

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 programme.

Please select a link below to view the Stage 2+ requirements for your programme:

- [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](#)
- [Statistical Data Science \(Formerly Statistics\)](#)
- [Statistical Data Science with an Industrial Placement \(Formerly Statistics with an Industrial Placement\)](#)

*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. **The University cannot guarantee whether all options will be available, or how they will be delivered, if Government Covid restrictions continue.***

STAGE 1 - 180 credits - credit imbalance permitted (up to 75 credits per term)

In the event that the student has been allowed to register for, and has obtained more than 180 credits, the degree qualification is based on the best 180 credits achieved.

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	Yearlong	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 Liability Modelling	15	Autumn & Spring	7
MACT8370	Mathematics of Financial Derivatives	15	Yearlong	7
MACT8400	Financial Modelling	15	Autumn & Spring	7
MAST5010	Statistics for Insurance	15	Spring	5
MAST6390	Time Series Modelling and Simulation	15	Spring	6
MAST8360	Stochastic Processes	15	Autumn	7

(Year 2)

150 credits (12 months) – PLACEMENT MODULES

You must take the following compulsory modules (150 credits):

Compulsory modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MAST7801	Industrial Placement Report and Presentation	30	Yearlong	7
MAST7805	Industrial Placement Experience (12 Months)*	120	Yearlong	7

*Module cannot be compensated or condoned

STAGE 1 - 180 credits – credit imbalance permitted (up to 112.5 credits per term)

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
MACT9160	Derivative Securities	30	Autumn & Spring	7
MACT9170	General Insurance Reserving and Capital Modelling	30	Autumn & Spring	7
MACT9180	General Insurance Pricing	30	Autumn & Spring	7
MACT9230	Introduction to Actuarial Research	15	Autumn & Spring	7
MACT9500	Prophet	15	Spring	7
MACT9520	Financial Modelling	15	Yearlong	7
MAST9420	Data Science with R	15	Autumn	7

STAGE 1 (Year 1) – 180 credits

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
MACT9160	Derivative Securities	30	Autumn & Spring	7
MACT9170	General Insurance Reserving and Capital Modelling	30	Autumn & Spring	7
MACT9180	General Insurance Pricing	30	Autumn & Spring	7
MACT9230	Introduction to Actuarial Research	15	Autumn & Spring	7
MACT9500	Prophet	15	Spring	7
MACT9520	Financial Modelling	15	Yearlong	7
MAST9420	Data Science with R	15	Autumn	7

(Year 2)

150 credits (12 months) – PLACEMENT MODULES

You must take the following compulsory modules (150 credits):

Compulsory modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MAST7801	Industrial Placement Report and Presentation	30	Yearlong	7
MAST7805	Industrial Placement Experience (12 Months)*	120	Yearlong	7

*Module cannot be compensated or condoned

STAGE 1 – 180-210 credits

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	Yearlong	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	Autumn & Spring	7
MACT8370	Mathematics of Financial Derivatives	15	Yearlong	7
MACT8400	Financial Modelling	15	Autumn & Spring	7
MAST5010	Statistics for Insurance	15	Spring	5
MAST6390	Time Series Modelling and Simulation	15	Spring	6
MAST8360	Stochastic Processes	15	Autumn	7

STAGE 2 - 180 credits - credit imbalance permitted (up to 112.5 credits per term)

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
MACT9160	Derivative Securities	30	Autumn & Spring	7
MACT9170	General Insurance Reserving and Capital Modelling	30	Autumn & Spring	7
MACT9180	General Insurance Pricing	30	Autumn & Spring	7
MACT9230	Introduction to Actuarial Research	15	Autumn & Spring	7
MACT9500	Prophet	15	Spring	7
MACT9520	Financial Modelling	15	Yearlong	7
MAST9420	Data Science with R	15	Autumn	7

STAGE 1 – 180-210 credits

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	Yearlong	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	Autumn & Spring	7
MACT8370	Mathematics of Financial Derivatives	15	Yearlong	7
MACT8400	Financial Modelling	15	Autumn & Spring	7
MAST5010	Statistics for Insurance	15	Spring	5
MAST6390	Time Series Modelling and Simulation	15	Spring	6
MAST8360	Stochastic Processes	15	Autumn	7

STAGE 2 - 180 credits - credit imbalance permitted (up to 112.5 credits per term)

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
MACT9160	Derivative Securities	30	Autumn & Spring	7
MACT9170	General Insurance Reserving and Capital Modelling	30	Autumn & Spring	7
MACT9180	General Insurance Pricing	30	Autumn & Spring	7
MACT9230	Introduction to Actuarial Research	15	Autumn & Spring	7
MACT9500	Prophet	15	Spring	7
MACT9520	Financial Modelling	15	Yearlong	7
MAST9420	Data Science with R	15	Autumn	7

150 credits (12 months) – PLACEMENT MODULES

You must take the following compulsory modules (150 credits):

Compulsory modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MAST7801	Industrial Placement Report and Presentation	30	Yearlong	7
MAST7805	Industrial Placement Experience (12 Months)*	120	Yearlong	7

*Module cannot be compensated or condoned

STAGE 1 – 120 credits - credit imbalance permitted (up to 120 credits per term)

You must take the following compulsory modules (105 credits):

Compulsory modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MAST7011	Bayesian Statistics with Stan and Python	15	Spring	7
MAST7012	Statistical Consultancy and Data Presentation	15	Spring	7
MAST7053	Statistical Learning for Data Scientists	15	Spring	7
MAST7291	Probability and Statistics for Data Science	30	Autumn	7
MAST8820	Advanced Regression Modelling	15	Autumn	7
MAST9420	Data Science with R	15	Autumn	7

You must take 15 credits from the following optional modules:

Optional modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MAST6015	Data Collection and Analytics	15	Autumn	6
MAST9960	Deep Learning with Python	15	Spring	7

STAGE 2 – 60 credits

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

Compulsory module:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MAST8670	Project	60	Yearlong	7

STAGE 1 – 120 credits (12 months)

You must take the following compulsory modules (105 credits):

Compulsory modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MAST7011	Bayesian Statistics with Stan and Python	15	Spring	7
MAST7012	Statistical Consultancy and Data Presentation	15	Spring	7
MAST7053	Statistical Learning for Data Scientists	15	Spring	7
MAST7291	Probability and Statistics for Data Science	30	Autumn	7
MAST8820	Advanced Regression Modelling	15	Autumn	7
MAST9420	Data Science with R	15	Autumn	7

You must take 15 credits from the following optional modules:

Optional modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MAST6015	Data Collection and Analytics	15	Autumn	6
MAST9960	Deep Learning with Python	15	Spring	7

STAGE 2- 180 credits (Year 2)

You must take the following compulsory modules (180 credits):

Compulsory modules:	MODULE TITLE	CREDIT AMOUNT	TERM TAUGHT	CREDIT LEVEL
MAST7801	Industrial Placement Report and Presentation	30	Yearlong	7
MAST7805	Industrial Placement Experience (12 Months)*	120	Yearlong	7
MAST9750	Short Dissertation (Statistics)	30	Yearlong	7

*Module cannot be compensated or condoned