Exams using e-class

3rd version

AUEB Distance Learning Support Team

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1. Exams Scenarios

This initial section summarizes three scenarios on how to organize a remote exam using e-class, so you can choose the most appropriate one for your course.

The following sections describe the Exercise tool, the Task tool, and the e-class Teams tool, so that depending on the exam scenario you will follow, you can refer to the corresponding sections for instructions.

More information about e-class is provided by its creator, the Academic Network GUNET, here (in English): https://eclass.gunet.gr/info/manual.php?localize=en
For students to participate in an exam, they must enroll in the relevant e-class course and log in before the exam. Thus, before the exam, connection and access problems not related to the exam must be solved.

Whatever scenario you decide, it is advised that you treat this exam as a regular written exam held with open books/ phones/ internet and adjust the exam topics and duration accordingly.

**Scenario 1: Exams with the Exercise tool**

In this scenario, you will create an exercise consisting of questions. The questions can be of two types: questions that allow automatic grading and development questions (i.e., free text), for which no automatic grading can be done. Of course, an Exercise can have questions of both kinds.

To limit cheating, one idea is to divide the students to be tested into groups and create one exercise per group, with small variations of questions/ answers between the groups. You can even turn off the Groups tool in e-class so that students do not know which group they belong to and who else faces the same questions.

It is also recommended, when creating the exercise to turn off the display of answers and scores at the end of the exercise, because otherwise whoever finishes will be able to give the correct answers to others.

**Automatically Graded Questions**

In this case, you can use questions of the following types:

1. Multiple choice with one unique correct answer.
2. Multiple choice with many correct answers.
3. Fill in the blanks.
4. Matching.
5. True/ False.

These questions take a long time to create but are automatically graded based on points you give when you create them, thus saving time for correction.

In each of the possible answers, you can put either a positive or a negative score. However, because in the multiple-choice questions with a single correct answer and True/ False questions, after the student chooses an answer he cannot cancel it, it is suggested to put in these questions an extra option "I do not know / I do not answer" whose grade weight to be 0.

**Development Questions**

If answers can be expressed in plain text, then it is enough to create free text questions and then include them in exercises. You can include math formulas and/ or pictures in the questions, but the answers will be in plain text.

Here, too, it is recommended to create groups and corresponding exercises with slightly different questions, to prevent cheating efforts as much as possible. After the exam, you will distribute the exercises to the teachers (if there are many) and they will grade them in e-class, seeing the answers of the students.
Scenario 2: Examinations using the Assignment tool.

Alternatively, you can perform the remote examination the same way as the regular exams, ie provide a PDF file of the topics, have students write the answers on paper, and upload photos of the answers. This can only be done with the Assignment tool: you will create one or more assignments (if you have different subject groups), attach the corresponding topics to each assignment, commend the assignment to a group of students, and set the time frame during which it will be available. Students will have access to the assignment (exam) at the time you have set.

Scenario 3: Examinations using both systems.

If you want to make use of the automatic grading methods provided by the exercises tool, but some student answers require blueprints, accounting, math, and generally anything not covered by plain text, you can use both tools. Meaning that the students, in addition to the answers that they fill in electronically in the exercise tool, they will record on paper the other elements of the answer, they will photograph them (which is mandatory in the remote exams) or scan them and submit them as a task in the Tasks tool. In this case, in addition to the exercise, you should also create an Assignment with the corresponding submission period, so that students can upload their answers. Like the exercises, the assignments can be commended to different groups of students.

Dealing with technical problems

Various problems may arise during the examination, and to be supervised, there should be a channel for teachers to communicate with both the students examined and the supervisors, either through Teams (which does not work if the subject's network falls), or by phone. For some problems, e.g., network loss, all that can be done is to inform the teacher, but for other problems, e.g., loss and network reset resulting in the student being locked out of the exam, the instructor may intervene in the e-class to continue the exam.

One problem that can occur when there is a power or network outage on the part of the student is that the e-class may not recognize the interruption and the student may be able to continue the exercise. You could give students the opportunity to repeat the exercise 2-3 times, always without the answers and grades appearing at the end, so that they do not repeat a complete exercise knowing the answers. Alternatively, you could have copies of the exercises in a group without users, and dynamically put the troubled users in that group to retry (this requires a student communication channel).

Scenario 2 (use of the Assignments Tool) is the scenario with the least possible technical problems on the part of users, because students can re-upload the answers if it fails, without being locked out of the exam. But when they all try to upload answers together, it can take a long time, so it is recommended that you activate the possibility of late submission.
2. Exercise Tool

In the first and third scenarios above, you will need to use the e-class Exercises tool to create quizzes.

