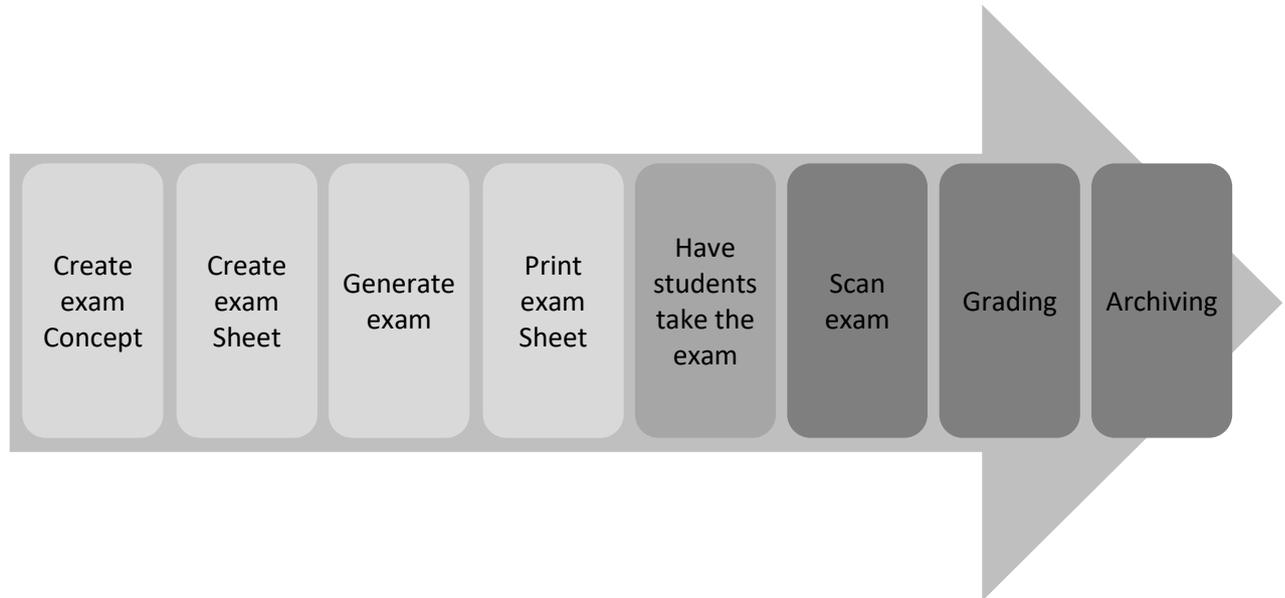


Scan Exams with EvaExam

In this handout you will be guided through the different steps from creating to performing scan exams with EvaExam. The graphic gives you an overview of the steps.



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1 Access to EvaExam, Creation of the Examiner Account

The Leuphana teaching service will be happy to provide you and your staff with an examiner account. Please send us an e-mail via digi-support@leuphana.de with details of your institute or school. With this information we can set up a personalized reviewer account for you. It is also possible to set up a functional account that can be used by several people in a team (but not at the same time).

After receiving your access data (username, password), log in to the EvaExam system at <https://evaexam.leuphana.de/evaexam/indexeva.php>.

2 Before the Exam

2.1 Create the Exam Concept

In *EvaExam* you have the possibility to perform three different types of scan exams. You have the choice between a questionnaire on which the answers are also given (option 1), a questionnaire with a separate answer sheet (option 2) or only the creation of an answer sheet (option 3).

- **Option 1** offers you the inclusion of all question types, but has the disadvantage that the scanning process takes longer because more sheets have to be scanned.
- **Option 2** offers you the inclusion of all question types **except** open-ended questions, segmented open-ended questions and Kprim questions. However, these options are more time-saving as you only need to scan the answer sheets.
- If you choose **option 3**, you will only create an answer sheet for single-choice questions that have the same number of answer options. This option is less demanding in the scanning process than options 1 and 2.

2.2 Create the Exam Sheet

In order to conduct an exam with EvaExam, you first create an exam sheet, which you successively fill with questions. You create a new exam sheet by selecting Create exam sheet in the left side menu (see Fig. 1).

