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*SM2501- Research Skills for Medical Sciences*

*Course Handbook 2023-2024*

*Undergraduate Medical Sciences*

*School of Medicine, Medical Sciences & Nutrition*

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Course Summary

This course focuses on developing core skills for medical scientists and is compulsory for all students with degree intentions in the Medical Sciences.

The objective of the course is to enhance essential skills required to undertake a research project.

Its aim is to develop an active, student-driven approach to learning based on curiosity and exploration of knowledge as opposed to passive acquisition.

Students will work in groups of around 6 and will research a particular topic related to the general theme of “Health and Disease”.

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Course Aims & Learning Outcomes

1. To carry out work in a disciplined manner as part of a team.
2. To take responsibility for ensuring that the group delivers the research project.
3. To understand how to use library/online facilities to perform a basic literature search and assemble relevant information.
4. To understand the basis of scientific investigation and the importance of hypothesis-driven enquiry.
5. To understand the importance of critical appraisal of information sources and the reality of conflicting views on important research topics.
6. To explain and educate your peers on information that you have learned about the group topic.
7. To demonstrate basic computing and communication skills to create an oral presentation.
8. To answer questions on any aspect of the project following the oral presentation.
9. To contribute to the discussion on the oral presentations of other groups in your theme.
10. To understand the meaning of plagiarism and take responsibility for ensuring that the group’s project is a true reflection of the group’s own work.
11. To demonstrate the skills needed to write an individual report of the project under exam conditions.
12. To develop transferable skills related to teamwork, time management, communication and information technology.

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Course Teaching Staff

Course Co-ordinator:

* Dr Derryck Shewan (IMS 5.28, Tel. 01224 437381) d.shewan@abdn.ac.uk

Other Staff:

• Course Administrator: Mr Nigel Graham (n.graham@abdn.ac.uk)

# Assessments & Examinations

The marking scheme for the course is as indicated below:

|  |  |  |
| --- | --- | --- |
| Course Component | Responsible | Contribution |
| Individual essay | Tutor | 40% |
| Presentation | All Tutors | 30% |
|  | Other student groups in the Theme | 10% |
| Course performance and assessed tutorial | Tutor | 15% |
|  | Peer group | 5% |
| Total |  | 100% |

The Marking sheets that will be used to assess the different components of the course are available on MyAberdeen and samples will be demonstrated at the start of the course.

# Class Representatives

We value students’ opinions in regard to enhancing the quality of teaching and its delivery; therefore, in conjunction with the Students’ Association we support the Class Representative system.

In the School of Medicine, Medical Sciences & Nutrition we operate a system of course representatives, who are elected from within each course. Any student registered within a course that wishes to represent a given group of students can stand for election as a class representative. You will be informed when the elections for class representative will take place.

What will it involve?

It will involve speaking to your fellow students about the course you represent. This can include any comments that they may have. You will attend a Staff-Student Liaison Committee and you should represent the views and concerns of the students within this meeting. As a representative, you will also be able to contribute to the agenda. You will then feedback to the students after this meeting with any actions that are being taken.

Training

Training for class representatives will be run by the Students Association. Training will take place within each half-session. For more information about the Class representative system visit [www.ausa.org.uk](http://www.ausa.org.uk) or email the VP Education & Employability [vped@abdn.ac.uk](mailto:vped@abdn.ac.uk) . Class representatives are also eligible to undertake the STAR (Students Taking Active Roles) Award with further information about this co-curricular award being available at: [www.abdn.ac.uk/careers](http://www.abdn.ac.uk/careers).

Problems with Coursework

If students have difficulties with any part of the course that they cannot cope with alone they should notify the course coordinator immediately. If the problem relates to the subject matter, general advice would be to contact the member of staff who is teaching that part of the course. Students with registered disabilities should contact the medical sciences office at [medsci@abdn.ac.uk](mailto:medsci@abdn.ac.uk) (based in the Polwarth Building, Foresterhill) to ensure that the appropriate facilities have been made available. Otherwise, you are strongly encouraged to contact any of the following as you see appropriate:

* Course student representatives
* Course co-ordinator
* Convenor of the Medical Sciences Staff/Student Liaison Committee (Dr Donna MacCallum)
* Personal Tutor
* Medical Sciences Disabilities Co-ordinator (Dr Derryck Shewan, [d.shewan@abdn.ac.uk](mailto:d.shewan@abdn.ac.uk))

All staff are based at Foresterhill and we strongly encourage the use of email or telephone the Medical Sciences Office. You may have a wasted journey travelling to Foresterhill only to find staff unavailable.

