

## **Tools recommended for distance testing at Charles University**

Moodle, Turnitin, MS Teams, and Adobe Connect

Moodle, Turnitin, MS Teams, and Adobe Connect are fully supported by the Centre for the Support of E-Learning of the Central Library of Charles University (CL CU).

Other tools mentioned may be used, however, they are not entirely recommended.

### **Tool for remote examinations using tests**

#### **MOODLE**

Moodle Test – university-wide installation of Moodle at Charles University  
<https://dl.cuni.cz/moodle/>

The module test in LMS Moodle is very a flexible tool that can be widely applied and can be used even for distance testing. However, it is a good idea to follow certain measures that help eliminate the fraudulent behaviour of students.

Access to the test must be limited to a certain time and hour, and ideally, access should be password restricted. In addition, students should only be allowed one attempt to pass a test during one examination period. It is also possible to set a time limit for taking a test corresponding to the difficulty of the questions. The test in Moodle allows you to enter different types of test questions. However, not all are suitable for online testing in higher education. “In a university context, it is best to base the test on questions with one best answer. For smaller groups, open questions can be added.” [1] On the other hand, multiple choice questions are not recommended at all by the authors of the book *Testing in the Teaching of Medicine*, “since this presents a number of problems that are difficult to resolve.”

A big advantage to online tests in Moodle is the option to enter random questions from a databank. An instructor should prepare a sufficient amount of questions with the same difficulty for the individual topics that will be tested. Then a selection of several random questions from each topic could be used to make the test. In this way, a test made up of random questions will have a large range of variation, and it would be statistically very unlikely that two students are given the same test.

Another advantage of this type of online test is the automatic grading of students' answers. A student receives the results of the test almost immediately after submitting it. However, in addition to verifying the correctness of their answers and their points (percentage), the instructor should think about whether it would be good for the student to learn about the correct answers to the test questions that they answered incorrectly.

To avoid cheating, it is not recommended to familiarize the student with the correct answers to the test questions.

**Advantages:**

- Time-limited tests,
- Password restrictions,
- Automatic grading,
- Option to enter random questions from the databank.

**Disadvantages:**

- Time consuming test preparation and creation of databank,
- Cheating cannot be completely eliminated,
- For system capacity reasons, Moodle is not recommended for testing large groups (over 50 students at the same time)

For questions or more detailed information, please contact the Moodle Helpdesk at the following address: [moodle-help@ruk.cuni.cz](mailto:moodle-help@ruk.cuni.cz)

[1] Štuka Č, Vejražka M., Martinková P., Trnka J, Komenda M.; Testování při výuce medicíny, Prague, Karolinum, 2013, available online:  
[https://www.wikiskripta.eu/w/F%C3%B3rum:Testy#Typy\\_ot.C3.A1zek\\_a\\_jejich\\_vytv.C3.A1.C5.99en.C3.AD](https://www.wikiskripta.eu/w/F%C3%B3rum:Testy#Typy_ot.C3.A1zek_a_jejich_vytv.C3.A1.C5.99en.C3.AD)

**Tool for verifying and evaluating written work:**

**Turnitin**

Turnitin is a platform for the development of academic writing and its verification. It is useful for evaluating written seminar work.

It is integrated into Charles University's Moodle environment. For the evaluation of seminar work, it is not only for checking originality, but also offers tools for commenting on parts of the text and overall evaluation. The overall evaluation can be uploaded directly in Turnitin, which can save time, allows you to add personal touches to the evaluation, and can encourage students' interest in feedback from instructors.

Turnitin also allows the peer review method, i.e. students in a group evaluating the work of each other.

For more information, click [here](#).

**Advantages:**

- Preventative didactic aspect discouraging plagiarism
- Checking the originality of a work against public resources on the Internet (e.g. <http://seminarky.cz>) and repositories of qualification work from Czech schools
- Purchased licences by Charles University and support from the Centre for the Support of E-Learning
- Students are acquainted with the protocol for evaluation before submitting their work
- A single place for saving work (not sending repeated e-mails)
- With the saving of seminar work at Charles University, the knowledge database in Czech is gradually supplemented
- The licences at Charles University are available in sufficient quantities; additional financial support is not needed

**Disadvantages:**

- Automatic Czech spell check is not integrated
- System does not allow revisions in text, such as MS Word, but only comments

For support at Charles University, see [turnitin-centralni-podpora-l@cuni.cz](mailto:turnitin-centralni-podpora-l@cuni.cz)

**Tools for distance testing:****MICROSOFT TEAMS**

Microsoft Teams is an application for cooperation that, for example, allows you to send text messages, communicate with voice and video, share a desktop, record communication, or have spaces for groups (joint documents, task management ...). Employees and students of Charles University have access to this service via their user accounts in the Central Authentication Service (CAS).

