

BSc (Hons) Mathematics with Applied Mathematics

Mathematical Sciences / Faculty of Science and Engineering

Year 1 Modules

Module Code	Module Title	Credits
CELEN120	Foundation Algebra	20
CELEF008	Introduction to Academic Skills	10
CELEN122	Foundation Electromagnetism and Mechanics	20
CELEN086	Introduction to Algorithms	10
CELEN037	Foundation Calculus and Mathematical Techniques	20
CELEN052	English in Specific Academic Contexts B (Engineering; Comp Sci; Env'mental Sci & Architecture)	20
CELEN082	Oral Communication Skills B	10
CELEN087	Introduction to Mathematical Software and Programming	10

Year 2 Modules

Compulsory Modules

Module Code	Module Title	Credits
MATH1029	Applied Mathematics	20
MATH1108	Probability and Statistics 1	20
MATH1109	Core Mathematics	60

Optional Modules

Module Code	Module Title	Credits
BUSI1122	Introduction to Accounting	10
MMME1019	Thermodynamics & Fluid Mechanics 1	20
BUSI1113	Fundamentals of Financial & Management Accounting	20
BUSI1070	Business Finance	10

BUSI1073	The Digital Economy	10
MATH1107	Algebra	20

Year 3 Modules

Compulsory Modules

Module Code	Module Title	Credits
MATH2032	Vector Calculus	10
MATH2033	Introduction to Scientific Computation	20
MATH2035	Modelling with Differential Equations	20
MATH2034	Differential Equations and Fourier Analysis	10

Optional Modules

Module Code	Module Title	Credits
MATH2037	Mathematical Analysis	10
MATH2038	Statistical Models and Methods	20
MATH2039	Probability Models and Methods	20
MATH2036	Complex Functions	10

Year 4 Modules

Optional Modules

Group 1: Students must take a minimum of 20 and a maximum of 40 credits from this group

Module Code	Module Title	Credits
MATH3048	Mathematical Medicine and Biology	20
MATH3049	Scientific Computation and Numerical Analysis	20

Group 2: Students must take a minimum of 60 and a maximum of 100 credits from this group

Module Code	Module Title	Credits
MATH3039	Stochastic Models	20
MATH3052	Coding and Cryptography	10
MATH3040	Mathematical Finance	20
MATH3051	Optimization	20
MATH3053	Game Theory	10
MATH3054	Discrete Mathematics and Graph Theory	10
MATH4083	Mathematics Group Projects	20

Group 3: Students must take a minimum of 0 and a maximum of 20 credits from this group

Module Code	Module Title	Credits
MMME2017	Thermodynamics & Fluid Mechanics 2	20