# Course Reading List

Your reading matter will depend upon what project you undertake. Seek advice from your tutor to help you find relevant material. You should try to find peer-reviewed, experimental sources of evidence yourself to support the statements and conclusions you make during your project.

# Lecture Synopsis

There are no standard lectures within this course, but the following material should help you progress during your project:

What do you have to do?

* Students will work in groups of around six to research a topic related to Health and Disease.
* In week 26, on Wednesday 24th January 2024 at 10am, you will attend Science Teaching Hub (labs 1.001/1.007) where you will receive an introductory lecture and where you will be able to find out more about the topics and be assembled into groups. Students may wish to form groups in advance, if you already have an idea for a topic and know others with the same interests.
* Students will then ensure that they exchange details about methods of communication between their group and start to plan how they are going to tackle the project.
* E-mail is the mode of communication with the tutor, the theme leader, the course coordinator and Nigel Graham.
* Advice and help for finding out how best to use literature searches and library resources will be provided. One member of each group will attend a session in the library and report back to the rest of the group.
* The recommended literature for searching should largely be at the level of textbooks and reviews, but key papers in the primary literature may also be used and websites may be useful for general information.
* Between weeks 26-33, you will prepare a joint project, which will be presented as an oral presentation, based on PowerPoint, on Wednesday 13th March. In addition, you will write an individual summary of the report under exam conditions in week 35, on Wednesday 27th March. So, the essence of what you are doing between weeks 25-33 is preparing a research report for presentation in oral and written form.
* One of the most important aspects of the project is that the members of the group explain and inform the rest of the group about the section of the project that they have been responsible for investigating. In the question session following the oral presentation, every member of the group will be expected to answer questions on any aspect of the project. So, the expectation is that you will all understand the project in its entirety.
* Between weeks 26-34 you will have meetings with a tutor, whose primary job is to ensure that the group is working productively and that you are achieving identified milestones. On Wednesday 28th February you will have an assessed tutorial when your tutor tests your knowledge of the topic and how effective your group work and communication have been, i.e. that you have cooperated well and read each other’s contributions. This assessment may take place as a question-and-answer session, a general discussion, or both. It is up to the tutor. The session would be expected to last between 30 and 60 minutes. ALL students MUST attend. This assessment contributes to your overall course grade.
* One member of each group will be appointed as the secretary whose responsibility is to e-mail your tutor and Nigel Graham regularly about the group's progress, i.e. attendance of all members at meetings and active contribution by all. It is your responsibility to identify anyone who is not pulling their weight.
* All students are responsible for managing the project and delivering the oral presentation and individual essays.
* Group meetings will be organised by the secretary in consultation with group members. You may meet as often as you like at a time that suits all group members – it is your project, so you organise your time. You may also meet with tutors when you like by arranging meetings with them.
* Help sessions for students who wish for training in PowerPoint can be organized on request – contact your course coordinator, Dr Derryck Shewan ([**d.shewan@abdn.ac.uk**](mailto:d.shewan@abdn.ac.uk)).
* Putting the oral presentation together is the responsibility of all members of the group, although it is up to you to decide how to present it, e.g. some members may take responsibility for preparing the PowerPoint slides and others do the talking.
* In week 33 on Wednesday 13th March, you will deliver the oral presentations. They will be arranged such that groups present their topics in related themes. The talk should last for 20 minutes and there will be 10 minutes of questions/discussion. All students will be expected to answer questions on their own project and to ask questions of the other groups about their presentations.
* In week 35 on Wednesday 27th March, you will write an individual report on the research project under exam conditions. The time allowed for this will be 1 hour and instructions will be provided.
* Anyone with Medical Certificates or Good Cause unable to attend on 27th March will be allowed to do their individual reports on Friday 29th March.

