SSC in Research Practice Handbook
May 2021

Course Lead: Dr Anna Maria Choy

Aims of the SSC in Research Practice

The overall aim of this SSC is to offer medical students a hands-on opportunity to experience research and data analysis. You will:

- learn basic research techniques and methods of data collection and analysis
- understand how these can be applied to addressing scientific problems in the laboratory
- develop skills in experimental design and analysis
- be exposed to biomedical research opportunities within the University and to clinical academic career options

The 4 week block is scheduled during standard SSC time, and is a "Taster Month". During this time you will become acquainted with basic methods and techniques used in your host research group, meet the team, and will formulate a research proposal under the guidance of your supervisor.

Supervisor Guidance

- Prior to your SSC, the supervisor will be advised whether the medical student has any background training in experimental work.
- The supervisor will be asked to meet with you, preferably on day 1 or 2 to discuss the aims/objectives of the SSC.
- Supervisors will be asked to provide reading material at least 8 weeks before the commencement of the SSC.
- Supervisors will be encouraged to give detailed feedback in the assessments.

Timeline

This year, only Third year students can do their SSC May.

Important dates for May block SSCs

Monday 10 May 2021	Start SSC in Research Practice
Friday 4 June 2021	Submit project report and logbook

Contacts

SSC in Research Practice Lead
Dr Anna Maria Choy
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SSC in Research Practice Administrator
DCAT Administrator
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How to Apply

There are 10 places available on this SSC.   To apply, please submit the following to dcat@dundee.ac.uk **by NOON on WEDNESDAY 30 SEPTEMBER 2020. (**_NB – the deadline has been specifically chosen with a view to informing you whether you have been selected before the final closing date for SSCs.)_

- A brief CV including all your course grades to date
- A short paragraph (200-300 words) about why you want to do an SSC in research practice
- An SSC in Research Practice application form

Assessment

You will be assessed on 3 different items:

- **Supervisor's evaluation**

Your supervisor will be asked to complete a standard SSC report form at the end of the 4 week component of the SSC. This will comprise the majority of the marks for the SSC. Key areas they are asked to score are attainment of course objectives, interest and motivation, and reliability.   An example form is shown in Appendix 1.

To allow standardisation of marks for all students participating in this SSC, Dr Choy will also allocate marks for the logbook, report, and application form, and these will be considered in addition to the supervisor's evaluation when awarding an overall mark.

- **Experimental Logbook**

All experimental research requires a logbook. You will be required to submit your logbook for assessment, and its format should be exactly as instructed by your supervisor. This means that every logbook is different.

Your logbook should demonstrate that you can formulate a scientific question, determine how to answer individual components of that question, record results, analyse results, draw conclusions and move on to the next question and do it again! It can be in any format, and it is okay to be messy, to have crossings out, etc – we are expecting a working lab book. This should be maintained throughout the SSC and should not involve a mad rush at the end.

- **Report**

The 300-500 word report should describe what you did, why you did it, and what the outcome was - so essentially this is the summary and conclusion to your lab book.   A useful model is a scientific abstract, with the addition of a reflective component at the end about what you learnt or found challenging.

Guidelines on how to outline your report can be found in Appendix 2.

Handing in your documentation for assessment

Students must submit their logbook and report to the DCAT Administrator (dcat@dundee.ac.uk), by **5pm on FRIDAY 4 JUNE 2021**. You should also upload your report to TURNITIN as requested by the School of Medicine.

Presenting your work

Once you have finished your SSC you will hopefully have some data that is worth telling other people about!

- Look out for the **Discovering Research** symposia - these are run once a year by the Dundee Research and Academic Medicine Society (DRAMS drams@dundee.ac.uk)
- Ask your supervisor about **subject-specific opportunities**, as many specialist societies specifically encourage students to present their work.
- The **National Student Association of Medical Research** (NSAMR) is a new student-led organisation, which aims to inform medical students about the benefits of careers in clinical research and academic medicine. Supported by the Wellcome Trust, the association was launched in 2011 and has established a collaborative network of societies throughout the country. This network enables the sharing of ideas and resources, as well as giving students a national voice on issues pertaining to research, academic training and careers. We strongly suggest that you keep an eye on the website www.nsamr.ac.uk for opportunities to present your work and find out more about research opportunities for medical students.

Appendix 1 Example Assessment Form

The form below is an example of the type of for your supervisor will be asked to complete at the end of your 4 week SSC component.

PHASE 2 SSC ASSESSMENT FORM 2017-2018

Student Name:
Year:
SSC Title:
Period(s):

Please award a specific percentage for each section below. The marking scheme is shown opposite for guidance.