A key tool of the Exercise Subsystem is the Question Pool which you can access if you select the icon.

In case it does not appear in the available active tools of your course, you will click on the left side in "Course Administration" and then in "Modules", you will select "Exercises" from the left and you will click on the arrow to the right to transfer it to active tools.

The exercise can have specific questions in a fixed or random order or select random questions from the pool (if you made categories, you can also choose topics based on the categories).

For large courses, it is recommended to create more than one exercise (with or without overlapping questions) and assign each group of students a different exercise to prevent cheating. How to use the groups is explained at the end of the guide.
Question Types

Through the e-class Exercises tool you can create exercises that consist of one or more of the following types of questions:

1. Multiple choice.
2. Fill in the blanks.
3. Matching.
4. True / False.
5. Free text.

Question Categories

Through the exercise tool you can create question categories, which are very useful because they allow you to group the questions you will create.

To go to the Question Categories page, select the icon from the homepage of the Exercise Subsystem. The next page lists the categories you have created.

To create a new category, select the icon and on the new page in the "Title" text box write the name of the category. Finally select the icon to complete the process.

To modify an existing category, select the icon from the pop-up menu, and if you want to delete it, select .
Creating Questions

In order to create a question, you can go to the Question Pool and there select the icon. On the next page you are asked to specify the details for the question you want to create.

**Question category:** you choose which category the question will belong to (optional)

**Question:** enter the question (plain text)

**Optional comment:** post comments about that question or fill in the quote with an image, URL, or formatted text. This comment will be displayed to students during the exam.

**Difficulty level:** select the difficulty level of the question (optional).

**Add an image:** you can add an image to the question.

**Answer Type:** you specify the question type. Whether it is multiple choice, free text or some other form. After selecting the desired format, click on the icon and navigate according to the chosen type (except for the free text questions) to the corresponding page to define the possible answers.

**Free Text Questions**

If you select "Free Text" as the answer type, the "Grade" text box appears in which you fill in the maximum grade that the specific question can get.
Free text questions are the only question types offered that need to be corrected by the instructor. To these questions the student writes his answer as a simple text. Questions of all other types are automatically corrected by the system. But in these questions also, after you grade them one by one, the final grade is calculated by the system.

To correct the free text questions, select the icon, and from the pop-up menu. In the pop-up window, select how the free text questions to be corrected will be shared between the course instructors and select the icon.

Then select again the icon that corresponds to the exercise you want to correct and from the pop-up menu and from the pop-up window.

On the next page are shown the questions to be corrected and you select the one you want and click .
It then displays the corresponding question with the student’s answer. After you place the grade of the answer in the text box "Question Grade" the icon is selected to proceed to the answer of the next student.
Multiple Choice Questions (Unique Answer)

On this page you are called to fill in the possible answers and to make the right choice. In the "Answer" text box, fill in the possible answers. If you want to add additional answers select the +answer icon, while if you want to remove select the -answer icon.

Next, select the CORRECT answer and in the "Score" text box enter the question score.

If you want a negative score, you can enter it in the "Score" text box.

Finally, select the Create icon to complete the process and return to the Question Pool.
Multiple Choice Questions (Multiple Answers)

On this page you are asked to fill in the possible answers and to set the correct answers. In the "Answer" text box, fill in the possible answers.

Then select the CORRECT answers and in the "Score" text box enter the score weight of each answer. The student's final grade for this form of questions is determined by the sum of the answers he has chosen.

If you want a negative score, you can enter it for the wrong answers in the "Score" text box.

Finally select the icon to complete the process and return to the question pool.
Fill in the blanks Questions.

When selecting the Fill in the Blanks format you should specify whether you want strict (case sensitive) or tolerant identification as shown in the image below.

| Fill in the Blanks | Strict Answer Validation (Athens ≠ athens ≠ ATHENS) | Tolerant Answer Validation (Athens = athens = ATHENS) |

In the "Question answers" text box type your sentence by putting the required sections (spaces) in brackets. If you want to define more than one correct option for a gap, separate them with | (vertical line). You can include more than one gap in a sentence. In the following example we have two gaps, for one of which we have two acceptable answers.

Then select the icon and on the next page in the text box next to each requested term enter its score. In case you have included more than one gap, the student's final grade is determined by the sum of the correct answers.

