Department of Physics

Final Year Examination Pre- Board and Board Guidelines 2011/12

Purpose of the Board

The Final Year Examination Pre-Board and Final Year Examination Board, hereafter Pre-Board and Board, meet to recommend the classification of award for candidates in their final year of the BSc Physics, Applied Physics, Laser Physics and Optoelectronics degrees and integrated masters MSci Physics, Applied Physics, Photonics, Biophysics, Physics with Visual Simulation and Physics and Mathematical Finance degrees. The Board also makes recommendations as to the classification of award for candidates on the BSc Mathematics and Physics degree that are then considered by the Joint Mathematics and Physics sub-board. In addition, the Board will make progress decisions for candidates on the fourth year of the integrated masters degrees listed previously.

Membership of the Pre-Board and Board

As defined by the list approved and held by the Science Faculty Office.

Progress and Award Requirements

Progression and award are determined by the accumulation of credits. The credit totals and conditions that must be satisfied for a candidate either to be awarded a degree at a given classification or to progress are specified in Part 2B of the University Calendar. General regulations relating to BSc degrees are covered in Regulation 15.1 and the regulations for Physics specific BSc degrees are listed in Regulations 15.15,15.17 and 15.29. The general regulations for integrated masters degrees are covered in Regulation 16.1 and the regulations for Physics specific Integrated Masters degrees are listed in Regulation 16.17.

The credit requirements for the degrees offered by the Department of physics, jointly with the Department of Mathematics and Statistics or with Faculty of Humanities and Social Sciences are given in Appendix 1.

Subject to satisfying these credit requirements, the classification of a candidate's degree will be determined by the candidate's composite mark, as calculated by use of the appropriate degree algorithm listed in Appendix 2. The calculation will use the "first attempt" mark of the compulsory and approved optional classes taken at Levels 3, 4 and 5. Approved optional classes are ones sanctioned by the appropriate Adviser of Study.

Schedules of Assessment

The Department will use both Student Business (SB) and internally produced Schedules of Assessment (SoA). The internal SoA will be produced by the 3rd – 5th Year Examination Marshall (EM) and will show, where appropriate, all Level 3, 4 and Level 5 classes. The internal SoA will be circulated to the Department for consideration at both the Pre-Board and Board. All Schedules are returned back to the EM for secure disposal after the Pre-Board and Board have met. The SB Schedules will be marked up by the Examination Board Convener and returned to Student Business after the Board has met.

Method of Operation

The Pre-Board and Board will be chaired by the Head of Department or his/her nominee.

The Pre-Board and Board will scrutinise the marks that have been set out in the schedules of assessment.

The production of the final mark associated with a given class is the duty of the staff responsible for the delivery of that class. Close attention must be paid to marks that are near to but below the pass mark.

For Level 1 – 4 classes a mark of 40 % or greater will be deemed a pass.

For Level 5 classes a mark of 50 % or greater will be deemed a pass.

For Level 1 – 4 classes a mark between 30 and 39 is deemed a "near pass".

The Pre-Board will consider candidates in the absence of the External Examiners. The Pre-Board will identify candidates who are close to a classification boundary and will recommend those candidates for interview by the External Examiners. The External Examiners can also select any candidate they so wish for interview.

Between the Pre-Board and the Board, the External Examiners may, if they so wish, scrutinise individual candidate's examination scripts, discuss the performance of a class with the staff responsible for the delivery of that class, or undertake any other activity that they feel is of benefit to the candidates.

A candidate that satisfies the Board in a class will be awarded the credits for that class.

Any candidate who fails to satisfy the minimum credit total needed for the award of the degree but has a composite mark greater than or equal to the value needed for the minimum degree classification will be awarded the appropriate super class(es) (see Appendix 3).

The Board can recommend the following

Award – The candidate has successfully completed all years of his or her degree course and so may graduate.

Do Not Proceed – A candidate has not satisfied the progress conditions for the next year of the course and will be required to enter academic suspension. The candidate may sit re-sit examinations in the coming session.

