

Students will take a minimum of 120 credits (CATS) from the lists below. In addition, they can choose from a list of optional modules as well as from other modules available across the University. The maximum load is 150 CATS.

Students will be required to study the following *core* modules:

MORSE			Maths & Stats			Data Science		
	CATS	Term	Mathematics (10 CATS core)	CATS	Term		CATS	Term
			Metric Spaces	10	1			
Business School (10 CATS core)								
Mathematical Programming II	10	1						
						Computer Science (45 CATS core)		
						Database Systems	15	1
						Algorithms	15	1
						Software engineering	15	2
Statistics (50 CATS core)			Statistics (50 CATS core)			Statistics (50 CATS core)		
Mathematical Methods for Statistics and Probability	10	1	Mathematical Methods for Statistics and Probability	10	1	Mathematical Methods for Statistics and Probability	10	1
Probability for Mathematical Statistics	10	1	Probability for Mathematical Statistics	10	1	Probability for Mathematical Statistics	10	1
Mathematical Statistics	10	2	Mathematical Statistics	10	2	Mathematical Statistics	10	2
Stochastic Processes	10	2	Stochastic Processes	10	2	Stochastic Processes	10	2
Linear Statistical Modelling with R	10	2	Linear Statistical Modelling with R	10	2	Linear Statistical Modelling with R	10	2
TOTAL CORE CATS:	60			60			95	

MORSE Students will be required to study 15–30 credits from the following *optional core* modules:

MORSE			Maths & Stats			Data Science		
	CATS	Term						
Economics								
Mathematical Economics 1A	15	1						
Economics 2: Microeconomics OR Economics 2: Macroeconomics OR Economics 2	15 15 30	1 2 1-2						

Students will be able to select from the following *optional* modules (may change from year to year):

MORSE			Maths & Stats			Data Science		
Statistics			Statistics			Statistics		
Games and Decisions	10	1	Games and Decisions	10	1	Games and Decisions	10	1
Visualization and Communication of Data	10	1	Visualization and Communication of Data	10	1	Visualization and Communication of Data	10	1
Mathematics			Mathematics			Mathematics		
Metric Spaces	10	1				Metric Spaces	10	1
Mathematical Analysis III	10	2	Mathematical Analysis III	10	2	Mathematical Analysis III	10	2
Mathematical Methods and Modelling 3	10	1	Mathematical Methods and Modelling 3	10	1			
Groups and Rings	10	1	Groups and Rings	10	1			
Introduction to PDEs	10	1	Introduction to PDEs	10	1			

Introduction to Mathematical Biology	10	1	Introduction to Mathematical Biology	10	1			
Theory of ODEs	10	1	Theory of ODEs	10	1			
Combinatorics	10	1	Combinatorics	10	1			
Geometry	10	1	Geometry	10	1			
Programming for Scientists	10	2	Programming for Scientists	10	2			
Multilinear Algebra	10	2	Multilinear Algebra	10	2			
Multivariable Analysis	10	2	Multivariable Analysis	10	2			
Combinatorial Optimization	10	2	Combinatorial Optimization	10	2			
Introduction to Number Theory	10	2	Introduction to Number Theory	10	2			
Integral Transforms	10	2	Integral Transforms	10	2			
Scientific Computing	10	2-3	Scientific Computing	10	2-3			
Computer Algebra	10	2-3	Computer Algebra	10	2-3			
			Economics					
Economics 2	30	1-2	Economics 2	30	1-2			
Mathematical Economics 1A	15	1	Mathematical Economics 1A	15	1			
Mathematical Economics 1B	15	2	Mathematical Economics 1B	15	2			
Economics 2: Microeconomics	15	1	Economics 2: Microeconomics	15	1			
Economics 2: Macroeconomics	15	2	Economics 2: Macroeconomics	15	2			
Business School			Business School			Business School		
			Mathematical Programming II	10	1	Mathematical Programming II	10	1
Simulation	15	2	Simulation	15	2			
Foundations of Finance	15	2						
Foundations of Accounting	15	1						
Principles of Entrepreneurship	15	2						
						Computer Science		
						Artificial Intelligence	15	1
						Digital Communications and Systems Processing	15	2
Centre for Teacher Education			Centre for Teacher Education			Centre for Teacher Education		
Introduction to Secondary School Teaching	30	2	Introduction to Secondary School Teaching	30	2	Introduction to Secondary School Teaching	30	2

Students will be permitted to study up to 30 credits of any modules available across the University, subject to availability and the approval by their Course Director. Choices include Cyber Security, Stars, Combinatorics, Introduction to Mathematical Biology, Introduction to Number Theory, Logic and Verification, Econometrics 1, Industrial Economics 1, and Market Structure, but other suggestions are possible (see module catalogue <https://courses.warwick.ac.uk>).