

SCHOOL OF MEDICINE POLICY
ASSESSMENT FOR MEDICAL STUDENTS

BSc (HONS) PROGRAMME

INTRODUCTION

1. The School of Medicine awards a BSc Honours degree in Medicine. The assessment methods for the BSc programme meet the needs of both a vocational degree (to determine acceptable levels of competence expected in a medical professional), and those of an Honours BSc (to discriminate between students in their understanding and application of knowledge).
2. The assessment strategies are reviewed regularly to ensure compliance with best practice in the field of medical education. Every effort is made to match assessment methods with those at our partner clinical schools. Assessments are designed to test: depth, breadth, and application of knowledge; clinical and communication skills.
3. The course has a modular design with 2 pre-Honours level modules in the first year (MD2001 and MD2002), and 5 Honours-level modules (MD3001, MD3002, MD4001, MD4002 and MD4003) delivered in the final 2 years of the course. The results of assessment from each module are reported using the University's common 20-point grade scale. Only the grades obtained in the honours modules are used to determine the final degree classification. The minimum the University requires to pass any module is a grade of 7.

KEY FEATURES OF THE ASSESSMENT STRATEGY

4. Assessments closely match and test the course objectives and intended learning outcomes.
5. Whenever possible, objective assessment methodologies are used to test learning outcomes.
6. Assessments sample the breadth and depth of knowledge, and are not intended to test every learning outcome of a module.
7. Summative assessments are designed to meet expected standards of validity and reliability. This ensures that the sampling of knowledge and skills in assessments is appropriate and defensible. Performance in an assessment will therefore be an accurate reflection of a student's wider knowledge and skills base.
8. Summative assessments are blueprinted to ensure that assessment content proportionately represent the curriculum content of each module. Assessments are integrated within each module to reflect the integrated, systems-based curriculum.
9. All summative assessments (with the exception of MD4002) are standard set to ensure appropriate and fair pass marks are applied.
10. Assessment of clinical and communication skills are incorporated in all years of the programme.
11. Students are informed of all assessment procedures at the beginning of each phase of the course.
12. Opportunities for formative assessment and remediation are provided in all years of the programme.

GENERAL ASSESSMENT OUTLINE

13. The following pattern of formative and summative assessments are common to the MD2001, MD2002, MD3001, MD3002, MD4001 modules within the degree programme:

14. **Formative Assessment.** The results of formative assessments do not count towards the module grade. Formative assessment exercises are designed to encourage students to consolidate their learning and provide practice in the assessment methods used in the summative examinations. These tasks help students to monitor their own progress and their ability to apply knowledge. Formative assessments can also provide students with an early warning of any areas of weakness.

15. **Summative Assessment.** Module grades are derived from the results of summative assessments. Summative assessments are based around learning outcomes that are associated with the timetabled elements of the module (including guided study and practical components). Summative assessments test the breadth and depth of knowledge acquired. They may also examine the application of knowledge to novel problems.

a. **Summative assessment methods for semester 1 modules:**

- (1) Multiple Choice Questions (MCQs)
- (2) Short Written Answer Questions (SWAs)
- (3) Anatomy Practical Exam

b. **Summative assessment methods semester 2 modules:**

- (1) All methods for semester 1
- (2) Objective Structured Clinical Exams (OSCEs)

c. **Mid and End of Semester Assessment:**

(1) **Mid-semester assessment (MSA).** This contributes 25% to the final module mark. The date and venue for the MSA is organised by the School. The MSA is composed of multiple-choice questions (MCQs). All questions are in single best answer format, and are not negatively marked. There will be 80 MCQ questions in the MSA, for an available total of 80 marks.

(2) **End-of-semester assessment (ESA).** This contributes 75% to the final module mark. The ESA is composed of two separate papers: The first paper contains short written answer (SWAs) questions totalling 160 marks (one question may be a separate anatomy practical exam – see below). The second paper, totalling 80 marks, is composed of MCQs. Anatomy knowledge may be assessed using cadaveric material, models or images in a standalone practical examination during the ESA examination diet. Marks derived from this assessment will be included as part of the total from the SWA paper. The final module mark will therefore be determined from a total of 320 marks. This is split 50:50 between MCQs (80 marks from the MSA, 80 marks from the ESA) and SWAs (160 from the ESA).