Outline of the project

The projects relate to the overall Theme of “Health and Disease.” A few sub-Themes will be arranged, each with several topics. Students are encouraged to suggest their own ideas for topics. The sub-Themes are listed below:

• Genetic Diseases

• Diseases of the Immune System

• Developmental Diseases

• Diseases Affecting the Nervous System

• Acquired Diseases

• Is Exercise the Best Medicine?

• Prevention is Better than Cure

Mostly, you will be looking at a specific disease entity and then finding out about the following key areas, which will form the common structure for all the projects.

1. Relevance of the disease or condition. How common is it, who does it affect?

2. What are its causes, e.g. are they genetic, autoimmune, viral, lifestyle-induced or, indeed, all the above?

3. How is the disease diagnosed?

4. How does the disease affect normal biochemistry and physiology, or structure? (Clearly need to understand normality first.)

5. How is the disease treated? What is the rationale for the treatment?

6. Are there any exciting new therapeutic strategies that might be used in the future?

Within this overall structure, different topics will have different emphases, e.g. if you are looking at “Is Exercise the Best Medicine?” then the emphasis is more likely to be on points 4 and 5 above, while, for example, some genetic diseases may not be amenable to any treatments currently.

Industrial Placement discussions

Although nothing to do with the content or assessment of SM2501, students who are interested in the possibility of Industrial Placement after Level 3 should attend timetabled sessions during this course in which the coordinator of Industrial Placements, Dr Ian Fleming, will provide information and instruction important for preparing CVs etc to get ready for the application process in Level 3. See the timetable below for details of these sessions.

# Practical/Lab/Tutorial Work

There is no standard practical work for this course, but the following advice will help you with various aspects of your project and continuous assessment:

Tips for Effective Group Work

* Get to know your group.
* Establish common ground rules, e.g.:
  + attend all meetings.
  + stay connected - you all have access to e-mail if nothing else.
  + individual tasks should always be completed by the agreed deadline.
* Make sure you all understand what the task is, and how it will be assessed.
* Make sure all members contribute.
* Share work evenly.
* If someone has specific skills (e.g. as illustrator, computer whizz, etc.) use them to the full.
* Review progress at each meeting.
* Record your decisions (i.e. what actions will be taken by whom?)
* Remember, you are responsible for the joint work of your group.

Tips for the Oral Presentation

The oral presentations will be 20 minutes long and will be followed by 10 minutes of discussion. The oral presentation is a group responsibility, but that does not necessarily mean that every member of the group should speak. Decide amongst yourselves how to make the best use of the talents of your group. Some people may take responsibility for making the PowerPoint slides, others may present the talk. Remember it is a joint effort and the marks you receive are for the overall package.

The talk should be rehearsed for clarity and length and should be in Microsoft PowerPoint.

The following list might help you in preparing the talks. Very few people are naturally confident when giving oral presentations, but there are several purely mechanical things that will make you appear more prepared and more confident:

* Keep it simple. People often overestimate the amount of information an audience can take in, so aim to present a coherent and understandable story.
* Tailor the talk to your audience. They will have the same background as you, so you should be able to judge the level at which to pitch it.
* Structure the talk as much as possible. Slides containing a limited number of “bulleted” headings and sub-headings will help with this.
* Punctuate the talk. Instead of using new paragraphs, as you would a written report, use a long pause or a new slide.
* Speak to the audience, not to the screen or to your feet.
* Do not read from a script. If you think you are in danger of losing your way, well-prepared slides can be used as prompts.
* Keep your slides simple. If there are drawings, make sure the lines are thick, and if there is text, make sure the font is large and visible.
* Rehearse the talk. Practice using the slides. Be critical friends with each other. Do not just say that it is fine unless you really mean it.
* Point clearly at the relevant parts of the slides as you go through them.
* Prepare for the question session. Try and predict the questions, or even omit an obvious point so that you are well prepared for the inevitable question.
* Empathy is the key to a good talk. Imagine yourself in the shoes of a member of the audience and try to work out what they will think is interesting, confusing or boring.

