

## 1.1 Neuroimaging Research for Graduate Neuroscientists (20C)

### NEME11061

### Handbook

### 2022-2023

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### 3. Contact details

<b>Course Director:</b>	Professor Andrew Farrall
<b>Course Coordinator:</b>	Dr Charis Alexakis <a href="mailto:c.alexakis@ed.ac.uk">c.alexakis@ed.ac.uk</a>
<b>eProgramme Support Officer:</b>	Mrs Nathalie Wallace <a href="mailto:Nathalie.wallace@ed.ac.uk">Nathalie.wallace@ed.ac.uk</a>

The content tutors, course director & course coordinator can be contacted online via the module, activity & help & support discussion boards in the course homepages.

For issues & concerns which do not need to be addressed during office hours, please contact Nathalie Wallace or Charis Alexakis in the first instance. Prof Farrall is often busy clinically and the more rapid response is likely to come from the course administrative team.

Prof Farrall holds both virtual & in-person office hours 09:30 - 10:30 on most Wednesdays throughout the semester. Virtual appointments are best held via Skype or by phone; in-person appointments are at Prof Farrall's office in the Chancellor's Building, Little France. If for any reasons office hour times change, the changes will be announced as soon as possible.

**Please book a 15 minute session at least one day in advance. You MUST book the session at least one day in advance to allow for session set up and Prof Farrall's time management. Please contact the eProgramme support officer to book a session in the first instance.**

To contact content tutors for individual feedback / discussion please go via the **eProgramme Support Officer** or the **Course Coordinator**.

**Our address:**

Centre for Cognitive Brain Sciences (CCBS),  
University of Edinburgh,  
Chancellor's Building  
49 Little France Crescent,  
Edinburgh EH16 4SB

## **4. Aim & learning objectives**

### **4.1 Aim**

To expose postgraduate students to neuroimaging techniques & their applications in disease research & management, in order to stimulate interest in & understanding of neuroimaging as a research & diagnostic tool.

### **4.2 Learning objectives for the course**

On completion of this course, the student will be able to:

1. describe principles behind radiation and magnetic resonance based image acquisition; and critically evaluate the relative merits and drawbacks of the various imaging modalities.
2. discuss and debate applications of neuroimaging techniques and neuroimaging technology to neuroscience research
3. state practical and safety considerations, important when engaging with neuroimaging in research and demonstrate the ability to deduce such considerations to novel or previously unseen imaging scenarios
4. Demonstrate competence in using bibliographic databases to conduct complex search strategies (for systematic literature reviews) & communicate findings to peers.
5. Critically appraise published research work, critically evaluate the work of peers & be able to provide constructive feedback.

### **4.3 Learning objectives for individual modules**

This course consists of several modules. Specific learning objectives for each module are listed within the online environment.

## **5. Course description**

### **5.1 Teaching & learning approach**

#### **5.1.1 Philosophy & practicalities**

This course is delivered by online distance learning, using a web based delivery system.

The reason this course is online is because demand for neuroimaging teaching far outstrips the numbers of academic professionals & specialists able to deliver it. Rather than restrict neuroimaging teaching & deprive a large number of people of opportunity to learn about neuroimaging, we have put our teaching online to make sure as many people as possible can access our expertise.

In 2021-22, we were able to teach full online 10 & 20 credit courses in neuroimaging to 188 students on campus, across three different degree programmes; we were also able to deliver an introductory course in imaging via the Institute of Academic Development to an additional 31 on campus students. This teaching of on campus students is in addition to our own 188 students

who were enrolled on our two full online MSc programmes, plus an additional 23 online students from other programmes taking our online materials.

Benefits we have discovered over 10 years of online teaching, include:

- You can revisit, replay & review lectures as often & whenever you want:
  - Feedback has been that this is much more useful than sitting through a single lecture while trying to take notes;
  - Many students say they print off the PDF files of our lectures to make notes while listening to the lectures;
  - They also download the podcasts of our lectures to listen to in their own time elsewhere
- Our neuroimaging experts are not tied up teaching large volumes of materials face-to-face, which means they do have time to tutor & interact with you via online discussion boards & our activities:
  - You are therefore much more likely to get focused attention from an expert over an extended period of time than you would otherwise at the end of a lecture or in trying to pin down an expert during office hours;
  - Also, questions & answers on discussion boards educate everyone because they are visible to all, & usually several people will have the same questions & concerns which they appreciate being aired.
- We are able to focus what face-to-face sessions we do have on interacting with you, which often leads to extended discussion about course content, course activities, neuroimaging & neuropathology in general, as well as developing a research or professional career involving neuroimaging – topics which are generally student driven, rather than top-down didactic

### **5.1.2 Online learning environment**

- The course is taught entirely online via the University of Edinburgh platform Learn, this includes the delivery of the final assessment.
- Teams is used for online face to face sessions & the final assessment.
- The platform QMP is used for all multiple choice questions.
- We recommend using Google Chrome for stability of these platforms.