16. **Skills Assessment.** Clinical and communication skills are tested at the end of each academic year during the examination diet for MD2002, MD3002 and MD4003 modules. Clinical and communication skills are assessed by Objective Structured Clinical Examinations (OSCEs).

- a. **MD2001.** A formative, OSCE is held in December during the semester 1 exam diet. Attendance at this formative assessment is compulsory and any absence must be self-certified. Appropriate evidence will be required to verify the reason for any absence.
- b. **MD2002.** The OSCE consists of a single event in which students will be tested in a number of separate stations (normally 8), each of 5 minutes duration.
- c. **MD3002.** The OSCE consists of two events on separate days: The first comprises a number of stations (normally 4) each of 10 minutes duration, the second comprises a number of stations (normally 8) each of 5 minutes duration.
- d. **MD4003.** The OSCE consists of three events on separate days: The first comprises a number of stations (normally 5) each of 10 minutes duration, the second comprises of a number of stations (normally 8) each of 5 minutes duration, and the third comprises a number of short written answer questions (normally 6) assessing data interpretation/ clinical reasoning.

17. **MD4002: Dissertation module.** Assessment of this module comprises of a written dissertation (95%) and an oral presentation (5%). Students will additionally submit a formative reflective portfolio entry.

PREPARING THE ASSESSMENTS

18. **Blueprinting.** Assessment questions are selected to proportionately reflect the curriculum content of each module.

19. **Approval of the assessments.** Relevant teaching staff and external examiners review the questions to ensure appropriate balance within the paper.

STANDARD SETTING AND PASS MARKS

20. **Pre-honours and honours modules.** Different assessments may have a different level of difficulty, so the traditional approach of applying an arbitrary pass-mark for each assessment (e.g. 50%) is neither fair, nor appropriate, for this programme. In order to determine the pass-fail boundary, a standard setting procedure is applied to each individual component of every assessment (with the exception of MD4002) so the appropriate cut-point or pass mark can be calculated. This process ensures the consistency of results between different modules and across forms of assessment, as well as ensuring year-on-year equivalence. The standard setting procedure for each module is explained in detail to students to ensure transparency, fairness and accountability. Standard setting focuses attention on the concept of a borderline student. The borderline student is one who shows the minimum acceptable level of competency to pass the relevant assessment.

21. **Written examinations.** All the questions used in summative assessments (i.e. MCQs, SWAs and OSCEs) are stored in the School Exam Question Banks. These banks are extensive and consist of peer-reviewed and approved assessment items. Statistical data on past performance of these exam bank items provides data to aid the standard setting process.

22. **Standard setting.** When standard setting, the programme uses absolute (criterion-referenced) standards to set the minimal level of attainment required to pass an assessment. The Assessment Committee sets the level of performance required of students prior to written exams being taken. It is important to note that we do not use a formula (norm-referencing) to determine if a fixed number of students should pass or fail, therefore all students can pass if they achieve the pre-determined standard.

23. **Angoff method.** When standard setting questions which have not been used before, the Angoff method is then applied. The Angoff method is an absolute method based on judgments about test question difficulty. It is based on expert judgments on how well a borderline student would perform in each new question and is carried out prior to the exam being sat. Standard setting is performed by a representative cohort of staff who teach across the topics being assessed, and those who have an overall view of the module content. These judges consider each new question in every paper and decide a minimum acceptable score for each question. Judges predict what percentage of borderline students are likely to answer a MCQ question correctly, or what mark a borderline student would obtain in a SWA question.

24. **Pass marks.** Since every exam is unique the percentage required to pass that exam is also unique and must be calculated each time. The pass mark is the minimum level of performance required to obtain the University credits for each module.

