

Explanatory Note: Calculation of Module Marks and Year/ Programme Overall Weighted Averages

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1 Calculating module results

1.1 Terminology and definitions

1.1.1 Assessment components

Each module must contain one or more assessment components, each which represent an individual standalone item of assessment completed by the student. Each assessment component is classified as either:

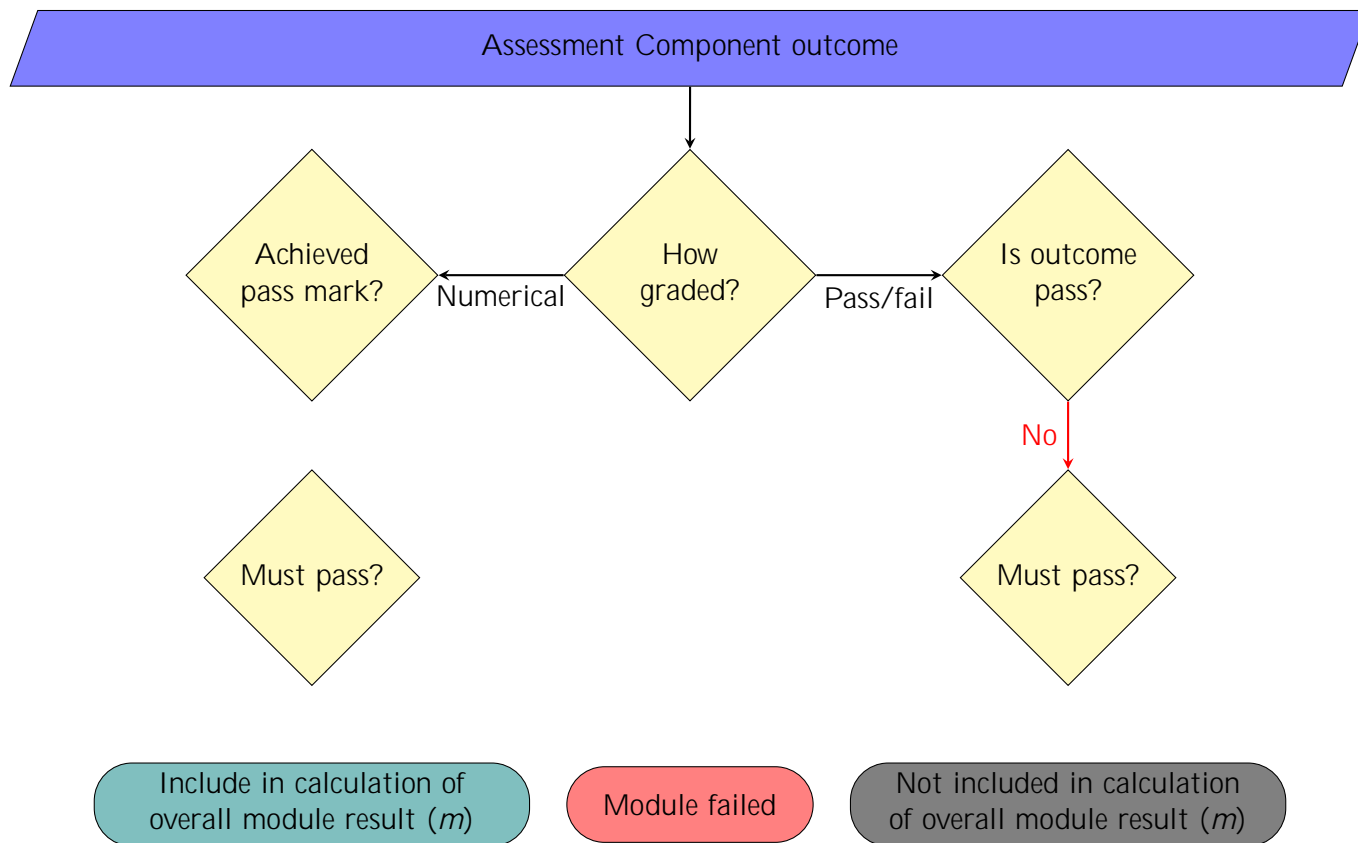
- *numerically graded*, with an assessment component mark recorded as a real number to 2 decimal places

1.2.2 Pass/fail and must pass assessment components

Amendments to the calculation of the overall module mark (m) may be necessary if the module contains pass/fail assessment component(s) or any of the assessment components are designated as Yes for "must pass":

- If the module contains a pass/fail assessment component which is designated as No for "must pass" then no change in the calculation of the overall module mark (m) is required even if the student fails the assessment component.
- If the module contains a pass/fail assessment component which is designated as Yes for "must pass" then if the student fails the assessment component the module is failed.
- If the module contains a numerical assessment component which is designated as Yes for "must pass" then if the student does not achieve the given pass mark for the assessment component the module is failed and the overall module mark (m) is set to 0.00.
- If the module contains a numerical assessment component which is designated as No for "must pass" then if the student does not achieve the given pass mark for the assessment component there is no change in the contribution of the assessment component result to the calculation of the overall module mark (m).