#### **5.1.2.1 Modules**

Teaching materials are packaged as Modules. Each module has the following structure:

- One or more online lectures
- Self-assessments (summative multiple-choice & other quiz tests)
- Resources listing relevant readings, some required, others simply recommended
- Discussion boards – a tutor-moderated area where you can ask questions & clarify the content; tutor support is scheduled for specific periods during the semester & we provide a schedule of when that tutor support is available

### **5.1.2.2 Activity**

The course is split into 2 activities:

- The In-course assessment (ICA) counts for 50% of the total of your final mark & runs throughout the semester; and
- The End-of-course assessment (ECA) counts for 50% of the final mark; this takes form of an exam within a confined time. See section 7.2 & 7.3 for more information.

## **5.2 Course team**

The Course Director, Coordinator & Support Officer are responsible for the smooth running of the course. They should facilitate your orientation & smooth progression through the course.

- The Course Director is Prof Andrew Farrall;
- The Coordinator is Dr Charis Alexakis;
- The Support Officer is Nathalie Wallace. (Contact details given above).

### **5.2.1 Support and guidance**

Guidance and support during the course is available from a number of different sources. These will be mainly listed in the handbook given to you by your Programme team.

The Coordinator's role is to:

- Keep track of your progress throughout the course of study
- Provide advice and guidance for course assessments

**NOTE:** It is your responsibility to inform your Personal Tutor immediately of any problems that are interfering with your coursework or progress.

### **5.2.2 Tutors**

During your progression through the course you will meet a number of content tutors who will support your learning. Each module & the activity will have at least one content tutor. The tutors will moderate online discussions, facilitate your group work & help you clarify academic questions for the relevant module or activity.

Note that content tutors will only be available for fixed periods of time, which we will indicate in our timetables. Please make sure you take full advantage of the tutors when they are scheduled. Some content tutors will also mark your assessments.

### **5.2.3 IT help & support**

You will depend on the University's information systems for access to your courses & to the resources you need for your study. Should you run into problems – please use the points of contact given in this handbook, to get help.

### 5.2.4 Local IT & administrative help

Your first point of contact should be the Programme Support Officer. Most IT & administrative problems can be handled locally by the administrative team (we may refer you to the central IS Helpline / administration if necessary). It is important that the eProgramme Support officer is aware of any difficulties you may be experiencing, even if they cannot directly deal with the problem.

**Online:** Help and Support discussion boards within relevant courses (visible to all students so answers can benefit all)

**Email:** [imaging.academy@ed.ac.uk](mailto:imaging.academy@ed.ac.uk)

Contacting online or by email will ensure the most rapid response. We endeavour to respond within 48 hours.

### 5.2.5 Central IT, library & elearning help

There is a central point for all of the IT, library and eLearning enquiries – IS Helpline (Information Services Helpline).

They provide a comprehensive online database of solutions to frequently encountered problems (this should help you resolve many problems without having to ask for help):

<http://www.ed.ac.uk/information-services/help-consultancy>

Here are the direct contact details (please also notify the Support Officer of any problems):

- Email: [IS.Helpline@ed.ac.uk](mailto:IS.Helpline@ed.ac.uk)

For opening hours see:

<http://www.ed.ac.uk/information-services/help-consultancy/contact-helpline/is-helpline-operating-hours>

## 5.3 Expectations & responsibilities

You are expected to work individually to view the lectures, explore the resources, take the embedded quizzes and self-assessment tests. You will also participate in online discussion boards with your peers and content tutors in order to form an effective online learning community. Your study will involve a mix of online and offline activity, and it is essential for your success that your online participation as well as self-guided study, be regular.

It is your responsibility to:

- Ensure that you set up your computer to access effectively all aspects of the course during the early weeks of the first semester, especially in relation to assessments.
- Study regularly on a weekly basis, including participating in online tests, assessments and discussion boards.
- Know the timetable and deadlines for assessment and meet them (this will be facilitated by use of Google calendar – please see *Keeping up with deadlines* section below for details).

