation. Many students may be unable to attend lectures due to illness or problems with their internet connection. The recording can be published as a stream via ILIAS for a limited group of users and it can also be deleted at any time. Recordings are only available in the Zoom-cloud via your login and will be deleted automatically after 30 days. You can delete them manually at any time before.

The settings for recording in the cloud can be made in the web interface in the "Recordings" section of the settings. Make the settings shown in the figure and apply them by clicking "Save". The cloud recording must first be activated, it is deactivated by default.
- With "Record active speaker with the shared screen" the video image of a second speaker is also recorded. Of course, this person must be informed in advance and must have given his or her consent. If you only hold the lecture alone, this setting does not affect another person's privacy.
- With "Record thumbnails on shared screen" your video image or profile image will be displayed next to the slides in the recording. Omit this setting if you want to record the slides only.
- You should refrain from recording chat messages and gallery view to avoid recording other people accidentally.

Since quarantine can hit everyone very unexpectedly, always give access to a second person as a secondary moderator. Please let this person know in advance. In case of doubt, this person is then able to activate, hold or at least cancel the lecture.

Settings for more interaction

In the settings in the section "Meeting", you can also activate the option for polls in the meeting.

These polls are made for voting on simple questions. The polls can be prepared in advance and then used during the lecture to activate all students. You can start the pre-prepared polls during the lecture. Your students will be shown a poll window and be able to answer by clicking on them. As soon as you are satisfied with the number of answers, you can end the survey and – if you wish – display the results.

Schedule an online lecture = plan a meeting

To schedule an online lecture, a meeting is created in Zoom. For a lecture, you do not have to plan each date individually but can create it at once - as a series of meetings.

Click on "Schedule a meeting" at the top centre of the screen.
In the first section, you are asked to name the meeting and plan the times

Via "Recurring meeting" you can use one meeting for all appointments during the semester. If the lecture has several dates in the week at different times, this cannot be set, but you can use and start the meeting at any time outside the scheduled dates.

In the second section, you regulate access or substitution options

Important settings:
Do not check the box for “Registration”. For reasons of data protection, students should be able to participate with an alias which they can choose freely and without having to register for Zoom.

By default, a "meeting password" is required. Students can still easily access the lecture, but this effectively prevents so-called "Zoom bombing" by third parties.

In the meeting options, "Enable join before host" is not activated by default and "Enable waiting room" is preset. Thus, students are kept in a waiting room until the host – you – are in the Zoom-room to start the lecture. The meeting room can thus not be used for pranks outside the lecture times.

For alternative presenter you can type in different KIT accounts, which are also registered for Zoom. Use the KIT’s pseudonym like ab1234@partner.kit.edu. The people mentioned in this section can start and hold the lecture as substitutes for you even you are absent.

Save and generate a link

At the bottom, save all the settings you have made. Thus, you generate a link to the virtual lecture hall. You will also see the meeting-ID, i.e. the number of your virtual lecture hall. The assigned password is also displayed.

Under "Invite participants", you can distriubute the link for your students on ILIAS. Your students will directly enter the virtual lecture hall. The link already contains the meeting ID and the meeting password.

The meeting-ID and password or the link to the meeting room should be treated as confidential. Do not publish it on the Internet outside of ILIAS and the like. Advise your students not to do so either. With this information, everyone can attend the lecture. If you feel that the link has been leaked, you can edit the meeting again and change the meeting password. Then the link changes and the previous one becomes unusable. In this case please remember to provide your students with the new link in time, e.g. via ILIAS, so that they can continue to attend the lecture.
Invite students to the lecture

To attend the lecture, your students need the link to the meeting (see above). You must, therefore, provide this link at a suitable location. The recommendation is to do this in the corresponding ILIAS-classroom. To do so choose "Add new object" and the object type "Weblink" in ILIAS.

Then enter the URL of the Zoom-meeting and assign a title.

You must inform your students with the following note:
"Participation is via Zoom and it is voluntary. Please read and understand https://s.kit.edu/zoomhinweise beforehand."

The information text behind the URL informs the students about the risks associated with Zoom. By clicking on "Create web link" you will transfer the link to your course. The link will then be displayed accordingly in the course.

Students can then click on it to enter the virtual lecture hall. They will be asked to enter the virtual lecture hall either with the app or directly in the browser.

The Campus Management System is usually not suitable to distribute the link to the meeting.