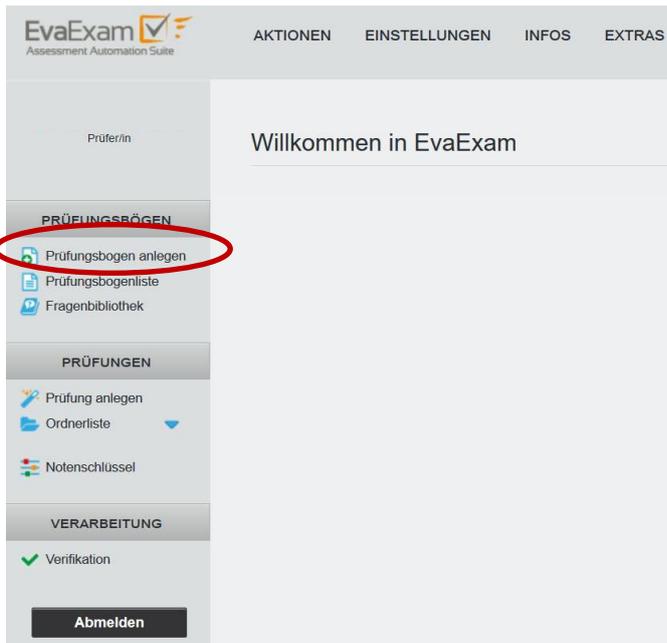


Fig. 1: Create Exam Sheets

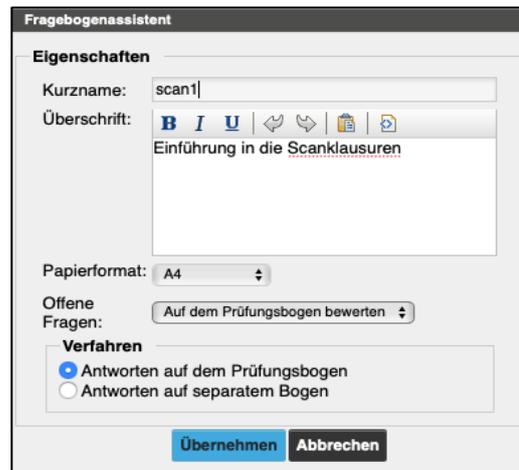


Fig. 2: Entering a short name and a heading for the exam sheet & selecting the response method.

Now, enter a short name and a heading for your exam sheet. At this point you can also select whether the answers are to be given on the examination sheet (option 1) or on a separate sheet (option 2) (see Fig. 2)..

Edit header: Double-click on the sheet header to edit it. There you can make individual entries for the exam and exam execution via the selection "individual ID area". Selecting "No ID area" hides the sheet header.

Question types: The EvaExam software allows the use of seven different question types.

- Single Choice Question (cf. *EvaExam Examination Manual V.8.0, S. 34*)
- True/False Question (cf. *EvaExam Examination Manual V.8.0, S. 38*)
- Multiple Choice Question (cf. *EvaExam Examination Manual V.8.0, S. 38*)
- Open Question (cf. *EvaExam Examination Manual V.8.0, S. 41*)
- Segmented Open Question (cf. *EvaExam Examination Manual V.8.0, S. 45*)
- Kprim Question (cf. *EvaExam Examination Manual V.8.0, S. 50*)
- Matching question (cf. *EvaExam Examination Manual V.8.0, S. 52*)

2.3 Question Library

In the questionnaire editor (Vivid) you then create one or more question groups. This is necessary to be able to formulate individual questions at all - there is no question without a question group. You can structure question groups thematically and name them accordingly (e.g. "Basic knowledge" instead of "Group 1"), so you always keep an overview - especially if you save them in the question library (see below).

You then create the corresponding exam questions within the question groups. Seven different question types and corresponding answer options are available for the exam questions and solutions. For an automated evaluation you can store sample solutions.

We recommend that you save recurring questions and formulas in the question or formula library. This is not done automatically.

The question library corresponds to a question pool, which can be useful when creating further online exams later on. Formulas can be entered in the formula editor, which are saved as an image in the formula library.

When you add open-ended questions to the exam sheet, you also have the choice of scoring them on the exam sheet or scoring them later online. If you choose to score the open-ended questions on the exam sheet, a scoring matrix appears on the exam sheet where you must enter the score before scanning. If you choose to score the answers later online, then no matrix appears and you can score the answers later after scanning via an online mask.

When you have compiled all the questions, click *Save* and *Exit* at the top left. The exam sheet you created now appears in the exam sheet list. In the left menu under *Exam Sheet List*, you can view and revise all the exam sheets you have created at any time.

2.4 Create Exam

For the generation of the scan check, an *online wizard* is available in *EvaExam* which guides you through the selection menus.

