University of Sheffield
Department of Computer Science

MSc Tutorial booklet

Autumn & Spring Semesters 2015/2016

MSc in Software Systems and Internet Technology
MSc in Advanced Computer Science (all versions)
MSc (Eng) in Advanced Software Engineering
MSc in Computer Science with Speech and Language Processing

Updated September 2015
About the MSc Tutorial System

Welcome to Sheffield, and to the Department of Computer Science. We hope that you settle in quickly, and enjoy your time here.

Every new student registered on one of the Department’s degrees is automatically allocated a personal tutor (one of the lecturers in the Department), and it’s important that you get to know your tutor as soon as possible. As well as acting as a ‘mentor’ during the whole of your time here, your personal tutor is also there to help you understand what’s expected of you when you submit work, and to sort out any problems that arise.

You will meet your tutor in small groups of around five students to discuss topics that will broaden your understanding of computer science. The meeting times should be agreed between the tutor and the tutees when you meet during Intro Week. During semester 1, there will be four tutorials in weeks 2, 5, 8, and 11. In semester 2, you will see your personal tutor in week 2 to discuss your project preparation, and in week 5 to discuss your semester 1 results.

The tutorial sessions throughout semesters 1 & 2 are as follows:

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As MSc students, you have already studied at undergraduate level and will have developed good study skills. Nonetheless, we discuss issues such as exam technique, study skills and time management in these tutorials because they are important for the successful completion of a Masters degree. Many of you have come to Sheffield from another university (and in many cases, from another country), and therefore face the problem of adapting to a new academic culture. Again, the tutorial system aims to smooth this transition. Because of the importance of these issues, attendance at tutorial sessions is compulsory.

The tutorials will be given by a single member of staff who will be your tutor for the whole year. As part of the tutorial process, your tutor will check that you are
making satisfactory progress on your MSc course. If you are having any difficulties (academic or personal) with your course, you should initially discuss the situation with your tutor. If your tutor cannot help, he or she will be able to refer you to someone else who will be able to, e.g. the Director of MSc Courses or the Director of Teaching for academic problems, and a University Counsellor for personal problems.

The tutorial system provides an opportunity to put taught material into the bigger picture. You will be expected to put forward your own ideas and to discuss your point of view with other members of your tutorial group. Successful tutorials rely on careful preparation. After each tutorial, check the tutorials web site carefully to see what needs to be prepared for the next meeting.

And don’t forget ...
If you have any problems, the Department is here to help you. For information about your course, please contact DCS reception in Regent Court first of all. If there are problems that are affecting your studies then make an appointment by email to see your tutor. Alternatively, you can make an appointment (via e-mail) to see your Course Tutor, or contact the University Student Services Information Desk, which has a web page at - http://www.sheffield.ac.uk/ssid/
Week 2: Orientation and Study Skills

PART ONE: Orientation

Aims: the aims of this part of the tutorial are:

- To ensure you are aware of the information resources available to you as a student, both within the department and the University more broadly.
- To ensure that you have read the online course handbook.
- To provide you with an opportunity to learn more about the British academic system, and the University of Sheffield in particular.

Before the tutorial: try to find answers to the following questions:

- Where would you find books on Java in the library?
- How do you find out information about modules in other departments?
- How do you find the title of an academic paper written by your tutor?
- What rules govern the assessment of MSc students in this department?

During the tutorial

During the tutorial, your tutor will discuss these questions, and any other questions that you may have about your course.

PART TWO: Study Skills

Aims: the aims of this part of the tutorial are:

- To review time management and study skills, and to exchange ideas about your approach to studying with other tutees and with your tutor.

Before the tutorial

Read the notes below on “How to study”.¹ Reflect on whether your own approach to study differs from the advice given, and make a note of any differences.

During the tutorial

Discuss the various aspects of study skills covered in the “How to study” notes below, and address the issues:

- Do you agree with the advice and, if not, how does your approach differ?
- Do you have any advice of your own to share with other tutees?

HOW TO STUDY

All successful students develop their own pattern of study. It is important that you develop your own style of working. Please read through the following notes, but be prepared to stay with whatever study habits suit you best. However, as you are just starting a new MSc programme, why not reconsider your approach?

The environment for study

Some people are fortunate enough to be able to study effectively in almost any

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¹ These notes were adapted from the student handbook for the Distance Learning Programme, Department of Automatic Control and Systems Engineering, University of Sheffield.
conditions. For others, it is more important that the conditions are right. A few factors are noted here; can you think of others?

