

Videos - How To Do

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This documents provides some practical hints on how to produce videos for online and / or interactive teaching settings (as e.g. Flipped Classroom).

Of course, the short list of options is by far not complete and most of the practical hints are for Mac computers (some ideas for other operating systems are included).

Last but not least, I'm always glad to help, just contact me at laura.keller@math.ethz.ch.

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1 Videos stored on your device

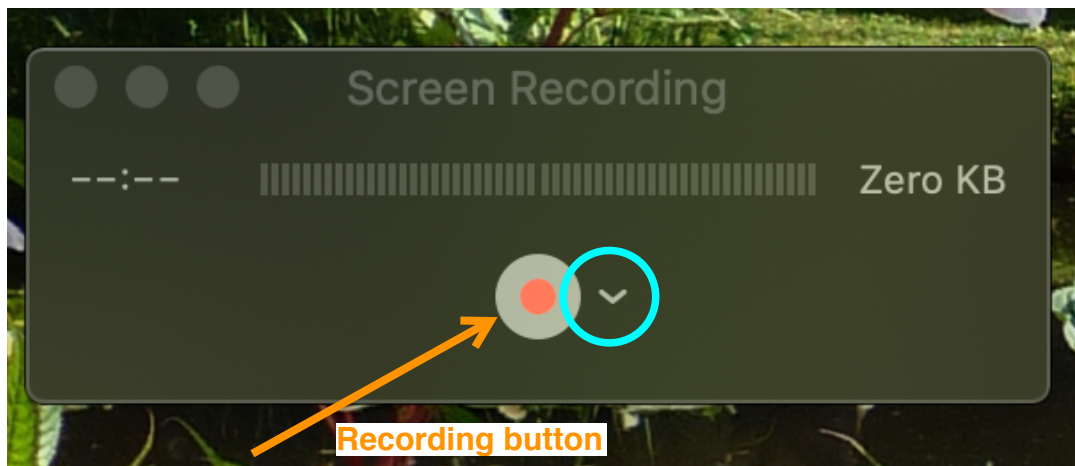
1.1 Slides or PowerPointPresentation with audio

This option is surely the easiest to implement. You just need your computer or laptop a maybe a headset.

Note that in this setting it is possible to highlight some content of your slides or presentation and you can use a remote control to switch from one slide to the other but usually you can not an external pointer. If you want wo use a tool like a pointer you can use you mouse or open your presentation with a programme which includes a pointer tool.

Just follow the following steps in order to produce such a video:

- 1) Write your presentation, slides or whatever you want your audience to see.
- 2) Open your presentation with your favourite programme to view your presentation (for PDFs I recommend "PDF Expert" or "Adobe Acrobat Reader").
- 3) Connect your headset to your computer or laptop.
This is not absolutely necessary as long as you speak loud enough. The built-in microphone does quite a good job.
- 4) On a Mac computer or laptop open the application "QuickTime Player" (this programme usually is already installed on your computer, you find it most often under "Others").
Close the window which opens and allows you to open a file (if this windows opens).
In the programme "QuickTime Player" go to "File" and there select the option "New Screen Recording". Then you see a window as in the picture below.



Click on the arrow next to the recording button and set the options (see e.g. in the next picture).



- 5) Start the recording clicking on the recording button (follow the instructions on the screen).
- 6) Do you video recording!
If you made a mistake, do not worry! Just correct yourself or stop the recording and start a second one or make a pause. After the recording you then have the option of putting together the various pieces of your recording of to cut where something went wrong (see also step 9 below).
- 7) Stop the recording by clicking on the top control line (see picture).



By clicking on the red dot you use to close a window you open the options to save or not your recording and to give it the correct name.

