STATISTICS FOR ACADEMIC PURPOSES

900011

2020

UNIT OUTLINE

Last amended:	January 2020

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Disclaimer

Unit name	Statistics for Academic Purposes
Unit number	900011
Coordinator	Michael Casey
Session	2020.1
Handbook summary	This unit is designed to prepare students for study in statistics at first year university level. The unit develops those skills specific to the statistical requirements of further study in the areas of arts, business, science and the humanities.
Credit point value	5
Prerequisite/s	N/A
Corequisite/s	N/A
Unit incompatible with and not to be counted for credit with	N/A
Assumed knowledge	Year 10 Mathematics or equivalent
Unit level	Level Z — Non-award
Attendance requirements	Students are expected to attend at least 80% of classes. Educational research consistently demonstrates that this attendance level is associated with a high likelihood of achieving a passing grade.
Enrolment restrictions	Enrolment is restricted to The College students.
Learning outcomes	On successful completion of this unit, students should be able to:

Learning outcomes:

1. demonstrate an understanding of the statistical terminology and use the correct notation
2. collect, organise and display data
3. calculate descriptive characteristics and describe data sets
4. calculate and describe the relationship between two variables and use simple linear regression to predict or estimate values
5. calculate probabilities
6. apply appropriate statistical methods to analyse data and make inferences, and
7. use computer software to display and analyse data.

Unit content	In this unit students will learn about:

- statistical terminology and methods of collecting data
- organising and displaying data
- measures of central tendency, variation and spread
- correlation and simple linear regression
- probability
- binomial distribution
- normal distribution
- sampling distribution
- estimation, and
- hypothesis testing.

Mode of delivery	This unit is taught on a face-to-face basis and includes six hours of classes per week. In addition, students will be required to access vUWS regularly, in order to download additional learning material, and to check for any announcements about the unit that may be posted there.

Online learning requirements	

Essential requirements	**Essential text**

Brase, CH & Brase, CP 2013, *Understanding basic statistics*, 7th edn, Brooks/Cole, Boston, MA.

Further resources

Anderson, DR, Sweeney, DJ, Williams, TA, Camm, JD & Cochran, JJ 2015*, Essentials of statistics for business and economics*, 7th edn, Cengage Learning, Stamford, CT.

Bennett JO, Briggs WL & Triola, MF 2014, *Statistical reasoning for everyday life*, 4th edn, Pearson, Boston, MA.

Berenson, ML, Levine, DM, Szabat, KA, O'Brien, M, Jayne, N & Watson, J 2016, *Basic business statistics: concepts and applications*, 4th edn, Pearson Australia, Melbourne.

Black, K, Asafu-Adjaye, J, Burke, P, Khan, N, King, G, Perera, N, Papadimos, A, Sherwood, C, & Wasimi, SA 2016, *Australasian business statistics*, 4th edn, John Wiley and Sons Australia, Milton.

Gonick, L & Smith, W 2005, *The cartoon guide to statistics*, 1st Collins edn, Collins Reference, New York.

Keller, G 2014, *Statistics for management and economics*, 10th edn, Cengage Learning, Stamford, CT.

McClave, JT & Sincich, TT 2017, *A first course in statistics*, 12th edn, Pearson Education, Harlow.

Essential equipment

- A College-approved non-programmable scientific calculator with statistics mode (a list of approved calculators can be found in the learning guide)

ASSESSMENT ITEMS AND WEIGHTING

Assessment for this unit will be based on the following components:

Task	Weighting	Learning outcomes assessed	Mandatory task
1. Intra-session exam – in-class test (1 hour)	20%	1–3	Yes
2. Report a. Part A — students will be expected to collect their own data and display in tables and graphical form – 100 words (10%) Individual assessment b. Part B — students will be asked to summarise, analyse and interpret their combined data, discuss their results and make recommendations – 300 words plus mathematical calculations (25%) Group assessment c. Part C — each member of the group orally presents a distinct part of the report – 3-4 minutes per student, approx 10 minutes per group (5%) Individual assessment	40%	a. 1–3 b. 1–7 c. 1–7	Yes
3. Final exam (2 hours)	40%	1–6	Yes
Total	100%		

For details of assessment due dates, please refer to the learning guide for this unit.

All marks will be determined in accordance with The College Assessment Policy.

All assessment tasks are mandatory unless otherwise specified. Should a student fail to attempt/submit the first formal assessment task in a unit, they will be deemed to be at risk and will need to follow an intervention plan in order not to receive a Fail Non-Submission (FNS) grade. However, failure to attempt/submit all other mandatory assessment tasks will result in an immediate FNS grade for the unit.

A minimum overall mark of 50% is also required to pass the unit.