- Report any difficulties which may affect your ability to complete the coursework and assessment within deadlines to your Director of Studies and the Neuroimaging Course Coordinator IN ADVANCE of the assessment deadlines.
- Report any technical problems as soon as they arise to the Support Officer.
- Deal promptly with emails from the Support Officer - preferably reply immediately, even if just to send a "holding reply" or acknowledgement of receipt.

#### **5.4 Independent study**

You will be expected to undertake self-guided independent study of the materials, including lectures and required reading, which will help you structure your reflection time and prepare for assessment. You should plan to spend a significant amount of your study time reading widely – each Module has a recommended reading list which should be used as a starting point. You will be able to discuss and consolidate your reading in your discussion boards and group learning activity, where you are expected to demonstrate critical and analytical thinking.

As opposed to traditional residential courses, in this online course, there are only three scheduled face-to-face sessions so your study is entirely self-paced and relies on your good time management skills and motivation. It is important for your progress that you study regularly, spending some time on these courses every week.

We recognise this can be challenging. To help you spread out your workload, we scheduled modules to be supported sequentially so that you can pace your study in time with the support. We also place much emphasis on in-course continuous assessment to encourage your regular participation.

Another way we try to help you stay focussed and motivated is by creating a supportive online learning community via the discussion board tool within Learn.

#### **5.5 Formation of learning community through collaboration**

Online learning can be very isolating and our team addresses this by use of online discussion boards to create a supportive learning community within each course.

This community is focussed around two types of discussion boards:

- Module discussion boards – present in each module and moderated by a content tutor, allowing you to explore the module's topic in more depth as a whole class. There will be as many module discussion boards as there are modules.

While tutors will be present within the discussion boards, their role is mainly as facilitators and you are expected to share, collaborate with and support your peers to create an active learning community. This means responding to questions posted by your peers as well your tutors, and taking charge of extending the discussion by sharing your own expertise and experience, as well as what you glean from extended reading.



Naturally your tutors will be available to answer your queries, and will be happy to help. Each tutor responsible for module discussion boards during the 1-2 weeks when the module of their subject expertise is shown as supported in the timetable. One of the course tutors will also monitor the group activity discussion boards.

Regular monitoring and contributions to discussion boards are a key to a successful learning experience. While we put some deadlines on discussion board contributions, we also make sure that they remain as flexible as possible by keeping them open 24 hours a day 7 days a week so that you can use them any time that suits you.

## 5.6 Diversity of learners

You are going to be participating in the modules together with students from many diverse backgrounds. These students come from all over the world. There are potentially large cultural differences in the way participants from all these groups communicate and learn. Please be sensitive to and respect these potential differences when interacting with your peers within the discussion boards.

## 6. Timetable

Outline timetables for the online teaching, as well as face-to-face sessions, are listed in the Appendices. Please note that more specific timetables (e.g. around activity deadline dates) will be available in the online virtual learning environment.

You will have access to most of the teaching material for the duration of the semester, which will allow you to read ahead, as well as review materials, as often as you like, whenever you like. Tutors for the various taught components, however, are only available for fixed periods of time (typically 1-2 weeks), so if you have questions about the content, or would like to discuss issues which arise, it will be important to pose your questions and query tutors during the time they are scheduled.

The online face-to-face or synchronous sessions are scheduled via Teams and include: an introduction to Neuroimaging at the start of the course, a mid-semester session to help you finalise ICA P1 & a late semester session which will include a mock assessment.

You will need to attend the Introduction to Neuroimaging session at the beginning of semester 1, which will introduce you to online learning, ensure you can access course materials, & outline what is expected of you.

The formal time slot allocated to this course is **Monday afternoon**; the online face-to-face sessions are scheduled for this time slot. You can use this time slot to schedule online work for this course, if you wish. However, the online format means you can also study at the times and locations of your choice.

## 7. Reading

Reading is listed in the **Resources section** of each online module. It is prioritised by listing of *required* versus *recommended* readings. Required readings supplement & expand on taught materials, & are examinable; recommended readings include many of the references used to create the lectures, & are listed to allow you to read further around topics should you wish.

## 8. Assessment

### 8.1 Methods of assessment

Assessments in this course are designed to develop your learning further, to reinforce learning concepts, to encourage thought & discussion about learning concepts, & to guide exploration of modules' topics beyond what is covered in lectures.

In-course assessment contributes 50% & the final assessment contributes further 50% to the overall mark in the course. According to the assessment requirements at the MSc level, you must pass with a mark of at least 50%. A grade between 40%-50% on this course may still allow you to complete your MSc depending on your grades on other courses you take.

In addition to the marked in-course assessment, which provides formal feedback on & assessment of your learning, we aim to provide you with more informal feedback via module discussion boards. All of these components are discussed in detail below.

