AGRI20028 Research Methods for Life Science

Credit Points:	12.5
Level:	2 (Undergraduate)
Dates & Locations:	2016, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
Time Commitment:	Contact Hours: Twenty-four hours of lectures and 36 hours of tutorials and practicals Total Time Commitment: 170 hours
Prerequisites:	**Subject** / **Study Period Commencement:** / **Credit Points:** MAST10002 Data & Decisions / July / 12.50
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry. It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: http://services.unimelb.edu.au/disability
Coordinator:	Dr Peter Ades
Contact:	Dr Peter Ades **petera@unimelb.edu.au (mailto:petera@unimelb.edu.au)**
Subject Overview:	This subject provides students with an introduction to a number of statistical techniques which are frequently used in agriculture, science and business situations. Course content will be set within the context of practical problems. Technology will be used to support statistical calculations. Topics include an introduction to sampling techniques and experimental design; descriptive treatment of sample data; introduction to elementary probability and distributions; estimation and hypothesis testing of means and proportions; the chi-square distribution; simple and multiple regression and correlation; one-factor and two-factor analysis of variance; and use of statistical computer packages.
Learning Outcomes:	The objectives of this subject are to provide students with: # a basic understanding of how to ask and answer questions in agricultural, biological and business research, # familiarity with the kinds of data generated in research, # an understanding of the statistical models and analyses that can be applied to different kinds of biological and business data, and # able to interpret and present results of statistical analyses.
Assessment:	A 3-hour final examination (60%), Answers to four problem sets equivalent to 1000 words, due in weeks 4, 6, 8 and 12 (40%)

Prescribed Texts:	Essential Statistics (D G Rees), 4th edn, Chapman and Hall, 2001
Breadth Options:	This subject potentially can be taken as a breadth subject component for the following courses: # **Bachelor of Arts (https://handbook.unimelb.edu.au/view/2016/B-ARTS)** # **Bachelor of Environments (https://handbook.unimelb.edu.au/view/2016/B-ENVS)** # **Bachelor of Music (https://handbook.unimelb.edu.au/view/2016/B-MUS)** You should visit **learn more about breadth subjects (http://breadth.unimelb.edu.au/breadth/info/index.html)** and read the breadth requirements for your degree, and should discuss your choice with your student adviser, before deciding on your subjects.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	Students should progressively acquire generic skills from this subject that will assist them in any future career path. These include • problem-solving skills: the ability to engage with unfamiliar problems and identify relevant solution strategies; • analytical skills: the ability to construct and express logical arguments and to work in abstract or general terms to increase the clarity and efficiency of analysis; • time management skills: the ability to meet regular deadlines while balancing competing commitments.
Related Majors/Minors/ Specialisations:	Agricultural Economics Plant and Soil Science Production Animal Health Production Animal Science Sustainable Production