

SCOTTISH MATHEMATICAL SCIENCES TRAINING CENTRE

Notes for Students (revised September 2019)

1 Introduction

Welcome to the Scottish Mathematical Sciences Training Centre. SMSTC is a large joint venture, relying on contributions from staff and students across Scotland. Some aspects of the system are therefore likely to be unfamiliar; these notes are intended to provide both an introduction and a source of information that you can refer to over the coming year.

The overall aim of SMSTC is to provide *broadening* training for first-year PhD students. In the past, a perceived weakness of the mathematics PhD in the UK was that although students gained a great deal of in-depth knowledge of their subject speciality, this was at the expense of wider mathematical learning. SMSTC courses aim to redress that balance. The courses we run are intended to be useful to students *not* in that research area, as well as to those who are. So, don't hesitate to spread your wings and learn about something different. You may benefit more from a course in which you feel slightly out of your depth than from one in which you feel entirely comfortable.

We hope you enjoy SMSTC and find it intellectually enriching. Thank you for your participation.

David Pritchard (Director)

on behalf of the Academic Steering and Management Group (ASMG)

2 Themes and modules

SMSTC modules are organised in four **themes**: *Analysis (ANA)*; *Applications of Mathematics (AOM)*, *Probability and Statistics (PAS)*; *Structure and Symmetry (SAS)*. Each theme contains four self-contained **core modules**, which may have different prerequisites. Each module is assessed independently using either one or two assignments.

Supplementary modules on various topics may also be offered, but will not necessarily follow the pattern described in this document; they will be advertised separately.

Each module has a page on the SMSTC website, www.smstc.ac.uk, where you will find an overview of the module, contact details for the module lecturers, and links to material and assessments. Lecturers will make **notes** or **slides** available on the SMSTC website, often in advance of the lecture. (They may also recommend other supplementary reading.)

Once you have registered for SMSTC, you can **enrol** on modules using the “My Student SMSTC” link under “My Account”.

3 Opening symposium

This takes place in early October. A representative of each theme will give a short presentation on that subject. One purpose of the event is to give students a flavour of a wide range of interesting topics in mathematics, and another is to help those who have not finalised their module choices to come to a decision. There will also be presentations on

other aspects of life as a PhD student.

Another part of the purpose of the Symposium is for participants to get to know each other, and to meet some of the staff. Everyone is strongly encouraged to stay overnight. There is a dinner for everyone attending and the chance to learn something about curling...

4 Weekly schedule for the core modules

We run two ten-week semesters, October–December and January–March, with the following weekly schedule. (This was agreed after extensive consultations at the start of SMSTC in 2007 to avoid clashes with long-standing seminar series etc.)

Time	Monday	Tuesday	Wednesday	Thursday
1300–1500	SAS	PAS	AOM	SAS
1530–1730	PAS	ANA	ANA	AOM

5 Video-conferenced classes

Classes may follow various formats, including traditional lectures, “flipped classes” with preparatory work or reading, or seminars where students present solutions to problems. Taking a class via videolink can take a little getting used to, and interacting with the lecturer may not feel natural at first, but you are strongly encouraged to do so.

Questions are always warmly welcomed by lecturers. However, to avoid stray noise (or unguarded comments!) being broadcast to everyone else, please keep your microphone switched off until you want to speak to the whole group.

The technology usually works well, but in case of difficulty, there are normally technical support staff at each university available to help. Look out for local documentation about the operation of the video conference kit, and whom to call for help.

6 Tutorials

Tutorial-style **exercises** and **solutions** will be provided on the SMSTC website. However, SMSTC module teams are not responsible for running tutorial support; this is organised by each university individually and could consist of scheduled classes or of a designated person who will deal with questions on request. If you are unsure who is responsible for tutorials in your institution then you should contact your department's Postgraduate Director in the first instance.

7 Assessment of modules

Only PhD students of the partner departments should submit **assignments** to SMSTC. Students taking SMSTC as part of a taught MSc or at an external institution will have local arrangements for assessment.

- The modules are assessed independently of each other.
- Each module's assessment regime should consist of one or two assignments, typically taking a total of 10–12 hours of work.
- You should be given advance warning of the number of assignments and their deadlines, and usually given at least two weeks to complete each one, with a final deadline no more than four weeks after the end of the semester. We will aim to return marks within four weeks of the deadline where possible.
- You may be encouraged to work collaboratively to learn the topic, but you should

produce your own assignment solutions. The submission cover sheet asks you to sign a declaration that it is your own work. Identical scripts are not acceptable, and **suspected plagiarism or misconduct** of any kind is taken very seriously by both SMSTC management and partner departments.

- On most modules, the assignments will be submitted by uploading them to the website, using the “My Student SMSTC” link under “My Account”. However, some modules may find it more convenient to make different arrangements. Please pay careful attention to any instructions about the format of submitted work.
- **Grades** will be released via the website, using the “My Student SMSTC” link under “My Account”, and **feedback** may also be provided either via the website or in hard copy. Individual assignments may be awarded either a percentage or letter grade, but the overall result for the module will be a letter grade, on the following scale.

A = excellent (e.g. more than 75%);

B = good (e.g. 60–74%);

C = satisfactory (e.g. 40–59%);

U = unclassified (e.g. below 40%);

NA = not taken for assessment (the default if you submit nothing).

8 Workload

The amount of time you need to devote to each module will vary according to your previous background and all sorts of other factors. We expect that “on average” (whatever that means) each module will take about 25% of your time. However, assignment deadlines for the various modules tend to cluster together around the middle and the end of each semester, so you may find you have several deadlines in quick succession. Please be prepared for this to happen, manage your time accordingly, and ensure that your supervisor is aware of when these peak workload periods will be.

9 Final grades

SMSTC does not have the power to award any formal qualifications, or make progress decisions. We return your final grades to your department, who may then use them as part of a formal appraisal or credit system. We therefore cannot provide an official transcript of your results. However, at the end of each year we email every student a **letter confirming their grade** for each module. You may find this letter useful if you need to establish to your department or to a funding body that you have taken these modules.

10 Data protection and privacy

The basic rules we use for **data protection** are that:

- students can see only their own assessment results, feedback, and data;
- lecturers, module leaders and Theme Heads can see only the results and feedback for students on their modules;
- PhD supervisors and universities can see only results and feedback for their own students.

The official **privacy policy** is linked to from the bottom of each page on the website.