In the left side menu under *Exams*, select *Create Exam*. Afterwards, create a new folder where you want to save your scan exam (see Fig. 3). Later on, you can select this folder to save further exams in it or create further folders. Then, assign a name for your exam {LV title} and select the Paper exam option (cf. Fig.4).



The screenshot shows a web interface titled "Prüfung anlegen - Ordner". It contains two radio button options. The first option, "Neuen Ordner anlegen", is selected and has an empty text input field below it. The second option, "Einen vorhandenen Ordner verwenden", is unselected and has a dropdown menu below it showing the text "Testprüfung".

Fig. 3: Creating a new folder to save the scan check

Now, choose between a questionnaire on which the answers are also given (option 1), a questionnaire with a separate answer sheet (option 2) or only the creation of an answer sheet (option 3) (see Fig. 5).

Fig. 4: Create exam - give name and select paper exam

Fig. 5: Type of examination and answer sheets

The wizard now presents you with a choice between two methods of **participant registration**. You have the choice between the indication of the **examinee ID** by the participants as well as the participant import.

When the participants enter the **examinee ID**, the sheet remains non-personalized, the participants themselves enter their first name, last name and the **examinee ID** (student ID).

If you select the participant recording by participant import, the sheet is pre-filled with the data of the respective test participants. To do this, the participant data must be imported after the exam has been confirmed. These can either be added manually or uploaded via **CSV import** from the *myStudy* exam lists. To test the import function in advance, you can refer to the sample participant data that you can find in *EvaExam* under *Extras*. Here you can also see how the address file must be formatted (e.g. order of columns, file format. Csv.).

Now select an exam sheet from the exam sheet list that you have created in advance. In a next step you can create up to **10 different versions of an exam sheet**, in which the selected questions and question groups are arranged differently. Creating multiple versions can be helpful, for example, to make it more difficult to exchange answers among students, especially in multiple-choice exams

Finally, enter the number of test takers. *EvaExam* recommends printing about 10% more exam sheets than the expected number of participants, so that spare sheets are available if needed.

After confirming the details, the exam will be available for download as a PDF document. Now you just need to print the exam.

Note: When the exam is created, the sheet can no longer be edited. Regardless of whether sheets have already been scanned or not.

2.5 Details of the Exam

The folder list in the left side menu takes you to the exam overview of previously created exams.

If you click on the name of the exam or the icon under *Details*, you will get to the details of the exam. There, you can create additional exam sheets, assign or adjust a grading key, retrieve the sample solutions, as well as rename, move or delete the exam.

The already printed sheets cannot be retrieved again as .pdf. This avoids duplicate sheet numbers.

In case of an already scanned exam, the original scans and PDF reports can be downloaded at this point and the completeness of the sheets can be checked

2.6 Printing o the Exam

Each sheet has an individual numbering, a so-called "consecutive sheet set number." This number is included on the first page in the header area as well as in the barcode.

Note: In the case of multi-page examinations, the sheets with the same number must be distributed to the same students so that the records are later correctly assigned and evaluated.

Therefore, the exam sheets should always all be printed and not copied. For an error-free recognition of answers, the exam sheet should always be printed on white paper. Keep the actual size of the document and do not adjust the page size when printing.

If you are taking a multi-page exam, the sheets may be stapled at the corners, but the staple corners should be cut off before scanning.

Mock exam

To become familiar with the handling of a scan exam, you should print, fill out, and scan a set of exam sheets prior to the exam.

3 Exam Execution

Practical tips for filling in the examination forms

Instruct participants on the correct way to perform a scan exam prior to the exam.

- Crosses should always be made within the boxes. The system does not recognize the answer if the cross is next to the box.
- The exam sheet becomes illegible if test takers write over the barcode or the corner markings or if these two areas are otherwise made illegible or irre recognizable.
- Blue or black ballpoint pens or thin felt-tip pens must be used for doing the exam. Crosses made with a pencil lose their visibility in the scanning process and the use of a

too thick felt pen leads to a too high degree of blackness, which would be misunderstood as a correction.

- Participants must correctly mark each digit of their examinee ID in the matrix and also enter the examinee ID and name in the fields provided. The automatic reading only takes place via the matrix.

4 After the Exam

4.1 Scan the Exam

On the campus of Leuphana University of Lüneburg, an area with a scanning device has been set up in **C.7.117** where you can scan the scan exams. Via the EvaExam software, the data of the scanned exam sheets are sent directly to the system where they are evaluated semi-automatically. Before you start scanning, you should check the settings on the scanning device and the stack of exam sheets.

