

Mathematics Common Entry LM124

You need to make some decisions about which 5 modules you will take this semester. Three of them are compulsory for everyone on LM124, but the other 2, which are called *elective modules*, can affect which of the three *exit programmes* (Mathematical Sciences, Economics and Mathematics or Mathematics and Physics) you will take from next semester onwards.

Autumn Semester modules:

MS4021	Calculus 1
MS4131	Linear Algebra 1
CE4701	Computer Software 1
	Electives – You must choose two from
MS4101	Mathematics Laboratory
EC4111	Microeconomics (Non Business)
AC4213	Financial Accounting
PH4131	Mechanics/Heat/Electricity/Magnetism
PH4051	Measurement and Properties of Matter
CS4221	Foundations of Computer Science

Which electives should you choose in Semester 1?

This depends on which programme you wish to continue with from Semester 2 onwards. So first let's look at semester 2 for the three programmes.

Semester 2 for the three programmes

Mathematical Sciences

MS4022	Calculus 2
MS4122	Further Linear Algebra
MS4222	Introduction to Probability and Statistics
CE4702	Computer Software 2
	Elective – Choose one from
AC4214	Accounting for Financial Decision making
EC4112	Macroeconomics (for Non Business)
PH4102	Waves/Light/Modern Physics
CS4182	Foundations of Computer Science 2

You can enter the Mathematical Sciences programme with any choice of electives in Semester 1, but your elective choice in Semester 2 will follow on from your choice in Semester 1 (economics, accounting, physics or computer science.) For Mathematical Sciences It would be ideal to have taken MS4101 Mathematics Laboratory in Semester 1.

Mathematics and Physics

MS4022	Calculus 2
MS4122	Further Linear Algebra
MS4222	Introduction to Probability and Statistics
PH4102	Waves/Light/Modern Physics
PH4092	Semiconductor Devices

There are no elective choices to be made. However, you need to have chosen at least the one physics module PH4131 from Semester 1. PH4051 in Semester 1 would also be useful.

Economics and Mathematics

MS4022	Calculus 2
MS4222	Introduction to Probability and Statistics
EC4102	Macroeconomics
	Electives – Choose two from
AC4214	Accounting for Financial Decision Making
MS4122	Further Linear Algebra
CE4702	Computer Software 2

If you wish to take AC4214 in Semester 2, you should take AC4213 in Semester 1. And again for Economics and Mathematics MS4101 in Semester 1 would be very useful.

For those who are clear about their choice of programme:

If you are sure which programme you wish to take then we would recommend the following electives in the first semester:

Mathematical Sciences

MS4021	Calculus 1
MS4131	Linear Algebra 1
CE4701	Computer Software 1
MS4101	Mathematics Laboratory
	Any other elective

Mathematics and Physics

MS4021	Calculus 1
MS4131	Linear Algebra 1
CE4701	Computer Software 1
PH4131	Mechanics/Heat/Electricity/Magnetism
PH4051	Measurement and Properties of Matter

To proceed with Mathematics and Physics it is **essential** that you select PH4131.

Economics and Mathematics

MS4021	Calculus 1
MS4131	Linear Algebra 1
CE4701	Computer Software 1
EC4111	Microeconomics (Non Business)
MS4101	Mathematics Laboratory

To proceed with Economics and Mathematics it is **essential** that you select EC4111. And if you wish to take the accounting elective AC4214 in Semester 2 you should replace elective MS4101 with AC4213 (Financial Accounting). But we strongly recommend MS4101 as it will be useful throughout your whole undergraduate career.

For those who are undecided between two programmes:

If you are undecided and you wish to keep 2 options open, you could consider the following electives in the first semester:

Mathematical Sciences and Mathematics and Physics

MS4021	Calculus 1
MS4131	Linear Algebra 1
CE4701	Computer Software 1
MS4101	Mathematics Laboratory
PH4131	Mechanics/Heat/Electricity/Magnetism

Mathematics and Physics and Economics and Mathematics

MS4021	Calculus 1
MS4131	Linear Algebra 1
CE4701	Computer Software 1
PH4131	Mechanics/Heat/Electricity/Magnetism
EC4111	Microeconomics (Non Business)

Mathematical Sciences and Economics and Mathematical Sciences

MS4021	Calculus 1
MS4131	Linear Algebra 1
CE4701	Computer Software 1
MS4101	Mathematics Laboratory
EC4111	Microeconomics (Non Business)

For those who are completely unsure about their choice of programme:

For those who are completely unsure about what to take, the following selection in the first semester keeps all options open:

MS4021	Calculus 1
MS4131	Linear Algebra 1
CE4701	Computer Software 1
EC4111	Microeconomics (Non Business)
PH4131	Mechanics/Heat/Electricity/Magnetism

As it is daunting enough to be starting a university programme, and particularly in current circumstances, a wise course might be to pick electives where you are already reasonably sure of your ability. It might not be a great time to try a physics module if you have never studied physics before; the elective computer science module is really only suitable for those with a serious interest in computer science; however, economics and accounting don't require any prior background.

If you have any questions, you can contact the Course Director Dr Alan Hegarty at alan.hegarty@ul.ie.