

Statistics

CAO code: DN200 Option: Mathematical, Physical & Geological Sciences (MPG)



A map of Ireland showing radon in Irish dwellings. Map by the EPA's Office of Radiological Protection

- Learn how statistics is used in areas as diverse as biotechnology, finance, marketing, science, medicine and even psychology

“ The data analytics I have learned are currently some of the most highly sought after skills by employers, and can be applied to a broad range of areas including finance, insurance, marketing and pharmaceutical companies. If it wasn't for the flexibility of the UCD Science programme I would never have ventured into Statistics, and would have missed out on the chance to enter into the area of Mathematics I now love. **Melanie Dwayne, Student** ”



Sample pathway for a degree in Statistics *

YEAR 1 ENGAGE WITH THE PRINCIPLES

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| <p>STATISTICS
Topics include:</p> <ul style="list-style-type: none"> - Applications of Differential Equations - Statistical Modelling - Research Methods for Science | <p>MATHEMATICS
Topics include:</p> <ul style="list-style-type: none"> - Calculus in the Mathematical and Physical Sciences - Linear Algebra in the Mathematical and Physical Sciences - Mathematical Analysis - Numbers & Functions | <ul style="list-style-type: none"> - Two Elective modules - One Small-Group Project |
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YEAR 2 CHOOSE YOUR SUBJECTS

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| <p>STATISTICS
Topics include:</p> <ul style="list-style-type: none"> - Probability Theory - Inferential Statistics - Linear Models | <p>MATHEMATICS
Topics include:</p> <ul style="list-style-type: none"> - Calculus of Several Variables - Computational Science | <ul style="list-style-type: none"> - Two Elective modules |
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YEAR 3 FOCUS ON YOUR CHOSEN SUBJECT

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| <p>STATISTICS – Topics include:</p> <ul style="list-style-type: none"> - Statistical Data Mining - Survey Sampling - Linear Algebra 2 | <p>STATISTICS – Topics include:</p> <ul style="list-style-type: none"> - Data Structures & Algorithms - Time Series - Survival Models - Bayesian Analysis - Design of Experiments | <ul style="list-style-type: none"> - Two Elective modules |
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YEAR 4 REFINE YOUR KNOWLEDGE

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| <p>STATISTICS – Topics include:</p> <ul style="list-style-type: none"> - Stochastic Models - Multivariate Analysis - Monte Carlo Inference | <p>STATISTICS – Topics include:</p> <ul style="list-style-type: none"> - Actuarial Statistics - Applied Statistical Modelling - Nonparametric Statistics | <ul style="list-style-type: none"> - Categorical Data Analysis - Data Programming |
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BSc (Honours) Statistics

MSc (Taught)	PhD	Industry	Conversion Courses
<ul style="list-style-type: none"> - MSc Statistics - MSc Actuarial Science - MSc Meteorology 	<ul style="list-style-type: none"> - Students can pursue a PhD in universities in Ireland or abroad in areas as diverse as Bayesian Statistics, Pharmaceutical, Medical and Educational Statistics, Epidemiology, Econometrics, Environmental and ecological modelling 	<ul style="list-style-type: none"> - Data Analytics and Business Analytics, Data Science - Pharmaceutical - Actuarial Science - Banking & Finance - Insurance - CSO 	<ul style="list-style-type: none"> - Professional Master of Education (PME) - Graduate Diploma in Actuarial Science - MSc Quantitative Finance

*See page 42 for more information on subject choices. Potential combinations shown here are examples only and are not guaranteed by UCD. Topics are subject to change each year.