The following flow chart summarises the process for a given assessment component outcome:



calculation or overall result of formula 2.

Compensation is a mechanism by which a module can be passed and credit can be awarded by the Board of Examiners where the student has achieved a marginal failure. Only compulsory or elective modules can be compensated, and there are limits on the number of modules which can be compensated. Further details are provided in the Regulations for Taught Programmes of Study in paragraphs 10.8 to 10.16. When a module is compensated the overall module mark (m) as determined by formula 2 is used without any amendment to calculate the overall year/programme weighted average, despite it being less than the given module pass mark.

For Referred modules the overall module mark is calculated using the new assessment component mark(s) for the initially failed components to determine whether the module has been passed, but the overall module mark (m) is then set to the pass mark. The exception is in cases of accepted Mitigating Circumstances where it has been determined that the module is uncapped, so the overall module mark (m) remains as calculated with the new assessment component mark(s) for the failed components.

A summary of where substitutions are made in formula 2 and the resulting numerical values of the overall module mark (m) are:

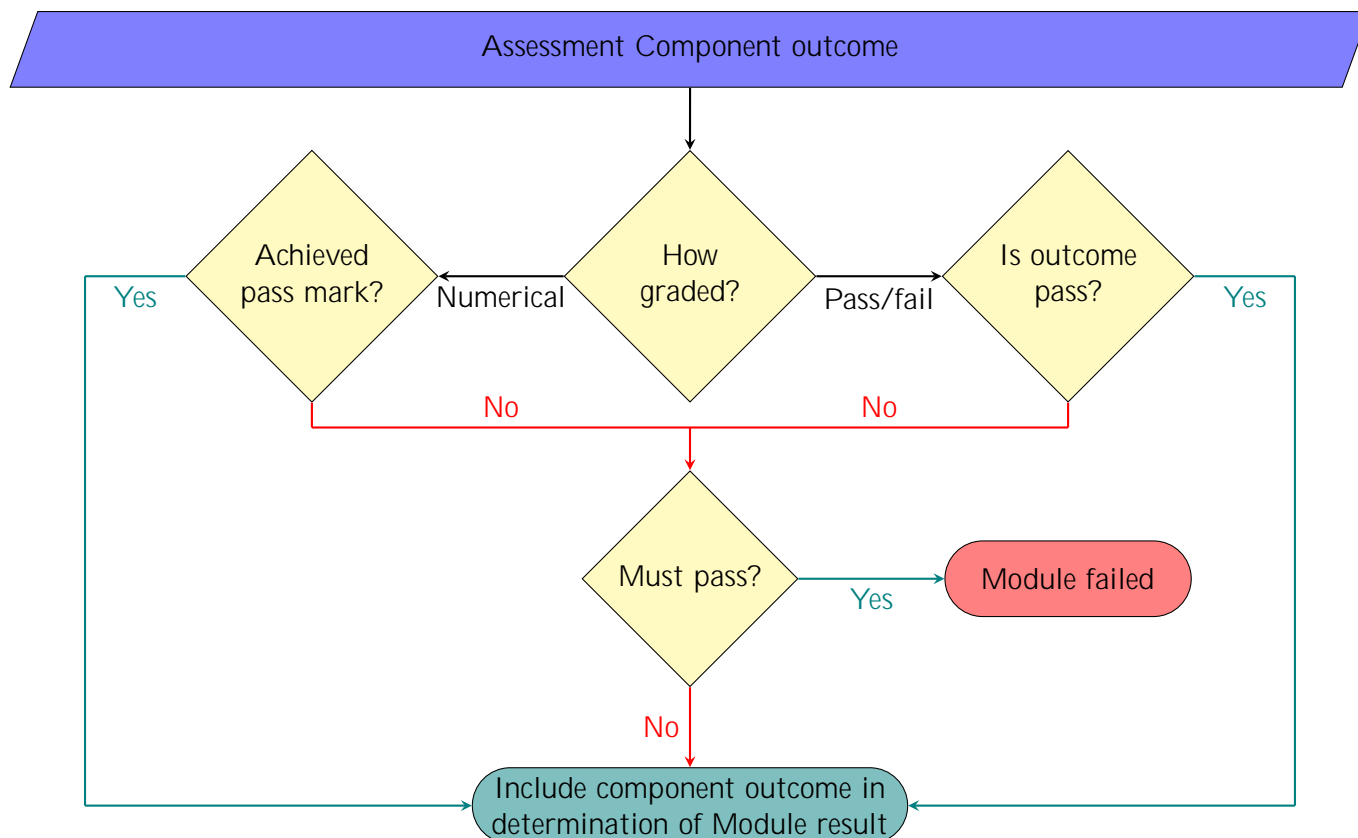
Module outcome	Substitution	Overall module mark range	
		FHEQ Level 4/5/6	FHEQ Level 7
Pass	n/a	40.00 to 100.00	50.00 to 100.00
Compensated	n/a	30.00 to 39.99	40.00 to 49.99
Referred	Module mark	40.00	50.00
Referred (uncapped due to Mitigating Circumstances)	n/a	40.00 to 100.00	50.00 to 100.00
Deferred	n/a	40.00 to 100.00	50.00 to 100.00
Pass - Academic Misconduct Penalty D	Assessment mark (capped)	40.00 to 100.00	50.00 to 100.00
Pass - Academic Misconduct Penalty E	Module mark	40.00	50.00
Pass - Academic Misconduct Penalty F	Module mark	0.00	0.00
Repeated modules - Academic Misconduct Penalty G	Module mark	40.00	50.00

