Queen Mary
University of London

MTH4101 Calculus II
Preparing for your Calculus II exam Year 2012/2013

- Please check out http://www.maths.qmul.ac.uk/undergraduate/exams for **date and location of your Calculus II exam 2013**. The School will also e-mail you in due time.
- The **sample exam** specified below will be solved in a **revision lecture** end of April. Again, you will be informed about date and location of the revision lecture by the School.
- **Previous exam papers** plus model solutions are available on the course webpage as follows:

exam	**model solution**
sample exam	To be solved in the revision lecture. It is the 2012 exam, suitably adapted to the new syllabus of 2013, which replaced complex variables by first-order differential equations. The original 2012 exam, as well as details about the modifications, you can find on the course webpage.
2011	This is if you wish to test 'the real thing' without being tempted to get help by looking at model solutions. Questions 1(a), 1(b) and 2 involve complex variables and are not relevant to the 2013 exam.
2010	The full model solution is available on the course webpage. Questions 1(a) and 1(b) are not relevant to the 2013 exam.
2009	The full model solution is available on the course webpage. Questions 1(a), 1(b) and 2(a) are not relevant to the 2013 exam.
2008	Questions 1(a) and 1(b) as well as the second part of question 4 are not relevant to the 2013 exam.

- Please note: **Model solutions to other Calculus II exams will not be made available.**
- Work yourself through a suitable number of these **sample exams** from the previous years. The *structure* of the 2013 exam paper will be exactly the same. You will thus get a good idea about what to expect. Note that exams earlier than 2007 (labeled MAS102), as they are available on the College's exam webpage, are different from the 2007ff exams (labeled MAS125 or MTH4101), because the syllabus of this module has changed significantly in 2006/7. In short, for the upcoming 2013 exam only the 2008ff exams above are representative.
- **Read the exam question!** Take a few moments to read the question and be clear about what is being asked. Too often students either forget about a part of a question or just do not see it. Make also sure you transcribe any relevant material correctly. It is very easy to copy

down an equation incorrectly and so if the questions asks, e.g. "Show that ..." it may then be impossible to do so.

- **Show that you understand what you are doing!** For example, if you are asked about the limit of a given function, do not just answer 'does not exist' (are you guessing?). Show by a calculation how you come to this conclusion. Partial marks will be awarded to all exam questions. That is, if you only give the answer to a question for which a calculation is needed, without providing any calculation, even if the answer is correct you will only be awarded partial marks. On the other hand, if you show by a calculation that you have essentially understood of how to solve the problem, but your calculation contains errors leading to the wrong result, you will still earn partial marks.

- **Use your time wisely!** Each of Questions 2–5 in the exam is worth 11 marks while each of the eight parts of Question 1 is worth 7 marks. Therefore if time is short and you are struggling with part of Question 1 when you know you can do one of Questions 2–5 for more marks, concentrate on the latter.

- **Check your answers!** Many students lose marks for making "silly mistakes". Check your answers carefully, rather than just assuming that you know how to do something and assume that you have done it correctly.

- If you are aiming at a *bare pass* (40 marks), practice at least on a suitable number of sample exams. You will be *ideally prepared* for the exam (aiming at at least 70 marks for an A) if in addition you review

  1. all your Calculus II online coursework and the midterm test, including exercise 10
  2. all the problems covered in the exercise classes, including exercise 9
  3. all material covered by the lecture notes

  The exam will only be on material covered by the above three items. If you want to know which sections of the textbook have been taught in this course, see the annotated syllabus as well as the frontpages of all the lecture notes as they are available on the course webpage, where this is stated for each week. If you need more examples, or if you have any specific questions that are not answered by the above material, study your textbook.

- Calculators will not be allowed for the exam. No tables of integrals will be available or allowed, nor will they be needed for solving the exam questions.

- I will have regular **office hours** from April 2nd until the exam takes place. However, I will be away from May 8 to May 13 and for another week in April. Please check out my homepage for details. If you have any specific question on previous exam problems, feel free to see me during my office hours. However, I then expect to see a *written attempt* from you of how you have tried to solve the respective sample exam.

- **Please note:** More information on this exam than provided in these notes and on the course webpage *will not be given out to students*! Particularly, I will not give specific exam hints to single students via e-mail or otherwise. This would not be fair towards all the other students.

I wish you much success with your exams!

14 March 2013 *Rainer Klages*