

BSc Physics 4-Year Program Structure 2004/05

1. AT LEVEL ONE

1B28 Thermal Physics
1B72 Waves and Modern Physics
1B70 Physics Laboratory and Computing I
1B71 Mathematics for Physics I

2. AT LEVEL TWO

1B47(1B27) Classical Mechanics
2201(1B26) Electricity and Magnetism

2B72 Mathematical Methods for Physics II
2B22 Quantum Physics
2B70 Physics Laboratory and Computing II

3. AT LEVEL THREE – Beginning in odd years:

Lecture courses (half of the courses are given in alternating years)

2B27 Environmental Physics
2B24 Atomic and Molecular Physics

3C26 Quantum Mechanics
3C24 Nuclear and Particle Physics
3C75 Principles and Practice of Electronics
3C70: Physics Practical (Laboratory)

4. Beginning in even years:

2B28 Statistical Thermodynamics and Condensed Matter Physics
2B29 Electromagnetic Theory

3C74 Topics in Modern Cosmology
3C25 Solid State Physics
3C43 Lasers and Modern Optics
3C80: Physics Practical and Project

MSc and Postgraduate Diploma in Physics - Structure

Course Structure :-

The MSc programmes have the following course structure. Detailed syllabuses of core courses can be found in the MSc handbook. Syllabuses for other courses are available on the Departmental web pages. The label in brackets gives an alternative designation for the course used in the timetable.

The MSc and Post Graduate Diploma are governed by the general provisions given in the annual “University College London Academic Regulations for Students.”

MSc Physics

1. Four “core” components, course weighting 1/12th each, to be selected from :

PHASG426 Advanced Quantum Theory (4426)

PHASG442 Particle Physics (4442)

PHASG421 Atom and Photon Physics (4421)

PHASG427 Quantum Computation and Communication (4427)

PHASG472 Order and Excitations in Condensed Matter (4472)

MATHG305 Mathematics for General Relativity (3305)

SPCEG002 Space Plasma and Magnetospheric Physics (4465)

PHASG431 Molecular Physics (4431)

2. Two further components, weighting 1/12th each, selected from:

(a) The above list

(b) Courses registered for the MSc in Astrophysics

(c) Courses given by Space and Climate Physics as part of the MSc in Space Science (as determined by the MSc Tutor)

(d) Intercollegiate 4th year courses

(e) 4th year MSci Physics and Astrophysics courses (and appropriate 3rd year Physics courses, as determined by the MSc Tutor).

(f) Medical Physics MSc core courses

(g) Plastic and Molecular Optoelectronics

3. Research Essay (weighting 1/6th). PHASG405

4. A Research Project which will be based in a research group within the Department (weighting 1/3rd). PHASG299

Post Graduate Diploma Physics:

Assessment

In order to be eligible for a Post Graduate Diploma award, a student must complete all components of the programme satisfactorily. These include all the written examinations (on the lecture courses of both terms), and the extended research essay. The overall mark for the Post Graduate Diploma is a weighted average of these elements, with the same relative weight for each element as those noted above.

To obtain a Post Graduate Diploma award, students must obtain an overall average mark of at least 50%. Provided that these marks are achieved, the Board of Examiners may allow condoned failure (i.e. a mark of < 50%) in up to TWO courses (which can include the research essay) provided that the mark achieved in

each of those elements is at least 40%. Otherwise, failure of an examination element requires a re-sit to be completed successfully in the subsequent year. Failure in the research essay requires a resubmission the following year.

The results for the Post Graduate Diploma-registered students are decided at a special meeting of the Examination Board in June. If a student fails to achieve the marks required for a Post Graduate Diploma he/she can resit the relevant exams in a subsequent year.

Transfer from PG Diploma to MSc

At the discretion of the Examination Board, a Post Graduate Diploma-registered student can be transferred to MSc registration, provided that he/she achieves a mark of $\geq 50\%$ as his/her overall average mark, as well as $\geq 50\%$ in any four course examinations, and $\geq 40\%$ in the other two examinations. If transferred to MSc registration, the student will then continue with the project work so as to try and obtain an MSc. An extra fee is also then due. Students wishing to have the option of transferring to MSc registration at the June Exam Board meeting must therefore have already completed all the initial project work up to that date, the same as the MSc-registered students.

NOTE: Under the current UCL regulations, if a Diploma-registered student fails to achieve the marks required for transfer to MSc registration, he/she ends the programme in June, and is NOT allowed to complete a project or re-sit any exams for the MSc degree. The student can, however, re-sit for the Diploma if he/she has failed to obtain the marks required for a Diploma.

(2008-09)

Courses for the Astrophysics MSc

Four core courses to be chosen from:

Planetary Atmospheres
Solar Physics
High-energy Astrophysics
Stellar Atmospheres and Stellar Winds
Galaxy and Cluster Dynamics
Cosmology
Mathematics for General Relativity
Space Plasma and Magnetospheric Physics

a further two optional courses to be taken from:

Physics MSc core courses
Space and Climate Science MSc core courses
Medical Physics MSc core courses

Intercollegiate 4th year courses

4th year MSci Physics and Astrophysics courses (some 3rd year MSc courses may be taken with approval)

MSc in Physics and Astronomy - Assessment

The taught courses and the research project each account for 50% of the overall degree mark.

The mark for taught courses is made up of:

10% based on continuous assessment

90% based on performance in examinations (6 three-hour papers) taken in April/May

The mark for the Research project will include components associated with the literature survey, the project report and the verbal presentation

MSc degrees are awarded at two levels: Pass and Distinction

Pass: requires a pass (score $> 50\%$) in all course components

Distinction: requires an overall mark of $\geq 70\%$ with $\geq 70\%$ obtained for the dissertation and at least half of the taught components.

To obtain an MSc award, students must obtain an overall average mark of at least 50% and a mark of at least 50% for the individual project. Provided that these marks are achieved, the Board of Examiners may allow condoned failure (i.e. a mark of $< 50\%$) in up to TWO courses (which can include the research essay) provided that the mark achieved in each of those elements is at least 40%.

Otherwise, failure of a written examination requires a re-sit to be completed successfully in the subsequent year in order to obtain the MSc. Failure in the project or research essay element requires a re-submission in the subsequent year.

Distinctions are awarded at the discretion of the examining board. In order to be considered eligible to be awarded a Distinction, a student must obtain an overall average mark of at least 70%, a mark of at least 70% for the individual project, and a mark of at least 50% for each other element.

(Courses may vary in other years.)

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