### 8.2 In-course assessment

#### 8.2.1 Activity (marked)

This is an online activity which requires individual & independent work.

Please go to assessment > In course assessment to download the ICA descriptor. This will highlight what is expected of you including the weightings for each part. Submission deadlines are highlighted on the Google calendar.

The activity has its own marking criteria which are made clear to you at the outset within the **Assessment page** on the course homepage. As activities typically consist of several components, there will usually be several component marks contributing to your overall activity mark. Please be aware that plagiarism guidelines do apply to your discussion board contributions (see **Plagiarism** section below).

#### 8.2.2 Self-assessment tests/tasks (not marked)

All assessed modules have MCQ self-assessment tests and / or small tasks.

Note that you may use the tests as many times as you want for revision. Small tasks are submitted for manual marking.

MCQ self-assessment tests will be delivered using an online assessment tool called QuestionMark Perception (QMP).

### 8.2.3 Module discussion boards (not marked)

As outlined in the *Teaching and Learning Approach* section above, each module has its own online tutorial discussion board moderated by a subject tutor. Here you can interact with the tutor and your peers as a whole class. It is a relatively informal forum which allows you to ask questions, as well as to provide answers to your peers' and tutors' questions around the subject covered by the particular module.

In order to benefit fully from access to these boards, including peer-to-peer feedback and tutor feedback, we encourage you to make meaningful contributions, such as:

- Replying insightfully to any questions or comments on module materials drawing on other's contributions, external resources, wider reading or professional experience
- Recommending relevant resources outside the module resource lists in accordance with guidelines (see *Guidelines for citing of resources in discussion boards* section below).
- Contributing new ideas to the discussion
- Asking detailed questions relevant to the topic (both of your tutor and your peers) – make sure you make some effort to investigate things yourself first.

As these discussions are designed to encourage topic exploration and clarification of any aspects you might not understand, do not worry about asking questions to clarify the material or making factual misinterpretations. You are strongly encouraged to answer each other's questions as it is an integral part of your learning process promoting deeper understanding of the topics. Tutors will intervene when no answers are forthcoming or to correct misunderstandings and errors.

### 8.2.4 Guidelines for citing of resources in discussion boards

When posting a resource into any discussion board use these guidelines:

- briefly summarise the content of the posted resource and outline its relevance to the module/task – *e.g.* do not simply cut and paste an article's abstract to summarize the content of a resource – instead paraphrase key points and put them into the context of your discussion
- minimise use of any direct quotes (don't just cut and paste)
- attribute any outside sources, *e.g.* by giving a link to the source or the full reference – make sure you include enough information for the source to be found easily and quickly
- paraphrase and critically analyse the sources rather than just stating their content
- simple copying and pasting of a link to a resource is not acceptable and will attract no marks!
- Do not attach documents containing published articles as this is in **violation of copyright law**, instead provide enough information or a link so that others can find it themselves

online. Any such attachments will be removed from the discussion boards by deleting your entire post.

By using these guidelines you will avoid plagiarism, copyright violations and maximise your marks in any assessment.

### 8.3 End-of-course assessment

Final assessment will occur during the examination period at the end of the semester, it is scheduled entirely online. The final assessment will include:

- a short essay (500-1000 words max) on one of two topics (one topic will reflect a more techniques & physics based approach, & one topic with reflect a more applications in disease based approach). This will account for 2/3 of your exam mark.
- a computerized objective test of 36 questions (multiple-choice-type questions of similar format to module tests). This will account for 1/3 of your exam mark.

You will be given 3 hours to complete the exam and we suggest you spend 120 minutes on the essay and 60 minutes on the objective test. In order to minimise any disruption on the day of the final assessment, we ask you to arrive 15 minutes prior to the official start of the exam: this will help us sort out any technical difficulties in time.

The final assessment mark will contribute to 50% of your total mark for this course. The final assessment is open book and not invigilated however all essays received will be checked for plagiarism and will be referred to the Academic Conduct Officer if found to have a high similarity score. More information on plagiarism can be found here:

<https://www.ed.ac.uk/academic-services/students/conduct/academic-misconduct/plagiarism>

Information on Academic misconduct can be found here: <https://www.ed.ac.uk/academic-services/students/conduct/academic-misconduct/what-is-academic-misconduct>

*How do timed essays for the final assessment capture knowledge that I gain from the course?*

Our timed essay questions test factual knowledge & also - important at the post-graduate level - to test how you engage critically with & reflect on your knowledge base, how you distil & prioritize information from that knowledge base, plus how you then synthesize a response. In our experience, common reasons for poor performance on timed essay questions in general, are:

Not reading the question properly (the risk is that students only focus on key words & then write about what they know around the key words & not the full question).

