SCOTTISH MATHEMATICAL SCIENCES TRAINING CENTRE

Notes for Students (revised June 2020 for remote teaching)

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 PhD students. In the past, a perceived weakness of PhDs 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 learning. SMSTC courses aim to redress that balance. Most of our modules are intended principally for students who are *not* in that research area, though they may also be useful to those who are. So, don't hesitate to spread your wings and learn about something different. You will grow more as a mathematician by taking modules beyond your usual interests, and in which you feel slightly out of your depth, than by sticking to your comfort zone.

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.

Supplementary modules on various topics may also be offered, but will not necessarily follow the pattern described in this document. Supplementary modules may be more specialised than the core modules.

The **prospectus** gives a brief overview of each module, including the **expected prior knowledge**. SMSTC students have widely differing backgrounds, so you are advised to check the prospectus rather than to make assumptions about whether a module ought to be suitable for you.

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** and/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 from the "My SMSTC" page. You will need to be enrolled to submit assignments and to receive messages about the module; enrolment also lets us know how many students are taking each module.

3   Opening symposium

This takes place in late September / early October. Usually it runs as a face-to-face event but in 2020 it may be necessary to run it online. 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, and social events to give you a chance to meet other students.

4   Weekly schedule for the core modules

We run two ten-week semesters, October–December and January–March, with the following weekly schedule.

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

5   Videoconferenced classes

Classes may follow various formats, including traditional lectures, "flipped classes" with preparatory work or reading, or seminars in which students present solutions to problems. Taking a videoconferenced class 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 muted until you want to speak to the whole group.

In 2020-21, classes will be delivered using the Zoom videoconferencing platform. This raises some issues around privacy and security; please see our separate **Zoom policy** for details. Note in particular that **students are not permitted to record classes**.

6   Tutorials

Exercises and **solutions** will be provided on the SMSTC website. However, SMSTC module teams are not responsible for tutorial support; this is organised by each university individually and could consist of scheduled classes or a designated person who will deal with questions on request. If you are unsure who is responsible for tutorials in your institution 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. Submitting an assignment is taken as 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, via the "My SMSTC" page. 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, via the "My SMSTC" page, 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

SMSTC is designed to be used **flexibly**. We do not prescribe the number of modules you take or in which year you take them – any such requirements are set by your department.

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 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.