Milestones to Achieve

1. 0n Wednesday 24/1/202, students decide membership of group and decide on research topic. Theme leaders will then assign you a tutor.
2. By Friday 26/1/202, all group members agree on how they will proceed with their research topic.
3. On or about 31/1/202, the group presents their tutor with an overall plan including individual responsibilities for researching and preparing each section. The plan may be e-mailed to your tutor after the session on 26/1/2024, at which tutors may or may not be present. Remember, it is your project.
4. On or about 7/2/2024, meet tutor to present first draft of each section. May be in person or on Teams.
5. On or about 21/2/2024, should have overall project finalised so that the oral presentation can be developed. Tutor needs to have a copy of a project report, which does not have to be more than a draft since you are not presenting a written report as a group for formal assessment.
6. On or about 28/2/202, meet with tutor in person, when ALL members of the group MUST attend and be expected to demonstrate understanding of all the material in the project. Performance in this assessed tutorial will contribute to the course performance mark.
7. Between 28/2/202 and 8/3/2024, PowerPoint slides to be designed and oral presentation decided upon and rehearsed with the group. You may wish to arrange a meeting with your tutor.
8. By 11/3/2024, PowerPoint presentations MUST be e-mailed to the Theme leader so that they can put them together for the sessions on 13/3/2024.
9. On Wednesday 13/3/2024, oral presentation of group project.

* ALL students MUST attend.
* All students must be able to answer questions on any aspect of the project.
* All students should contribute to the questioning of other group presentations.
* Contribution to discussion will be a component of the mark you receive from the tutor.

1. On Wednesday 27th March, attend the science teaching hub to write a summary of the report under exam conditions within 1 hour via MyAberdeen.

University Policies

Students are asked to make themselves familiar with the information on key education policies, available [here](https://www.abdn.ac.uk/staffnet/teaching/key-education-policies-for-students-11809.php). These policies are relevant to all students and will be useful to you throughout your studies. They contain important information and address issues such as what to do if you are absent, how to raise an appeal or a complaint and how the University will calculate your degree outcome.

These University wide education policies should be read in conjunction with this programme and/or course handbook, in which School specific policies are detailed. These policies are effective immediately, for the 2023/24 academic year. Further information can be found on the [University’s Infohub webpage](https://www.abdn.ac.uk/students/) or by visiting the Infohub.

The information included in the institutional area for 2023-24 includes the following:

* Assessment
* Feedback
* Academic Integrity
* Absence
* Student Monitoring/ Class Certificates
* Late Submission of Work
* Student Discipline
* The co-curriculum
* Student Learning Service (SLS)
* Professional and Academic Development
* Graduate Attributes
* Email Use
* MyAberdeen
* Appeals and Complaints

Where to Find the Following Information:

C6/C7- University of Aberdeen Homepage > Students > Academic Life > Monitoring and Progress > Student Monitoring (C6 & C7)

https://www.abdn.ac.uk/students/academic-life/student-monitoring.php#panel5179

Absences- To report absences you should use the absence reporting system tool on Student Hub. Once you have successfully completed and sent the absence form you will get an email that your absence request has been accepted. The link below can be used to log onto the Student Hub Website and from there you can record any absences you may have.

[Log In - Student Hub (ahttps://www.abdn.ac.uk/studenthub/loginbdn.ac.uk)](https://www.abdn.ac.uk/studenthub/login)

Submitting an Appeal- University of Aberdeen Homepage > Students > Academic Life > Appeals and Complaints

https://www.abdn.ac.uk/students/academic-life/appeals-complaints-3380.php#panel2109

Academic Language & Skills support

For students whose first language is not English, the Language Centre offers support with Academic Writing and Communication Skills.