1.3 Calculation of module result for pass/fail graded modules

1.3.1 General method

For pass/fail graded modules the overall outcome is calculated using just the Pass or Fail outcome of the assessment component(s). At least one assessment component must be designated as Yes for 'must pass'. No weighting of assessment components is used for determining the outcome of pass/fail modules.

The following flow chart summarises the steps to determine the overall module outcome:



1.3.2 Examples

The assessment components for a FHEQ Level 7 pass/fail graded module are:

Assessment Component	Type	Pass Mark	Must Pass
Assignment 1	Numeric	50.00	No
Assignment 2	Pass/fail	n/a	No
Class test	Numeric	50.00	Yes
Navigation exercise	Pass/Fail	n/a	Yes

The assessment component and overall module outcome for four students studying this module are:

Assessment Component	Student A	Student B	Student C	Student D
Assignment 1	45.00 (Fail)	75.00 (Pass)	80.00 (Pass)	78.00 (Pass)
Assignment 2	Pass	Pass	Pass	Fail
Class test (Must Pass)	65.00 (Pass)	40.00 (Fail)	70.00 (Pass)	50.00 (Pass)
Navigation exercise (Must Pass)	Pass	Pass	Fail	Pass
Module outcome	Pass	Fail	Fail	Pass

- Student A achieves 45.00 for assignment 1 for which the pass mark is 50.00 so does not reach the pass threshold, but passes all other assessment components. As this assessment component is designated as No for \must pass" the student passes the module.
- Student B achieves 40.00 for the class test for which the pass mark is 50.00 so does not reach the pass threshold, but passes all other assessment components. As this assessment component is designated as Yes for \must pass" the student fails the module.
- Student C achieves the pass threshold in all but the navigation exercise assessment component. As this assessment component is designated as Yes for \must pass" this student fails the module because of this.
- Student D achieves the pass threshold in all but assignment 2. As this assessment component is designated as No for \must pass" this student still passes the module.

