



## Higher School of Economics

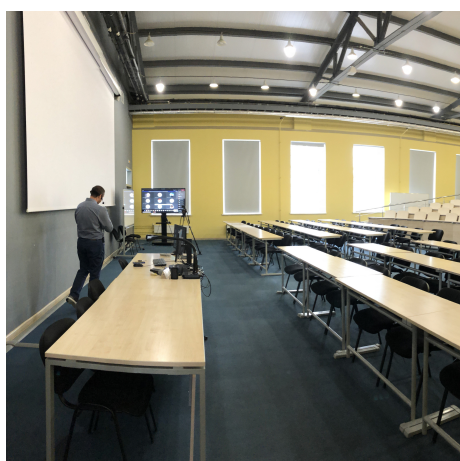
Technologies for new formats of blended and distance learning

Project integrators: Digiton and Edkom. Design and installation of projection equipment performed by SubProject.

“ Thanks to distance learning, we have taken a huge step towards the digitalization of education. The campus now has a modern infrastructure for recording online courses and conducting distance classes; professors and students have mastered new services for synchronous learning; and the curricula of all programs now include online courses. I hope that in the next year we will continue to move towards a modern and convenient educational process. ”

Sergey Mikhailovich  
Kadochnikov, Director of the  
St. Petersburg HSE Campus





An innovative media complex with Panasonic AV equipment will significantly expand the possibilities of distance learning at the St. Petersburg Higher School of Economics. With the new complex, the university will be able to offer convenient and effective education in synchronous, asynchronous, and blended formats. Three lecture halls have been equipped with PTZ cameras with automatic speaker tracking systems, in addition to the installation of Panasonic PT-VMW50 projectors in 24 classrooms. Additional webinar studios have installed professional 4K resolution cameras, and the video studio has undergone a significant upgrade.

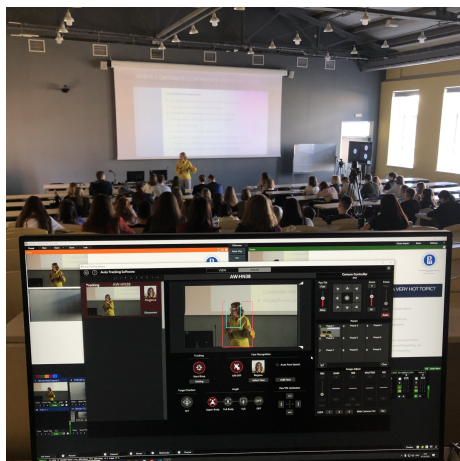
The laser light sources in PT-VMW50 projectors are guaranteed to work for 20,000 hours, and even after that time they maintain their bright colours. Equipping lecture halls with these projectors is a profitable investment in the further development of the university's multimedia park. The PT-VMW50's also come with a wireless Wi-Fi module, which students can use to connect to the projector and display digital materials from their mobile devices.

With three lecture halls in various HSE buildings equipped with broadcasting equipment, professors will be able to conduct classes using a new blended format in which both in-person and remote students can attend the same lecture. The wide-angle 4K Panasonic AW-UE4 camera clearly captures all the notes on the board, while the professor is filmed by the Panasonic AW-HN38 PTZ camera. The latter is connected to an AW-SF100 system that automatically tracks the movements of the lecturer, so that they always remain in the frame without the need for constant manual control by an operator. Students who are attending the lecture remotely see both the materials presented during the lecture - presentation slides and the board - and the professor. The professor can address questions to the students in the lecture hall as well as to the remote students via the 65-type' display for Teams or Zoom meetings.

The AW-UE4 camera can be turned towards the students in the classroom so that remote students are able to communicate with them. Video streams from the cameras are sent to a computer with a vMix 4K program for mixing, graphic editing, streaming, and recording of lectures. The Panasonic AW-SF100 Autotracking Software is installed on the same computer.

The video studio of the St. Petersburg Higher School of Economics also underwent a comprehensive modernization. Video studio employees can now create professional-level content, such as materials for online courses and educational or other projects for campus departments.

With two new Panasonic AG-CX10 cameras, high-quality 4K video can be filmed both in the studio and outside it. The compact 4K video cameras can easily be taken to interesting shooting locations around the city.



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They also provide live streaming capabilities in addition to being able to record onto an SD card. If necessary, multi-camera shooting can be achieved in any of the classrooms by simply connecting the AG-CX10 to the classroom's video broadcasting setup. The video studio is also equipped with everything necessary for high-quality online broadcasts.

The studio will be in particular demand among students in the new master's program in Media Production and Media Analysis, launched at the St. Petersburg HSE in 2020. The program will teach how to generate ideas for media projects and implement them using media technologies, primarily video equipment.

Summing up the results of the year, Director of the St. Petersburg HSE Campus Sergey Mikhailovich Kadochnikov noted: "Thanks to distance learning, we have taken a huge step towards the digitalization of education. The campus now has a modern infrastructure for recording online courses and conducting distance classes; professors and students have mastered new services for synchronous learning; and the curricula of all programs now include online courses. I hope that in the next year we will continue to move towards a modern and convenient educational process."

According to the results of an independent survey conducted by the HSE Institute of Education and Tomsk State University with support from the Ministry of Science and Higher Education of the Russian Federation, which included 20,000 respondents from over 400 Russian universities, 88% of students of the St. Petersburg HSE gave a positive assessment of their campus's readiness for the emergency transition to distance learning. The average value for St. Petersburg was 57%. The second question - "Are you satisfied with the organization of the educational process in the remote format?" - received positive responses from 86% of St. Petersburg HSE students, which is significantly higher than the St. Petersburg average (63%).

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Panasonic equipment used:

**AW-UE4 PTZ camera - 3 pcs.**

**AW-SF100 Autotracking Software - 3 pcs.**

**AW-HN38HK PTZ camera (Black model) - 2 pcs.**

**AW-HN38HW PTZ camera (White model) - 3 pcs.**

**AG-CX10 camcorder - 3 pcs.**

**PT-VMW projector - 24 pcs.**

**AG-VBR59E battery - 4 pcs.**

**AG-BRD50 two-slot charger - 2 pcs.**