

## H8STATS1: Statistics I

Module Code:	H8STATS1
Long Title	Statistics I <b>APPROVED</b>
Title	Statistics I
Module Level:	LEVEL 8
EQF Level:	6
EHEA Level:	First Cycle
Credits:	5
Module Coordinator:	Sophie Flanagan
Module Author:	ORLA LAHART
Departments:	School of Computing
Specifications of the qualifications and experience required of staff	Level 9 Qualification in a numerate / scientific discipline and experience of the practical business application of standard statistical techniques.
<b>Learning Outcomes</b>	
<i>On successful completion of this module the learner will be able to:</i>	
<b>#</b>	<b>Learning Outcome Description</b>
LO1	Demonstrate the use of graphical and numerical techniques in descriptive statistics
LO2	Understand the theory, concepts and methods associated with the analysis of business data, using statistical hypotheses and inferential statistics to assist appropriate judgement and decision-making.
LO3	Understand and apply linear models to calculate correlation and to perform and interpret inference using regression.
LO4	Understand and apply typical software tools for business data analysis
<b>Dependencies</b>	
<b>Module Recommendations</b>	
No recommendations listed	
<b>Co-requisite Modules</b>	
No Co-requisite modules listed	
<b>Entry requirements</b>	

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Module Content & Assessment			
Indicative Content			
<b>Week 1</b> Course Introduction, The Role of Data and Statistics			
<b>Week 2</b> Interpreting and Describing Datasets			
<b>Week 3</b> Probability: Sample Spaces, Combinatorial Mathematics, Random Sampling			
<b>Week 4</b> Hypothesis Testing			
<b>Week 5</b> Single Sample Testing			
<b>Week 6</b> Two Sample Testing, Independent Samples			
<b>Week 7</b> Two Sample Testing, Dependent Samples			
<b>Week 8</b> Analysis of Variance			
<b>Week 9</b> Goodness of Fit			
<b>Week 10</b> Linear Correlation			
<b>Week 11</b> Simple Linear Regression			
<b>Week 12</b> Module Revision			
Assessment Breakdown			%
Coursework			40.00%
End of Module Assessment			60.00%
Assessments			
Full Time			
Coursework			
<b>Assessment Type:</b>	CA 1	<b>% of total:</b>	40
<b>Assessment Date:</b>	n/a	<b>Outcome addressed:</b>	1,2,4
<b>Non-Marked:</b>	No		
<b>Assessment Description:</b> Test on topics covered to date: Interpreting and Describing Datasets, Visualizing Data and Data Presentation, Hypothesis Testing, Single Sample Testing			
End of Module Assessment			
<b>Assessment Type:</b>	Terminal Exam	<b>% of total:</b>	60
<b>Assessment Date:</b>	End-of-Semester	<b>Outcome addressed:</b>	1,2,3,4
<b>Non-Marked:</b>	No		
<b>Assessment Description:</b> Module Terminal Exam covering entire curriculum but with a focus on: Two Sample Testing, Analysis of Variance, Goodness of Fit, Correlation and Simple Linear Regression			
No Workplace Assessment			
Reassessment Requirement			
<b>Repeat examination</b> <i>Reassessment of this module will consist of a repeat examination. It is possible that there will also be a requirement to be reassessed in a coursework element.</i>			
<b>Reassessment Description</b> Reassessment of this module will consist of a repeat examination that assesses all learning outcomes. It is possible that there will also be a requirement to be reassessed in a coursework element.			

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Module Workload				
Module Target Workload Hours 0 Hours				
Workload: Full Time				
Workload Type	Workload Description	Hours	Frequency	Average Weekly Learner Workload
Lecture	No Description	24	Per Semester	2.00
Tutorial	No Description	12	Per Semester	1.00
Independent Learning	No Description	89	Per Semester	7.42
Total Weekly Contact Hours				3.00

Module Resources	
<i>Recommended Book Resources</i>	
<p>James T. McClave, Terry Sincich. (2016), <i>Statistics</i>, 13th. Pearson, p.896, [ISBN: 9780134080215].</p> <p>Neil J. Salkind, Bruce B. Frey. (2019), <i>Statistics for People Who (Think They) Hate Statistics</i>, 7th. SAGE Publications, Inc.</p> <p>John H. Krantzler. (2017), <i>Statistics for the Terrified</i>, Rowman &amp; Littlefield Publishers, p.224, [ISBN: 9781538100288].</p>	
<i>Supplementary Book Resources</i>	
<p>Andy Field. (2018), <i>BUNDLE: Field: Discovering Statistics using IBM SPSS Statistics 5e + SPSS 24</i>, SAGE Publications, Incorporated, p.775, [ISBN: 9781544328225].</p> <p>Dennis Howitt, Duncan Cramer. (2016), <i>Statistics in Psychology Using SPSS</i>, Pearson, p.760, [ISBN: 9781292134215].</p> <p>Antony Davies. (2017), <i>Understanding Statistics</i>, Cato Institute, p.152, [ISBN: 9781944424367].</p>	
<i>This module does not have any article/paper resources</i>	
<i>Other Resources</i>	
<p>[website], Khan Academy,  <a href="http://www.khanacademy.org/">http://www.khanacademy.org/</a></p> <p>[website], Learn with Dr Eugene O'Loughlin.,  <a href="http://www.youtube.com/eoloughlin">http://www.youtube.com/eoloughlin</a></p> <p>[website], University of Amsterdam. open source software and videos,  <a href="https://jasp-stats.org/">https://jasp-stats.org/</a></p>	
Discussion Note:	