Academic Writing

* Responding to a writing task: Focusing on the question
* Organising your writing: within & between paragraphs
* Using sources to support your writing (including writing in your own words, and

citing & referencing conventions)

* Using academic language
* Critical Thinking
* Proofreading & Editing

Academic Communication Skills

* Developing skills for effective communication in an academic context
* Promoting critical thinking and evaluation
* Giving opportunities to develop confidence in communicating in English
* Developing interactive competence: contributing and responding to seminar discussions
* Useful vocabulary and expressions for taking part in discussions

More information and how to book a place can be found here

Medical Sciences Common Grading Scale

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Grade | Grade Point | % Mark | Category | Honours Class | Description |
| A1 | 22 | 90-100 | Excellent | First | • Outstanding ability and critical thought • Evidence of extensive reading • Superior understanding • The best performance that can be expected from a student at this level |
|  |
| A2 | 21 | 85-89 |  |
|  |
| A3 | 20 | 80-84 |  |
|  |
| A4 | 19 | 75-79 |  |
|  |
| A5 | 18 | 70-74 |  |
|  |
| B1 | 17 | 67-69 | Very Good | Upper Second | • Able to argue logically and organise answers well  • Shows a thorough grasp of concepts  • Good use of examples to illustrate points and justify arguments  • Evidence of reading and wide appreciation of subject |  |
|  |
| B2 | 16 | 64-66 |  |
|  |
| B3 | 15 | 60-63 |  |
|  |
| C1 | 14 | 57-59 | Good | Lower Second | • Repetition of lecture notes without evidence of further appreciation of subject • Lacking illustrative examples and originality • Basic level of understanding |  |
|  |
| C2 | 13 | 54-56 |  |
|  |
| C3 | 12 | 50-53 |  |
|  |
| D1 | 11 | 47-49 | Pass | Third | • Limited ability to argue logically and organise answers • Failure to develop or illustrate points • The minimum level of performance required for a student to be awarded a pass |  |
|  |
| D2 | 10 | 44-46 |  |
|  |
| D3 | 9 | 40-43 |  |
|  |
| E1 | 8 | 37-39 | Fail | Fail | • Weak presentation • Tendency to irrelevance • Some attempt at an answer but seriously lacking in content and/or ability to organise thoughts |  |
|  |
| E2 | 7 | 34-36 |  |
|  |
| E3 | 6 | 30-33 |  |
|  |
| F1 | 5 | 26-29 | Clear Fail | Not used for Honours | • Contains major errors or misconceptions • Poor presentation |  |
|  |
| F2 | 4 | 21-25 |  |
|  |
| F3 | 3 | 16-20 |  |
|  |
| G1 | 2 | 11-15 | Clear Fail/Abysmal |  | • Token or no submission |  |
|  |
| G2 | 1 | 1-10 |  |
|  |
| G3 | 0 | 0 |  |
|  |

