

## AGRI90075 Research Methods For Life Sciences

<b>Credit Points:</b>	12.5
<b>Level:</b>	9 (Graduate/Postgraduate)
<b>Dates &amp; Locations:</b>	2016, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
<b>Time Commitment:</b>	Contact Hours: Twenty-four hours of lectures and 36 hours of tutorials and practicals Total Time Commitment: 170 hours
<b>Prerequisites:</b>	None
<b>Corequisites:</b>	None
<b>Recommended Background Knowledge:</b>	Students who have not taken any statistical analysis subjects at a tertiary level are advised to take Research Methods for Life Sciences as an introduction to statistical analysis.
<b>Non Allowed Subjects:</b>	Students who have completed statistical analysis subjects at a tertiary level are advised not to take Research Methods for Life Sciences. Students should select Research Philosophies and Statistics or Social Research Methods as alternatives.
<b>Core Participation Requirements:</b>	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. This course requires all students to enrol in subjects where they must actively and safely contribute to field excursions and laboratory activities. Students who feel their disability will impact on meeting this requirement are encouraged to discuss this matter with the Subject Coordinator and Disability Liaison <a href="http://services.unimelb.edu.au/disability/">http://services.unimelb.edu.au/disability/</a> students email: <a href="mailto:disability-liaison@unimelb.edu.au">disability-liaison@unimelb.edu.au</a>
<b>Coordinator:</b>	Dr Peter Ades
<b>Contact:</b>	Dr Peter Ades <a href="mailto:petera@unimelb.edu.au">petera@unimelb.edu.au</a> ( <a href="mailto:petera@unimelb.edu.au">mailto:petera@unimelb.edu.au</a> )
<b>Subject Overview:</b>	<p>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.</p> <p>It is designed for students with little or no background in statistics.</p> <p>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.</p>
<b>Learning Outcomes:</b>	<p>The aim of this unit is to assist students to develop an:</p> <ul style="list-style-type: none"> <li>• Introduction to statistical analysis</li> <li>• Understanding of the process of statistical analysis</li> <li>• Introduction to the use of statistical analysis in postgraduate research</li> <li>• Ability to select appropriate methodological frameworks and to match research tools to these approaches</li> </ul>
<b>Assessment:</b>	A 3-hour final examination (60%), Four assignments, equivalent to 2000 words, due in Weeks 4, 6, 8 and 12 (40%).
<b>Prescribed Texts:</b>	Essential Statistics (D G Rees), 4th edn, Chapman and Hall, 2001

<b>Breadth Options:</b>	This subject is not available as a breadth subject.
<b>Fees Information:</b>	Subject EFTSL, Level, Discipline & Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a>
<b>Generic Skills:</b>	<p>Students should progressively acquire generic skills from this subject that will assist them in any future career path. These include</p> <ul style="list-style-type: none"> <li>• problem-solving skills: the ability to engage with unfamiliar problems and identify relevant solution strategies;</li> <li>• 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;</li> <li>• time management skills: the ability to meet regular deadlines while balancing competing commitments.</li> </ul>
<b>Related Course(s):</b>	<p>Graduate Diploma in Food Science  Master of Agricultural Science  Master of Animal Science  Master of Food Science  Master of Forest Ecosystem Science  Master of Science (Ecosystem Science)  Master of Science (Geography)  Master of Urban Horticulture  Postgraduate Diploma in Agricultural Science  Postgraduate Diploma in Food Science</p>
<b>Related Majors/Minors/ Specialisations:</b>	<p>100 Point (B) Master of Agricultural Sciences  150 Point Master of Agricultural Sciences  200 Point Master of Agricultural Sciences  Honours Program - Agricultural Science  Honours Program - Animal Science and Management  Honours Program - Food Science  Honours Program - Veterinary Bioscience  Master of Science (Ecosystem Science) - Discipline Elective subjects</p>