

MMS – School Admin: Exam Marking Tool

The Exam Marking Tool is used for the storage and resolution of exam marks and can be accessed from the module overview page by clicking **Exam Overview** from the Tools section of the module page. MMS can be used to record the grades of each section in an exam or just the final exam grade. The amount of information entered into MMS affects how the exam tool is to be set up.

Initial Set-up:

1. Once a module has been activated (please see the MMS School Admin: Activating a Module Guide to learn how to do this) create the exam tool on the module overview page by selecting the tool then clicking the Create Tools button.

Select tools to create:

 - Core
 - Coursework submission
 - Exam marking
 - Grade aggregator

[Create Tools](#)
2. The way in which marks and grades are reported will affect the exam setup. On the Module Overview page check that in the table at the top of the page the Mark Type is correctly defined for that Module. The usual setting will be School default.
3. When you enter the Exam Tool for the first time it automatically opens the configuration pages.
4. Select the number of sections in which the exam is marked and click the next button. A section is defined as a set of equally weighted questions however for the simple case where only one mark is submitted after marking, create only one section. For more details see the section on Sections, Questions and MMS Mark Calculation at the end of this document. otherwise see the information on how MMS defines a section below.
5. The next page will allow you to give details on the number of questions in each section, the number of required answers, and the marks each question is to receive. For example if only one mark (on the 20 point scale) is to be entered for each student then fill this section in Figure 1

Section	Questions	Required Answers	Marks per Question
Section 1	1	1	20

Figure 1: Exam Setup for 1 grade per student as marked on the 20 point scale

6. It may be useful to upload a copy of the exam paper using the upload section on that page; however this will be only for your reference and is not required. Once this information has been added then click Finish.
7. The third screen outlines the current set up of the exam. Identification, marking and reporting methods can all be altered at this stage. Under reporting, select the option that best describes how you wish the grades to be reported. For example:
 - A single grade is produced summing over all sections: This is the default and will produce a single grade. If you have entered only one grade then it will simply report it unaltered.
 - Each section produces it's own grade, all with the same mapping table: Select this option if you wish to return a grade for each section individually given that each section is marked the same way. This is useful if each section has multiple questions.
 - Each section produces it's own grade, via its own mapping table: Similar to the above option, the difference being each section will be graded on its own mapping table.
7. If the module has been set up to use the St Andrews 20 point scale then the exam marking tool has now been completely configured. However for modules that use a percentage marking scheme a mark-to-grade table needs to be set up. MMS is pre-populated with most department mark grade tables and these can be selected from the select a map drop down list. MMS will calculate the mark from the percentage based on a linear interpolation between the points defined on the map. An example grade map is given in Figure 2

- If the school default is not as required then the points may be changed and the new model saved using the 'Save Model' button. A quick to create a grade/mark map would be to upload a csv file, the option of which is near the bottom of the page

Entering Marks:

- To enter marks return to the Exam Tool Overview either from the the Module Overview or the directly from the Modules page.
- The Exam Overview will now display a table with a list of all students in the module as well as text boxes for the entry of marks as in Figure 3.
- Once you have entered the marks click on the **Update Results** button to save
- If you wish to upload the results from a spreadsheet, scroll down to the bottom of the Exam Overview, browse for the file and then click the upload button. The file uploaded should be a csv file (when saving in excel: File menu->save as ->file type:csv). The first column should contain the students matriculation number and each additional column must be labelled q1, q2, q3 etc.
- To make changes to the exam once it has been set up, it is necessary to create a new exam tool and deleted the old one. This is to ensure that there is a clear audit trail.

Percentage (%)	Grade	Delete?
0	0	<input type="checkbox"/>
14.5	2	<input type="checkbox"/>
24.5	4	<input type="checkbox"/>
29.5	5	<input type="checkbox"/>
39.5	7.5	<input type="checkbox"/>
49.5	10.5	<input type="checkbox"/>
59.5	13.5	<input type="checkbox"/>
69.5	16.5	<input type="checkbox"/>
99.5	20	<input type="checkbox"/>

Interpolation type:

Replace map with:

Save this grade map as a model:

Figure 2: Example mark to grade table

Exam Tool Configuration pages

2009/0- AA0000 (Example Module)

[Exam](#)
Exam Marks and Grades



Total questions 8

Maximum mark 102

[Last grade map model used was Example grade map, and has not been altered, with linear interpolation](#)

[Show read-only](#)

To remove a mark, replace it with the word "remove"; this is required to avoid accidental erasure.

Matric Number	Section A (3/4)				Section B (3/4)				Exam Mark	Percentage	Exam Grade	Module notes
	17 marks per question											
	Q.1	Q.2	Q.3	Q.4	Q.5	Q.6	Q.7	Q.8				
00000000												[Add]
00000000												[Add]
00000000												[Add]
00000000												[Add]
00000000												[Add]
00000000												[Add]

Figure 3: Exam Overview Page

Displaying Marks:

- To allow students to view their grades the exam tool needs to be finalised. In the Exam Setup page click the tick box to enable status change
- This will activate the drop down list. Select the option required. Note that the mark is the sum of marks a student has achieved on a paper and the grade is the score on the St Andrews 20 point system.
- Click the 'Update Paper' button to allow students to view grades

Sections, Questions and MMS Mark Calculation

When deciding how many sections to enter for each exam it is important to understand how MMS defines a section. A section is defined as a set of equally weighted questions of which all or some may be answered. For example if an exam has 5 questions, all of which are marked out of the same number of marks (for example 20, if using the 20 point scale) then only one section will need to be created and this will contain 5 questions. If various questions are marked out of different marks then a section can be created for each grouping of similar marked questions, or a section containing only one question can be set up for each question.

If each section is weighted the same then MMS calculates the percentage grade by:

1. For each section: calculate the maximum possible marks by multiplying the number of required answers in a section by the number of marks each question has in that section
2. Sum up the number of possible marks over all sections (Possible)
3. Sum up the actual number of marks the student has over all sections (Actual)
4. Calculate the overall percentage mark using Formula 1

$$Total = \frac{Actual}{Possible} \times 100$$

Formula 1

For sections of different weighting:

1. Calculate the number of possible marks a student can get per section, as above (Possible_N where N is the section number)
2. Sum up the actual number of marks the student has per section (Actual_N)
3. Multiply the possible mark and actual mark for each section by the weight (W_N) of that section
4. Calculate the overall percentage mark using Formula 2 where N_T is the number of sections in the paper

$$Total = \frac{\sum_{N=1}^{N=N_T} W_N \times Actual_N}{\sum_{N=1}^{N=N_T} W_N \times Possible_N} \times 100$$

Formula 2