25. **MD4002.** There are two assessments in this module. The dissertation and an oral presentation. Written descriptors are used to aid staff marking both aspects. You must pass both the dissertation and presentation components to pass the module. For assessment of the presentations two staff members use a set of descriptors to determine a grade. The average of their grades determines whether a student has passed the presentation. If a marker gives a fail grade then the opinion of the third marker is sought using the recording made of the presentation and the 3 marks averaged to give the student's final grade. The student's dissertation supervisor and one other member of staff independently mark the dissertation using descriptors. Where the marks are 2 grade points or less apart, the marks are averaged. When examiners provide marks for a student that are more than 2 grade points apart, a moderation process occurs where the two markers are given access to each other's marking justification text (anonymously) and can at this point reassess their own marking and may, if they choose, adjust any of the descriptors and add a justification of the change in light of the other marker's comments. If after moderation, the marks remain more than 2 grade points apart, the thesis is blind marked by a third examiner and the 3 marks (moderated marks + 3rd marking) are averaged to give the student's final grade. If any marker gives a fail grade following the moderation process, then a third examiner is sought and again the marks are averaged.

26. **Module results.** The module results are mapped onto the University 20 point scale (see below) by examining the performance of the cohort as a whole compared to the pass mark. A unique look up table is created for every exam to relate % score to a grade. Grade 7 is the minimum pass grade, and Grade 6 and below indicate a fail. Obtaining a fail grade requires a student to re-sit that module.

CLINICAL EXAMINATIONS (OSCE)

27. **The Borderline Regression Method.** An OSCE examiner will score each student using a checklist as they observe the performance during a clinical/ communications skills station. After the student has finished, the examiner also assigns a global rating using the terms excellent, clear pass, borderline pass, borderline fail and clear fail. Scores from the checklist are statistically analysed against the global rating by the borderline regression method for each station in order to determine the station cut-point.

28. **Pass/fail boundaries for OSCE.** Pass/fail boundaries at OSCE stations are determined by a borderline regression method (see above) and written stations by the same standard setting procedure used for written examinations. A pass mark is then determined for the entire exam by

averaging the cut-points for each station. Students must pass at least 60% of stations AND achieve the overall pass mark in order to pass the assessment.

29. **MD2002, MD3002 OSCEs.** These exams are simply pass or fail, and no grade is attributed to student performance in either the MD2002 or MD3002 OSCEs. Failure of the OSCE in either of these modules will necessitate a resit OSCE be performed. Passing the OSCE is a requirement for completion of the module and the grades for knowledge based assessments will not be reported until the resit is passed.

30. **MD4003.** In this exam the cut-point for passing is also mapped to a grade point 7. A unique grade point lookup scale is created for every OSCE to permit the mapping of scores to grade.

Where a student achieves the minimal passing score but fails because they have not passed the requisite number of stations grade 6 will be awarded if they are one station below the required level, grade 5 two stations below and so on.

REPORTING

31. **Module Exam Board Meeting.** Before the results are reported to the University, a cohort of external examiners reviews the exam data and the cut-points suggested by the standard setting and post-test moderation process. The final module grades reported are agreed by the External Examiners, Module Controllers, Assessment Officers, Director of Teaching and programme Course Director.

32. **Key reporting codes.** Following completion of a module, a mapping scale is used to convert the module mark to the University-approved grade point reporting scale. The University uses a non-linear 20 point grade scale to report the results of all modules. These grades appear on the official academic transcript. This ensures uniformity of practice across the University. The key reporting codes are:

7.0 to 20.0	Pass
0 to 6.9	Fail with opportunity for reassessment
0D	Deferred Assessment
0X	Denotes a failure to complete module requirements: This grade should be applied where a student has failed to complete the work of a module without good reason, and should be applied where a student does not register for, or does not attend, any examination without good reason. The student is not entitled to a re-assessment opportunity for this module.
0Z	Incomplete module (usually indicates that that the student has passed the written papers and failed the OSCE)