**Support from family and friends.** It is important that the people close to you support your study. You need them to allow you time for your work which might otherwise be spent with them. You need them to agree not to interrupt your work every few minutes and to appreciate that there will be times when you will have to work very hard, and under some pressure (for example, in preparation for examinations or when deliverables for the Maxi Project or Genesys are due).

**Regular hours.** Most students find that a good work routine is important. A few hours per day is usually better than cramming before an examination or before a coursework deadline. Try not to study when you are already tired. Also, take regular breaks during a period of study - a few minutes every hour is about right, but it will depend on how long you can concentrate effectively.

**Physical conditions.** Try to study in comfortable conditions. Good lighting and a large desk or table are a great help. Fresh air can also help overcome tiredness. Beware conditions which are too comfortable and can lead to drowsiness!

**Write.** Most people find that it is hard to study really effectively without writing. It is as if the brain does not function unless it has to process information with more than one sense. So make notes, underline or highlight key ideas, and so on.

**Stop when winning.** On each occasion that you start to study it will take an effort. Some of this is the natural effort of getting the books out, but there is also the mental effort of starting to think about the work again. One trick which can help with this is to stop when work is going well: this makes it easy to pick up again.

**Studying a module**

**Read the syllabus and module aims.** You will find these on the departmental web pages. This will help you to put the module into context.

**Plan your time.** It is important to plan your study. We estimate that you should study for at least 60 hours for a 10-credit module (inclusive of lectures, tutorials and coursework). Your time plan should allow for revision time, and time required to complete coursework.

**Read the assignment.** Reading assignment questions as soon as you receive them will help you as you progress through the module. In some cases, you will be able to spot what is needed to do the assignment. You will also get a feel for the level of understanding that you should aim for (of course, you will also receive guidance on this from the module lecturer).

**Produce your own revision guide.** Before getting into the examination period, produce your own revision guide. This may be a few pages of summary notes to go with your marked-up notes and books.

**Your assignments**

**Read the question carefully.** This is obvious, but students often misread questions and write answers to questions which they thought (or wished) were set. For instance, if the question asks you to use a particular equation, there is no need to prove that equation. If you have to “discuss” a result you need to do more than just state what the result is.
Answer the questions. You should answer the questions clearly and concisely. You should avoid unnecessary writing - don’t copy down everything you know about the topic of the assignment in the hope that the answer will be in there somewhere.

Write your answers. If it is easy for you, please type and print out your answers. If you cannot easily produce typed answers, make sure that your writing is large enough and easy to read. Clearly, the marker needs to be able to read and understand your work. Equally, however, don’t waste valuable time making your work look pretty in a word processor - you don’t have to produce every diagram or part of the assignment to publishing standards of presentation.

Perfection. You will naturally want to get high marks. Remember, however, that you cannot expect to get full marks on every assignment. You must expect some of them to be quite hard. Do not waste your time in trying at great length for every last mark; the time you would spend is probably better spent on some other aspects of your studies. Of course you should do your best, but beware of falling behind because of spending too much time on an assignment. Remember, the pass mark for a module is 50%, and 70% means you are working at Distinction level.

Use of other material and sources. It is quite useful for you to use other materials and sources to aid you in doing an assignment. The assignments are “open book” and you should not feel the need to be able to do them in a “closed book” way.

However, you should not merely copy material from other sources as your answer. This is a waste of effort for you, and does not really show that you have understood the material. The skill of producing a paraphrase in your own words is a valuable one. This entirely legitimate: it shows that you have a good feel for the material. Remember, though, to give proper credit where appropriate.

Finally, remember that the purpose of an assignment is not just to award you a mark towards your MSc degree. Assignments are part of the teaching process, and the feedback will help you with subsequent assignments or exams.
Week 5: Unfair means, plagiarism and collusion

During your time at Sheffield we expect you to develop and evaluate your own ideas, and to acknowledge the contribution of other people’s sources appropriately. We also require you to declare that each piece of coursework you submit is your own work.

It is not acceptable to submit work that is plagiarised from other sources, bought or commissioned from internet sites, friends or former students, or written by someone else. It is also not acceptable to allow other students to submit your work as their own, or to do their assignments for them.

This tutorial has two aims:
- To help you think through issues of academic integrity;
- To make sure you understand what are and what are not unfair means.