Lack of analysis (the risk is that students perform a "data dump" of facts they do know, without demonstrating critical appraisal & insight or actually addressing the set question).

Poor planning (the risk is that the essay is unfocused, with students often only answering the question in the last paragraph or two, with not enough time to demonstrate appropriate depth of knowledge or analytical prowess).

Over-generalization (the risk is that critical thinking, insight & reflection cannot then be demonstrated, which are expectations of post-graduate work)

Insufficient reading around the subject ( the risk is that the student's knowledge base is limited, which can lead to one or more of the above points all coming true)

## 8.4 Mock assessment

The eLearning team will run an online mock assessment approximately three weeks prior to the end of the teaching period. This aims to make you familiar with the computerised exam set up. If during that time you feel you might need additional help, please inform the eLearning team no later than one week after the mock assessment. Attendance at the mock assessment is not compulsory. However, we strongly recommend you attend, because the experience will give you an idea of what to expect on the actual day of the final assessment, & give you insight into how you should prepare for it.

The mock assessment MCQ test will give you a score at the end of your assessment. The mock assessment essays will NOT be graded and NO feedback will be provided – their purpose is solely to prepare you for the circumstances & environment for the final assessment.

We will communicate the date & time of the mock assessment via your University of Edinburgh email, as well as by an announcement in the online noticeboard. The date is also scheduled below in the appendix section.

## 9. Assignment submissions / deadlines

While we take care to make the course as flexible as possible (accessible 24 hours a day, 7 days a week), we also include some deadlines. These are necessary in order to:

- Help you pace your study so that you can get most out of the course and do not risk failing it by leaving everything to the last minute.
- Ensure that you receive continuous feedback to help you address any areas of difficulty.
- Ensure that the subject module tutors are available to help you. As they are not involved in the courses full time it is crucial that you complete activities and use discussion boards within the time they are available to teach in a particular module. Since they are busy professionals with full time jobs, outside these times their availability cannot be guaranteed.
- Enable you to interact meaningfully with other students via the discussion boards.

### 9.1 Assessment cover sheet

All of the individual and in-course submissions which you make via the Learn or TurnItIn inbox MUST include a cover sheet. You MUST name your file according to submission instructions. Assessments without cover sheet and incorrect filename will not be accepted. The cover sheet is located on the course under **assessment**.

### 9.2 Assessment deadlines

The full and up-to-date academic calendar for each of the courses is provided online via Google Calendar within the relevant course homepage. There is also a static overview of the calendar provided as a PDF file.

You can also find the full university calendar at:

<http://www.ed.ac.uk/news/semester-dates>

### **9.2.1 Module discussion boards**

The module discussion board becomes available with the release of the module and closes at the end of the timetabled tutor support period. Tutors will only be available for comment during the timetabled slots and we encourage you to focus your discussions within these periods. However, you may submit posts earlier if you think you will not be available at the scheduled slot. Thereafter, the discussion boards will remain accessible only for review. Discussion boards are not marked.

### **9.2.2 Module self-assessment tests**

Module self-assessment tests are available with most module content, these are not marked. They are closed on the day of your final assessment.

### **9.2.3 Final assessment**

Final assessment will be an invigilated online open book timed exam and the exact date will be confirmed closer to the examination period at the end of the semester. You do not need to go to a special invigilated centre for this but we do recommend that you are located somewhere quiet and with a stable reliable internet connection.

## **9.3 Marks & feedback**

We recognise the importance of feedback to your learning and we aim to return your work in time for you to benefit from it in your further study, within the constraints of resources available to us.

All of your marks and most of the formal feedback are provided via the My Grades tool in each course homepage and more detailed individual feedback may be delivered via GradeMark tool within TurnItIn. The tutors and Course Coordinator may also use discussion boards or individual emails where appropriate. If you have further questions regarding your marks or feedback please do not hesitate to contact the Course Coordinator via email with your questions.

Tutor marks for all of the components in the small group discussion activities will be returned to you before the commencement of the exam period. Where appropriate, tutor feedback and marks will be provided after each of the activity components, and before the next activity stage is finished. In addition to marks, content tutors may choose to provide you with some individual or whole class feedback. The Course Coordinator will usually notify you via email when and where to find this.

In addition to tutor feedback at the end, activities are designed so that you benefit from peer-to-peer feedback and self-reflection while they are in progress. The content tutors and the Course Coordinator also provide light touch guidance during the activity and you may ask them for help via Activity discussion boards or emails.

