

## COMP90044 Research Methods

<b>Credit Points:</b>	12.50
<b>Level:</b>	9 (Graduate/Postgraduate)
<b>Dates &amp; Locations:</b>	This subject is not offered in 2011.
<b>Time Commitment:</b>	Contact Hours: 36 hours, made up of 12 three-hour lectures (one per week) Total Time Commitment: 120 hours
<b>Prerequisites:</b>	The prerequisites are: Completion of 50 points of third year computing study, or equivalent, or enrolment in a Masters degree
<b>Corequisites:</b>	None
<b>Recommended Background Knowledge:</b>	None
<b>Non Allowed Subjects:</b>	None
<b>Core Participation Requirements:</b>	For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website: <a href="http://www.services.unimelb.edu.au/disability/">http://www.services.unimelb.edu.au/disability/</a>
<b>Contact:</b>	Dr Adrian Pearce email: <a href="mailto:adrianrp@unimelb.edu.au">adrianrp@unimelb.edu.au</a> ( <a href="mailto:adrianp@unimelb.edu.au">mailto:adrianp@unimelb.edu.au</a> )
<b>Subject Overview:</b>	The aim of scientific research is to produce new knowledge. To be useful, new knowledge must be able to stand up to critical scrutiny, and its presentation to other researchers and/or to the public must be persuasive.  This subject is an introduction to the processes of science as they apply to computer science, including designing experiments, locating relevant literature, writing papers, giving presentations and refereeing. Underlying all of these, the subject will foster the development of critical thinking, a skeptical, scientific perspective, and scientific ethics.
<b>Objectives:</b>	On completion of this subject students should be able to: <ul style="list-style-type: none"> <li># Explain the principles of scientific research Describe the roles of rigour and skepticism in producing results of high impact</li> <li># Explain the ethical guidelines governing academic research</li> <li># Demonstrate knowledge of and experience in research planning, analysis of research, experimental method and written and spoken communication</li> </ul>
<b>Assessment:</b>	Six assessment items spread over the semester, made up of: a literature review on a chosen research topic (20%); a competitor analysis for a research area (10%); a presentation on a research topic (10%); a research plan, focusing on research questions with justifications, and discussion of plausible outcomes (20%); an experimental design to test a hypothesis (20%); and research paper reviews (20%).
<b>Prescribed Texts:</b>	Justin Zobel, Writing for Computer Science, second edition, Springer
<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>On completion of this subject students should have the:</p> <ul style="list-style-type: none"><li># Ability to undertake problem identification, formulation, and solution</li><li># Ability to utilise a systems approach to complex problems and to design and operational performance</li><li># Ability to manage information and documentation</li><li># Capacity for creativity and innovation</li><li># Ability to communicate effectively, with the engineering team and with the community at large</li></ul>
<b>Related Course(s):</b>	<p>Bachelor of Computer Science (Honours) Bachelor of Engineering (Software Engineering) Master of Science (Computer Science)</p>
<b>Related Majors/Minors/ Specialisations:</b>	<p>B-ENG Software Engineering stream Master of Engineering (Software)</p>