May-Proceed – The candidate may proceed to the next year of his or her course.

Pass – The candidate has no re-sits and can proceed to the next year of his or her course.

Re-attend – A candidate has been adversely affected by circumstances to such an extent that it is in the best interest of the candidate to re-attend the year.

Re-sit – The candidate should take re-sit examinations at the next available opportunity.

Transfer – The candidate will transferred to another degree. This decision can be qualified by another decision, for example, Transfer and Award.

Adjusting or Raising Marks (Mitigating Circumstances)

The following procedures with respect to the adjusting or raising of examination marks were approved by the Faculty of Science's Board of Study in November 2005 (minute 3037.2).

(i) Following the outcome of an examination or other assessment process, the Pre-Board may decide that the marks distribution for the class as a whole does not properly reflect the standards set in the University's Marking Guide for UG Courses or Marking Guide for Integrated Masters Courses. The Pre-Board may then adjust the marks in order to bring the marks so that they are in line with the University's Marking Guides. Scaling will be performed by use of the Department approved Two-Point scaling algorithm (see Appendix 4).

(ii) Class examiners may be aware of mitigating circumstances, as defined in the University Procedures and Guidelines on Mitigating Circumstances, that may have affected the performance of individual candidates. Where such circumstances result in a candidate missing a piece of coursework or a class test that contributes to the overall assessment for a class, the examiners may, through agreed departmental procedure, condone this (for example by averaging over the remaining coursework or class tests to arrive at the appropriate coursework/class test mark for the candidate) and this need not be reported to the Pre-Board or Board. Otherwise, the examiners should **not** adjust marks of such candidates. Students who present mitigating circumstances will be considered by the Department's Mitigating Circumstances Panel who will make recommendations for the Pre-Board and Board as to how a candidate's mark should be adjusted in the light of the mitigating circumstances. Other circumstances, unknown to the examiners that may have affected a candidate's performance may be recorded in the Registry and these are routinely reported to Examination Boards for consideration.

(iii) In the light of all circumstances affecting an individual candidate that are reported, the Examination Board may decide to

a. discount the candidate's attempt at one or more examinations, and/or

b. convert a marginal fail in one or more examinations into a pass, through raising the mark or marks to the pass mark (40% or 50% as appropriate), taking into account the recommendations of the relevant departments.

(iv) Adverse circumstances that may have affected a whole class may be reported to an Examination Board (for example a fire alarm during an examination or bad weather affecting travel to the exam). In such circumstances, Examination Boards shall take whatever decision they see fit within any appropriate University procedures or guidelines.

(v) Notwithstanding the above procedures, Examination Boards may exceptionally, in the light of a candidate's overall academic standing, raise marginal fail marks to passes. The term "marginal fail" will normally be regarded as a mark in the range 35 - 39% for Level 1 - 4 classes where the pass mark is 40% and 45 - 49% for level 5 classes where the pass mark is 50%.

APPENDIX 1

CREDIT REQUIREMENTS FOR AWARD

MSci Physics, Applied Physics, Photonics, Physics and Visual Simulation, Physics and Mathematical Finance

In order to qualify for the award of the degree of MSci in the chosen course, a candidate must have accumulated no fewer than 600 credits from the course curriculum. These must include no fewer than 210 credits at Levels 4 and 5 of which a minimum of 120 must be at Level 5.

MSci Biophysics

In order to qualify for the award of the degree of MSci in Biophysics, a candidate must have accumulated no fewer than 600 credits from the course curriculum. These must include no fewer than 230 credits at Levels 4 and 5 of which a minimum of 120 must be at Level 5.

BSc Honours Physics, Laser Physics and Optoelectronics, Applied Physics

BSc with Honours: In order to qualify for the award of the degree of BSc with Honours in the chosen course, a candidate must have accumulated no fewer than 480 credits from the relevant course curriculum. These must include no fewer than 180 at Levels 3 and 4 or above of which a minimum of 90 must be at Level 4 or above.