**Advantages:**

- Support from the Centre for the Support of E-Learning at Charles University
- Sharing screens
- Chat in groups and with individuals
- Large number of students in group (max. 250 students for online meetings)
- Students do not need to install the application but can attend exams using a generated link that is opened via a web browser,

- If necessary, it is possible to record online broadcasting/testing (for ordinary control of studies with the agreement of all participants of online meeting, for state final exams according to the terms set out in the Act on Special Rules for Education and Decision-Making at Universities in 2020 and on Assessing the Period of Study for the Purpose of Other Acts (the “Act”))
- Option to turn off the microphone of participants during a lecture so that the person speaking is not interrupted
- Allows testing in real time (beneficial especially for individual testing).

#### **Disadvantages:**

- Does not allow secret voting for commission testing,
- Does not have the option of “raised hands”, which replaces presenting oneself in the classroom.

#### **ADOBE CONNECT**

Adobe Connect allows the distribution of recorded lectures and also immediate real-time instruction. Charles University employees have access to this service through their user accounts for the Central Authentication Service (CAS). The manual can be found here: <https://adobeconnect/navod>.

#### **Advantages:**

- Support from the Centre for the Support of E-Learning of Charles University
- Verification of CAS authentication
- Sharing in general (screen, files)
- Duplex camera and sound
- Chat – Bilateral text communication
- Option to use a panel with questions
- If necessary, it is possible to record online broadcasting/testing (for ordinary control of studies with the agreement of all participants of online meeting, for state final exams according to the terms set out in the Act)
- Allows testing in real time (beneficial especially for individual testing)
- Option to turn off the microphone of participants during a lecture so that the person speaking is not interrupted
- Option of “signing in”, which replaces presenting oneself in the classroom
- Allows dividing participants into groups (could be used during secret voting)

#### **Disadvantages:**

- Application must be installed

For technical support, please contact [tomas.nikl@ruk.cuni.cz](mailto:tomas.nikl@ruk.cuni.cz), phone: +420 777 10 11 66.

## **Tools for distance learning, not completely supported for use during distance testing**

### **ZOOM**

ZOOM is a platform for organizing videoconferences, online meetings, and cooperation that several CU faculties have used in the past. It works on most ordinary systems (Windows, Linux, Mac, Android). The Centre for the Support of E-Learning now offers this tool for online instruction/communication in real time for all faculties of Charles University – user support is handled in this case by the Faculty of Medicine in Plzen. For more information on acquiring a full licence and support, click [here](#).

### **Advantages:**

- Purchased licences by Charles University and support from the Faculty of Medicine in Plzen,
- Sharing of screens – all participants can share their screens with the group. The host may allow more participants to share their screens at the same time. You may create shared notes for the shared screens.
- Suitable for smaller or larger online meetings,
- Allows testing in real time (beneficial especially for individual testing),
- Allows secret voting,
- Planning in Outlook and Chrome using free plug-ins – you can plan meetings directly from the Outlook calendar or Google calendar.

### **Disadvantages**

- Does not work in Firefox
- Danger relating to the protection of personal data ONLY in the case of recording (sharing data with third parties)

Instructions for using the service and how to register can be found [here](#).

Support for new users is provided by the Faculty of Medicine in Plzen. Any questions should be sent to the following e-mail address: [zoom@lfp.cuni.cz](mailto:zoom@lfp.cuni.cz).

The user support team usually responds within 24 hours. In addition to general resources, dedicated web e-learning support from the Faculty of Medicine in Plzen is available.

The information on this web is updated on a regular basis. **Before sending a question relating to support, it would be useful to browse these pages (especially the FAQ**

**section) – many users get answers much faster there.** When arranged in advance, support is available also as remote consultation (via ZOOM, telephone).

## **SKYPE**

Skype supports conference calls with the option of sharing screens, sharing documents, and chats. You can organize a webinar for a maximum of 50 people (i.e. 49 students) in Skype.

### **Advantages:**

- Popular worldwide,
- Easy to use.

### **Disadvantages:**

- Required registration (creation of an account),
- Participants of the calls must be in your contacts,
- Often not good quality and calls interrupted (especially when there is a large number of participants).

## **GOOGLE MEET**

Google Meet tools support video conference calls, desktop sharing for up to 250 participants, and massive streaming up to 100,000 participants, including recording and saving of presentations. In addition to videoconferences, you can broadcast the content of a desktop or separate windows and switch between them. During a videoconference, you can communicate with participants either via audio/video or using an integrated chat.

Google Meet runs as a component of the cloud services package Google GSuite for Education, which is free of charge for educational institutions, including Charles University. An account in the GSuite for Education service is needed to broadcast videoconferences. There are no user account restrictions for videoconference participants – i.e. they do not need to use an e-mail address in the cuni.cz domain, a Google account, or log in via a CAS password. You just need the sent link to participate in a videoconference.

You do not need to install software to connect, and the tool runs in the window of the web browser. Connections are possible with any device, such as a desktop computer, laptop, tablet, or mobile phone. This tool has been used by the Faculty of Science (<http://ga.natur.cuni.cz/google-meet>) and the Faculty of Social Sciences, where instructions and support are available. Support at the Faculty of Social Sciences, which you can contact if you have any questions: Head of IT Bc. Dušan May ([dusan.may@fsv.cuni.cz](mailto:dusan.may@fsv.cuni.cz)).