We also provide you with formative feedback opportunities via module self-assessment tests and module discussion boards which are not formally marked – please make sure you take a full advantage of these options.

In order to benefit from feedback as a student you will be expected to:

- familiarise yourself with when, where and how feedback is provided
- develop an understanding of assessment expectations, criteria and standards
- collect and reflect on the feedback provided, and grasp opportunities to put it to good use

There are also guidelines on making the most of feedback for students provided by the University's Teaching Learning and Assessment team:

<https://www.enhancingfeedback.ed.ac.uk/students/making.html>

## **10. Late submission & penalties**

Please see Appendix I for further details on late submission and penalties.

Technical difficulties will only be taken into consideration if they are reported to the eProgramme support officer/Course Coordinator immediately after they arise. Please note that if you start assessments on the last day before the final deadline, and run into technical difficulties, then they may not be taken into consideration.

As outlined above in Student Responsibilities section, it is your responsibility to make sure that the computer you are using is set up appropriately to access all of the assessments as early as possible. Instructions on how to do this will be given in the *Introduction to online learning* module at the start of the course. The materials in this module are designed to test all of the relevant settings so please make sure you complete it.

Submission dates must be strictly adhered to and follows the application guidance under regulation 28 Taught Assessment Regulations at <https://www.ed.ac.uk/academic-services/staff/assessment> . If assessed coursework or final assessment work is submitted late without an accepted good reason, it will be recorded as late and a penalty will be exacted.

Students need to submit assessed coursework by the published deadline. Where the student provides a good reason for late submission, Schools will consider accepting late submission of up to seven calendar days without exacting a penalty.

Normally, penalty is a reduction of the mark by 5% of the maximum obtainable mark per day. This applies for up to five days (or to the time when feedback is given, if this is sooner), after which a mark of zero will be given.

For example, if you submit up to 24 hours after the deadline and your mark is 70%, penalties (5% deducted off the mark) reduce your mark to:

$$70\% - 5\% = 65\%$$

If work is submitted late we would advise that you follow the application guidance under Regulation 28

For further guidance on the Application of the regulation see the Taught Assessment Regulations at, <https://www.ed.ac.uk/academic-services/staff/assessment/assessment-regulations>

### **10.1.1 Keeping up with deadlines**

You will be able to keep check all of the release dates and deadlines using Neuroimaging for Research Google calendar. This will be embedded in the Learn courses but can also be accessed independently. More detail on the calendar, how to use it and options to link it to your private digital calendars will be given in Learn course homepages in the Course Information section.

You will need to check back regularly or set up reminders as some of the deadlines may change during the course, e.g. extensions will be given if there are University-wide technical difficulties with access to Learn for substantial periods.

## **11. Penalties for exceeding the word limits**

You are reminded that one objective of MSc level programmes is to train you to write clearly and concisely; many scientific manuscripts are returned to authors with an instruction that they must be shortened. MSc level courses, where a word limit is specified, this word limit is more than sufficient for achieving the outcomes of the assessment and is, therefore, the “**recommended maximum**” within which you should aim to complete your work. It is entirely feasible that a piece of work completed in fewer words than the recommended maximum can meet the assessment criteria for obtaining a first class mark!

Most pieces assessed in this course are brief, and this brevity of expression is part of the training in composing terse but meaningful communications. **Reference lists** are **excluded** from the word counts.

Exceeding maximum word counts will result in a deduction marks from the synthesis component of your grade. Exceeding the absolute word limit by greater than 25% of the absolute word limit will result in deduction marks from your overall mark.



## **12. Guidance on the use of appendices in assessed work**

The recommended maximum word limit includes all components of the piece of work that are submitted for the assessment.

Unless otherwise specified, the use of appendices is not an allowable mechanism for exceeding the recommended maximum word limit.

You will be aware that many journals allow article authors to provide additional supplementary information online in a manner similar to the use of appendices. For the purposes of your assessments, any material that you wish to be evaluated as contributing to the final mark of the assessment must be included within the final word count. As a general rule, material included in an appendix will be regarded as non-assessable material unless you specifically indicate otherwise and the maximum word limit is not exceeded.

An appendix can be used to provide non-assessable source or reference data in much the same way that the reference list provides a route to identifying source material.

## 13. Assessment criteria

### 13.1 Marking schemes

Please refer to the supplements to this handbook, as well as the Virtual Learning Environment for the rubric containing the criteria used to assess quality of your individual contributions to collaboration in group activities & to the supplements to this handbook.