BSc Physics and Applied Physics

BSc: In order to qualify for the award of BSc in Physics and Applied Physics, a candidate must have accumulated no fewer than 360 credits from the course curriculum. These must include no fewer than 60 credits at Level 3 or above and at least 180 credits at Level 2 or above from the compulsory and optional classes taken from the course curriculum

APPENDIX 2

FINAL YEAR COMPOSITE MARK

BSc Honours Physics, Laser Physics and Optoelectronics, Applied Physics

The **composite mark** is determined to be the credit-weighted average mark of 90 credits at Level 3 and 90 credits at Level 4, taken from the compulsory and approved optional classes for the appropriate Years 3 and 4 curricula. The marks included are those from the first attempt.

Note 1: **12 359** Pass Degree Option 1**, 12 360** Pass Degree Options 2 and **12 437** Industrial Project are **NOT AVAILABLE** for inclusion in the composite mark.

Note 2: **ONLY ONE** mark from **12 418** Physical Concepts, **12 425** Ethics for Science & Engineering, **12 478** Managing Technological Innovation, **12 488** Research Skills, **12 489** Physics in Society, **12 490** Communicating Physics may be included in the composite mark.

BSc Honours in Mathematics and Physics

The **composite mark** is determined by the Faculty approved Faculty of Science Algorithm (see Appendix 5).

BSc Honours Assessment (Physics) One Year

As for the normal BSc Honours assessment except that the **composite mark** is determined from 120 credits at Levels 3 and 4, including at least 90 credits at Level 4.

MSci Physics, Photonics, Applied Physics, Physics and Visual Simulation, Physics and Mathematical Finance

The **composite mark** is determined to be the credit-weighted average mark of 210 credits at Levels 3 (Physics and Mathematical Finance **ONLY**), 4 and 5 (All degrees), taken from the compulsory and approved optional classes for the appropriate Years 4 and 5 curricula. The marks included are those from the first attempt.

Note 1: **ONLY ONE** marks from **12 418** Physical Concepts, **12 425** Ethics for Science & Engineering, **12 488** Research Skills, **12 489** Physics in Society, **12 490** Communicating Physics may be included in the composite mark.

Note 2: The mark for the class **12 437** Industrial Project is **NOT AVAILABLE** for inclusion in the composite mark.

MSci Biophysics

The **composite mark** is determined to be the credit-weighted average mark of 210 credits at Levels 3, 4 and 5, taken from the compulsory and approved optional classes for the appropriate Years 4 and 5 curricula. The marks included are those from the first attempt.

Note 1: **ONLY ONE** marks from **12 418** Physical Concepts, **12 489** Physics in Society, **12 490** Communicating Physics may be included in the composite mark.

Note 2: The mark for the class **12 437** Industrial Project is **NOT AVAILABLE** for inclusion in the composite mark.

MSci Assessment for BSc Honours for Photonics, Applied Physics, Physics and Visual Simulation, Physics and Mathematical Finance

A candidate who fails to satisfy the requirements for the award of an MSci degree may be assessed for the degree of BSc Honours in Physics (Physics, Physics with Visual Simulation, Physics and Mathematical Finance, or Laser Physics Optoelectronics (Photonics), or Applied Physics (Applied Physics).

Note 1: **12 521** Research Project may be counted as 40 credits at Level 4.

Note 2: **ONLY ONE** marks from **12 418** Physical Concepts, **12 425** Ethics for Science & Engineering (Biophysics excluded), **12 488** Research Skills, **12 489** Physics in Society, **12 490** Communicating Physics may be included in the composite mark.

Note 3: The mark for the class **12 437** Industrial Project is **NOT AVAILABLE** for inclusion in the composite mark.

APPENDIX 3.