<table>
<thead>
<tr>
<th>Question answers</th>
<th>Capital of the ioannina district is [ioannina] [giannena], which are located on the banks of the [Pamvotida] lake.</th>
</tr>
</thead>
</table>

| Enter weight for each blank | [ioannina] [giannena] | 5 |
|-------------------------------|------------------------|
|                               | [Pamvotida]            | 5 |
Finally select the icon to complete the process and return to the question pool.

Matching Questions

In the two columns (Column A and Column B) enter the sentences that the students must match. Then for each sentence of Column A you select the correct sentence of Column B and enter the scoring weight of each sentence. The student's final grade is determined by the sum of the correct matches he chooses.

To add or remove options in both columns click the icons next to the corresponding column.

Finally select the icon to complete the process and return to the question pool.
True/ False Questions

Select the CORRECT answer by clicking True or False and in the "Score" text box enter the score weight of the question.

If you want a negative score, you can enter a negative score for the wrong answer in the "Score" text box.

Finally select the Create icon to complete the process and return to the question pool.

Use of mathematical symbols.

The questions and answers texts can contain, in basic form, mathematical expressions. These expressions must be enclosed between two tags [m] and [/m]. You can see commands that can be used at: http://www.mylovewill.com/ya/phpmathpublisher/doc/help.html

Editing Questions

In order to edit an existing question, the simplest way is to go to the question pool and there, after finding the question you want to modify, select the Edit icon and from the popup menu choose Edit. If you use the question in exercises, then a window will appear asking you if you want to change the question or only in question pool.

In both cases it will take you to the answers page to make the changes you want. If you want to change something in the questions text, then select the icon at the top of the page to open the corresponding page we have seen in Creating Questions.
If you choose to change a question only in the Question Pool, then a copy of the original question will be created. The original question will remain in the pool as it is used by exercises. If you choose in all the exercises, the question will change in the pool and in all the exercises that you have included.

Creating an Exercise

The last step to create the exam is the creation of an exercise. To create a new exercise from the exercise tool in e-class, choose the icon. In the page that you are directed to, you are going to have to define all the settings for the new exercise.

![Exercise Creation Interface]

- **Exercise Name**: define an exercise name.
- **Exercise Description**: fill in a short description of the exercise (optional).
- **Exercise Type**: you specify whether the exercise questions will appear *all in one page or one question per page*. Due to problems, we have noticed with temporary caching, we suggest using the one question per page option to store students' answers to each question change.
- **Start - Finish**: you set the date when the exercise is active as well as its expiration date. The exercise will be activated and deactivated automatically at these times.
**Save Temporary:** you specify whether the students will be able to temporarily save the exercise. In case of activating this option, the student can temporarily stop the exercise and return to it provided the time for the examination has not passed. Due to problems, we have seen in the current version of e-class, it is recommended to disable this option.

**Time constraint:** define the maximum time that the student will have at their disposal to complete the exercise. When the time limit is completed, a relevant message is displayed to those who have not completed the exercise and their work so far is saved, regardless of the end time of the exercise.

**Attempts allowed:** Specify how many times the same user can repeat this exercise. In standard circumstances, it is recommended to put once or twice.

**Random questions:** if activated then the questions of the exercise will appear in random order to the students. In addition, you can choose to show each student a specific number of questions from the exercise (e.g., 10 random questions from the set of questions included in the exercise).

**Answers:** you determine if the correct answers will appear at the end of the exercise and when. For the exams it is recommended not to show the correct answers.

**Score:** you determine whether the score will appear at the end of the exercise or not. For the exams it is suggested not to appear at the end.

**Assign to:** you specify which users will have access to the specific exercise (all students, specific students, user groups). For courses with many participants, it is recommended to create user groups to which different exercises are assigned. *Instructions for using the User Groups subsystem can be found below in the Guide.*

**Continue Attempt:** In case of interruption of the connection with e-class, normally the users cannot continue their current attempt to respond to the exercise. With this option, if the student continues within the set time, he does not lose his effort. Because connection problems are common, it is recommended that you keep this option to its default values.

**Unlock with password:** you set the password that users must insert to enter the exercise (optional).

**Unlocking specific IP’s or IP CIDR’s:** you specify the IP addresses for which access to the exercise will be allowed (NOT APPROPRIATE and cannot be done when participants are outside the University).

