Online Exams with Moodle

These instructions will guide you through the various steps that are required to carry out an online exam with Moodle. The graphic below provides an overview of the exam process.

<table>
<thead>
<tr>
<th>Step</th>
<th>Details</th>
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<tbody>
<tr>
<td>apply for an exam course</td>
<td>- apply for a Moodle exam course by email to <a href="mailto:dipi-support@leuphana.de">dipi-support@leuphana.de</a></td>
</tr>
<tr>
<td>adjust Moodle course</td>
<td>- adjust course settings (title, enrolment method, etc.)</td>
</tr>
<tr>
<td></td>
<td>- customize text templates (welcome text, information for students)</td>
</tr>
<tr>
<td></td>
<td>- if necessary, modify test activity for mock exam</td>
</tr>
<tr>
<td>configure Moodle quiz activity</td>
<td>- in the preconfigured quiz activity for the exam:</td>
</tr>
<tr>
<td></td>
<td>- adjust settings (date, processing time, password, etc.)</td>
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<tr>
<td></td>
<td>- change text template 'notes on examination processing'</td>
</tr>
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<td></td>
<td>- add exam questions/tasks (if desired via import)</td>
</tr>
<tr>
<td></td>
<td>- perform pre-test of the finished test activity, if necessary</td>
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<tr>
<td>enrolment of examinees</td>
<td>- download preliminary exam list form myStudy</td>
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<tr>
<td></td>
<td>- send examinees an email with a link to the exam course, if needed with registration key (if possible at least 1 week before the exam)</td>
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<tr>
<td></td>
<td>- enrolment of students (manually or by registration key)</td>
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<tr>
<td>mock exam &amp; last preparations</td>
<td>- performing a mock exam (preferably 5-7 days before the exam)</td>
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<tr>
<td></td>
<td>- download final exam list from myStudy (at the earliest 3 days before the exam)</td>
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<td>execution of the online exam</td>
<td>- start video conference meeting and briefing on the exam</td>
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<tr>
<td></td>
<td>refer to 'Query on Health and Autonomy'!</td>
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<tr>
<td></td>
<td>- enable access to test activity</td>
</tr>
<tr>
<td></td>
<td>- during the exam: check that all examinees have submitted 'Query on Health and Autonomy' and keep a protocol of the exam</td>
</tr>
<tr>
<td></td>
<td>- at the expiration of time: check that all test results are in</td>
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<tr>
<td>evaluation of the exam</td>
<td>- manual evaluation of the free text answers and verification of the automatic evaluation</td>
</tr>
<tr>
<td></td>
<td>- upload examination list with grades to myStudy</td>
</tr>
<tr>
<td>documentation &amp; archiving</td>
<td>- save the results of the 'Query on Health and Autonomy' and the exams including the evaluation as a PDF file</td>
</tr>
<tr>
<td></td>
<td>- send query results, exam PDFs, exam list and exam protocol to student service</td>
</tr>
</tbody>
</table>
We advise you to perform an online exam with Moodle only if you are already experienced in the handling of the Moodle platform.

You should be familiar with functions such as user management, adding activities or resources, and hiding/showing elements.

A complete introduction to Moodle requires a certain amount of effort in addition to the exam preparation. This guide is based on basic Moodle knowledge and is not suitable for first-time users of Moodle! *

1 Request exam course

To create an online exam with Moodle, please email digi-support@leuphana.de to receive a new Moodle exam course. Please make sure to send your request from a Leuphana email account and indicate which faculty or school you belong to if your email signature does not reveal this.

The teaching service has developed a preconfigured Moodle exam course that already contains important elements and information. Please use this template, which you can adapt to your needs.

The test itself is performed with the Moodle activity quiz. You can import existing question banks from other Moodle courses into the quiz activity of this course (→ see instructions in the appendix).

The exam course includes:

- information for you as an examiner,
- a template with information for students on how to prepare for and take the exams,
- a ready-to-use quiz activity that you can use to conduct a mock exam,
- a template for the Health and Autonomy Quiz,
- a preconfigured quiz activity for the online exam, into which you can directly insert your exam questions/tasks,
- background information on examining and examining tasks.

