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1. Overview

Perculus Plus is a virtual class platform that enables live training and meeting via computers and mobile devices. Using Perculus Plus, the following can be performed:

- Live video and audio streaming,
- Screen and application window sharing,
- Document and presentation sharing,
- Live annotation on documents,
- Video sharing.
- Public and private messaging,
- Questions to conduct mini polls and tests.

The sessions are recorded and can be viewed by attendees later.

This document is a manual for instructors who want to conduct live sessions (courses, webinars) on Perculus Plus.

2. Prerequisities

The following are required to use Perculus Plus:

- An internet browser
 - Google Chrome on the desktop (Windows, Mac, Linux or Android)
 - Apple Safari on IOS 12.0 (iPhone and iPad)
- Minimum bandwidth of 1 Mbit/Sec (each for upload and download) ٠
- An average computer or a mobile device
- **FENERBAHCE ÜNİVERSİTESİ** For mobile devices, Android or IOS operating system
- Web camera for live video streaming
- Microphone for audio streaming
- Perculus Screen Sharing Plugin on Chrome for screen sharing. This can be downloaded from Google Webstore.

3. Lobby

The attendees (users except for administrators and instructors) wait in the lobby and can chat with other attendees here. Also, whenever the instructor gives a break, the attendees are taken here again.



4. Session Menu

Clicking the arrow next to the clock opens the following menu:



4.1. System Check

It's a good practice to test camera, microphone, and bandwidth capacity.

You can open up the system check dialog by clicking the System Check link in the session menu.

4.1.1. Status

In the first step of system testing pane, you can see the status of your computer capabilities.

STATUS	2 CAMERA 3 AUDIO 4 MICROPHONE 5 BANDWIDTH					
$\overline{\bigcirc}$	You can use your camera. Number of cameras : 1 You can share audio with your microphone.					
	Number of microphones : 3					
	You have to install Perculus 3 Screen Sharing Extension for screen sharing.					
	Perculus 3 Screensharing Extension					
	Next					

If you want to use live video or audio streaming, you need to have a web camera and a microphone installed. In order to share your screen in Chrome, Perculus 3 Screen Sharing Extension should be installed.

4.1.2. Camera	EÜNIL	
You can select one of	the cameras installed on your syste	em to make it your default camera.
When you live stream, the se	lected camera is used. You can chan	ge your default camera in this pane
whenever you want. Z		
STATUS	2 CAMERA 3 AUDIO 4 MICROPHONE	5 BANDWIDTH
6	Camera Test	
	If your camera is functioning properly, you should see the video of below. If that's the case, please press the 'Camera is working' butto the next step.	your camera in the area on below and proceed to
	Choose your camera	÷
	Previous Came	ara is working Skip

When you select a camera from the list, you should see the camera view. If you see it, you can click "**Camera is working**" and proceed to the next step.

4.1.3. Audio

If you can hear the music being played from your speaker/headset, you can continue by pressing the "I hear the sound" button.

STATUS	2 CAMERA 3 AUDIO 4 MICROPHONE 5 BANDWIDTH
, ⊂]»	Audio / Speaker Test If you can hear the music playing, press the 'I hear the sound' button below.
	► 0:00 / 0:25 ●
	Previous I hear the sound Skip

If you cannot hear the sound, you need to make sure your speaker or headset is working properly.

STATUS	2 CAMERA	3 AUDIO	4 MICROPHONE	5 BANDWIDTH
₽	Microphone • After making sure yo	Test ur microphone is tur	ned on, speak into the	microphone.
	Select microphone			

In the microphone step, the microphones available on your device are listed. When you select the microphone you want to use in the session, the microphone level bar is displayed, and as you speak, it will move accordingly. This indicates that your microphone is working. By clicking "**Next**", you can go to the next page.

If there is no microphone listed here, you need to make sure that there is a microphone connected to your device.

4.1.5. Bandwidth



Sufficient bandwidth is one of the most important requirements of a live session. If you live stream with your webcam, you need a minimum upload bandwidth of 250 Kb/s. For screen sharing, it is around 500 Kb/s. So, for good user experience, the recommended bandwidth rate is above 1 Mbit/s for upload and download. $\ddot{U}_{N/r}$

The test results in this step show you your upload and download bandwidth rates.

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4.2. Change The Display Language

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If you click this link, a language selection dialog gets opened where you can change the display language to one of the supported languages.

5. Content Area

The documents, the whiteboard and the screen that are shared by the instructor in the content area can be viewed from the user panel.

The current image of the whiteboard or the document that is open in the content area can be downloaded by clicking the icon \bigcirc at the bottom left.

To request permission for sharing from the instructor, click the icon 🖞 at the bottom right of the content area.

6. Chat



The Attendees panel can be displayed by clicking the icon \mathbb{R}^2 below the camera section.



8. Questions

To respond to questions asked by the instructor, click the icon $\stackrel{\otimes}{=}$ below the Camera section.



9. Permissions For Sharing

During the session, the instructor may want to open to turn your camera or microphone on. In this case, you are asked to allow or not. Your camera or microphone cannot be turned on automatically.



The instructor can permit you to share content as well. Then, you are notified as follows and can share your content on whiteboard until your permission is revoked.



9.1. WHITEBOARD 201

Clicking the + button on the top centerof the screen and selecting the whiteboard tool, drawing and text tools appear on the left, and an area with a light grey background also appears.



Pencil \checkmark , eraser \checkmark , text $^{T_{20}}$, colour selection O and trash \fbox{II} tools appear in the left menu. These tools can be used on the whiteboard.

By clicking the button \bigcirc located on the lower left corner of the page, the current whiteboard image can be downloaded. This is useful for saving the drawings and texts with the image or presentation displayed.

9.2. Document And Video Sharing

Clicking on the + button on the top centre of the screen and selecting "**Upload Document**" opens a window to upload documents and videos from your device. The upload status can be monitored on the bottom of the files section in the right panel. You can select a pre-uploaded document, video or image from the Files section which is under the camera/microphone area.

Only files in pdf, jpeg, png, mp4 (video) and mp3 (audio) formats can be uploaded. Therefore, if you want to share an MS Office document, first you need to convert it to PDF. Video and audio files are played or paused synchronously with other attendees. When a document or an image is open in the common area, drawing and text tools appear in the left panel.



The image of the document on the screen can be downloaded by clicking the button \bigcirc located on the bottom left corner of the page. You can also display thumbnails of a shared document by clicking the icon \bigcirc on the lower left corner. Then, you can jump to a specific page without navigating through all the pages of that document.

9.3. Screen Sharing

For screen sharing, Perculus 3 screen sharing plug-in must be installed to the Google Chrome browser. Clicking the + button on the top centre of the screen and selecting "Screen Sharing" item will bring up the screen sharing window.

All of your screen	Application window	Chrome tab	
1.Screen	2.Screen		

The first tab in the window is for sharing the entire screen. If you have more than one screen, you can select one of them. The application window tab is used to select and share an application window of a running program.

When you minimize the application window, it's not shared until you open the window again. Also, even if you resize or move the window, sharing continues. If an open browser tab in Google Chrome is to be shared, it can be selected in the tab titled "Chrome tab". Opening other tabs during screen sharing does not stop sharing of this tab.

To stop screen sharing, dick on the sharing section on the top and click on the trash icon on the right of the screen sharing tab as shown in the image below.