**Tags:** associate the current exercise with a tag. This feature is quite useful for searching with tags (optional).

After completing the exercise settings, select the icon to complete the process and go to the next page to add questions to the exercise.
The simplest way to add questions that you have already created in the question pool is by selecting the icon. On the next page it displays all the questions you have in the question pool and by selecting the icon you add the corresponding question to the exercise. Continue until you have added all the questions you want and at the end select the icon. On the exercise page now, in addition to general information, it also displays the list of questions that have been included in it. By selecting the arrows you can set the order of the questions (in case you have not chosen to display the questions in random order), while if you want to remove a question from the exercise you select and from the pop-up menu.

You can also add a new question that you create by selecting the icon and following the already described procedure.

Finally, you can add random questions to the exercise by selecting the icon. In the pop-up window you select the category to which the questions will belong, the degree of difficulty and the number of questions from all those that meet the specific criteria, so that the system randomly selects them to include them in the specific exercise, after selecting the icon.
**ATTENTION:** When you finish adding questions to an exercise, you should check to see if all the correct answers add up to the maximum score you want for the exercise. You can check the total questions and their score as well as the total score of the Exercise by clicking on the name of the Exercise. Attention, gap filling questions may not be counted in the total grade, while they are normally graded in the students' answers.

See the following indicative snapshot.
Editing Exercises

In order to edit an existing exercise, the simplest way to do it is to go to the home page of the Exercise Subsystem and from there after finding the exercise you want to modify, select the 🔄 icon and from the pop-up menu.

If you want to change something in the exercise then select the 📝 icon at the top of the page to open the corresponding page we have seen in Creating Exercises, to make the changes you want.

From there you can add or remove questions the way we have already seen, change the order of the questions or edit a question, which will be edited depending on what you choose, either in the current exercise only or in all the exercises it has been included in.

3. Assignments Tool

To enable students to upload files with part or all of their answers, it is recommended to use the Assignments Tool. In case it does not appear in the available active tools of your course, you will click on the left side in
"Course Management" and then in "Tools", you will select "Tasks" from the left and click on the arrow to the right to go to active tools.

To create a new assignment, click "New Assignment":

Assignment settings are shown below in two parts.

The first part of the assignment settings allows you to set the Assignment Title and a descriptive text of your choice. You can then upload an attachment, e.g., the exam subjects corresponding to this assignment, which will be visible only during the assignment and only to the students to whom it has been assigned to. Then choose to submit an assignment through e-class and the type and grade scale (not necessary if you do not announce points through e-class).
In the second part of the assignment settings, select File or Multiple Files as the submission type. If the answers require multiple pages and students photograph them with a mobile phone, then it is simpler to accept multiple files so that each page is uploaded separately without the students having to consolidate the photos into one file. Next, you set the start date for submission of the assignment, which will be the time when the examination will take place. You can choose to be notified by email at each submission (not recommended for exams). In the Assignment type, it is suggested to choose Individual submissions. Finally, in Assign to, you can either assign it to all the course students, or only to specific students or groups of students, which is necessary if you want to assign different topics to different groups.
4. Groups Tool

In order to carry out the remote exam in a more efficient way, it is recommended to divide the students into groups of a few people (e.g., 20-40 people). You can then use the Groups Tool to assign each exercise to a different group of users. This way you can "share" different topics in each group.

Creating a Users Group

To create a new user group, select the "Create one group" link.

Enter the group name, information it concerns (optional) as well as the maximum number of participants in it. You can if you want to appoint a Group Tutor for organizational reasons.

You can choose which of the students enrolled in the course will join the specific group, selecting them from the «Unassigned students" and clicking so that they are transferred to the right box with the "Group Members". Similarly, you can remove students from the group by selecting them in the right pane and clicking .
It is possible to let students register on their own in the group of their choice, by enabling Students can self-register in groups feature as well as group registration. Students can no longer register once the maximum number of users per group has been reached. By clicking create, you have created the group with the desired options.

It is possible to create more groups in an automated way, by selecting the "Create many groups" link.
Then, in the entry form fill in the number of groups you want to create and the number of participants in each group. The number of groups you have selected is automatically created with a corresponding maximum number of members.

**Editing User Groups**

To edit the groups, choose “Edit” from , which opens the form for you to make changes in. Also, there is the option that allows you to delete the group.

It is possible to **automatically fill in the user groups** from the list of the course registered users.

As well as the ability to **empty all groups** by selecting the corresponding action from the pop-up menu.
By clicking on the name of a group you can see the **group members**.

When you are on the screen where you see the group members, you are given the option to send a **message** only to the group members and **export the list of group members** in excel format.