* If you have not worked with Moodle before, but still want to do an online exam with an exam software, we recommend the use of EvaExam. You can find information about EvaExam here: https://www.leuphana.de/en/university/history/teaching/support-tools/digital-platforms-and-tools/online-exams/evaexam.html
2 Adjust Moodle course

2.1 Adjust course settings

Once you have received your exam course, you should adjust the following settings:

- adjust the course name, if necessary
- set enrolment method and, if necessary, enrolment key (default setting: manual enrolment)
- set course visibility to show in time (set to hide by default)
- if desired, you can change the layout/course format

Recommendation for the enrolment method:

If there are only very few examinees, we recommend the use of manual enrolment, i.e., you add all examinees to the course individually. For larger groups, this method tends to be very time-consuming. In this case, you can set an enrolment key and send it to the examinees by email so that they enrol themselves. The self-enrolment setting must be activated in the enrolment methods. It is not possible to add students using an Excel or CSV file.

When using the enrolment key method, we recommend setting the enrolment method back to manual once all examinees have enrolled, in order to prevent third parties from enrolling in the course unnoticed.

2.2 Define framework conditions

Beyond the mere testing activity, the Moodle course allows you to design the entire exam scenario, including preparation and execution.

Preparation

- Prepare the exam situation by providing students with important information and the opportunity to familiarize themselves with the technical conditions and the framework of the exam.
- For this purpose, we recommend offering students the opportunity to take a mock exam. You can use the existing quiz activity in the section Probeklausur als Testdurchlauf in your examination course, or you can create a mock exam yourself.
- If you are not offering a mock exam, delete or hide this section in Moodle.

Support during the exam

- At the time of the exam (respectively 15 minutes before), we recommend that you meet with the students in a video conference room (e.g., Zoom or GoTo meeting) to answer any final questions and make sure that everyone is ready to go.
- If you are using Zoom, it is best to create a meeting using the corresponding activity in Moodle, or alternatively communicate the meeting ID and password in a text box in the Moodle course.
- After the questions have been clarified and the exam has started, you should switch off the conference tool again in order to avoid unnecessary strain on bandwidth and to prevent communication between students during the exam.
• **Reachability**: According to the RPO attachment, you must ensure that students can reach you during the online exam processing time (mail, phone).

### 2.3 Query on Health and Autonomy

You will find a **Moodle activity** *Choice* in the section *Online Klausur* of the exam course, which you can use to retrieve the students’ *Query on Health and Autonomy*.

Here, the examinees declare that they are medically fit to take part in the exam and that they will do the work independently, without the help of others.

### 2.4 Adjusting the information

- Adjust the information provided in the exam course to your exam scenario.
- Delete any unnecessary information and placeholder activities.

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### 3 Configuration of the Moodle quiz activity and preparation of the online exam questions

**We recommend that you use the preconfigured quiz activity for the exam.**

We have already defined important basic settings that are tailored to the online exam scenario.

This includes the following basic settings:

- The test is handed in automatically (under **timing**).
- The test is limited to one attempt (under **grade**).
- There will be a later evaluation of the test, so students do not see any evaluated results (section **question behaviour**) after the online exam.
- The answer options within questions are mixed. This option is relevant for multiple-choice tasks.
- No browser security is set under **extra restrictions on attempts** in order to ensure that no technical display problems occur when accessing the online exam.
- No review options (*during the attempt* and *immediately after the attempt*) are activated, so students have no opportunity to review their solutions.

After you have switched on the editing mode, you can adapt the basic settings of the preconfigured quiz activity to your exam and insert your tasks/questions in the next step.

You must modify the following basic settings of the quiz activity:

- Seminar/lecture title and myStudy course ID in the name of the quiz activity
  
  Example name: *Online exam Introduction to Business Administration (167844)*
- Welcome text to the exam
- Activation period of the activity (under **open/Close the quiz**)
- Available processing time (under **time limit**)

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• Specify the minimum number of points required to pass the exam (under grade to pass)
• Set password for the quiz activity (under extra restrictions on attempts)

All basic settings of the quiz activity also can be changed and adjusted after test questions have been added.

In addition to question type, question name, question text, and answer choices (or free text blanks), you must make the following decisions for the tasks:
• Layout (Number of questions/tasks shown per page)
• Number of points per task
• Question behaviour (Mixing answers within the question)

3.1 General information
• Enter the title of the exam under name.
• In the description box, you can provide information and advice on how to work through the exam.