University Marking scheme:

Reporting Scale	Aggregation Scale	SSC % Equivalent	Description
A1	23	95-100%	Excellent
A2	22	89-94%	
A3	21	83-88%	
A4	20	76-82%	
A5	19	70-75%	
B1	18	67-69%	Very Good
B2	17	64-66%	
B3	16	60-63%	
C1	15	57-59%	Good
C2	14	54-56%	
C3	13	50-53%	
D1	12	47-49%	Satisfactory
D2	11	44-46%	
D3	10	40-43%	
M1	9	37-39%	Marginal Fail
M2	8	34-36%	
M3	7	30-33%	
CF	5	20-29%	Clear Fail
BF	2	0-19%	Bad Fail
*	0		

* Relevant descriptor selected from: CA (Certified Absence); AB (Unauthorised Absence); MC (Medical Certificate); WD (Withdrawn); DC (Discounted); ST (Stopped); NM (Not Marked—generally used where penalties have been applied for plagiarism)

Generic Grade Descriptors*	Percentage
Section 1: *Attainment of Course Objectives (Course Work) – weighting 70%*	
A Course work of an exemplary standard. Extensive knowledge beyond that required of the module. Excellent ability to critically appraise material and apply to specific issues. Vastly superior to average student.	
B Course work well above average. Thorough knowledge of the material covered in the course. Above average ability to critically appraise material and apply to specific issues.	
C Course work of average standard. Adequate knowledge of material covered in the course. Satisfactory ability to critically appraise material and apply to specific issues.	
D Course work only just meets acceptable standard. Knowledge of material covered is barely adequate. Minimal critical appraisal.	____**%**
M Course work below acceptable standard. Poor knowledge of material covered. Lack of ability to critically appraise.	
CF Course work well below acceptable standard. Little or no demonstration of knowledge of material covered. Critical appraisal absent.	
BF Course work not completed.	
Section 2: *Interest and Motivation – weighting 15%*	
A Highly self-motivated. Enthusiastic and mature approach to activities.	
B More motivated than the average student. Participates spontaneously and constructively.	
C Average student. Participates after minimal prompting.	
D Requires repeated prompting to participate.	____**%**
M Rarely participates despite prompting. Clearly not interested.	
CF Cannot be prompted to participate.	
BF Inadequate attendance (see over). No good reason supplied.	
Section 3: *Reliability – weighting 15%*	
A Totally reliable. Always present and prompt. Much better than the average student.	
B Better than average.	
C Expected standard. Can usually be relied on.	
D Cannot always be relied on. Only just meets acceptable standard.	____**%**
M Unreliability is an issue. Below expected standard.	
CF Unreliable. Well below acceptable standard. Usually absent/late for duties.	
BF Totally unreliable	

Student's Name:

Attendance	
Has the student's attendance at the SSC been adequate (see note below)*	
Students will expect feedback on their performance during this module. Please give reasons for the grades awarded, with examples of strengths and weaknesses. Extra detail will be required if you wish to award high (A3 or above) or low (D or less) grades. Marks and comments are routinely made available to students, who may challenge them.	
Signature of Supervisor: ………………………………………. Date: …………………… Print Supervisor's Name:……………………………………….	

Grading	Attendance
The overall grade awarded will be calculated as before using the weightings given overleaf to the different components of student performance.	Attendance at SSCs/SPSSCs is compulsory. In general, they are expected to occupy 4½ days per week. The question of what constitutes adequate attendance is however a matter of judgement for the module supervisor. **If the student's attendance during the module has been an issue, please provide details in the Feedback box above - this is likely to be challenged. The more detail you provide, the less likely it is that you will be challenged.**
Please return form to: dcat@dundee.ac.uk	

Appendix 2   Report Writing Guidelines

Title
Write a clear, informative title which describes key elements of your project. Very short or very long titles are not recommended. Using a title and a subtitle separated by a colon is a good way to describe the project in a short space. It is easier to choose a title after writing the abstract.

General format and style
Your abstract should be single-spaced in an easy-to-read 12pt font (like Times or Calibri). Write in the 3rd person. Passive voice is best. Write complete but concise sentences, using present tense for the existing body of facts, past tense for the completed research and define specialised terminology and abbreviations.

Be extremely precise and detailed about your argument and analysis. Do not say "Results of the study will be discussed" or the equivalent, but state what the results are and why they matter.

How to structure the abstract
Abstracts are quite concise in structure, although there is a lot of variation. Each of the sections may include one or more paragraphs.

Section 1
The main focus of the first paragraph should be a general statement about some issue in the field that your project contributes to. Do not describe your project yet but write a sentence which describes the topic of research. Write several sentences indicating the problem to be solved and the hypothesis that was posed and raise the issue that you will be addressing (this will provide the opening to introduce your research as the solution to a problem, or as a challenge to a claim made by another academic). Do not just say you are applying someone else's ideas; describe why this adds to knowledge. Alternatively, you can open with one sentence stating what the paper is about and then contextualise it with a general statement about how it connects to an issue in the field.

Section 2
This should be the heart of the abstract. State here that your study offers a solution to the problem described in section 1 and how. Briefly give details about the study, where it was conducted and with whom (number and background of participants, sources of data), how long the study lasted and/ or how much data was collected (e.g., hours of recordings), then summarise your research findings. You should include a detailed description of the results: specify your findings in detail (perhaps introduce key terms you use in the analysis).

Section 3
Write a discussion that gives the conclusion(s) of the research work and a statement of the direction for future research: how do these findings address the issue raised in Section 1? What does this imply for the field? This discussion need not be lengthy, but it should convey that your research has significant implications.

References
You should cite a few references in the text (no more than 3 or so in a 500-word abstract) to show you know the field. Do not waste space with a long list; select the key references only (it is often best to cite at least one "classic" reference and one "cutting-edge" recent reference). You should also cite anyone who centrally represents the issue you are discussing. Do NOT include a bibliography; save the space for describing your study.