DIVISION OF COMPUTING, ENGINEERING AND MATHEMATICAL SCIENCES

School of Mathematics, Statistics and Actuarial Science

School Website: www.kent.ac.uk/smsas

Please refer to the online Module Catalogue for full details of all modules:
www.kent.ac.uk/courses/modules

Note: It is ultimately your responsibility to ensure that you are registered for the correct modules for your course.

Please select a link below to view the requirements for your course:

- Actuarial Science
- Actuarial Science with an Industrial Placement
- Applied Actuarial Science (MSc)
- Applied Actuarial Science with an Industrial Placement
- Applied Actuarial Science (International Masters) – 360 Credit Version
- Applied Actuarial Science with an Industrial Placement (International Masters) – 510 Credit Version
- Data Science (PCERT)
- Data Science (PDIP)
- Data Science (MSc)
- Data Science with an Industrial Placement (MSc)

The information contained herein is correct at the time of publication. Please note, however, that if a module recruits fewer than 8 students it is possible that it will not run. In this event, you will be contacted and asked to select an alternative module.

ACTUARIAL SCIENCE PASC0001X2MS-F

ACTUARIAL SCIENCE WITH AN INDUSTRIAL PLACEMENT PASC0001P1MS-F

STAGE 1 – 180 – 210 credits – credit imbalance permitted

You must take at least 180 credits and no more than 210 credits from the following optional modules:

Optional modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MACT7009	Financial Mathematics	15	Autumn	7
MACT7290	Probability and Statistics for Actuarial Science	30	Autumn	7
MACT7350	Actuarial Mathematics	30	Year-long	7
MACT8190	Business Economics	15	Spring	7
MACT8250	Survival Analysis	15	Autumn	7
MACT8260	Finance & Financial Reporting	15	Autumn & Spring	7
MACT8350	Financial Economics and Asset and Liability Modelling	15	Year-long	7
MACT8370	Mathematics of Financial Derivatives	15	Spring & Summer	7
MACT8400	Financial Modelling	15	Summer	7
MAST5010	Statistics for Insurance	15	Spring	5
MAST6390	Time Series Modelling and Simulation	15	Spring	6
MAST8360	Stochastic Processes	15	Autumn	7

PLUS you must take the following non-contributory compulsory module:

Compulsory module:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
WMATH016	Introduction to Excel	0	Autumn	W

All students can also take the following non-contributory optional module:

Optional module:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
WMATH015	SMSAS Industrial Practice Masters	0	Autumn & Spring	W

ACTUARIAL SCIENCE WITH AN INDUSTRIAL PLACEMENT PASC0001P1MS-F

PLACEMENT MODULES - 120 credits (12 months) – (Year 2)

You must take the following compulsory modules (120 credits):

Compulsory modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MAST7806	Industrial Placement Report	15	Year-long	7
MAST7807 *	Industrial Placement Experience	105	Year-long	7

*Module cannot be compensated or condoned

APPLIED ACTUARIAL SCIENCE PAAS0001X1MS-F
APPLIED ACTUARIAL SCIENCE WITH AN INDUSTRIAL PLACEMENT PAAS0001P1MS-F

STAGE 1 – 180 credits – credit imbalance permitted

You must take the following compulsory modules (75 credits):

Compulsory modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MACT9210	Actuarial Risk Management 1	30	Autumn	7
MACT9220	Actuarial Risk Management 2	30	Autumn & Spring	7
MACT9530	Communications	15	Autumn & Spring	7

You must take 105 credits from the following optional modules:

Optional modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MACT9090	Enterprise Risk Management	30	Autumn & Spring	7
MACT9120	Life Insurance	30	Autumn & Spring	7
MACT9150	Finance and Investment	30	Autumn & Spring	7
MACT9170	General Insurance Reserving and Capital Modelling	30	Autumn & Spring	7
MACT9180	General Insurance Pricing	30	Autumn & Spring	7
MACT9500	Prophet	15	Spring	7
MACT9520	Financial Modelling	15	Year-long	7
MAST9420	Data Science with R	15	Autumn	7

All students can also take the following non-contributory optional module:

Optional module:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
WMATH015	SMSAS Industrial Practice Masters	0	Autumn & Spring	W