Further preparations for a meeting

Using poll

With surveys, you can make lectures more interactive. In Zoom, you can conduct short polls that you prepare in advance in the web interface. In the meeting-information of the web interface, you can create separate polls for each lecture series during the preparation. In the list of your meetings, click on the name of the meeting of any session:
At the very bottom of the page, you can see surveys you have already created or you can create new ones.

For your first poll, click on "Add".

- Give the poll a title
- The "Anonymous" button only refers to hiding users who are logged in to Zoom. Our students are asked to work without Zoom-registration. Therefore, this usually does not affect their privacy.
- You can create single or multiple-choice questions.
- Enter the question text and answer options.
- You can add more questions below.
- A survey can thus consist of one or more questions that are to be answered by the participants at a certain time during the online lecture.
- When you have finished the poll, "Save" the survey.
- If you prepare a generic survey with "My answer is A, B, C, D", you can also spontaneously use this tool for any question during the lecture.

You can prepare several surveys for special occasions in the lecture.

Later on during the lecture, you can quickly start the surveys and choose from the list of prepared surveys.

The Use of Breakout Rooms for Group Work

If you plan group or partner work during your online lecture, it is highly recommended to make sure that the breakout rooms are enabled before creating the session. You can find this button in the settings-menu on the left side.
If you have a list of participants, you can also assign individual participants to one of the breakout rooms in advance.

Alternatively, students can be assigned to the breakout rooms during the session. Likewise, they can move themselves to a specific breakout room as soon as you switch on the breakout room phase.

**Use of the Whiteboard by the Students**

If students are to use the digital whiteboard in Zoom during the session as part of a collaborative work phase, or add comments, calculations, etc. to the presentation, this must be enabled before the meeting is created. To do so, go to the settings on the left and scroll down to the whiteboard button. Turn it on.
Execution of a date of the online lecture

Prepare yourself about 10 minutes before the lecture

Enter the meeting via the link from your Zoom-account (Meetings). If installed, the link opens your Zoom-client. You are then automatically logged in and can enter the room directly. Students are kept in the waiting room.

If you can only access the waiting room, you were not logged in.

Typical display whilst being in the waiting room

Upon entering, you will be asked whether you would like to participate with "Computer Audio". Click the button to use your computer's microphone and speakers. In the dialogue box, you also can test the speakers and your microphone. When using a hardware combination for the first time, you should do this to ensure that the configuration works.

For better audio quality and to avoid feedback, we recommend using a simple headset.

Make sure your microphone is turned on - both on Zoom and your computer. We strongly recommend that you test this beforehand with someone who can give you feedback on whether you can be heard clearly.
After that, you will be in the room and a window will appear as shown.

Before the students in the waiting room enter the meeting, you should take a few seconds for some last but important preparations.

These preparations aim at avoiding disturbances during the lecture and to make you start confidently.

- In the KIT-settings, your audio and camera are not activated. This can be changed in the programme’s preferences. **Activate your microphone** and, if you wish, also your camera.

  With the “virtual background” option, you can also replace the background in the video with another image to protect your private environment. Note that this only works out well if your devices are sufficiently powerful: https://support.zoom.us/hc/de/articles/210707503-Virtual-Background.

- Activate the participant view by clicking on “Participants” in the lower control bar to display all present participants on the right. When Zoom is in full-screen mode, the list of participants is displayed as a separate window. In the list of participants, you can see who is already in the
meeting and who is waiting in the waiting room.

- Click on "Mute all" at the bottom of the list of participants. A dialogue box appears.

  ![Zoom screenshot showing Mute all button]

  Make sure to uncheck the box "Allow participants to unmute themselves". Click on "Continue".

  ![Zoom screenshot showing Allow participants to unmute themselves option]

  In this way, you can prevent participants from interrupting the presentation by voice and being accidentally recorded during a lecture recording.

- In the following, you should prepare your presentation. An existing PowerPoint file has to be opened for this purpose. To be able to see the Zoom-controls during the presentation, start them in "View by an individual (window)" mode. You make these settings in PowerPoint.
under “Screen presentation > Set up screen presentation”.

• Then, you can start the presentation as usual. A window will open instead of full-screen mode.
• Now release the presentation or other screen content in Zoom. To do this, click on “Release screen” in the control bar at the bottom of the zoom window.

You will now see a preview of all programs and other options for splitting the screen. Select the PowerPoint window and click on “Share screen” in the lower right corner of the dialogue box.
• The PowerPoint window has a green frame now.
To later stop the screen-sharing, click on the red button above.