Before the tutorial:
- Read through the Departmental guidance on unfair means:
- Do the following online tutorial:
  - https://librarydevelopment.group.shef.ac.uk/shef-only/info_skills/plagiarism.html
- Write down any questions or concerns you have about plagiarism, collusion or the use of unfair means. Ask your tutor about these during the tutorial.

During the tutorial:

A. Use of unfair means:

Discuss the reasons for not using unfair means when you are a student, with regard to (a) the university’s rules and penalties; (b) moral issues and your own integrity; (c) fairness to other students.

Talk about the fairness of the following scenarios and their likely consequences. Bear in mind that both programs and written work are likely to be run through automatic plagiarism detectors.

1) You understand the programming assignment you have been set, and complete it in plenty of time. The morning that the assignment is due, your friend Tom tells you that he is completely stuck on the assignment, and is not going to be able to hand it in on time. He asks you if he can have a look at your solution. He promises not to copy it, but says he just wants to understand what to do. You give him a copy of the assignment. Tom runs out of time, and submits your assignment as his own, just changing a few variable names.

2) You are having trouble with one piece of a programming assignment. You notice that someone has left a printout of their solution near the printer, and read through it. You copy the function they used and include it in your program which now works. You submit it.
3) You are stuck on one part of a programming assignment, and post your program on an internet site so that you can get feedback on it. Another student on your course notices it there, downloads it and submits it as their own.

*Note: all of these examples are based on previous plagiarism cases in the department.*

**B. Citations**

The flip side of plagiarism is the proper citing of references. Here are some examples of how to cite different kinds of references in your written work. The reasons for citing references appropriately include the following:

(i) You have acknowledged the source of the material, avoiding plagiarism, and have also strengthened the case for what you are saying by showing that you have researched the question, and found relevant material that is related to it.

(ii) If someone reads your work, and is interested to find out more about the reference you have cited, they will be able to find it.

(iii) It is good academic training – for instance, when you come to do your project dissertation, you will need to cite references correctly.

Different forms of citation are appropriate depending on the source of the reference (e.g. whether it is a book, or a journal article), and also depending on the reference scheme you are using (e.g. the Harvard name and date scheme, or a numeric scheme). You should use one scheme consistently for a piece of written work. The examples that follow show the Harvard version, but your supervisor may recommend using another scheme.

**a) For an article in a journal**

*In the written text:* Searle (1980) and Walrus et al. (2009) suggest that only living beings, not machines, are capable of thought.

*In a final section,* labelled References:


**b) For a book...**

*In the written text:* Pfeifer and Scheier (2001) argue that embodiment is crucial for real intelligence

*In the reference section:*

You can find a tutorial on the Harvard system of referencing here – you are encouraged to work through this; a well referenced piece of work creates a good impression.

http://www.librarydevelopment.group.shef.ac.uk/shef-only/referencing/engineering_harvard.html

After (or during) the tutorial:

In written work, it can be difficult to be sure what does and what does not count as plagiarism. See how well you do on the following test: http://www.indiana.edu/~tedfrick/plagiarism/item1.html
1 (a). In your own words, how is plagiarism defined?

1 (b). Explain why you think that plagiarism, submission of bought or commissioned work, collusion and fabrication are serious academic offences.

(i) Plagiarism

(ii) Submission of bought or commissioned work

(iii) Collusion

(iv) Fabrication

What action does the department take against students when there is evidence of the use of unfair means?

**Instructions on how to submit the form to MOLE:**

Access the ‘COM – MSc Personal Tutorials (2015-16)’ course on MOLE where you will find an electronic version of this form in the folder ‘Week 5 – Unfair means, plagiarism and collusion’. Complete the form and save as a PDF. Click the link ‘Plagiarism Form Submissions’ and attach your PDF form, then press to submit.
**Week 8: Preparing for the individual project**

This tutorial aims to help you to understand the process of choosing your MSc dissertation project. This process takes place later in Semester 1.

**Background**

The MSc project is a substantial piece of work, which you will complete over the summer between mid-June to mid-September. The project is worth 60 credits, and you will be assessed on your overall performance during the project period, on your presentation of the project at a poster session, and on the final report.

Throughout the project period, you will be supervised by a member of staff, with whom you will meet regularly to discuss your progress. Most project topics are proposed by members of staff (who then supervise the students who are allocated their topics). However, students may also propose their own project topic, provided they can secure the agreement of a member of staff who is willing to supervise their work on that topic.