The following setting should be active:

Black and white, A4 paper size, resolution: 200 DPI, brightness: threshold slightly darker than average, corrections disabled, duplex (scans front and back).

The exam sheets should all be from one exam and should be free of staple corners and scribbles. If you have enabled scoring on the exam sheet for open-ended questions, you must score them in the matrix before scanning. No more than 100 pages should be scanned in one batch, the more sheets that need to be scanned, the longer the processing time will take.

Select *Release Batch* when you have scanned all sheets.

Error messages: If you notice errors during scanning, discard the batch and start capturing again. You should also do this if you see the error message "Incomplete exam sheets" and pages of a sheet are missing. The batch should be discarded and rescanned with the missing page.

4.2 Assessing

After scanning, you can view the status of your exam in the exam list of your user account. In the Status column, click Verification to manually check the crosses that have been detected as unsafe. In the list that follows you will see the checks that need verification, by clicking on the yellow pencil you can start verification.

If you have selected to score open-ended questions online, the status of the exam now changes to *Scoring*. Click on *Scoring* in the *Status* column to answer the open questions. Here it is also possible to access previously stored solution texts and add comments to the assessment that will be visible later in the participant report

To remove a single question of an exam from the overall score, you can assign the maximum score to the question. However, this change cannot be undone.

4.3 Archiving

EvaExam provides two types of exam reports in .pdf format:

The detailed **individual report** provides the evaluation per examinee. Here, the answers of the individual examinees to each question as well as the points awarded and comments of the examiners are displayed. The examinee ID, and in the case of participant import also the name,

the score achieved, the maximum points to be achieved and the percentage of correct answers are noted on the sheets.

In addition, the system offers an **overall report**. The **overall report** is divided into the evaluation of the individual questions, the examination report and the overall report with question analysis. In the evaluation of the individual questions, the points achieved by the participants are displayed question by question and in relation to each other as a percentage. If you have created a grading key, the examination report generates a grading table of all participants that can be read question-by-question and exam-by-exam. The overall report contains a graphical representation of the score distribution and a question analysis in which the questions are evaluated according to their selectivity and degree of difficulty

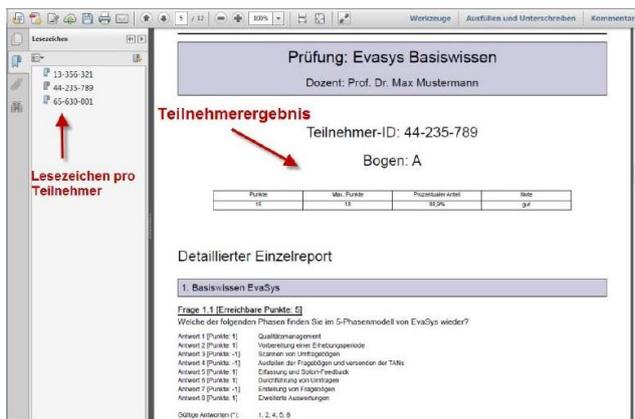


Fig. 6: Example of an individual report (Quelle: EvaExam Examination Manual V8.0, S. 179)

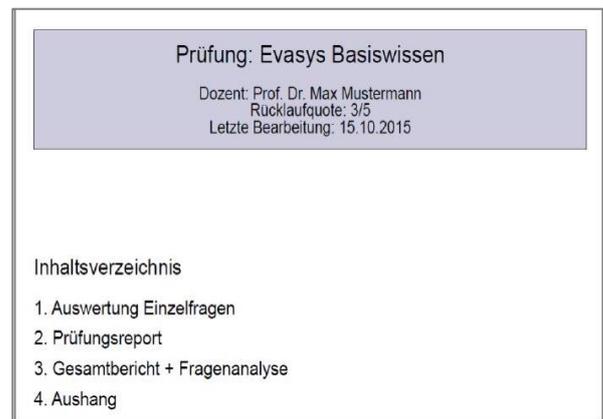


Fig. 7: Example of an overall report (Quelle: EvaExam Examination Manual V8.0, S. 174)

As before, grades are recorded for all online examinations by using the Excel spreadsheet provided via myStudy. Examiners enter the grades and upload the list in myStudy again.

On our EvaExam [scan exams website](#) you can book the room (C.7117) for scanning the exams.

For further questions and support, please contact the Leuphana Teaching Service team at digi-support@leuphana.de!