

Entry into Part II and Part III Astrophysics of the Natural Sciences Tripos and expected prerequisites listed below. These are not absolutely binding and individual cases can always be discussed specifically.

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### **To Part II Astrophysics**

Students normally enter from either IB Natural Sciences or IB Mathematics.

#### From IB Natural Sciences

Students have usually taken Physics A, Physics B and Mathematics. Astrophysics part II courses build on material from both Physics A and Physics B. Students who have not taken either one of these will need to catch up on Quantum Mechanics, Electromagnetism, Classical Mechanics and Thermodynamics as necessary.

A good understanding of IA Mathematics for Natural Sciences can be sufficient but students who proceed to part III will find a substantial amount of material from IB Mathematics for Natural Sciences necessary.

#### From IB Mathematics

Students have usually taken all the applied/theoretical physics courses, Methods, Quantum Mechanics, Complex Methods (or Analysis), Electromagnetism, Fluid Dynamics and Variational Principles.

Material from all applied IA courses may be assumed.

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### **To Part III Astrophysics**

Students enter from Part II Astrophysics, Part II Mathematics, Part II Physics or externally as MAST students.

Part III Astrophysics takes most of its courses from part III Mathematics. Students can expect that a good understanding of any material from both IA and IB Mathematics for Natural Sciences to be assumed. Equivalently any material from the IA Mathematics courses (except Numbers and Sets) and the applied IB courses may be assumed.

Part II Astrophysics - a student with a II.1 at part II may proceed automatically to part III. A student who fails to get a II.1 may request special consideration. A request for special consideration should be forwarded by the student's Director of Studies to [ugadmin@ast.cam.ac.uk](mailto:ugadmin@ast.cam.ac.uk) at the earliest opportunity and, at the latest, within two weeks of the results being announced.

The Director of Studies should state the reasons for requesting dispensation, confirm that the College supports the request and is able to support the student, and believes that the student will be capable of undertaking the Part III course successfully. The application must be accompanied by copies of supervision reports, and a detailed breakdown of the student's marks, year by year and subject by subject.

Part II Physics - each case is considered individually but evidence of at least a II.1 level of ability is expected.

Part II Mathematics - Each application will be considered individually following the release of the part II Mathematics results.

The general expectation is that students entering part III Astrophysics will have a first or good upper second result with alphas scored in at least three different theoretical physics courses. Candidates may also be asked to attend an interview.

Our list of recognised theoretical physics courses in Part II Mathematics is:

Mathematical Biology, Classical Dynamics, Cosmology, Principles of Quantum Mechanics, Applications of Quantum Mechanics, Statistical Physics, Electrodynamics, General Relativity, Fluid Dynamics, Waves

Please register interest by writing to [ugadmin@ast.cam.ac.uk](mailto:ugadmin@ast.cam.ac.uk)