SOP - Conversion of Raw marks to CGS marks in IEHMS Using the Common Grading Scale

The University of Aberdeen has a common marking scale which is used across all assessments. This scale consists of seven bands – A to G. Each band has an associated 'grade point range' (22 in total), which are then used to make any necessary calculations.

Band	Band point	Grade point range	Band descriptor
A	1	22	Excellent
	2	21.00-21.99	
	3	20.00-20.99	
	4	19.00-19.99	
	5	18.00-18.99	
B	1	17.00-17.99	Very good
	2	16.00-16.99	
	3	15.00-15.99	
C	1	14.00-14.99	Good
	2	13.00-13.99	
	3	12.00-12.99	
D	1	11.00-11.99	Pass
	2	10.00-10.99	
	3	9.00-9.99	
E	1	8.00-8.99	Marginal Fail
	2	7.00-7.99	
	3	6.00-6.99	
F	1	5.00-5.99	Fail
	2	4.00-4.99	
	3	3.00-3.99	
G	1	2.00-2.99	Fail or No submission
	2	1.00-1.99	
	3	0.00-0.99	

Use in written assessment

Most of our healthcare programmes' written assessments will result in an overall percentage score. This must be converted to the University's assessment common grading scale. For exams where standard setting processes are used to determine the pass mark, the marks will be mapped to CGS grade points after the exam using the provided guidance. For certain courses it may be appropriate to have a fixed conversion of percentages to CGS grade points.

Use in clinical assessment

OSCE exams are assessed in two ways. Firstly, students must achieve the pass mark at a specified percentage of stations to pass the examination. Secondly, students will receive a percentage score based on their marks across all stations and must achieve the pass mark for the assessment.

In the MBChB programme, students who do not achieve a pass in at least two-thirds of stations, referred to as the conjunctive standard, will be awarded a failing grade (<D3), with the grade point dependent on the overall number of stations failed. The borderline SOP should be considered, and applied if appropriate, for students who fail by the conjunctive standard only.

In the PA programme, owing to small cohort numbers, the modified Angoff is used for standard setting instead of borderline regression method. The OSCE standard is the pass mark and the conjunctive standard is 75% of stations.

As each OSCE is standard set, percentage marks will be mapped to grade points after the assessment using the provided guidance.

Use in essays and reports

Essays and reports will have an associated **marking rubric** covering the range of knowledge and skills that is being developed through the assessment within the list of criteria. When marking essays or reports the examiner should first identify the band descriptor that best fits the work. They should then select the middle grade point from that band and adjust this up or down depending on how well the student performance matches each descriptor. Descriptors must be available for each assessment.
https://www.abdn.ac.uk/staffnet/teaching/common-grading-scale-2840.php

Aggregating scores

The grade points on the CGS can be used numerically to determine an overall grade. When there is more than one component of assessment, the grade points can be multiplied by the appropriate weighting and added together. The resulting grade point will be returned to two decimal places and should **not** be rounded up to a whole number.

For example, a course assessment consists of 3 components – two essays (40% each) and a presentation (20%). A student who achieved the following grade points: 13.99, 15.05 and 10.66 would be awarded an overall grade of 14.8 and an alphanumeric score of C1.
i.e. (13.99 x 0.4) + (15.05 x 0.4) + (10.66 x 0.2) = 5.59 + 6.02 + 2.13 = 13.74

Conversion of percentages to CGS

Each exam is individually standard set in line with best practice in Medicine, Advanced Clinical Practice and PA studies.   Using the prescribed CGS calculation spreadsheet, available on SharePoint, to produce a CGS mark, all the raw student data is normalised so that the
pass mark equates to 50%. A further point for setting the conversion to 'excellent '(A1 and A5) on the scale is then needed. Extensive modelling of past results has produced the most appropriate calculations for this. For written, OSPE, and ISCE assessments which use the modified Angoff process, this may either be done using the conversion levels which have been set using previous exam data (see below) or as part of the standard setting process (standard setting groups can be asked to set both the pass mark and the point at which students display 'excellent 'knowledge or skills, at either the A5 or A1 level).

For OSCEs , where borderline regression is used (the first sitting in the MBChB OSCEs), the spreadsheet produced by data management will include the CGS mark for OSCEs automatically. As students can fail by the number of stations, but may have achieved the pass mark, Learning technologies team can implement necessary adjustments in the grades of failing students automatically.

A1-A5 scores should not necessarily be expected to be the same across cohorts, or across subjects. Minor adjustment may be required once the examination data is available. The exam coordinator should discuss and agree any change with the Assessment Lead or deputy and Exam Board Chair. There can also be discussion at the Examiner's Meeting.

In a large cohort the distribution of CGS marks and the raw percentages typically assumes a fairly normal distribution. This is less likely in small cohorts but it is still to be expected that a small proportion will receive very high or very low marks and a larger number will cluster around the class mean.

For some assessments, threshold conditions apply, such that a fixed or proportionate number of questions or OSCE stations are required to be passed, independent of the overall pass mark.

Conversion levels for assessments (normalised percentages)

Exam	Normalised A5	Normalised A1
MBChB		
Year 1 OSPE (ME2020)	Standard set each time	100%
Year 1 OSCE (ME2021)	75%	82%
Year 1 written (ME2512)	83%	92%
Year 1 written (ME2019)	83%	92%

Year 2 OSPE (ME3023)	Standard set each time	Standard set each time
Year 2 OSCE (ME3024)	75%	85%
Year 2 written (ME3009)	78%	85%
Year 3 OSPE (ME3026)	Standard set each time	Standard set each time
Year 3 OSCE (ME3025)	75%	80%
Year 3 written (ME3019)	70%	80%
Year 4 OSCE (ME4404)	70%	75%
Year 4 written (ME4403)	75%	80%
Year 5 OSCE	70%	75%

Results Processing and Common Grading Scale – Checklist for using look up tables.

