### Honours Course Selection 2010

**List A (Approved Honours-Level Courses): Choose at least three courses**

- **Applied Mathematics Topic A**
  - Modelling emergent dynamics in complex systems

- **Applied Mathematics Topic B**
  - Network & modelling Inference

- **Applied Mathematics Topic C**
  - System Modelling and Simulation

- **Applied Mathematics Topic D**
  - The stability of fluid flows

- **Applied Mathematics Topic E**
  - The finite element method in heat and fluid flow

- ** Applied Mathematics Topic F**
  - Topics in Operations Research (to be advised)

- **Pure Mathematics Topic A**
  - Differential Geometry

- **Pure Mathematics Topic B**
  - Algebraic Curves

- **Pure Mathematics Topic C**
  - Lie groups and Lie algebras

- **Pure Mathematics Topic D**

- **Pure Mathematics Topic E**

- **Pure Mathematics Topic F**
  - Topics in Analysis

- **Statistics Topic A**
  - Advanced Statistical Inference

- **Statistics Topic B**
  - Analysis of Multivariate & High Dimensional Data

- **Statistics Topic C**
  - Bayesian Statistics

- **Statistics Topic D**
  - Modern Statistical Methods

**List B (Approved Level III Courses to be assessed at Honours Level): Choose at most two courses**

- **Mathematical Biology III**

- **Variational Methods & Optimal Control III**

- **Number Theory III**

**List C (Approved AMSI Courses): At most one course can count towards honours**

Please list below any AMSI courses that you have taken/will take. You must ensure that the AMSI coordinator forwards your marks for the courses to the Honours Coordinator.

(Form is continued overleaf)
Honours Course Selection 2010

List D (Other Level III Courses offered within the School and assessed at Level III):
Choose at most one course

☐ Applied Probability III ☐ Telecommunications Systems Modelling III
☐ Computational Mathematics
☐ Differential Equations III ☐ Waves III
☐ Financial Modelling/ Tools & Techniques ☐ Coding and Cryptology III
☐ Fluid Mechanics III ☐ Complex Analysis III
☐ Optimisation III ☐ Fields and Geometry III
☐ Integration and Analysis III
☐ Topology and Analysis III
☐ Biostatistics III
☐ Industrial Statistics III
☐ Mathematical Statistics III
☐ Sampling Theory and Practice III
☐ Statistical Modelling III
☐ Time Series III

NOTES:

1. Five courses from Lists A, B, C and D are required for completion of honours, subject to the conditions given above.
2. Students seeking to enrol in more than five courses from Lists A, B and D (courses taken at the School during your honours year) must obtain formal permission from the Head of School.
3. For students taking more than five courses (with approval from the Head as needed), the best five courses subject to the conditions above will be used for computation of your honours mark.
4. At least three discipline-specific courses are required from Lists A, B and C, of which at least two must be from List A. That is, if you are completing honours in applied mathematics, the “discipline-specific” courses relevant to you from List A are those with applied mathematics in the title. A more flexible interpretation is possible for students doing honours in mathematical sciences (not specifically in pure mathematics, applied mathematics or statistics).