The marking schemes used for this course are derived from the University of Edinburgh's Common Marking Scheme.

#### 13.1.1 Supplement 01

- The marking scheme, which will be used to grade most submissions for in course assessments (ICAs) and end of course assessments (ECAs).

#### 13.1.2 Supplement 02

- The marking scheme, which will be used to grade peer reviews

Please be aware that plagiarism guidelines do apply to your discussion board contributions (see **Plagiarism** section below).

## 14. Referencing

The course uses the Vancouver referencing System.

### The Vancouver Referencing System

The Vancouver (Numbering) system is preferred for the citation of the references in all activities, discussion boards and essays:

References should be cited in the text by sequential numbering in square brackets e.g. [1], [2-6], [1, 4, 5, 7-10] or superscripted. The final list should then be in numerical order, preceded by the appropriate number.

Whichever system is used the following information should be given in the reference list:

For a paper:

- Authors(s) surname(s) and initials
- Year of publication (including a, b, c etc. if appropriate)
- The full title of the paper
- The journal title
- The volume number, underlined or in bold
- The first and last page numbers

E.g. Sanger, F. (1981) Determination of nucleotide sequences in DNA. *Science* 214, 1205-1210.

For an article in a book the following details are required:

- Author(s) surname(s) and initials
- Year of publication
- The article title
- The title of the book, including volume numbers
- The publisher's name and place of publication

E.g. Farr, L.A., Gaspar, T.M., & Munn, D.F. (1984) Desynchronization with surgery. In Chronobiology. Eds. E. Hans & H.F. Kabat. Pp. 544-547. Karzer, New York.

## 14.1 University of Edinburgh Common Marking Scheme

Class	Mark	Description
Fail	0-39	<ul style="list-style-type: none"> <li>• Largely irrelevant to the question only touching briefly on relevant material</li> <li>• Serious misunderstandings or omissions or errors but with some relevant facts which are correct</li> </ul>
III	40-49	<ul style="list-style-type: none"> <li>• Relevant material but mainly descriptive</li> <li>• No evidence of outside reading beyond references supplied/textbooks</li> <li>• Several misunderstandings or factual errors or omissions</li> <li>• Lacking logical structure</li> </ul>
IIII	50-59	<ul style="list-style-type: none"> <li>• Mostly relevant material</li> <li>• Good knowledge and understanding of the topic</li> <li>• Limited discussion of the topic</li> <li>• Lacking logical structure</li> <li>• Limited evidence of outside reading beyond references supplied</li> <li>• Some minor misunderstandings or omissions</li> </ul>
IIII	60-69	<ul style="list-style-type: none"> <li>• Directly addresses the question</li> <li>• Very good knowledge and understanding of the topic</li> <li>• Discussion and some critical analysis of the topic</li> <li>• Logical structure</li> <li>• Relates different pieces of information and gives relevant examples</li> <li>• Evidence of outside reading</li> <li>• Clarity of style</li> </ul>
I	70-84	<ul style="list-style-type: none"> <li>• Directly addresses the question</li> <li>• In-depth knowledge and understanding of the topic with detailed examples</li> <li>• Discussion and critical analysis of the topic</li> <li>• Logical structure</li> <li>• Evidence of substantial outside reading</li> <li>• Clarity of style</li> </ul>
	85-100 (extremely unusual)	<ul style="list-style-type: none"> <li>• Brilliant in every respect</li> <li>• Evidence of a critical personal view</li> <li>• Critical judgement in selecting and evaluating relevant material</li> <li>• Detailed knowledge drawn from many sources and gives many relevant examples</li> </ul>

## 15. Appendices

### 15.1 Appendix I: Course timetable

Please note that more specific timetables (e.g. around activity deadline dates) will be available in the online virtual learning environment.

The activity timetable is also available within the virtual learning environment, which will be available to you in week 1 of the semester.

Note that content tutors will only be available for fixed periods of time, which we indicate in our timetables. Please make sure you take full advantage of the tutors when they are scheduled. Please note that you may have more than one tutor per week.