**Before the tutorial**

1. Most of the information you will need about MSc projects can be found at: [http://www.dcs.shef.ac.uk/intranet/teaching/public/projects/index-pgt.html](http://www.dcs.shef.ac.uk/intranet/teaching/public/projects/index-pgt.html)

2. Look at these pages and make sure you understand
   - The project timetable
   - The different types of project available
   - What you need to deliver

3. MSc project reports (dissertations) from previous years are available online at: [http://www.shef.ac.uk/dcs/research/publications/studis](http://www.shef.ac.uk/dcs/research/publications/studis). Select a report whose topic is of interest to you and read it, making notes regarding the questions given below.

4. Spend a little time thinking about project topics that you could propose yourself; something you would really like to work on, or that would allow you to develop skills you’d like to acquire. Write a short description of your topic. Consider which members of staff who might be able to supervise your project.

**During the tutorial**

Be prepared to talk briefly about the project that you have read, including:

- The topic area of the project.
- Whether the project is *design-based* (designs/builds/tests a software system), *theoretical* (develops methodologies/proofs) or *experimental* (uses experiments to evaluate the properties of a system, or effectiveness of a technique)?
- Are the aims and objectives of the project clearly defined?
- Is the report well structured? How do you rate the standard of presentation?
- How much of the work that was planned was actually completed?
- What mark would you give the project? (when 50% is a pass, 70% a distinction)

Be prepared also to present your own idea for a project to the group.
Week 11: Exam skills

Aims: The aims of this tutorial are:

- To help you understand the exams process;
- To reflect on exam preparation and technique;
- To encourage you to look at past exam papers

The assessment process
Each module that you take is assessed by assignment (i.e. coursework), by an exam at the end of semester or academic year, or by a combination of both. Assessment may involve individual work or group work, or a combination thereof.

Before the tutorial
2. Read the guidance on exam revision and technique, which you will find at [http://www.dcs.shef.ac.uk/~richard/campus_only/Tutorials/Exam.html](http://www.dcs.shef.ac.uk/~richard/campus_only/Tutorials/Exam.html).
3. Look at past exam papers (which can be accessed via module description pages, at: [http://www.dcs.shef.ac.uk/intranet/teaching/public/modules/msc](http://www.dcs.shef.ac.uk/intranet/teaching/public/modules/msc)).
4. Choose a previous exam paper, for one of the modules you are taking this year. Read the paper carefully, and consider the following points:
   - What do you think the examiner is trying to test in each question?
   - How much of each question asks you to reproduce information from your lecture notes, and how much of each question requires problem solving?
   - What form do the questions take? Are they essay questions, short answer questions, scenario questions or a mixture of different forms?
   - How are the marks distributed between each part of a question, and how do you rate the difficulty of each part? If there are easier or harder parts, do they tend to come at the start or end of the question?
   - Looking at the exam paper overall, does it cover all of the topics listed as content on the module description page? Why do you think particular topics were chosen?

Comments (note down any questions/concerns you have about the assessment process, for discussion in the tutorial):

During the tutorial: Bring this sheet to the tutorial, where it will be used as the basis for a discussion on assessment.
 Semester 2

Week 5: Review of progress

You should arrange an individual meeting with your tutor in Week 5, to discuss your progress in general on the course. Your module results from Semester 1 should be available at this time, and your tutor will be able to advise you on any issues arising.

Week 9: Project Review

The aim of this tutorial is to help you reflect on your allocated project topic, and to share ideas amongst your tutorial group about how best to organise and conduct your project work.

Before the tutorial

Prepare a short description of your project topic, as you now understand it (i.e. since the original proposal may have been refined or elaborated, after discussions with your supervisor). Consider how the work to be done can be broken down into a number of subtasks, and sketch a plan for how you might schedule these tasks across the period from now until the final submission deadline. You might find it helpful to use a Gantt chart (en.wikipedia.org/wiki/Gantt_chart) for presenting your plan.

During the tutorial

Be prepared to briefly present your project topic. After topics have been presented, a discussion should follow which includes:

- Are the topics similar/different with respect to whether they are design-based, theoretical or experimental?
- Is a good division of work into subtasks similar or different between projects and project-types?
- Take a look at each other's project plans, and share ideas on what might be good practice for deciding on subtasks and their scheduling.
- Consider whether some plans are more robust than others in terms of successful completion. For example, might an unexpected delay later on in the project mean that very little is ultimately delivered?