

**MAS334 COMBINATORICS 2011-2012  
EXAM INFORMATION**

**Duration:** 2 hours 30 minutes.

**Format:** Choose 4 out of 5 questions.

**Content:** The paper covers all the chapters of the course and aims to test most of the main ideas in the syllabus.

**Definitions:** You should learn carefully definitions in the course, e.g. the definition of a rook polynomial, of a design, ...

**Statements of Theorems:** You should be able to state accurately the main theorems of the course, e.g., the Binomial Theorem, the Inclusion/Exclusion Principle, ...

**Proofs:** As part of your revision, you are advised to read the entire course, including the proofs. The following are examinable proofs: **34, 42, 50, 65, 78, 84, 88**. A proof or possibly parts of these proofs will be asked for on the exam.

**Examples:** There will be examples and problems to solve on the exam paper. The examples in the course and the homework problems provide a good guide to the style of problems.

**Past papers:** Two past papers are available on the course web page, with solutions. These two papers should be a reasonably good guide to the style of your exam questions. Last year I lectured the course and set the exam. The previous year (2009-2010) the course was lectured by Sam Marsh, who also set the exam.