- 8) Now your video is ready (in the .mov-format).
- 9) (optional)
If needed, now can further edit your video, e.g. adjust the part which is visible, shorten your video, put together various pieces etc.
This can be done using e.g. the programme "iMovie" (this programme as well is usually already installed on your Mac).
Open the programme and start a new movie project.
Once done that, you import all the pieced you want to put together, respectively you want to edit and do your editing work.
At the end, export your new video file (usually in the .mp4-format).
Alternatively, one might use again "QuickTime Player" (see <https://trunkuserguide.screenstepslive.com/s/5891/m/18197/1/503716-how-do-i-edit-or-trim-a-quicktime-video-on-a-mac> for further instructions).
Still another possibility to edit videos is provided by "Adobe Media Encoder" (cf. last page of this document, HowTo written by Guillaume Schiltz).
- 10) Share your video via Moodle, Polybox,

Windows users might have a look at the following page indicating a screen recording tool for Windows (10): <https://betanews.com/2019/01/14/windows-10-screen-recorder-utility/>

1.2 Slides or PowerPoint Presentation with audio AND live writing

This option is closest to what one usually does in a lecture hall by combining slides/projections and the blackboard. In this video setting the blackboard is substituted by a table (iPad which preferably supports the Apple Pencil, Wacom (Bamboo) tablet or similar) that you connect to your Mac computer or laptop.

Ensure that you have all the necessary software for your tablet installed. For the iPad you do not need anything additional, for other tablets usually you need a software).

If you do not have a tablet of your own the ISG has one iPad that you can rent and some other tablets.

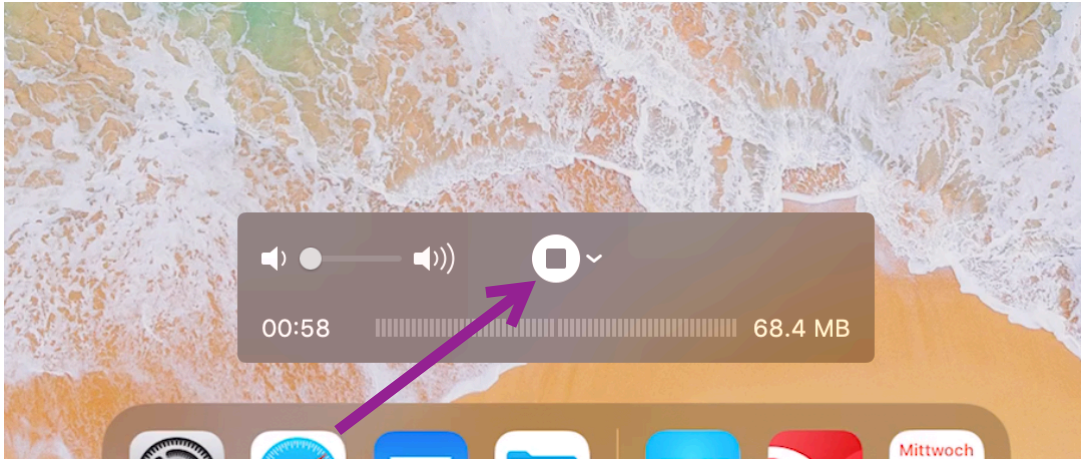
Still another alternative is the kit of the Multimedia services of ETH. Further information about this can be found on <https://ethz.ch/services/de/it-services/katalog/multimedia/video-produktion/studio/diy-produktion-aufnahmerraum.html>.

Just follow the following steps in order to produce such a video:

- 1) Write your presentation, slides or whatever you want your audience to see.
If you want to have sections where you explain something by writing it down while you speak it is wise to include white pages in your presentation. Like that, at the end of your video production you have a written documentation as well.
- 2) Open your presentation with your favourite programme to view your presentation AND to write (for PDFs I recommend "PDF Expert") ON your tablet.
- 3) Connect your tablet and your headset to your computer or laptop.
- 4) On a Mac computer or laptop open the application "QuickTime Player" (this programme usually is already installed on your computer, you find it most often under "Others").
Close the window which opens and allows you to open a file (if this window opens).
In the programme "QuickTime Player" go to "File" and there select the option "New Movie Recording".
Click on the arrow next to the recording button and set the options (see e.g. in the next picture).