APPLIED ACTUARIAL SCIENCE WITH AN INDUSTRIAL PLACEMENT PAAS0001P1MS-F

PLACEMENT MODULES - 120 credits (12 months) – (Year 2)

You must take the following compulsory modules (120 credits):

Compulsory modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MAST7806	Industrial Placement Report	15	Year-long	7
MAST7807 *	Industrial Placement Experience	105	Year-long	7

*Module cannot be compensated or condoned

APPLIED ACTUARIAL SCIENCE (INTERNATIONAL MASTERS) – 360 Credit Version

PAAS0001Z3MS-F

STAGE 1 – 180 – 210 credits – credit imbalance permitted

You must take at least 180 credits and no more than 210 credits from the following optional modules (at least 150 credits must be taken at Level 7):

Optional modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MACT7009	Financial Mathematics	15	Autumn	7
MACT7290	Probability and Statistics for Actuarial Science	30	Autumn	7
MACT7350	Actuarial Mathematics	30	Year-long	7
MACT8190	Business Economics	15	Spring	7
MACT8250	Survival Analysis	15	Autumn	7
MACT8260	Finance & Financial Reporting	15	Autumn & Spring	7
MACT8350	Financial Economics and Asset and Liability Modelling	15	Year-long	7
MACT8370	Mathematics of Financial Derivatives	15	Spring & Summer	7
MACT8400	Financial Modelling	15	Summer	7
MAST5010	Statistics for Insurance	15	Spring	5
MAST6390	Time Series Modelling and Simulation	15	Spring	6
MAST8360	Stochastic Processes	15	Autumn	7

PLUS you must take the following non-contributory compulsory module:

Compulsory module:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
WMATH016	Introduction to Excel	0	Autumn	W

All students can also take the following non-contributory optional module:

Optional module:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
WMATH015	SMSAS Industrial Practice Masters	0	Autumn & Spring	W

STAGE 2 – 180 credits – credit imbalance permitted

You must take the following compulsory modules (75 credits):

Compulsory modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MACT9210	Actuarial Risk Management 1	30	Autumn	7
MACT9220	Actuarial Risk Management 2	30	Autumn & Spring	7
MACT9530	Communications	15	Autumn & Spring	7

You must take 105 credits from the following optional modules:

Optional modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MACT9090	Enterprise Risk Management	30	Autumn & Spring	7
MACT9120	Life Insurance	30	Autumn & Spring	7
MACT9150	Finance and Investment	30	Autumn & Spring	7
MACT9170	General Insurance Reserving and Capital Modelling	30	Autumn & Spring	7
MACT9180	General Insurance Pricing	30	Autumn & Spring	7
MACT9500	Prophet	15	Spring	7
MACT9520	Financial Modelling	15	Year-long	7
MAST9420	Data Science with R	15	Autumn	7

APPLIED ACTUARIAL SCIENCE WITH AN INDUSTRIAL PLACEMENT (INTERNATIONAL MASTERS) – 510 CREDIT VERSION PAAS0001P3MS-F

STAGE 1 – 180 – 210 credits – credit imbalance permitted

You must take at least 180 credits and no more than 210 credits from the following optional modules:

Optional modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MACT7009	Financial Mathematics	15	Autumn	7
MACT7290	Probability and Statistics for Actuarial Science	30	Autumn	7
MACT7350	Actuarial Mathematics	30	Year-long	7
MACT8190	Business Economics	15	Spring	7
MACT8250	Survival Analysis	15	Autumn	7
MACT8260	Finance & Financial Reporting	15	Autumn & Spring	7
MACT8350	Financial Economics and Asset and Liability Modelling	15	Year-long	7
MACT8370	Mathematics of Financial Derivatives	15	Spring & Summer	7
MACT8400	Financial Modelling	15	Summer	7
MAST5010	Statistics for Insurance	15	Spring	5
MAST6390	Time Series Modelling and Simulation	15	Spring	6
MAST8360	Stochastic Processes	15	Autumn	7

All students can also take the following non-contributory optional module:

Optional module:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
WMATH015	SMSAS Industrial Practice Masters	0	Autumn & Spring	W

STAGE 2 – 180 credits- (Year 1) – credit imbalance permitted

You must take the following compulsory modules (75 credits):