**Advantages:**

- Simple and intuitive operation for users and participants,
- No software installation needed; broadcast in a web browser window,
- Option of recording and saving presentations,
- Participants may connect via a sent link; no restrictions on account type or authentication.
- Participants may use any type of device, including mobile phones
- During a call, the sound of participants may be turned off so that the lecture is not interrupted,
- Option of communicating with participants during the broadcast using chat,
- Live videoconference for up to 250 participants, streaming for up to 100,000 participants,
- Option of sharing desktops and switching between various windows and programs.

**Disadvantages:**

- A GSuite for Education account is needed for broadcasting videoconferences (free of charge),
- The number of videoconference participants is normally 100, and has been increased to 250 only until July 1<sup>st</sup> as a response to the COVID-19 pandemic.

**Safe Exam Browser**

(<https://safeexambrowser.org/>)

A freely accessible web browser that is available for Windows, macOS, and iOS. Once installed on the equipment to be used for the exam, it turns it into an one-off tool for testing only. All other applications disappear, other web pages cannot be opened, clipboard, shortcuts cannot be used, and any applications and background processes can be turned off. The browser also supports LMS MOODLe and when it is turned on, security options appear in the MOODLe test settings:

## ▼ Další omezení pokusů

Vyžaduje heslo	! ?	Klikněte pro zadávání textu ✎ 👁
Vyžaduje síťovou adresu	! ?	<input type="text"/>
Časová prodleva mezi prvním a druhým pokusem	! ?	<input type="text" value="0"/> minut <input type="checkbox"/> Povolit
Prodleva mezi dalšími pokusy	! ?	<input type="text" value="0"/> minut <input type="checkbox"/> Povolit
Zabezpečení prohlížeče	! ?	<input type="text" value="Vyžaduje prohlížeč Safe Exam"/>
Povolit v testu pokusy v režimu offline v mobilní aplikaci	! ?	<input type="text" value="Ne"/>
Allowed browser exam keys	! ?	<input type="text"/>

This test can only be opened in the Safe Exam Browser, and the “Exam keys” setting can provide an additional level of security so that it is very difficult to bypass the security (open in a non-secure browser).

In combination with a visual inspection using a camera on a mobile phone, where students can be connected using, for example, ZOOM, this solution offers functionality similar to options 1 and 2.

### **Advantages:**

- Uses tools implemented and supported at Charles University,
- High level of security.

### **Disadvantages:**

- Students must install the browser on their devices,
- not completely trivial setup for the configuration file and possible problems with setting the “exam keys”.

## **PROCTOREXAM**

(<https://proctorexam.com/covid-19/> )

- Used by Sorbonne University, the University of Utrecht, the Polytechnical University Montreal, and others...

How it works: Students show their ID cards (student IDs) on the web camera. Using the web camera, it takes a picture of the student’s face and the tool compares whether it is really the person in question. Then the student allows the examiner using the camera on their mobile phone (or on the computer) to look under the desk and all around the room



and also shows the examiner that they do not have any device in their ears. Finally, the student puts their phone in airplane mode, turns on Wi-Fi and the camera in the phone (phone connects to computer). At this point the phone is used as a second medium for monitoring the student from behind. The student may share the screen with the examiner. There are two controls used for cheating – the sharing of screens and the phone which provides a view from behind.

The Central Library of Charles University is currently considering the purchase of licences.

**Advantages:**

- A platform developed especially for online testing

**Disadvantages:**

- It must be installed.

**TOPHAT**

(<https://tophat.com/classroom/online-exam-software/>, <https://tophat.com/covid-19-response/>)

- Used especially by universities in the USA.
- A free version for instructors is being prepared, cooperation with ZOOM

**Advantages:**

- Secured against cheating – the system has sensor settings for “non-standard” movement of students and immediately notifies teachers of unusual movements and any manipulation with the computer.

**Disadvantages:**

- It must be installed.

**Experiences and recommendations abroad:**

**Sorbonne University** – recommends Proctorexam

**Heidelberg** – <https://www.urz.uni-heidelberg.de/en/2020-03-16-digital-tools>

**University of Cambridge – ZOOM**

Practical example of using ZOOM:

Students register for the exam in their information system. They are then tested one at a time in the order in which they registered (can also be used for smaller groups). The examiner has a specific time for each student, so each student knows when to connect (they are informed in advance). The examiner requires the student's computer screen to be shared, and the camera must be on. This ensures that they do not have open notes on the computer and are not reading the responses.

- For online testing, they use tools such as WebEx (<https://www.webex.com/>), Skype, or ZOOM.

If you have any other experience that you would like to share with us, advice, or questions, please contact us by e-mail: [vzdelavani@cuni.cz](mailto:vzdelavani@cuni.cz).