SM2501 Course Timetable: 2023-2024

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Date | Time | Place | Subject | Session | Staff |
| Week 26 | | | | | |
| Mon 22 Jan |  |  |  |  |  |
| Tue 23 Jan |  |  |  |  |  |
| Wed 24 Jan | 10:00-11:00 | STH 1.001/1.007 | Course Introduction | Lecture | DS and CC |
| 11:00-13:00 | STH 1.001/1.007 | Tutor and group topic allocations | Tutorial | DS/MC/VS/PM/JG/CC/IR/NG |
| Thu 25 Jan |  |  |  |  |  |
| Fri 26 Jan | 10:00-13:00 | TBA by students | Student group meetings | Tutorial |  |
| Week 27 | | | | | |
| Mon 29 Jan |  |  |  |  |  |
| Tue 30 Jan |  |  |  |  |  |
| Wed 31 Jan | 10.00-11.00 | STH 1.007 | Industrial Placement discussion | Tutorial | IF |
| 10:00-13:00 | TBA by students | Student group meetings | Tutorial |  |
| 10:00-13:00 | TBA by students | Student group meetings | Tutorial |  |
| Thu 1 Feb |  |  |  |  |  |
| Fri 2 Feb | 10:00-13:00 | TBA by students | Student group meetings | Tutorial |  |
| Week 28 | | | | | |
| Mon 5 Feb |  |  |  |  |  |
| Tue 6 Feb |  |  |  |  |  |
| Wed 7 Feb | 10.00-11.00 | STH 1.007 | Industrial Placement discussion | Tutorial | IF |
| 10:00-13:00 | STH/online | Tutor-student meetings | Tutorial | SMMSN Staff |
| Thu 8 Feb |  |  |  |  |  |
| Fri 9 Feb | 10:00-13:00 | TBA by students | Student group meetings | Tutorial |  |
| Week 29 | | | | | |
| Mon 12 Feb |  |  |  |  |  |
| Tue 13 Feb |  |  |  |  |  |
| Wed 14 Feb | 10:00-13:00 | TBA by students | Student group meetings | Tutorial |  |
| Thu 15 Feb |  |  |  |  |  |
| Fri 16 Feb | 10:00-13:00 | TBA by students | Student group meetings | Tutorial |  |
| Week 30 | | | | | |
| Mon 19 Feb |  |  |  |  |  |
| Tue 20 Feb |  |  |  |  |  |
|  | 10:00-13:00 | TBA by students | Student group meetings | Tutorial |  |
| Thu 22 Feb |  |  |  |  |  |
| Fri 23 Feb | 10:00-13:00 | TBA by students | Student group meetings | Tutorial |  |
| Week 31 | | | | | |  |  |  |  |  |
| Mon 26 Feb |  |  |  |  |  |
| Tue 27 Feb |  |  |  |  |  |
| Wed 28 Feb | 10:00-13:00 | STH 0.004, 1.001, 1.007 | Assessed Tutorials | Tutorial | SMMSN Staff |
| Thu 29 Feb |  |  |  |  |  |
| Fri 1 Mar | 10:00-13:00 | TBA by students | Student group meetings | Tutorial |  |
| Week 32 | | | | | |  |  |  |  |  |
| Mon 4 Mar |  |  |  |  |  |
| Tue 5 Mar |  |  |  |  |  |
|  | 10:00-13:00 | TBA by students | Student group meetings | Tutorial |  |
| 10:00-13:00 | TBA by students | Student group meetings | Tutorial |  |
| Thu 7 Mar |  |  |  |  |  |
| Fri 8 Mar | 10:00-13:00 | TBA by students | Student group meetings | Tutorial |  |
| Week 33 | | | | | |  |  |  |  |  |
| Mon 11 Mar |  |  |  |  |  |
| Tue 12 Mar |  |  |  |  |  |
| Wed 13 Mar | 10:00-13:00 | STH 0.001, 1.001, 1.007, 2.006 | Oral Presentations | Presentation | SMMSN Staff |
| 13:00-16:00 | STH 0.001, 1.001, 2.006 | Oral Presentations | Presentation | SMMSN Staff |
| Thu 14 Mar |  |  |  |  |  |
| Fri 15 Mar | 10:00-13:00 | TBA by students | Student group meetings | Tutorial |  |
| Week 34 | | | | | |  |  |  |  |  |
| Mon 18 Mar |  |  |  |  |  |
| Tue 19 Mar |  |  |  |  |  |
| Wed 20 Mar | 10:00-13:00 | TBA by students | Student group meetings | Tutorial |  |
| Thu 21 Mar |  |  |  |  |  |
| Fri 22 Mar | 10:00-13:00 | TBA by students | Student group meetings | Tutorial |  |
| Week 35 | | | | | |  |  |  |  |  |
| Mon 25 Mar |  |  |  |  |  |
| Tue 26 Mar |  |  |  |  |  |
| Wed 27 Mar | 10:00-13:00 | STH 1.001, 1,007 | Assessed student essays | Exam | DS/NG |
| Thu 28 Mar |  |  |  |  |  |
| Fri 29 Mar |  |  |  |  |  |

Staff

* DS – Dr Derryck Shewan CC – Dr Catriona Cunningham
* JG – Dr Jenny Gregory VS – Dr Virtu Solano
* MC – Prof Martin Collinson IR – Dr Iain Rowe
* PM – Dr Pietro Marini IF – Dr Ian Fleming
* NG – Nigel Graham

Campus Maps - Foresterhill



Polwarth Floor Plans

Diagram, schematic

Description automatically generated

Diagram

Description automatically generated

Diagram

Description automatically generated