

University of Manchester
School of Mathematics
First Year Feedback Supervision Arrangements

All first year students have two feedback supervision classes each week. In the autumn semester, one is associated with the course unit MATH10101/MATH10111 *Sets, Numbers and Functions* and the other is associated with MATH10121/MATH10131 *Calculus and Vectors* and, in the spring semester, one is associated with MATH10202/MATH10212 *Linear Algebra* and the other with MATH10222/MATH11222/MATH10232 *Calculus and Applications*. Note that students on the various programmes do different versions of these course units but all the students in each group will be doing the same version.

Feedback supervisions begin in week 1, the first week of lectures, and so will take place before very much material has been covered in the course (it may even be before the first lecture in a few cases!). The lecturer should provide supervisors with some preparatory course material to discuss with the students in the first class. This will probably be a rather untypical supervision as the students are not expected to have done any preparation for it. The main aim should be for the students and the supervisor to meet each other and for the supervisor to make clear what is expected of the students for the rest of the semester and what the students can expect of the supervisor.

At this first meeting, the supervisor should explain to the students the arrangements for them to hand in work in future weeks — probably delivering it to the supervisor's office by a specified time on the day before the supervision. Supervisors should NOT ask students to put work into a pigeonhole in the Brian Hartley Room since undergraduates are not permitted in the MIMS area which is on the first floor south side of the atrium. If handing work in to the supervisor's office is not convenient then it is possible for the supervisor to arrange with the Teaching and Learning Office for work to be handed in there. Many supervisors leave a large envelope attached to their door for handed in work.

The lecturer for each course unit is responsible for providing the students with problems on the course material and should provide supervisors with copies of the problems and the solutions in advance of the supervision. The lecturer should indicate each week which questions the students should hand in for marking.

In the autumn semester there are no supervisions in week 6 (reading week). In the spring semester there are no lectures in week 12 other than revision lectures but supervisions should be held that week to cover the material from the week 11 lectures and possibly queries on earlier material.

A. What is expected of students

- A1.** Students are required to hand in work promptly as requested and to attend each feedback supervision. If, for any reason, a student is unable to attend a supervision they should inform the supervisor as soon as possible (preferably before the supervision).
- A2.** Students are expected to spend at least as much time working on the course material as they should spend in class: at least five hours a week for a 20 credit course unit and at least four hours a week for a 15 credit course unit. It is important for students to keep up with the course material in order to have the background knowledge to understand the lectures.
- A3.** Students are expected to hand in a reasonable attempt at the questions identified for handing in at supervisions. Even if the student is having real difficulty doing a problem there is always work that can be done: make sure that you understand what all the terms

in the question mean, look for similar questions done in the lectures, look for similar questions in a course text. It can be a good idea to discuss the work with other students but the work handed in must be your own. Work should be written out properly; lecture notes and course texts provide a model for how mathematics should be written. You should aim to write something that you will be able to understand yourself in a few months time.

- A4.** Students should attempt most of the other questions on the problem sheets (the number of questions on sheets will vary from one lecturer to another — in some cases it will be clear that everything should be attempted). The problem sheets are the heart of each course and intended to help students engage with the course material presented in lectures. If a student is finding the problems on the course too easy (possibly because of prior study of the material) then they should contact the lecturer to ask for some supplementary problems or read around the course material in the associated text book.
- A5.** Students should be ready to participate in supervisions, having their course materials (lecture notes and problem sheets) with them at the supervision. Students may be asked to go through a problem at the blackboard or to show the supervisor their lecture notes and other course work.

B. What is expected of supervisors

- B1.** Supervisors should keep a record of student attendance, submitted work and participation in the feedback supervisions and report regularly to the Teaching and Learning Office. The Office will distribute attendance and mark lists for return.
- B2.** If a student fails to attend a supervision during the first five weeks of the semester, the supervisor should immediately email the student asking for an explanation, copying the email to the Teaching and Learning Office and the Personal Tutor. Email addresses will be provided by the Office. It is important to demonstrate that you expect full attendance.
- B3.** In marking students' written work make it clear that you expect a high standard of presentation. Although it is important not to discourage students who are struggling with a course, supervisors can reasonably expect students to have worked at the material. If work is not presented satisfactorily then the work might be marked but the student should be asked to write it out again. One of the purposes of taking work in regularly in the first year is to teach students how to write out mathematics.
- B4.** Occasionally, enthusiastic students hand in much more work than is asked for or hand in different questions. If there is a lot of work then marking it all can be time consuming; it is probably best to concentrate on marking the work asked for, glancing through the other work to check for howlers or indicating that numerical answers are correct. Sometimes a struggling student may answer different questions which they can do and it is probably best to encourage them by marking the work. Strong students should be encouraged to work at any more demanding questions which there may not be time to discuss in the supervision. Students should be encouraged to work at material which is appropriate for them. The lecturer should be informed about any students who are finding the course too easy so that they can provide some supplementary problems for them to work on.
- B5.** The supervisor should return marked work during the next supervision after it is handed in so long as the student meets the deadline set. When marking the work the supervisor should remember that the students will be receiving solutions from the lecturer in due course so it is not usually necessary to go into much detail about what the students should

have done in place of some incorrect solution: it may be better just to provide a hint to the student. The purpose of marking the work is to provide feedback to the students to help them understand their mistakes and to improve the quality of their mathematical writing. The supervisor may choose to give students a numerical mark for their work (students seem to like this) but it should be made clear that this is not the mark for participation in the supervision which counts towards the assessment of the course (see B8 below).

- B6.** During the supervision each student should be encouraged to participate. This is another way in which they can obtain feedback on their work. Supervisors should get students to do most of the work, possibly by getting them to the blackboard and helping them to answer each other's questions; but supervisors will need to do what they are comfortable with and what appears to meet the needs of the particular group. A student who is nervous about presenting work at the blackboard may be helped by being asked to prepare something. It is usually bad practice for the supervisor to work through problems on the board without any input from the students. The supervision should not be just another lecture. If a student falls behind for good reason or bad then it is important to be encouraging as they seek to catch up.
- B7.** It is not necessary during the supervision to work through all the questions marked for handing in. It is important to make clear that the students are expected to have worked at the other problems on the relevant problem sheet and so it is a good idea to spend some time on these. It might be useful to start the supervision by quizzing students about the material in the lectures including basic definitions or formulae which they need to learn.
- B8.** The assessment of each of these course units includes 10% of the marks for participation in the supervision. This mark is based on marks given to each student each week by the supervisor. The supervisor should give each student a mark out of 3 each week (apart from the supervision in week 1) using the following scheme.
- Award one mark for turning up and participating in the supervision. If a student attends but does not appear to participate in the discussion they should be warned that they may not receive the attendance mark in future.
 - Award a mark of 0, 1 or 2 for their written work. This gives a chance for supervisors to differentiate between those students who have done the bare minimum and those who have made more effort. Work handed in need not be correct, but the student should clearly have spent some time on the work and taken some care over the presentation in order to get both marks — it is important not to discourage students who are finding the course difficult. If a student hands in an attempt which appears too feeble to merit a mark then give the student one mark but warn the student that in future such feeble attempts will not count.
- B9.** Students do sometimes work together on the supervision work and to an extent this is to be encouraged. But students should be warned about plagiarism and anything that appears to be copied should not be accepted. The student's work must be their own. If the offence is repeated the supervisor should report the student to me for plagiarism. If the supervisor has concerns about this matter then they should be discussed with me.
- B10.** Supervisors may rearrange to the time of the supervision for their and the students convenience so long as a suitable room is available (often a problem).

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