The assessment office will send you provisional results and analysis of your assessment. The course coordinator will process and produce the results from raw marks as will the psychometrician, both independently to compare results. The psychometrician will help identify items that need checking. The course coordinator will check the Item performance and can seek help from the anatomy, written, OSCE and year leads as necessary. Course coordinator will produce the final spreadsheet and report which will be checked by the year lead and then presented at the pre exam board and Examiners Meeting.

The checklist below aims to provide a robust method of minimising errors when manipulations of the data are carried out and lays out the steps required to ensure accuracy of the results.

Steps to follow/check on receipt of your results:

1. Is the pass mark correctly entered in the orange box at the top of the worksheet with the tab labelled "Marks"?

2. Are the A5 and A1 percentage cut off values (see table above) correctly entered in the orange boxes in the worksheet with the tab labelled "LookUp?

   NB: the "Average Mark (D3)" in the LookUp sheet should always show 50.

3. Return to the "Marks" sheet and note the candidate number, name, percentage score, grade point and CGS of 5 random students. Write these down and check after any sorting that all those data remain with the correct student. Be particularly careful to follow through students with similar names.

   NB: Grades have been accidently muddled in the past when students with very similar names have received the other's grades.

4. Sort the final column of raw data (total percentage) so that it is in increasing order of merit, i.e., with the lowest marks at the top. Check sorting is accurate (see 3 above). This column should be to two decimal places.

5. Check that all students on a raw percentage score equivalent or greater than your raw pass mark also show a normalised percentage score of 50% or above.

6. Confirm all students in 5 above have been assigned a pass grade (unless in OSCE where additional parameters apply).

7. Check that all students on a normalised percentage score of less than 50% have been assigned a failing grade.

8. Check that all Grade Points correspond with the appropriate alpha numeric CGS grade and that when the grade point changes so does the CGS and vice versa.

9. Check the A band starts where you expect it to. The lowest percentage for A5 should correspond with the percentage value you entered in the "Look Up" sheet. If standard setting the A5 grade cut score for each exam, rather than using values in the table above, the calculated percentage cut score must be entered in column with the student grades and the "normalised" score entered into the Look Up sheet.

10. Check the A1 band starts where you expect it to. The percentage for A1 should correspond with the percentage value you entered in the "LookUp" sheet. If standard setting the A1 grade cut score each time, rather than using values in the table above, the calculated percentage cut score must be entered in column with the student grades and the "normalised" score entered in the Look Up sheet.

11. Should you need to sort the data for any other reason e.g., alphabetically, by candidate number etc., please remember to check the data has sorted correctly (see 3 above).

12. The worksheet labelled CGS Chart will automatically show a distribution curve of your exam results. The title can be overwritten to reflect the name of your course. These distribution curves should be made available to the Examiners Meeting.

Additional Checks

a) Check for anomalies, for example, students who are attaining 80% plus in most short answer/clinical scenario questions being awarded 10% in another. This may be correct but may also indicate the wrong score has been entered.

b) Does each SAQ/CSP provide a sensible distribution of grades? If most students are failing one question the question needs reviewed – either the pass mark adjusted, or the question removed from the analysis.

c) Check that no student has been awarded marks that exceed the maximum possible for that SAQ/CSP.

d) All borderline fail SAQ/CSP papers should be double marked, and any modifications noted on a spreadsheet that is then held by the Assessment Office.

CGS award for students failing an OSCE

(Including loss of one further point for students who fail on both pass mark and number of stations). This must be inserted manually into the results spreadsheet.

- Where a student has failed the OSCE by number of stations failed **only**, the CGS grade shall be grade point 9 reduced by one grade for each station above the maximum number of stations a student is allowed to fail (e.g., a student failing one station more than the maximum allowed would receive grade point 8).

- Where a student has failed the OSCE by number of stations failed **and** by overall mark, a further one grade point will be deducted (e.g., a student failing one station more than the maximum allowed and by overall mark would receive grade point 7).

- Where a student has failed the OSCE by overall mark **alone**, the CGS grade shall be grade point 8 reduced by one grade for every complete 2% increment below the normalised pass mark. (e.g., a student failing on overall mark alone with a mark 3% below the pass mark would receive grade point 7).

- NB: The minimum CGS grade for a student who has attended the OSCE examination is 3 (F3).

Year Distinctions

A grade point average will be calculated for each student using all the courses in the year weighted by the number of credits for each course. This will be used to determine eligibility for year distinctions. Those averaging 18.00 and above should be awarded a distinction. In addition, those scoring between 17.01 and 17.99 are regarded as borderline, and should be awarded a distinction if agreed by the exam board in the following circumstances:

- Grade profile – if the weighted median grade is in the distinction category

- In exceptional circumstances.

Programme Distinctions

The MBChB degree can be awarded with Honours or with Commendation to recognise students who have maintained a very high standard of performance across all courses in the medicine programme. At the final Year 5 examination Board a grade point average will be

calculated for each student using all the courses across the programme weighted by the number of credits for each course. This will be used to determine eligibility for Honours or Commendation.   Students who transfer into Aberdeen at Year 3 are considered based on the grades achieved on the Aberdeen programme only, weighted accordingly. Those averaging 19.00 and above should be awarded the degree with Honours. In addition, those scoring between 18.00 and 18.99 should be awarded the degree with Commendation. Candidates up to 1.0 below each grade average may be regarded as borderline, and can be awarded Honours or Commendation if agreed by the exam board in the following circumstances:

- Grade profile – if the median grade is in the Honours or Commendation category

- In exceptional circumstances.

In the PA programme those averaging a GPA 18.0 and above should be awarded a distinction.