Tutoring week	Module	Lectures	Tutoring dates	Assessments & deadlines
<b>Please note that you have access to all the lecture content from week 1 - this is a tutoring schedule only</b>				
<b>Week 1 &amp; 2</b>	Imaging in Context & CT: techniques	<ul style="list-style-type: none"> <li>• History: past to present</li> <li>• Terminology &amp; orientation</li> <li>• Anatomy basics</li> <li>• Computed Tomography basics</li> <li>• Grey scale perception - technical</li> <li>• Grey scale perception - applications</li> <li>• CT advanced techniques 1</li> <li>• CT advanced techniques 2</li> </ul>	26/09/22 – 30/09/22	ICA Part 1 release 26/09/22 Introductory online session 2-4pm
<b>Week 3</b>	MR: techniques & practicalities 1	<ul style="list-style-type: none"> <li>• Physics</li> <li>• T1 &amp; T2</li> </ul>	03/10/22 – 07/10/22	

		<ul style="list-style-type: none"> <li>• Localisation</li> <li>• k-Space</li> <li>• MR health &amp; safety</li> <li>• Safe running of an MR unit</li> <li>• Screening for MR contraindications &amp; safety</li> </ul>		
<b>Week 4</b>	Systematic review finalisation	<ul style="list-style-type: none"> <li>• At the question &amp; answer session, make sure you have already started your ICA so that we can help you troubleshoot during the final week before the submission deadline</li> <li>• Use the rest of this week to refine &amp; finalise your systematic review submission</li> </ul>	10/10/22 – 14/10/22	10-Oct-22 2-4pm Face to face systematic review troubleshooting session
<b>Week 5</b>	MR: techniques & practicalities 2	<ul style="list-style-type: none"> <li>• Physics</li> <li>• T1 &amp; T2</li> <li>• Localisation</li> <li>• k-Space</li> <li>• MR health &amp; safety</li> <li>• Safe running of an MR unit</li> <li>• Screening for MR contraindications &amp; safety</li> </ul>	17/10/22 – 21/10/22	ICA Part 1 due 17-Oct-22 at 12pm UK time (noon/midday) ICA Part 2 release 18-Oct-22
<b>Week 6</b>	Imaging stroke	<ul style="list-style-type: none"> <li>• MR diffusion imaging</li> <li>• Imaging in cerebrovascular disease - background</li> </ul>	24/10/22– 28/10/22	

		<ul style="list-style-type: none"> <li>• Imaging in cerebrovascular disease – advanced techniques &amp; concepts</li> <li>• Imaging in cerebrovascular disease - advanced techniques &amp; concepts</li> <li>• Lacunar stroke – part A</li> <li>• Lacunar stroke – part B</li> </ul>		
<b>Week 7</b>	Imaging dementia	<ul style="list-style-type: none"> <li>• Basic principles behind SPECT</li> <li>• Applications of SPECT imaging</li> <li>• Introduction &amp; Alzheimer’s disease</li> <li>• Vascular &amp; other dementias</li> <li>• SPECT &amp; PET imaging in the dementias</li> </ul>	30/10/22 – 04/11/22	
<b>Week 8</b>	Imaging ageing	<ul style="list-style-type: none"> <li>• MR spectroscopy – introduction</li> <li>• MR spectroscopy – techniques</li> <li>• Ageing, brain volumes &amp; spectroscopy</li> <li>• Ageing, white matter &amp; cognition</li> </ul>	07/11/22 – 11/11/22	ICA Part 2 due 07-Nov-22 at 12pm UK time (noon/midday) ICA Part 3 release 08-Nov-22
<b>Week 9</b>	Imaging function	<ul style="list-style-type: none"> <li>• Neurophysiology techniques</li> <li>• Neurovascular techniques</li> <li>• Functional imaging applications</li> <li>• MR practicalities</li> <li>• Basic principles behind SPECT</li> </ul>	14/11/22 – 18/11/22	Online Mock assessment 14-Nov-22 2-4pm

		<ul style="list-style-type: none"> <li>• Applications of SPECT imaging</li> </ul>		
<b>Week 10</b>	Motor Neuron Disease (MND)	<ul style="list-style-type: none"> <li>• The neuropsychology of motor neuron disease</li> </ul>	21/11/22 – 25/11/22	ICA Part 3 due 21-Nov-22 at 12pm UK time (noon/midday)
<b>Week 11</b>	Final assessment period	-	28/11/22 – 02/12/22	
<b>Week 12</b>			05/12/22 – 09/12/22	Online End of course assessment 05-Dec-22, 2-4pm



**15.2 Appendix II: Face-to-face session timetable**

<b>Date</b>	<b>Time</b>	<b>Location</b>	<b>Description</b>
Mon 26-Sep-22	2-4 pm	Online (via Teams)	Introductory session
Mon 10-Oct-22	2-4pm	Online (via Teams)	Course content, activity discussion & feedback session
Mon 14-Nov-22	2-5pm	Online (via Teams)	Mock assessment
Mon 05-Dec-22	2-4pm	Online (via Teams)	Final assessment. Duration 3 hours.