- 5) Start the recording clicking on the recording button (follow the instructions on the screen).
- 6) Do you video recording!
 During the whole process a window will remain open on your computer or laptop showing the external screen which is recorded.
 If you made a mistake, do not worry! Just correct yourself or stop the recording and start a second one or make a pause. After the recording you then have the option of putting together the various pieces of your recording of to cut where something went wrong (see also step 9 below).
- 7) Stop the recording by clicking on the top control line (see picture).



By clicking on the red dot you use to close a window you open the options to save or not your recording and to give it the correct name.

- 8) Now your video is ready (in the .mov-format).
- 9) (optional)
 If needed, now can further edit your video, e.g. adjust the part which is visible, shorten your video, put together various pieces etc.
 This can be done using the programme "iMovie" (this programme as well is usually already installed on your Mac).
 Open the programme and start a new movie project.
 Once done that, you import all the pieces you want to put together, respectively you want to edit and do your editing work.
 At the end, export your new video file (usually in the .mp4-format).
 Alternatively, one might use again "QuickTime Player" (see <https://trunkuserguide.screenstepslive.com/s/5891/m/18197/1/503716-how-do-i-edit-or-trim-a-quicktime-video-on-a-mac> for further instructions).
- 10) Share your video via Moodle, Polybox,

Remarks

- For those who have a suitable recent iPad there is an option to record your video WITHOUT connecting it to your Mac computer or laptop:
 - Make sure that in your control center the option "Screen Recording" is available. If not, go to "Settings", then to "Control Center", then to "Customize Controls" and there activate "Screen Recording".
 - Go to the control center, choose the symbol of the screen recording and KEEP it pressed (so called "long press") until the option of the microphone appears. Switch it on and start the recording.
 - Note that in this way, the recording will be saved in "Photos" (and keep in mind that usually your tablet has less memory than your computer or laptop).
- Windows users might try to use a Windows Surface tablet (similar to the solution in the ETH kit that you can find at <https://ethz.ch/services/de/it-services/katalog/multimedia/video-produktion/studio/diy-produktion-aufnahmeraum.html>).
- Moreover, if I'm right our colleague Ralf Hiptmair in his Flipped Classroom setting used a video production setting which is not based on Apple computers or laptops.
- A completely different approach would be to use a video camera and record from there.

1.3 Videos using the Document Camera

Alternatively to the previously described version where you write on a table one could use the document camera in stead of a tablet.

For such a setting the Multimedia services of ETH provide a kit with all the necessary infrastructure and corresponding instructions how to proceed (see also <https://ethz.ch/services/de/it-services/katalog/multimedia/video-produktion/studio/diy-produktion-aufnahmeraum.html>).