You can end the split-screen at any time, e.g. to show different content. To do this, click on the red "stop"-button at the top.

At https://support.zoom.us/hc/en-us/articles/203395347-Screen-Sharing-a-PowerPoint-Presentation#h_eb8ba928-2a24-41fd-ac1a-57d4d65326a5 you will find further options for splitting the screen, e.g. if you are working with a second screen. Besides slides, you can also share the whole screen or the display of other programs.

If you have a second camera, you can start the transfer with a camera which is not your webcam via "Share screen > Advanced > Contents of 2nd camera". Alternatively, you can go down to select another device in an ongoing transfer via "Video Settings > Video Camera". This is suitable, for example, for streaming an arithmetic exercise if you prefer to work with pen and paper or do not have a tablet.

To do this, connect the second camera to your PC (e.g. via USB or iOS devices via AirPlay).

- Disable the comment-option for students. By default, students can also comment on the content, e.g. for questions etc. In the menu "More" you can switch this off to avoid disturbances. To do so, click on 'Disable student comments'. Later, you can change the settings again.
• Optional: You might need support from another person during the lecture. This supporter is the first person to be allowed to enter the virtual lecture hall from the waiting room. Click "Allow entry" in the waiting list. Once the person is in the virtual classroom, you can make him or her a "co-host" in the list of participants. Then they have the same choices in the virtual room as you do and are able, for example, switch on their microphones to coordinate and present questions from the chat.

With a co-host, you can be supported in the execution of a lecture by an assistant.

Do not use the "Create host" option. You would completely relinquish your rights during the meeting and cannot get them back to control the meeting.

• At the very beginning of the lecture, open the chat window. Thus, you can see questions from students during the presentation. This is especially important if you are working without support. To do this, click on "Chat" in the Zoom control bar. Usually, you will find this as the first entry in the menu on the far right when you click on "More".

Now, all you need to do is to arrange all windows to can see all Zoom-windows at the same time.

Now you have finished all preparations and let the participants in the waiting room enter the virtual lecture hall.

Start the non-interactive (first) part of the lecture

Let students enter.

To start the lecture, you must first let the students enter from the waiting room. To do this, click on "Allow all" in the list of participants in the top right-hand corner.
Also, it is recommended to uncheck "Allow waiting room access" in the list of participants in the bottom right corner under "More". Then you do not have to manually let in participants who are late.

Optional: start recording

After having accomplished all these steps, it is time to start the recording. Thus, the future video does not show your preparations, but starts right away with your presentation part.

Due to connection problems or even break-offs, it is recommended to record the meeting and distribute it to the participants on ILIAS at least for a limited period of time.

Please note the information under “Settings for optional recordings” at the beginning of the document to avoid recording students unintentionally. Recording your students without their permission is illegal.

Start the cloud-recording as described. If no separate button is displayed in the Zoom control bar, you will find the recording in the cloud as a separate menu item under "More" on the far right as "Record in the Cloud".

When the recording has started, a cloud-symbol with a red dot appears in the header of the PowerPoint window you are sharing. This is also displayed next to your name in the list of participants.

For participants, "REC" is displayed in red at the top right.

As soon as you are recording, start your presentation
Give a presentation and comment on slides

You can speak now, welcome the students and use your PowerPoint presentation as usual.

In the Zoom control bar, you can use the "Comment" button to highlight something on the slides with different tools. If you click on "Comment", another toolbar opens with various options for highlighting something on the slides.

The annotation tools are described on https://support.zoom.us/hc/de/articles/201362153-Wie-gebe-ich-meinen-Bildschirm-frei-.

Options for student reactions during the presentation

- Students can comment or ask questions via the chat.
- Surveys prepared beforehand can be used to quickly display what students are thinking about an issue or to motivate students to think along.

To do this, click on "Poll" in the toolbar. A dialogue box will appear where you can select from the prepared surveys. Select the desired survey. And click on "Start survey".
A smaller window will pop up and can follow the students’ answers.

Students will see the question and be able to answer it. Press "Enter" to send the answer.
You can end the survey at any time with "End survey".

Afterwards, you can use "Share results" to show the results for everyone, or you can start the survey again.

**Go to the discussion part (last part of the lecture)**

When you finished your presentation, you can stop recording and allow more interaction from participants.

**IMPORTANT: Stop the recording first**

*First, stop the recording.* This is absolutely necessary. In the "More" menu you will find the option "Stop recording".
A dialogue box is displayed.

