School of Engineering
and Mathematical Sciences
CITY UNIVERSITY LONDON

ME1111
Computation 1

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Part 1 Modules

PART 1

ME1109 Engineering Science 1

Statics, Materials, Dynamics

Fluids, Thermodynamics, Electrical

ME1110 Engineering Practice 1

Engineering Laboratory

Drawing & Design

Manufacturing Methods

ME1111 Maths & Computation 1

Note: Computing is 30% of the 30 credit module ME1111.
It is an assessment you have to pass in order to progress to Part 2.

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Module Outline

- This module covers Excel/Word in the first three weeks.
- The main topic is Matlab
  - Basic Matlab skills
  - Basic programming skills
  - Advanced Matlab

Aims:

- to have confidence in using Excel
- to be able to use Matlab to solve problems
- to develop programming skills

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Module Structure

Lectures

- introduce new topics / coursework
- lecture weeks are shown on the online timetable (week 1, 4, 7, 9 in period 1 and week 1, 3, 5, 8, 9, 10 - in-class test in period 2)

Tutorials

- in-class exercise questions in coursework
- to get help
- 1 hour per week, see the rota

Private Study

- study and work on coursework
- 3 hours per week

Maths & Computing Rota

Maths starts in week 3

Computing starts in week 1 (CG51)

Period 1	Tuesdays		Thursdays	
	4-5	5-6	4-5	5-6
Group A	Comp T1	Maths T2		
Group B	Maths T1	Comp T2		
Group C			Comp T3	Maths T4
Group D			Maths T3	Comp T4

Period 2	Tuesdays		Thursdays	
	11-12	12-1	10-11	11-12
Group A	Comp T1	Maths T2		
Group B	Maths T1	Comp T2		
Group C			Comp T3	Maths T4
Group D			Maths T3	Comp T4

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Assessment

Weight on coursework and class test:

- Excel/Word Coursework……10
- Matlab Coursework……....45
- Matlab class test 1 (term1)…..……...15
- Matlab class test 2 (term2)……..30

- Total……..100

Pass mark is 40**%**

Note:

1) Course website: http://moodle.city.ac.uk/ - ME1111 – Computation Contents
2) Part 1 results do not contribute to the degree.
3) You need to pass all the modules to progress to Part 2.
4) As a guideline: above 40% - the learning outcome achieved
more than 70% - 1st class

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Late submission

- In-class exercise / class test:

  no late submission is allowed

- Other submission:
  - within 1 week: capped at 59%
  - within 2 weeks: capped at 40%
  - more than 2 weeks: 0

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Reading List

Essential Reading*:
Matlab for Engineers
Holly Moore
Publisher: Pearson International Edition

Recommended Reading:
A Guide to Microsoft Excel for Scientists and Engineers
By Bernard V Liengme
Publisher: Butterworth-Heinemann

Background Reading:
A concise introduction to Matlab
William J Palm III
Publisher: McGraw-Hill Science/Engineering/Math

* **You need to have a personal copy, which can be purchased in the Waterstone in the University**

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Schedule

ME1111 Computation 1 – Course Schedule (subject to change)

	Lecture	Tutorial Class			
week	Topics	Tutorial Exercise	Tutorial Assessment	CW	Weighting
1	Excel - Basic use, Plotting, If function	basic Excel		E1	10
2			basic use of Excel		
3			plotting		
4	Matlab 1 - Chapter 1-3 Basic use of Matlab	scalar and array operations		M1	5
5		build-in functions			
6					
7	Matlab 2 - Chapter 3, 5 Build-in functions, plotting	data analysis functions		M2	5
8		plotting			
9	Matlab 3 - Chapter 6-7 User defined functions, user controlled input and output	user-defined functions		M3	5
10		controlled input/output			
11			test 1: M1 and M2		15
week					
1	Matlab 4 - Chapter 8 **find/if** function	find		M4	10
2		if			
3	Matlab 5 - Chapter 8 **for/while** function	for		M5	10
4		while			
5	-		marking M4 and M5		
6					
7			marking M4 and M5		
8	Matlab 6 - Chapter 12 Numerical Techniques			M6	10
9	-				
10	test 2: M1- M6				30
11					

Text book: MATLAB for Engineers by Holly Moore