Introduction to JMC year 1

JMC - Degree Overview

Year 1 - levelling the playing field

providing you with the programming, computing and mathematical foundations needed for the course in later years.

Year 2 - big systems and specialising

learning the principles of engineering large systems, such as operating systems and compilers, and choosing your mathematical specialism(s).

Year 3 - breadth of knowledge and experience

the BEng year gives you lots of choice about what you learn, with the modules in this year getting you to the cutting edge of professional/industry level practices

Year 4 - depth of knowledge and experience

the MEng year also has lots of choice about what you learn, with the modules in this year getting you to the cutting edge of research

JMC Year 1 - All modules

MATH40009 Introduction to University Maths	Term 1 5ECTS	Intensive 4 week course aimed at getting you to think like a University Mathematician
COMP40009 Computing Practical 1	Terms 1,2&3 20ECTS	Learning to programme following principled and robust techniques (Haskell, Kotlin, Java & C)
MATH40002 Analysis I	Terms 1&2 10ECTS	Introduction to Mathematical Analysis, the core of many pure maths modules in later years
MATH40004 Calculus and Applications	Terms 1&2 10ECTS	Introduction to Calculus, the core of many applied maths and computing modules in later years
MATH40012 Linear Algebra and Groups	Terms 1&2 5ECTS	Introduction to Algebra for applied mathematics and Group Theory for pure mathematics
COMP40012 Logic and Reasoning	Terms 1&2 5ECTS	Learning the language and techniques necessary for formal reasoning and proofs
COMP40008 Graphs and Algorithms	Term 2 5ECTS	Core computing theory forming the basis of many modules in later years

Although the computing modules may seem smaller in number, they are actually quite large modules that last all 3 terms. The degree must be evenly split between the 2 departments for year 1 and 2. You can skew it once you enter year 3 and 4.

JMC - Year 1 Support Structure

PPT (Personalised Programming Tutorials)

supporting the programming content of COMP40009 Computing Practical 1. Undergraduate teaching assistants will be helping students and teaching them how to program. Part of the computing side of support.

PMT (Personalised Mathematics Tutorials)

Supporting the theory content of COMP40012 Logic and Reasoning and COMP40008 Graphs and Algorithms. Part of the computing side of support. Will not begin until introduction to university maths is over. About week 6-7. To support logic and reasoning and graphs and algorithms. With an undergaduate assistant that is supervised by an academic.

JMC Maths Catch-up Tutorials

supporting the mathematical content of all Year 1 Maths modules

PT (Personal Tutor)

first point of contact for your pastoral care needs (support for settling into Uni life, module options, CV reference and sign-post for other services). Will help you with your CV when applying for jobs by writing reference letters etc or when doing internships etc. First point of contact.

ST (Senior Tutor)

the Department's pastoral care lead, able to provide extensive support/advice

Programme Directors (Mark Wheelhouse and David Ham)

in charge of the academic structure of the degree programme

Miscellaneous information

In computing, you will have regular problem sheets which will be submitted and marked. In maths you may also have problem sheets that will get submitted and marked but most of them will not. You can go to problem classes and ask about the old stuff, you do not need to worry that you are not up to the current week's content. The PPTs do not actually count for credit. It is marked and you also get feedback on all of it, but do not worry if you don't get every single test case to pass as it is better to receive feedback on the one test case that doesn't work.

5 or 6 hours per module is how much time you should be spending doing maths and computer science. Half of this is in lectures and the other half is doing the work outside. In total about 40 hours should be spent on maths and computer science.

Everything other than intro to uni maths and computing practical has exams in the summer term. The intro to uni maths and computing practical have exams as the module goes along.