33. **Descriptors and standards for grades awarded at pre-honours.** Module grades for MD2001 and MD2002 do not contribute to the final Honours degree classification, and therefore only provide an indication of performance based on expected standards. A basic pass, for instance, is recorded as a Grade 7; an outstanding performance would receive a Grade 17 or above. The table below indicates the standards achieved with pre-Honours grades:

Grades	Result	It is the view of the examiners that:
0 1 2 3 4 5 6	Fail	The performance is unsatisfactory and there are deficiencies in the knowledge and understanding of the core curriculum. The student would not be able to cope with further study of this and related modules due to these deficiencies.
7 8 9 10	Pass	The performance is satisfactory and demonstrates an adequate knowledge and understanding of the curriculum content.

University of St Andrews - School of Medicine Handbook

11 12 13 14 15 16	Pass	The performance is of a good standard and shows merit. There is evidence of a much broader knowledge and understanding of the core curriculum. The student would be well prepared for further study of this and related modules.
17 18 19 20	Pass	There is evidence of a comprehensive knowledge and understanding of the core curriculum and of integration of a complex range of relevant material. The student would be very well prepared for further study of this and related modules.

34. **Descriptors and standards for grades awarded at Honours level.** Note that this table provides descriptors of grades given for individual modules only.

Grades	Result	It is the view of the examiners that:
0 1 2 3 4 5 6	Fail	Grades at this level reflect performance at a standard that is considered to be unsatisfactory. On assessment the student displays a rudimentary understanding of only a few aspects of the core curriculum and may have significant areas of misconception or ignorance.
7 8 9 10	Pass at 3 rd class level	Performance is satisfactory and demonstrates an adequate knowledge and understanding of the core curriculum.
11 12 13	Pass at lower 2 nd class level	Performance is of a good standard. There is evidence of a sound knowledge and understanding of the core curriculum.
14 15 16	Pass at upper 2 nd class level	Performance is of a very good standard. There is evidence not only of a broad and sound understanding of the core material but also an ability to integrate this with other material.
17 18 19 20	Pass at 1 st class level	The performance is of an exceptional standard. There is evidence of a comprehensive knowledge and understanding of the core curriculum and the ability to analyse and integrate complex information.

35. **Degree classification.** Only Honours module grades are used to calculate the final degree classification. The Honours degree classification is awarded using the University's Honours degree regulations and algorithm (<http://www.st-andrews.ac.uk/staff/teaching/examinations/honours/>). BSc Honours Medical Students have 5 module degree grades weighted appropriately on the basis of their credit ratings. Students complete Honours modules totalling 240 credits by the end of the degree programme (60 credits each for MD3001, MD3002, MD4001, 40 credits for MD4002 and 20 credits for MD4003).

REASSESSMENT AND SPECIAL CIRCUMSTANCES

36. **Special exam arrangements.** All students requiring special exam arrangements because of a disability or long term medical condition must register with Student Services. For arrangements to be in place for the MSA students must register with Student Services by the start of week 2, or by week 7 for these to be put in place for the ESA. Students should note that no extra time is currently allocated to the assessment of clinical/ communication skills (i.e. OSCEs).

37. **Deferred assessments.** In the event that students are absent from any summative assessment, a deferred sitting may be arranged. Students must apply to the School for a deferred assessment this can be done by emailing Medical Director of Teaching medicaldot@st-andrews.ac.uk, explaining the circumstances and including relevant evidence. The request will be considered, anonymously by the School Progress committee. If the committee approves the request then an exam will be held in accordance with University regulations for deferred assessments.

38. **Failure to attend.** Students who are expected to take an assessment (or reassessment) but who do not attend the exam must inform the School of Medicine, Support Team (medsupport@st-andrews.ac.uk) and the School Assessment Team (medass@st-andrews.ac.uk). Failure to do so, or failure to request a deferred assessment, will result in the module being awarded a 0X reporting code.