Award of Super Class

The award of the degree is determined by the number of credits accrued by a candidate over the period of study. A candidate who is short of credits but otherwise satisfies all of the other requirements to be awarded a given degree, with the exception of MSci Biophysics will be awarded 120 credits under the class code PH 400 / PH 414 / PH 500 / PH 503 provided that the credit mark average of 120 compulsory or approved optional class credits taken in the final year reaches the pass mark for the degree. The 120 credits awarded under PH 400 / PH 414 / PH 500 / PH 503 are instead of those included in the credit mark average.

For MSci Biophysics students are awarded 130 Level 5 credits under the class code PH 512 and 110 credits under the class code PH 419

APPENDIX 4.

Two Point Scaling Routine

The two point scaling works by defining pass, P_o, and excellent marks, E_o in line with the University Marking scheme (e.g P_o = 40 and E_o 70 % for Level 4 classes). Pass P, and excellent marks E, are then identified in the set of raw marks to be scaled and the marks are then scaled such that $P = P_o$ and $E = E_o$. Scaling should only be applied to classes that showed either exceptionally low pass rates and / or average marks. If any set of marks require scaling, a panel comprising the staff responsible for the delivery of the class, the Director of Teaching and the Year 3 – 5 Examination Marshall would meet to define P and E. If any class is scaled, then the raw and scaled marks would be presented at the Pre-Board and the External Examiners informed prior to the Board.

APPENDIX 5.

Faculty of Science Algorithm

Principles

1. Given that the SCQF (which underpins the University's General Regulations) is based on "Levels of Study" rather than "Years of Study", the algorithm should reflect this by being composed from credit weighted means of marks over "Levels of Study" rather than "Years of Study".

2. It is the mark at the first attempt at any class that is used in the calculation.

3. For all degrees (Honours and Integrated Masters) classes at the two highest levels of study will be included; i.e normally Levels 3 and 4 for Honours and Levels 4 and 5 for Integrated Masters. Exceptionally, where a curriculum for the award of an honours degree includes level 5 classes these shall be included in the algorithm as if they were Level 4 classes where this is to the benefit of the student.

4. All classes at each appropriate level in the students required curriculum shall be included in the calculation unless a class is assessed only on a Pass/Fail basis in which case it is omitted from the algorithm.

5. The weightings of the marks in the Composite Mark Algorithm shall reflect the credit value of the class and also the level of the class to reflect the general consensus that the marks at the higher level of study should have significantly more bearing on the final outcome.

6. Any exception form the Faculty Final Assessment Composite Mark Algorithm must be approved by the Faculty Board of Study.

The Composite Mark Algorithm

The Faculty Composite mark Algorithm shall be

$$C = \frac{\sum w_i c_i m_i}{\sum w_i c_i}$$

where *ci* is the credit value of the class, *mi* is the percentage mark gained in the class.

For Honours Degrees the sum is over all level 3 and level 4 classes in a students required curriculum, and *wi* = 1 for level 3 classes and 3 for level 4 classes. Where a curriculum for the award of an honours degree includes level 5 classes these shall be included in the algorithm as if they were Level 4 classes where this is to the benefit of the student.

For Integrated Masters the sum is over all level 4 and level 5 classes in a students required curriculum, and *wi* = 1 for level 4 classes and 3 for level 5 classes.

Alternatively, denoting the credit weighted average (CWA) mark for level 3, 4 and 5 classes by *L*3, *L*4 and *L*5 respectively, this can be calculated **for Honours** by

$$C = \frac{mL3 + 3nL4}{m + 3n}$$

where *m* and *n* are the numbers of credits at Level 3 and Level 4 respectively; and **for Integrated Masters** by

$$C = \frac{mL4 + 3nL5}{m + 3n}$$

where *m* and *n* are the numbers of credits at Level 4 and Level 5 respectively.

Where a curriculum contains the **same number** of credits (normally 120) at both levels included in the algorithm, the calculation is equivalent to

For Honours: 0.25**L*3 + 0.75**L*4
For Integrated Masters: 0.25**L*4 + 0.75**L*5.

NL May 2012