Welcome back to MMSC!

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Teaching this term

- All lectures will be in person with livestreaming and recordings via Panopto.
- All classes for core courses will be in person. A Teams link will be set up, but the default is that classes will not be livestreamed unless you request it at least an hour before the class.
- Case Study meetings will be likely to work best in person but let the group leader know if this is not possible for you.
- You should wear a face covering at all times in the Andrew Wiles Building, including in classes and the MMSC room (unless you are the only person in there). Lecturers and class tutors/TAs are not required to wear a face covering while teaching.
- Be prepared for things to change if the pandemic gets worse.

Completed exams and special topics

- Congratulations on surviving the first two exams!
- These are being marked and results should be available in early February.
- Special topic marks will be available by the end of term. After the marks are released you will get feedback from the assessors via Daniel.
- No feedback is available for the exams.

Core courses this term

The core courses this term are

- A2 Nonlinear Systems
- A2 Further Partial Differential Equations
- A2 Further Mathematical Methods
- B2 Further Numerical Linear Algebra
- B2 Continuous Optimisation

A2 Nonlinear Systems (B5.6)

- Taught by Jon Chapman.
- Attend the first eight lectures (in weeks 1–4).
- Complete problem sheets 1 and 2.
- There will be four one hour classes associated with the course (in weeks 3–6) and each class will go through approximately half a problem sheet.

A2 Further Partial Differential Equations

- Bespoke MMSC course taught by Ian Griffiths.
- There will be one lecture per week.
- There will be four problem sheets to complete.
- There will be four one hour classes associated with the course (in weeks 3, 5, 7, 9).

A2 Further Mathematical Methods

- Bespoke MMSC course taught by Dominic Vella.
- Two lectures per week in weeks 5–8 of term. (Think of this as filling the gap left by Nonlinear Systems.)
- There will be four problem sheets to complete.
- There will be four one hour classes associated with the course (in weeks 6–9).

B2 Further Numerical Linear Algebra

- Already completed — this is the material in the second half of the Michaelmas Term Numerical Linear Algebra course.
- Final class this week on Friday from 1–2.30pm.

B2 Continuous Optimisation (C6.2)

- Taught by Coralia Cartis.
- Two lectures per week in weeks 1–8 of term.
- There will be four problem sheets to complete and four associated 1.5 hour classes (in weeks 2, 4, 6, 8).

Special topics

This term almost all special topic courses will have live lectures with recordings available through Moodle afterwards. The exception is the Waves and Compressible Flow course which has pre-recorded lectures available through Moodle. All the lectures are available now and have been sorted into folders for each week of term.

Special topics

The available courses and codes are

- Applied Complex Variables [O], C5.6
- Computational Algebraic Topology [O], C3.9
- Elasticity and Plasticity [M], C5.2
- Finite Element Methods for PDEs [C], C6.4
- Mathematical Mechanical Biology [M], C5.9
- Mathematical Models of Financial Derivatives [M], B8.3
- Networks [M], C5.4
- Optimisation for Data Science [C], B6.2
- Statistical Mechanics [M], C5.3
- Stochastic Modelling of Biological Processes [M/C], B5.1
- Waves and Compressible Flow [M], B5.4

Case studies

- Everyone needs to do a case study in mathematical modelling and a case study in scientific computing.
- More information this afternoon and on Wednesday.
- For modelling expect to meet with your group supervisor once a week in weeks 2–7, to give a group presentation in week 8 and to have extra meetings within your group.
- For scientific computing expect to meet with your group supervisor (me!) once a week in weeks 2–5 or 3–6 and to have extra meetings within your group, and then to do further personal study.

Dissertation

There will be a session to present dissertation projects in the middle of term. (Likely to be the morning of Tuesday week 4 or week 5 but this will be confirmed nearer the time.)
More information will follow shortly if you and your supervisor have submitted a proposal for an industrial project.