Compulsory modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MACT9210	Actuarial Risk Management 1	30	Autumn	7
MACT9220	Actuarial Risk Management 2	30	Autumn & Spring	7
MACT9530	Communications	15	Autumn & Spring	7

You must take 105 credits from the following optional modules:

Optional modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MACT9090	Enterprise Risk Management	30	Autumn & Spring	7
MACT9120	Life Insurance	30	Autumn & Spring	7
MACT9150	Finance and Investment	30	Autumn & Spring	7
MACT9170	General Insurance Reserving and Capital Modelling	30	Autumn & Spring	7
MACT9180	General Insurance Pricing	30	Autumn & Spring	7
MACT9500	Prophet	15	Spring	7
MACT9520	Financial Modelling	15	Year-long	7
MAST9420	Data Science with R	15	Autumn	7

PLACEMENT MODULES - 120 credits (12 months) – (Year 2)

You must take the following compulsory modules (120 credits):

Compulsory modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MAST7806	Industrial Placement Report	15	Year-long	7
MAST7807 *	Industrial Placement Experience	105	Year-long	7

*Module cannot be compensated or condoned

DATA SCIENCE (PCERT) PDSC0001X1PC-F

STAGE 1 – 60 credits – credit imbalance permitted

You must take at least 60 credits from the following optional modules to be agreed with students based on their previous experience:

Optional modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
COMP8270	Programming for Artificial Intelligence	15	Autumn	7
COMP8320	Data Mining and Knowledge Discovery	15	Spring	7
COMP8481	Solving Problems with Data and Text	15	Spring	7
COMP8810	Object-Oriented Programming	15	Autumn	7
MAST7200	Data Modelling and Consultancy	20	Spring	7
MAST7210	Foundations of Data Science	20	Autumn	7
MAST7220	Machine Learning with R	20	Autumn OR Spring	7

DATA SCIENCE (PDIP) PDSC0001X1PP-F

STAGE 1 – 120 credits – credit imbalance permitted

You must take the following compulsory modules (120 credits):

Compulsory modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
COMP8270	Programming for Artificial Intelligence	15	Autumn	7
COMP8320	Data Mining and Knowledge Discovery	15	Spring	7
COMP8481	Solving Problems with Data and Text	15	Spring	7
COMP8810	Object-Oriented Programming	15	Autumn	7
MAST7200	Data Modelling and Consultancy	20	Spring	7
MAST7210	Foundations of Data Science	20	Autumn	7
MAST7220	Machine Learning with R	20	Autumn OR Spring	7

DATA SCIENCE (MSc) PDSC0001X1MS-F
DATA SCIENCE WITH AN INDUSTRIAL PLACEMENT (MSc) PDSC0001P1MS-F

STAGE 1 – 120 credits – credit imbalance permitted

You must take the following compulsory modules (120 credits):

Compulsory modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
COMP8270	Programming for Artificial Intelligence	15	Autumn	7
COMP8320	Data Mining and Knowledge Discovery	15	Spring	7
COMP8481	Solving Problems with Data and Text	15	Spring	7
COMP8810	Object-Oriented Programming	15	Autumn	7
MAST7200	Data Modelling and Consultancy	20	Spring	7
MAST7210	Foundations of Data Science	20	Autumn	7
MAST7220	Machine Learning with R	20	Autumn OR Spring	7

PLUS the following non-contributory compulsory module:

Compulsory module:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MAST7230	Data Science Project Methods	5	Spring	7

All students can also take the following non-contributory optional module:
Students on an Industrial Placement will also take the following non-contributory compulsory module.

Compulsory module:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
WMATH015	SMSAS Industrial Practice Masters	0	Autumn & Spring	W

STAGE 2 – 60 credits

You must take the following compulsory modules (60 credits):

Compulsory module:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MAST7240	Data Science Project	60	Summer	7

DATA SCIENCE WITH AN INDUSTRIAL PLACEMENT MSc PDSC0001P1MS-F

PLACEMENT MODULES - 120 credits (12 months) – (Year 2)

You must take the following compulsory modules (120 credits):

Compulsory modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MAST7240	Data Science Project	60	Summer	7
MAST7806	Industrial Placement Report	15	Year-long	7
MAST7807	Industrial Placement Experience	105	Year-long	7