



## BUS101 Unit Outline

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| <b>Unit Code and Title:</b> BUS101 QUANTITATIVE METHODS   |
| <b>Course(s):</b> Bachelor of Business (Technology Management)  |
| <b>Core Unit:</b> Yes   |
| <b>Credit Points:</b> 10 credit points  |
| <b>Study Period:</b> Year One   |
| <b>AQF Level 7:</b> One Quadmester  |
| <b>Study Load:</b> Students should expect to spend approximately 130 hours on studying and completing assignments across the study period. This includes time spent attending scheduled weekly classes, Work Integrated Learning (WIL) activities (if any), undertaking private study, and preparing for assessments, and examinations. |
| <b>Pre-Requisite:</b> None  |
| <b>Mode(s) of Delivery:</b> This unit will be delivered predominantly face-to-face and online via Learning Management System (Canvas)/Zoom with recordings available for later viewing. Where appropriate, assessments MUST be submitted to Turnitin for authentication checking  |

### Unit Description:

This unit introduces students to the basic concepts and techniques in statistical research. Students will be familiarised with descriptive measures of quantitative methods; probability and probability distributions of quantitative methods; statistical inference and sampling and sampling distribution of quantitative methods; estimation and hypothesis testing on a single population and two populations; chi-squared tests for problems; non-parametric statistics for comparing two populations; simple linear regression and correlation and multiple regression. The unit also introduces students to writing and presentation of statistical reports.

### Prescribed Textbook:

Selvanathan, E. A., Selvanathan, S., and Keller, G. 2021. Business Statistics 8th Ed.: Australia and New Zealand Cengage Learning Australia.

**Unit Learning Outcomes (ULOs):** On successful completion of this unit, students will be able to:

[ULO1] Recognise and understand the role of statistical concepts used in decision making.

[ULO2] Identify and apply commonly used quantitative methods and techniques used to collect and analyse financial and nonfinancial data.

[ULO3] Analyse and use appropriate statistical techniques to solve problems.

[ULO4] Identify problems and justify solution strategies interpreting the results of data analysis.

[ULO5] Review statistical data in hypothesis testing to write a statistical report, evaluate and logically communicate the results both in written and oral forms.

**Assessment Requirements:**

| <b>Assessment Type</b>   | <b>Due</b>  | <b>Weighting<br/>(% of total marks)</b>      |
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| Assessment 1: Discussion Forum – On-Campus and Online  | Week 1 to 8 | 10%  |
| <p>Assessment 2: Individual Assessment: Video Presentation</p> <p>Your video presentation will be prepared based on the material discussed and presented in Week 1 to Week 4 lectures, tutorials, and any other forums in the first half of the subject. Write a 500-word to report the findings of your video presentation. This should include:</p> <ol style="list-style-type: none"> <li>1. Aim: one or two sentences describing the purpose of the research study; a short background to the study is included.</li> <li>2. Methods: describe which statistical methods were applied in Excel. Generate at least two appropriate graphs and descriptive summary statistics from your subsequent analysis</li> <li>3. Results: report the key summary statistics.</li> <li>4. Conclusion: briefly describe the significance of your results</li> </ol>   | Week 4      | 15%  |
| <p>Assessment 3: Group Report on Business Statistics:</p> <p>Demonstrate your ability to perform statistical analysis of supermarket sales data set.</p> <ol style="list-style-type: none"> <li>1. A concise introduction which clearly states the objectives of the analysis.</li> <li>2. A description of the data and summary statistics.</li> <li>3. A discussion of the theoretical model and how it is used to test the specified hypothesis.</li> <li>3. The practical importance of the hypothesis.</li> <li>4. Discuss the empirical model and its consistency with the theoretical model in testing the hypothesis.</li> <li>5. Comprehensive discussion of the results.</li> <li>6. Concluding remarks summarising the work, while highlighting its strengths and weaknesses.</li> <li>7. Bibliography or Reference list.</li> </ol> <p>Groups of three or four must provide a 4000-word written report with an individual reflective summary report of 1000 words from each group member. Variations of plus or minus 10% of word limitation are acceptable.</p> | Week 8      | 25%<br><br>(Report 20% plus presentation 5%) |



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| Assessment 4: Final examination (Closed Book). The 3 hours invigilated examination is conducted in the week 10 following the week 9 of study break and exam revision | Week 10 | 50% |
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**Note:** It is your responsibility as a student to regularly check the academic policy documents available on the school website and unit materials available on the Learning Management System (LMS). **\*Failure to do so could lead to students taking a risk of failing to maintain satisfactory progress in the unit and completing the course on time. \*A breach of academic integrity could lead to the imposition of penalties.**