In the section timing, you have to define the time frame in which examinees can access the exam. You can choose between the following options. Decide on one of the variants, as they are mutually exclusive. You can regulate the processing time with the following options:
• Activate and define the processing time by determining the opening and closing time of the test.
• Activate the time limit taking into account a time buffer for clarifying any queries.
• Define that open attempts are submitted automatically when the time expires.
• Under the grade tab, you can adjust the grade to pass. The grade to pass determines the minimum number of points required to pass. This must be expressed in a score (e.g., 20).
• Leave the number of attempts allowed at 1 to prevent the exam from being performed more than once.

3.2 Layout
• Under new page, you can select whether one or more questions should appear on a page at a time. For exams with many test questions, it makes sense to spread the questions over several pages.
• You can still adjust this arrangement manually when adding questions.

We recommend free navigation so that students can start with the tasks they feel most comfortable with and also revise tasks they have already worked on using reverse navigation.

3.3 Question behaviour
If you select yes for shuffle within questions, the order of answers for multiple-choice or assignment questions will vary for each examinee.

How questions behave indicates the reaction of the examinees to the answering of individual questions. Deferred feedback determines that the candidates must first work through the entire test and that no feedback is shown to them after the mock exam as well as after the online exam. This option is the default setting. Please do not change it.

3.4 Review options
Review options can be divided into four categories. During the attempt is only relevant for questions with multiple trials. Since the number of attempts in section grade is set to 1, this aspect is not relevant for the examination.
3.5 Extra restrictions on attempts

- The tab **extra restrictions on attempts** allows you to set a password for the test activity (recommended). This will ensure that only those students who are actually registered for the exam take part in the exam.
- Please communicate the password only shortly before the exam date since students can unsubscribe up to three days before this date. Send the password (preferably by e-mail) only to students on the final examination list from myStudy.

**Do not forget to click save after editing!**

4 Editing Test Content

Once the configuration of the test activity is complete, you can now edit the content of your test.

- You can add questions now.
- You can also import existing questions from other Moodle courses (→ follow instructions in the appendix).
- An overview of the different question types offered in Moodle can be found in the appendix.
• After adding questions, you have the chance to change some settings in the question overview of your test activity.

**Maximum grade:** In this section, adjust the number of points an examinee must receive in order to obtain the best score.

**Shuffle:** If this option is enabled, the exam questions are displayed in a random order for each student.

**Page break:** By clicking on the page break icon, page breaks can be added or removed. This way, you can determine how many and which questions appear on a page.

We recommend placing only one task per page. This prevents data loss, as the answers are saved each time pages are switched.

**Move questions:** To rearrange a question, click and drag the question to the desired location.

**Preview question:** You can activate the preview view by clicking on the magnifying glass. You can now see the question from the students’ point of view and can directly adjust the display options.

**Maximum mark:** After each question, you can edit the score for the answers.

### Pre-test of the exam

Once you have completed the exam, we recommend - as is common in research- that you carry out a pre-test.

• Ask a colleague or another person to conduct the exam on a trial basis, focusing on a smooth technical process (of course, you can also ask for feedback on the content of the assignments).
5 Add Candidates to your Course

- Either add the examinee to the course yourself according to the examination list or communicate the link to the course and the enrolment key to the examinee by email - preferably with a deadline for registration.
- After this period, we recommend that you reset the enrolment method to manual so that other people who have gained access to the enrolment key by unknown means do not enrol in the course unnoticed.
- Please note that candidates can cancel their registration up to three days before the examination date. However, we recommend that candidates gain access to the Moodle course early.

6 Conducting a Mock Exam

We recommend that you offer students the opportunity to take a mock exam. This gives students the opportunity to try out the test activity in Moodle and to get to know the navigation and various question types.

The mock exam can either be a test activity with no time limit, which the students can take at any time. Or you can set a date for it and simulate the entire scenario, including a zoom meeting. Such a simulation might be helpful for you as well.

The Moodle exam course already includes a mock exam. The settings correspond to those of the preconfigured test activity.

In order to make the scenario as realistic as possible, for the mock exam

- a time limit of 60 minutes is set
- and a registration key is assign (="Probeklausur"). If necessary, you could adapt it and would have to hand it to your students before the mock exam.