Confirm with "Stop recording". In the control bar and next to your name in the list of participants the display for the recording should disappear. The cloud with the flashing red dot should not be visible anymore.

This method ensures that no student data is recorded.

Giving the floor to the participants

For the lecture part, the participants were muted. Therefore, in this second part, you need to unmute them. Please ask those students who have questions to either write in the chat or raise their hand and then speak via audio.

The use of the microphone must always be voluntary.

To allow participants to contribute via audio, unmute all participants from the beginning of the discussion-part. You do this clicking "More" in the list of participants by "Allow participants to mute themselves".
Participants who want to do this via audio are asked to raise their hand first. Participants will find this option in the "More" menu.'

When participants raise their hand, you can see this in the participation list by the hand symbol.

If you move the mouse over a person in the list of participants, you can also manually remove requests to speak with "lower your hand" if this is forgotten after answering the question.

Do not use the "Audio on" option, as this would enable a participant's microphone. Give the word verbally to a person who wants to speak and ask them to activate the microphone themselves. Participation via audio or video must always be voluntary.
Ending the Online-Seminar

At the end of the session, you need to end the meeting. To do this, select the "End meeting" option from the "More" menu.

You will be asked whether you only want to leave the meeting, or whether you want to end it for everyone. Click on "End the meeting for all". By doing this, you close the room for everyone and end the meeting for all the participants at once.

The session of the lecture is now successfully ended.
Dealing with disruptive participants

The recommendations and settings above make interruptions largely impossible or very difficult. However, since students participate with an alias, they could still try to interfere. You can mute individual participants in the participant list or expulse them from the room. Please be very cautious with this option and use it only in extreme cases.

Participants who insult other people or even make right-wing extremist remarks in the chat should definitely be removed from the virtual seminar room.

You can expulse a person from the room with “Remove” in the “More” menu in the list of participants. If you have problems with this frequently, or if the person simply comes back, you can deactivate the “Allow removed participants to rejoin” function in your profile settings.

The person can no longer join the meeting, at least no whilst using the same device. Even a new alias is not sufficient for rejoining the meeting.

Cf. the blocking list on https://support.zoom.us/hc/de/articles/201362623-Informationen-zu-den-Einstellungen.

Downloading the Recordings and Providing on ILIAS

Unfortunately, the most data-efficient variants in terms of subscriber data are only possible via the cloud. The settings and the procedure described at the beginning of the document ensure that only personal data of the lecturers is included in the recording. Recording lectures is always voluntary.

Only the account that created the meeting can access the recordings. To do this, log in to zoom.us with your account.

For reasons of temporary use and for the sake of data conservation, the forwarding of recordings via the Zoom Cloud is deactivated.
Manage recordings in the Cloud

You can find the recordings in your account in the menu on the left under "Recordings".

If you interrupt the recording in a session and restart it, you will receive several files.

Recordings are automatically moved to the recycle bin after 30 days. After another 30 days, they are permanently deleted. Thus, download them in time.

You can permanently delete recordings by moving them to the bin and emptying it.

A recording consists of one MP4 file in HD resolution. If you recorded the lecture with your camera, it will look as shown in the screenshot, otherwise, only the slides will be visible. In both cases, the audio recording of all speakers is included.
Download recordings

Click on "Download" next to your recordings. You upload them individually as MP4 files. Usually, these video files are highly compressed – to only a few 100 MB.

Keep these recordings locally on your computer in case you need to use them again.

Providing Recordings Available on ILIAS

Recordings can be provided in the specific ILIAS-classroom for the lecture. Thus, you keep control of the distribution as a stream only for those who are enrolled for the lecture. You can also delete the videos at any time.

The instructions for the provision via ILIAS are the same as in the scenario teaching content with screen recording. You can find them at http://www.zml.kit.edu/corona-screenrecording.php at the bottom of the page.
Info & Contact Details

License indications

These instructions and the digital teaching materials by the Center for Technology-Enhanced Learning (ZML) at Karlsruhe Institute for Technology (KIT) are licenced with Creative Commons BY 4.0 International.

Impressum

Publisher Karlsruher Institut für Technologie (KIT) Kaiserstraße 12 76131 Karlsruhe

Contact Karl-Friedrich-Str. 17 76133 Karlsruhe Deutschland Tel.: +49 721 608-48200 Fax: +49 721 608-48210 E-Mail: info@zml.kit.edu