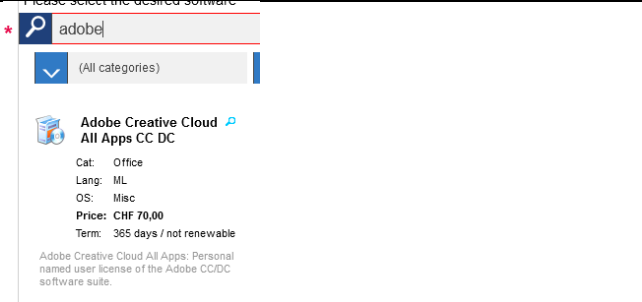

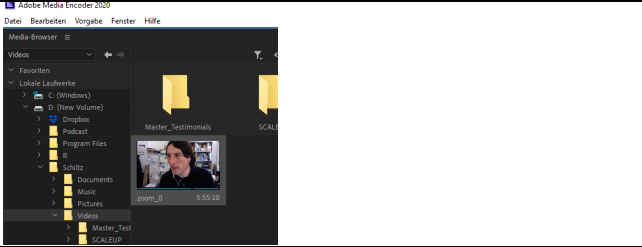
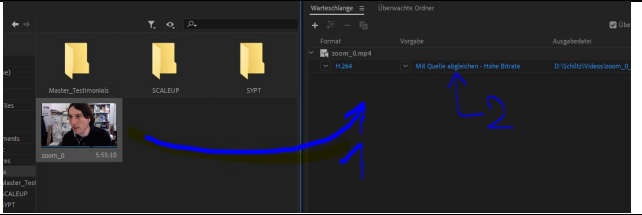
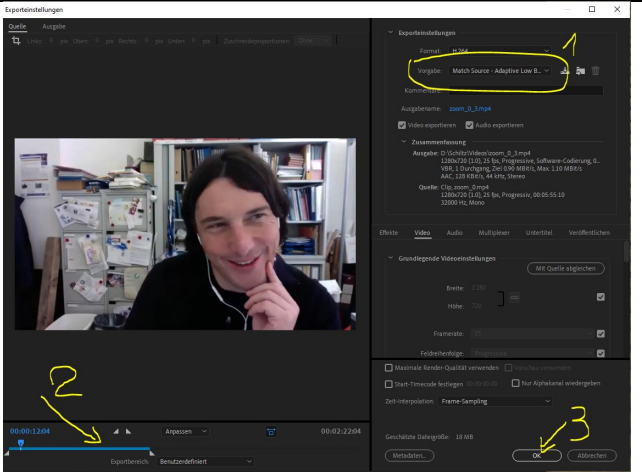
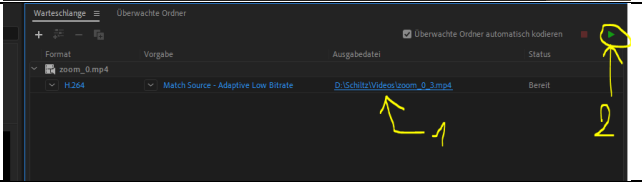
2 Videos stored online (streaming) and / or web seminars

Alternatively, you can produce your videos directly online. Three such options are

- <https://studio.opencast.org> (Mac users please use Chrome or Firefox)
with manual provided from ETH at <https://ethz.ch/services/en/it-services/catalogue/multimedia/lecture-recording/studio.html>
This option is mainly for the production of screen casts.
- <https://explaineverything.com>
This works for the production of screen cast videos as well as for web seminars.
- <https://zoom.us/de-de/zoomrooms/software.html>
This option is slightly more on the web seminar side. It is thus also an option for e.g. exercise classes.
ETH members have a free access to the basic version, see also <https://ethz.ch/services/de/it-services/katalog/multimedia/video-konferenz/zoom.html>.

Note that with some of these options your video primarily remains online and not on your device. Moreover, it might be helpful to use a tablet instead of the trackpad in order to improve writing opportunities.

Video compression and partitioning

<p>A) Get Adobe Creative Cloud (if not already done)</p>	<p>Media Encoder is part of Adobe Creative Cloud (including Acrobat, Photoshop, etc.) Adobe Creative Cloud is available from https://idesnx.ethz.ch/ (cost CHF 70/year)</p>	
<p>B) Activate Media Encoder</p>	<p>Open Creative Cloud Desktop and install Media Encoder</p>	
<p>C) In Media Encoder</p>	<p>Select source video</p>	
<p>(1) Shift source to waiting cue window (2) Click on parameters</p>		
<p>(1) Set parameters to "Match source – Adaptive low bitrate" (2) Select section to encode (optional) (3) click OK</p>		
<p>(1) Select output (optional) (2) start waiting cue</p>		
<p>→ use the most powerful computer available. Coding is time-consuming! → you can fill the waiting cue with several jobs and launch them over lunch, night, etc.</p>		