As a teacher, please do not take the mock exam or the online exam yourself (not even in the role of a student), otherwise you will not be able to see any assessment views.
7 Final Preparations
- After the withdrawal period has expired, download the final exam list of participants from myStudy and communicate the password for the test activity (= online exam) to these students.

8 Conducting the Online Exam
- Open the video conference room (e.g., zoom) and communicate all important information to the examinees.
  You and the students are now in both the video conference room and the Moodle course.
  Clarify how to deal with comprehension questions that arise during the exam.
- Once all the important questions have been clarified, ask students to participate in the Health and Autonomy Query (separate voting activity).
  Beforehand, switch the voting activity to available.
- Afterwards, students can start working on the online exam.
  If the test activity was set to unavailable, set it to available previously.
- Please remember to also fill in and sign the examination protocol from myStudy for the online examination and send it to the Student Services after the examination has been completed.
- If you wish, you can switch the test activity back to unavailable.
  Of course, you can still view them yourself.
- Remind students that closing the browser will cause data loss.

Please point out to your students that they must not close the browser under any circumstances while the exam is in progress. Otherwise, the results of these students will not be recorded and, therefore, not be displayed to you under the review screen.

9 Evaluation of the Exam
- To view the results of the exam, click on the cogwheel within the test activity and under results > grades.
• You can now select which tests (in progress, finished, ...) you want to display. It is recommended to leave all the checkboxes checked.
• Afterwards, click on show report.
• The report shows you the examinee’s data (name and e-mail address), time spend, the total score achieved, and the score for each task.
• The table contents can be downloaded as a file.
• Essay tasks (see screenshot Q.3) first must be assessed manually before a final assessment can be made. Click requires rating to rate a task.

• Under results > responses, you can display details of each question and answer of the examinees. Here you can see which answer the students have chosen instead of the correct answer.
• Choose results > statistics for test information and a test structure analysis.
You can display essay tasks collectively under results > manual grading and perform the evaluation there.

10 Documentation and archiving of exam results

- For the purpose of archiving and documentation, a PDF document of the exam results must be sent to the student services for each examinee.
- Currently, the only way to archive online exams in Moodle is to manually download the exam of each examinee as a PDF file.
- For this purpose, usage of the browsers Opera or Chrome is recommended to get all results in print format. Other browsers such as Firefox, depending on the version and operating system, may, unfortunately, show incomplete information.
- For archiving, first open the test activity and display the results for the evaluation (Chapter 9) (cogwheel icon> results > grades).
  All students of the examination course are displayed in tabular form.
- Select a student and click review attempt below the student’s name.
• Create a PDF printout of the results report for each student using the print option provided by your browser.

• Use the print preview to ensure all results are displayed in the print version.

• To ensure unique identification of the files, name the file according to the following format:
  ○ Last name_matriculation number
  ○ e.g. Schmidt_635428.

• For all online exams, grades are recorded as usual using the Excel spreadsheet provided in myStudy. Examiners enter the grades and upload the list back to myStudy.

For consultation and questions you might have concerning taking an exam with Moodle, please contact the Digital Teaching Support Team of the Teaching Service (digit-support@leuphana.de).
### Appendix

#### Types of Questions

Below is a list of the question types you can create in Moodle. We would recommend that you only use the question types "Calculated" and "Cloze" if you already have experience with these question types. This is because these question types are more cumbersome to design and create, and also require time for implementation during testing on both sides (teachers/students).

In the mock exam, the question types true/false, numerical, essay, and select missing words are represented.