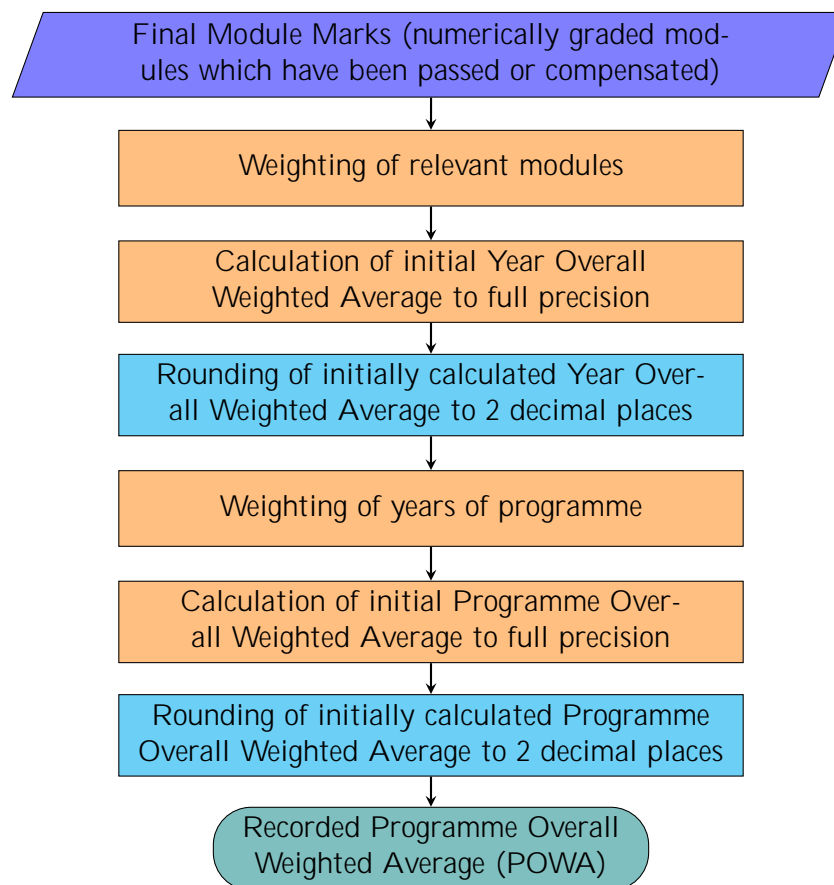
2 Undergraduate programmes

The calculation of year and programme overall weighted averages assumes, (when being used for determining a degree classification), as an input the calculations, that all relevant modules have been passed or compensated. Only numerically graded modules are included in the calculation of the year or programme overall weighted average. A year weighted average calculation which includes modules which have not been passed is required to determine eligibility for a module to be compensated, see paragraph 10.13 in the Regulations for Taught Programmes of Study.)

2.1 Process summary

The Year Overall Weighted Average (YOWA) is the weighted arithmetical mean of the final marks of all numerically graded modules (which have met the pass or compensated pass threshold). The weight for a given module is the fraction of the credit volume of the module with respect to the total credits of numerically graded modules for the year of study (except iExplore modules). iExplore modules (which are numerically graded) are not used within the calculation of the Year Overall Weighted Average.

The Programme Overall Weighted Average (POWA) is the weighted arithmetical mean of the Year Overall Weighted Averages. The weight for a given Year Overall Weighted Average is defined in Table 8 of the Regulations for Taught Programmes of Study (or within previous sets of regulations for such programmes).



2.2 Year Overall Weighted Average (YOWA)

2.2.1 Definition

The Year Overall Weighted Average (YOWA) is calculated using the following information:

- number of numerically graded modules within a given year of study which are used in calculation of the year overall weighted average (an integer of at least 1): n . (Typically the only numerically graded module not included is an iExplore one).

- module marks for the given numerically graded modules expressed as a real number to 2 decimal places: $m_1; \dots; m_n$. Permissible range of values is 0.00 to 100.00
- credit volumes (ECTS) for the given numerically graded modules expressed as a real number to 2 decimal places: $c_1; \dots; c_n$. Permissible range of values is given in section 1.1.2.

The Year Overall Weighted Average () is calculated as:

$$= \frac{1}{\sum_{i=1}^n c_i} \sum_{i=1}^n m_i c_i \quad (3)$$

The Year Overall Weighted Average () is calculated to full precision and then rounded to 2 decimal places.

2.2.2 Example 1

A student's module results for the year are:

Module	Grading Mode	Credits (ECTS)	Final Mark
Maths	Numeric	10.00	72.50
Biology	Numeric	5.00	64.00
Physics	Numeric	5.00	78.00
Chemistry	Numeric	5.00	55.00
Mapping	Numeric	5.00	42.50

The Year Overall Weighted Average () for this student is calculated using all the above module outcomes. The details of the calculation are:

$$= \frac{1}{15.00 + 5.00 + 5.00 + 7.50 + 5.00 + 10.00 + 15.00} \times \left[\begin{array}{l} (15.00 \times 62.50) + (5.00 \times 44.00) + \\ (5.00 \times 58.00) + (7.50 \times 78.00) + \\ (5.00 \times 65.00) + (10.00 \times 55.00) + \\ (15.00 \times \dots) \end{array} \right]$$

The Programme Overall Weighted Average (p) for this student is calculated as:

$$\begin{aligned}
 p &= \frac{(7.50 \quad 77.27) + (35.00 \quad 69.94) + (57.50 \quad 63.06)}{100.00} \\
 &= \frac{579.5250 \dots + 2447.90 \dots + 3625.950 \dots}{100.00} \\
 &= \frac{6653.3750 \dots}{100.00} \\
 &= 66.533750 \dots \\
 &= 66.53 \text{ (rounded to 2 decimal places)}
 \end{aligned}$$

2.3.3 Example 2 - MEng/MSci

A student studying a four year Integrated Master's programme has the following results:

Year of Study	Year Weighting	Year Mark ()
1	7.50	57.25
2	20.00	72.58
3	36.25	63.06
4	36.25	68.54

The Programme Overall Weighted Average (p) for this student is calculated as:

$$\begin{aligned}
 p &= \frac{(7.50 \quad 57.25) + (20.00 \quad 72.58) + (36.25 \quad 63.06) + (36.25 \quad 68.54)}{100.00} \\
 &= \frac{429.3750 \dots + 1451.60 \dots + 2285.9250 \dots + 2484.5750 \dots}{100.00} \\
 &= \frac{6651.4750 \dots}{100.00} \\
 &= 66.514750 \dots \\
 &= 66.51 \text{ (rounded to 2 decimal places)}
 \end{aligned}$$

3 Taught postgraduates

3.1 Process summary

The Programme Overall Weighted Average (POWA) is the weighted arithmetical mean of the final marks of all numerically graded modules (which have met the pass or compensated pass threshold). The weight for a given module is the fraction of the credit volume of the module with respect to the total credits of numerically graded modules for the programme.

The 'taught' and 'research' aspects of the programme are the weighted arithmetical mean of the final marks of the numerically graded modules (which have met the pass or compensated pass threshold) that are designated as part of the relevant aspect. In the same way as calculating a POWA, the weight for a given module is the fraction of the credit volume of the module with respect to the total credits of the numerically graded modules for that aspect of the programme.

3.2 Definitions

3.2.1 Programme Overall Weighted Average

The Programme Overall Weighted Average (POWA) is calculated using the following information:

- number of numerically graded modules within the given programme (an integer of at least 1): n .
- module marks for the given numerically graded modules expressed as a real number to 2 decimal places: m_1, \dots, m_n . Permissible range of values is 0.00 to 100.00
- credit volumes (ECTS) for the given numerically graded modules expressed as a real number to 2 decimal places: c_1, \dots, c_n .

The Programme Overall Weighted Average (p) is calculated as:

$$p = \frac{\sum_{i=1}^n m_i c_i}{\sum_{i=1}^n c_i}$$

Module	Grading Mode	Aspect	Credits (ECTS)	Final Mark
Optical Devices	Numeric	Taught	15.00	64.00
Lasers	Numeric	Taught	15.00	78.00
Biomedical Imaging	Numeric	Taught	15.00	65.00
Nanophotonics	Numeric	Taught	15.00	52.00
Project project	Numeric	Research	5.00	61.00
Individual Project (Dissertation)	Numeric	Research	25.00	59.00

The weighted arithmetical mean of the designated 'taught' aspects (a_t) for this student is calculated using all modules designated as taught, details of the calculation are:

$$\begin{aligned}
 a_t &= \frac{1}{15.00 + 15.00 + 15.00 + 15.00} \left((15.00 \times 64.00) + (15.00 \times 78.00) + (15.00 \times 65.00) + (15.00 \times 52.00) \right) \\
 &= \frac{1}{60.00} (960.00 + 1170.00 + 975.00 + 780.00) \\
 &= \frac{1}{60.00} (3885.00) \\
 &= 64.75 \text{ (no rounding required)}
 \end{aligned}$$

Similarly the weighted arithmetical mean of the designated 'research' aspects (a_r) for this student is calculated using all modules designated as research, details of the calculation are:

$$\begin{aligned}
 a_r &= \frac{1}{5.00 + 25.00} \left((5.00 \times 61.00) + (25.00 \times 59.00) \right) \\
 &= \frac{1}{30.00} (305.00 + 1475.00) \\
 &= \frac{1}{30.00} (1780.00) \\
 &= 59.33333333 \\
 &= 59.33 \text{ (rounded to 2 decimal places)}
 \end{aligned}$$

In this example the classification awarded to the student is a Pass, as while the taught aspect is greater than the threshold for a Merit the research element is not.

3.3.3 Example 3

This programme uses the Programme Overall Weighted Average (POWA) for determining classifications. A student's module results for the programme are:

Module	Grading Mode	Aspect	Credits (ECTS)	Final Mark
Strategy	Numeric	Taught	7.50	54.00
Economics	Numeric	Taught	7.50	75.00
Marketing	Numeric	Taught	7.50	51.00
Organisational Behaviour	Numeric	Taught	7.50	73.00
Corporate Finance	Numeric	Taught	7.50	59.00
Financial and Management Accounting	Numeric	Taught	7.50	63.00
Leadership	Numeric	Taught	7.50	65.00
Advanced Corporate Finance	Numeric	Taught	5.00	72.00
Advanced Accounting				