39. **Failing exams and resits.** Students who fail a module after completing all the required assessments may be entitled to take resit assessments for that module. These resit assessments will be timetabled prior to the commencement of the next academic year. Students must pass all modules in one academic year in order to progress on to the next. In the pre-Honours modules (MD2001 and MD2002) the resit grade obtained will be recorded on the University transcript. Resit pass grades for Honours modules are capped at 7 irrespective of performance in the reassessment. A resit module mark for MD2001, MD2002, MD3001, MD3002 and MD4001 is calculated from a total of 180 marks split 50:50 between SWAs & MCQs. It is composed of two separate papers, which all resit students for a module must sit: Paper 1 (SWAs totalling 90 marks), Paper 2 (90 MCQs). Marks obtained from the MSA do not contribute to the calculated resit module grade. If a student has passed the MD2002 or MD3002 OSCE but is required to resit the written papers, then there is no requirement to resit the OSCE. Similarly, if a student fails the MD2002 or MD3002 OSCE but obtains a pass for the written papers then only a resit OSCE is required. The resit assessment for MD4003 follows the same format as the MD4003 initial examinations. Failure of any component of MD4002 will require a resit of that component. A re-assessment for the dissertation component of MD4002 would require that the student completes a new, shorter, dissertation under the supervision of the same or different supervisor. If the student failed the original presentation then they will be required to re-present their work to be marked by two staff members using descriptors to determine a grade. The mark for any resit components (presentation or dissertation) of MD4002 will be capped at 7.

40. **S-coding.** A module grade may be reported with an S-code where most or the whole of the student's work for the module has been affected by special circumstances; where there is clear written evidence of these; and where it has not been possible to compensate by means of deferred and/or alternative assessment. Only students in the Honours modules are eligible to S-code a semester (to a maximum of 60 credits). The University S Code policy: <https://www.st-andrews.ac.uk/policy/academic-policies-student-progression-s-coding/s-coding.pdf>

FEEDBACK POST-SUMMATIVE ASSESSMENTS

41. **Class Performance.** The class will receive feedback on the exam performance as a whole.

42. **Individual performance.** A summary of examination performance will be available on the student record section of Galen.

43. **Personal Tutor.** Students will have the opportunity of meeting with their personal tutor following MSA and ESA exam diets to discuss their examination performance. Tutors will have access to generic class feedback and individual student records on Galen and be able to assist the student in conducting a self-appraisal of their performance. The tutor will ensure you understand the assessment system, review your study technique and may direct you to seek further support if indicated.

44. **Decile Rank.** Your decile relates to your general ranking within the class and is similar to how you will be ranked for foundation jobs in the future. Decile 1 is the top 10 percent of the class, decile 2 the next ten percent below that and so on to decile 10. Information on decile rank is not routinely calculated or held for individual students, a module decile rank can however be requested via a Galen signup sheet on completion of your ESA examinations.

ENTRY TO HONOURS

45. **Automatic progression.** You must pass both Foundations modules (MD2001 and MD2002) at first attempt and demonstrate appropriate skills and attitudes before you can automatically progress to the Honours years.

46. **Entry under licence.** You cannot progress from one year of the course to the next without successfully completing all the modules in that academic year. If you have been unsuccessful in completing either or both Foundation modules (MD2001 and MD2002) you must pass at reassessment to be considered for progression to the Honours years. Progression to the Honours years is not automatic. Performance requires consideration by the School Progress Committee and is discretionary: It may offer Conditional Entry into Honours.

Author:	Executive Administrator (DCM)	Approval Committee:	
Consultees:			
Location/s (Med Handbook):	UG Teaching>Assessment>Assessment		
Location of source file:	http://medhandbook.st-andrews.ac.uk/blog/assessment-information-for-ug-students/		
Access Level: (Public/University/School Staff)	Public		
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Version Control Record *(expand table as required)*

Date	Revision Description	Major Changes
29/06/2017	Published version	
29/01/2018	Clinical Examinations update	
10/08/2018	Update to BSc only focus	
10/09/2021	Update to refer to changes to Assessment for BSc Medicine Modules of Academic Year 2021-22	
06/09/2022	Update to Assessment for BSc Medicine Modules of Academic Year 2022 onwards. Reverting to pre-pandemic assessment structure.	