<table>
<thead>
<tr>
<th>Type of question</th>
<th>Explanation</th>
<th>Example</th>
</tr>
</thead>
</table>
| Multiple-Choice  | This type of question allows students to select a single or multiple answers from a pre-defined list. | Which of the following trees belong to the group of deciduous trees?  
A. Birch  
B. Maple  
C. Pine  
D. Alder |
| True/False       | Questions of this type involve deciding whether a statement can be classified as true or false. This type of question is particularly suitable for causal links between two statements, e.g. if-then statements or statements containing the word "because". | If the speed limit is exceeded on the motorway, one is at risk of having to pay a fine.  
Answers:  
- true  
- false |
| Short answer     | In response to this type of question, a word, short sentence or similar is inserted in a blank. | What is the German translation of exam?  
Answer to be entered in the blank: Prüfung |
| Numerical        | The question is answered by entering a number. This type of question is similar to the short answer, but in Moodle you can specify a range of values that are considered correct. | In millions, approximately how many inhabitants does Germany have?  
Answer: 82 million  
(correct are answers in the range of e.g. 80 to 84 million) |
| Calculated       | This type of question is useful if a task is to be solved using a mathematical formula. The variables necessary for the calculation of the formula are defined in the question text. The numerical value calculated by the student must be entered in the answer field. | Calculate the area of the square with the side lengths  
a = 2 cm and b = 3 cm.  
Answer: ___cm² (Formula: a * b) |
<table>
<thead>
<tr>
<th><strong>Essay</strong></th>
<th>The essay question type is used to answer an open question using a freely formulated text within a Moodle text editor. The text is not automatically corrected by the Moodle system, but manually by the teacher. Describe the course and results of a medical examination.</th>
</tr>
</thead>
</table>
| **Matching** | Questions of this type are answered by allocating an answer choice from a drop-down menu. The answer options are not arranged in any order. Only one answer is correct. Allocate the correct capital to each country. A. Austria  
Brussels  
Vienna  
Berlin  
B. Germany  
Brussels  
Vienna  
Berlin  
C. Belgium  
Brussels  
Vienna  
Berlin |
| **Random short-answer matching** | This type of question is about assigning a corresponding answer to several already recorded questions of the type "short answer" from a list. Only one answer is correct for each sub-question. A. What is the German translation of exam?  
Übung  
Prüfung  
Aufgabe  
B. What is the German translation of exercise?  
Übung  
Prüfung  
Aufgabe  
C. What is the German translation of task?  
Übung  
Prüfung  
Aufgabe |
| **Embedded answers (Cloze)** | With this question type, gaps are incorporated in a text passage, which must be filled accordingly. Different answer formats can be defined for the gaps. For example, the answers can be selected from a list of predefined answers (matching), filled by entering a number (numerical answer) or by entering a word (short answer). The fairytale of the Brothers Grimm „Snow White and the [ ] dwarfs“ is very popular with children. The house of the dwarves is located behind the [ ] (matching: gardens (wrong); mountains (correct); seas (wrong)). Snow White choked on a poisoned [ ] (short answer: apple), which the wicked stepmother brought to her. |
| Drag and drop onto image | With this type of question, images or text on storage areas can be dragged onto a background image. The filing area is determined beforehand and is visible to the students. This task type is suitable for labeling diagrams or for assigning elements in circuits, for example. |
| Drag and drop into text | Drag-and-drop can be used for cloze texts as well as images. Missing words in a question text are filled in by drag-and-drop. |
| Drag and drop markers | Markers are dragged and dropped onto a background image. The storage area is not visible to the students and allows them to recognize the areas independently, e.g. conspicuous features in X-ray images. |
| Calculated simple | Simple calculated questions are a simpler form of calculated questions that contain numerical questions with interchangeable values. These values are randomly selected from a list each time the test is taken. |
| Select missing words | Missing words in the question text are filled in via drop-down menus. |
| Other | **Description**

This 'question type' does not contain a question itself and does not require an answer. Descriptions are used, for example, to point out subsequent tasks or complex questions.

**The following questions refer to the excursion last Friday. Please try to answer them.**

![](image)

![](image)

![](image)
Import of question banks from other Moodle courses

To use question banks from existing courses in your Moodle exam course, you first have to export the question bank and import it into your course. This guide shows a step-by-step instruction with screenshots.

There are no questions in the question bank in your exam course before you import it.

Export of a question bank from an existing course

Open the course from which you want to export questions. On the course page click on the gear symbol in the upper right corner > More...

You are now in the course administration. In the section Question bank select the option Export.

Now you can export your questions to a file. For export and immediate import into another course we recommend the Moodle XML format.

In this section you can also select whether you want to export only a specific category of questions or all questions from the question bank. Finally, click Export questions to file.
Import a question bank in the new exam course

Now change to your exam course. Navigate via the gear symbol > More... to the course administration.

In the course administration, select the option Import.

Select Moodle XML format again for the file format and then upload your question file. Click on Import to import the questions.
Don't be confused that when importing questions from the file, the question text is displayed instead of the question title. Click Next to confirm.

Your questions are now imported into the question bank of your exam course.