

ALLOCATION OF UNIFORM MARKS IN GCSE (APPLICABLE FROM JUNE 2010)

What is a UMS?

The Uniform Mark Scale (UMS) is used in **unitised** specifications as a device for reporting, recording and aggregating candidates' unit/component assessment outcomes.

Why do we need the UMS?

In a unitised specification candidates may take units at different stages during the course and may retake units before certification. Each exam paper is unique, and so the difficulty of exams may vary slightly from year to year. Senior examiners take this into account in deciding on the raw marks needed for particular grades. They look at samples of candidates' work from the current year and from previous years, at examiners' reports and statistical data.

For example, in one session 56 raw marks may be required for a grade C, and in the next session (because the paper is more straightforward) the C boundary may be set at 58. The UMS is used so that candidates who achieve the same standard will have the same uniform mark, irrespective of when the unit was taken.

How many uniform marks are there?

Each qualification is allocated a total uniform mark. Typically for GCSE this is 200 for a full course and 100 for a short course. The total uniform mark is split between the units in proportion to their importance (weighting).

For example, in a specification allocated 200 uniform marks which has two equally weighted units, each unit will be allocated 100 uniform marks. However, if one unit carries three times the weight of the other, then the unit with more weighting will be allocated 150 uniform marks and the one with less weighting 50 uniform marks.

How is a raw mark converted to a uniform mark?

The range of uniform mark percentages allocated to a particular grade is the same each year:

| | |
|----|------------------------------------------------------------|
| A* | 90 - 100% of the total uniform marks allocated to the unit |
| A | 80 - 89% |
| B | 70 - 79% |
| C | 60 - 69% |
| D | 50 - 59% |
| E | 40 - 49% |
| F | 30 - 39% |
| G | 20 - 29% |

For example, if a unit is allocated a total of 120 uniform marks then the range of uniform marks allocated to grade B would be 84 to 95 (70% of 120 to 79% of 120). Similarly, the range of uniform marks allocated to grade C would be 72 to 83 (60% of 120 to 69% of 120).

Uniform marks take into account how high the raw mark is within a grade band; the higher the raw mark, the greater the uniform mark - up to the maximum uniform mark possible for the grade. If the calculation does not produce a whole number, then the uniform mark is rounded to the nearest whole number. A raw mark of zero is allocated zero uniform marks and the maximum raw mark is allocated the total uniform mark for the unit.

A capping process is sometimes employed to allow the better performing candidates (those who do not achieve the maximum mark, but do have a raw mark well above the minimum required for grade A) to be allocated the maximum uniform mark. This compensatory device is used when the minimum raw mark required for grade A is some way below the maximum raw mark for the paper.

What happens with tiered units?

Tiered units place some restrictions upon the number of uniform marks that a candidate may obtain. Candidates on the Foundation Tier may not be allocated a uniform mark above the range allocated to grade C, whatever their raw mark. Candidates on the Higher Tier who fail to reach the standard required for grade D are given a proportion of the uniform marks allocated with grade D.

How is the overall subject grade determined?

The uniform marks obtained for each unit are added up and the subject grade is based on this total. The table below shows the percentage of the total uniform mark required for each grade.

| | | | | | | | | |
|----------------------------------|-----------|----------|----------|----------|----------|----------|----------|----------|
| Percentage of total uniform mark | 90 to 100 | 80 to 89 | 70 to 79 | 60 to 69 | 50 to 59 | 40 to 49 | 30 to 39 | 20 to 29 |
| Grade awarded | A* | A | B | C | D | E | F | G |

As an example, if the total uniform mark allocated to a subject is 200, a candidate with a total of 180 to 200 uniform marks would be awarded grade A* and a candidate with 80 to 99 uniform marks would be awarded a grade E.

What happens if the subject is tiered?

The total uniform mark is worked out as described above but the grade awarded is restricted to the grade range associated with the tier; A* to D for the Higher Tier and C to G for the Foundation Tier.

How to Calculate a UMS (Uniform Mark Scale) conversion

The following method can be applied to any given set of raw marks and any uniform mark scale to find the UMS conversion for a specific raw mark (such as the raw mark for a particular candidate). In order to calculate the conversion, you must know the grade boundaries for the subject in question for the appropriate series.

For any given grade, first calculate the number of raw marks that are available within that grade. For example, a subject has a boundary for C of 24 marks, and B of 30 marks, so grade C has six marks available (24 to 29).

Next calculate the number of marks available in the equivalent uniform mark grade. These are pre-defined across grades and represent a percentage of the overall number of UMS marks available.

Calculate a conversion factor; the number of uniform marks in the grade divided by the number of raw marks in the same grade.

Next, identify how many raw marks the candidate had scored over the raw mark boundary. Multiply this number by the conversion factor previously calculated.

Add the resulting number to the uniform mark boundary for the grade. This will be the UMS mark for the candidate, for that specific raw mark.

Example

A candidate gained a raw mark of 47 on GCSE unit 9998. They achieved a grade C. The raw mark and UMS boundaries were determined as follows:

| Unit | | Max mark | A* | A | B | C | D | E | F | G |
|------|-----|----------|----|----|----|----|----|----|----|----|
| 9998 | Raw | 80 | 73 | 69 | 55 | 42 | 33 | 25 | 17 | 9 |
| | UMS | 100 | 90 | 80 | 70 | 60 | 50 | 40 | 30 | 20 |

There are 13 marks within the C grade (42 to 54)

There are ten marks in the equivalent UMS grade C (60 to 69)

The conversion factor is therefore 10 divided by 13 which equals 0.77

The candidate achieved 5 marks over the C grade boundary (42 to 47) and so 5 multiplied by 0.77 equals 3.85, rounded to 4.

Therefore the candidate's overall UMS mark is $60 + 4 = 64$.

In relation to capping for foundation tier units on which Grade C is the highest available grade, the maximum UMS available for the tier will be one mark below the Grade B UMS boundary mark which, in this example, would be 69 out of 100 UMS.

NOTE

This document is designed to outline in broad terms the reason for using uniform marks, and to indicate how they are allocated. It does not cover all the technical aspects of their application.