

MTHS2007 Advanced Mathematics and Statistics for Mechanical Engineers

Chapter 0: introduction

School of Mathematical Sciences

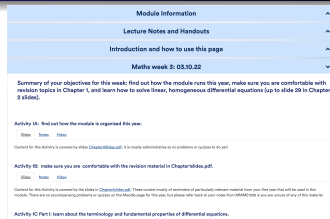


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How the module works: Moodle structure

I will follow a weekly structure in which content is divided into **Activities**, in which each Week's material is divided into more digestible chunks.



- There are typically 4-6 Activities each week (but more in Week 3).
- Each Activity has associated online recordings and notes developed for online learning during COVID - but **these are no longer the primary source of material.**
- Delivery in 22/23 will be **in-person**, through lectures and workshops - online recordings are optional extras.
- Module engagement will be monitored though attendance at lectures and workshops.
- There are **quizzes** following selected Activities on Moodle. **Quizzes are not used in any way to assess final marks.**

How the timetable works: lectures

MTHS2007 Autumn Timetable 2022-23

	9-11am	11-12pm	12-1pm	1-2pm	2-3pm	3-5pm	5-6pm
Monday					Office Hour Mathematical Sciences Building C21		Lecture Monica Partridge A03
Tuesday							
Wednesday							
Thursday		Lecture Monica Partridge A03	Example Class / Problem Class Monica Partridge A03	Office Hour Mathematical Sciences Building C21			
Friday							

Lectures: Mondays 5-6pm and Thursdays 11-12pm

Lectures cover the main content of the module. Material in recorded “minilectures” on Moodle repeats this.

How the timetable works: problem and examples classes

MTHS2007 Autumn Timetable 2022-23

	9-11am	11-12pm	12-1pm	1-2pm	2-3pm	3-5pm	5-6pm
Monday					Office Hour Mathematical Sciences Building C21		Lecture Monica Partridge A03
Tuesday							
Wednesday							
Thursday		Lecture Monica Partridge A03	Example Class / Problem Class Monica Partridge A03	Office Hour Mathematical Sciences Building C21			
Friday							

Problem/Example Class (alternating weeks): Wednesdays 12-1pm

These will take place in-person, in Monica Partridge A03. Details on next slide.

These are treated as a lecture in the first week of teaching (or “Week 3” according to the University).

Examples Class: Weeks 4, 6, 8, 10, 12

I go through problems related to lecture material, often from a past exam paper. I may pause to let you start the problem first before going through the solution myself.

Problems Class: Weeks 5, 7, 9, 11, 13

Problems classes will be held in-person, and give you a chance to get help with problem sheets, past exam questions and other Module activities.

Moodle: important resources

As all your mathematics modules, MTHS2007 is supported on the web through Moodle (<http://moodle.nottingham.ac.uk>). Important resources accessed through Moodle include

- The **Module Booklet** is posted under the sections *Module Information* and *Lecture Notes and Handouts*. This contains the main administrative information about how the module is run.
- **Lecture slides** are posted, chapter by chapter, in the section *Lecture Notes and Handouts*. The slides that are pertinent to each week's assigned Activities are also noted in the associated tab on Moodle.
- **Problem Sheets** are posted individually in the section *Lecture Notes and Handouts*. **Problem Sheet Solutions** will be posted in *Lecture Notes and Handouts*, as the semester progresses.
- **Past exam papers** and **solutions** are posted in the folder *Assessment and Feedback - Past Papers*.

Assessment of the module is by

- coursework 10% and
- final assessment 90%,

but **reassessment** is by

- **final assessment 100%**.

January Assessment

The final assessment is expected this year to take the form of a 2-hour, in-person exam with the same structure as in 2021-22. The online exam from 2020-21 has a similar format so can still usefully be used for practice.

In-term coursework

Coursework consists of a written assignment, due in *November* at a date to be confirmed, and is worth 10% to be made available on Moodle, two weeks before the due date.

All cases of academic misconduct, including plagiarism in coursework, are referred to Academic Misconduct Panels for formal investigation.

You are not required to buy a text book for this module. However, some students find it useful to work from a text book (multiple copies of text books are available in the George Green Library).

The main text is

- Glyn James, Modern Engineering Mathematics,

but there is an alternative,

- Kreyszig, Advanced Engineering Mathematics,

that you might also find useful.

The module has seven sections (not all of the same length!):

- 1 Brief Revision
- 2 Linear ODEs with constant coefficients
- 3 Fourier series and periodic functions
- 4 Application of Fourier series to ODEs
- 5 Laplace transforms and their application to ODEs
- 6 Introduction to PDEs
- 7 Probability and Statistics

Director of Service Teaching:

If you are a *non-engineering* student and need a signature on your module entry form, please contact the Director of Mathematics Service Teaching, Dr M Kurth (martin.kurth@nottingham.ac.uk).

Temporary page!

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