

PHYC30014 Laboratory Work A

Credit Points:	12.50															
Level:	3 (Undergraduate)															
Dates & Locations:	2012, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus. Semester 2, Parkville - Taught on campus. Practical laboratory classes.															
Time Commitment:	Contact Hours: 3 x four hour laboratory classes per week for six weeks during the semester Total Time Commitment: Estimated total time commitment of 120 hours															
Prerequisites:	<p>Either both</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>PHYC20010 Quantum Mechanics and Special Relativity</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>PHYC20011 Electromagnetism and Optics</td> <td>Semester 2</td> <td>12.50</td> </tr> </tbody> </table> <p>OR</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>PHYC20008 Laboratory Work</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	PHYC20010 Quantum Mechanics and Special Relativity	Semester 1	12.50	PHYC20011 Electromagnetism and Optics	Semester 2	12.50	Subject	Study Period Commencement:	Credit Points:	PHYC20008 Laboratory Work	Semester 1, Semester 2	12.50
Subject	Study Period Commencement:	Credit Points:														
PHYC20010 Quantum Mechanics and Special Relativity	Semester 1	12.50														
PHYC20011 Electromagnetism and Optics	Semester 2	12.50														
Subject	Study Period Commencement:	Credit Points:														
PHYC20008 Laboratory Work	Semester 1, Semester 2	12.50														
Corequisites:	None															
Recommended Background Knowledge:	None															
Non Allowed Subjects:	None															
Core Participation Requirements:	It is University policy to take all reasonable steps to minimise the impact of disability upon academic study and reasonable steps will be made to enhance a student's participation in the University's programs. This subject requires all students to actively and safely participate in laboratory activities. Students who feel their disability may impact upon their participation are encouraged to discuss this with the subject coordinator and the Disability Liaison Unit.															
Coordinator:	Prof Christopher Chantler															
Contact:	Email: PHYC30014@physics.unimelb.edu.au (mailto:PHYC30014@physics.unimelb.edu.au)															
Subject Overview:	The two subjects PHYC30014 Laboratory Work A and PHYC30015 Laboratory Work B are offered sequentially. In both subjects laboratory work draws from a common pool of experiments. Practical experience is available in the following laboratories: nuclear physics, particle physics, diffraction, electronics, atomic physics, optical physics and astronomy. Mechanical workshop experience is also available. In some laboratories individual projects can be selected. PHYC30015 Laboratory Work B offers the possible extension to research project work.															
Objectives:	To challenge students to expand their knowledge of fundamental physics principles and develop their capacity to: <ul style="list-style-type: none"> # demonstrate an understanding of a wide variety of advanced experimental and data analysis techniques; # acquire, analyse and interpret experimental data; and # write and evaluate scientific and technical reports. 															

Assessment:	Ongoing assessment of laboratory work during the semester, consisting of laboratory participation (28%), record keeping (57%) and written reports (15%) up to a total equivalent to 9000 words.
Prescribed Texts:	None
Breadth Options:	<p>This subject potentially can be taken as a breadth subject component for the following courses:</p> <ul style="list-style-type: none"> # Bachelor of Arts (https://handbook.unimelb.edu.au/view/2012/B-ARTS) # Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2012/B-COM) # Bachelor of Environments (https://handbook.unimelb.edu.au/view/2012/B-ENVS) # Bachelor of Music (https://handbook.unimelb.edu.au/view/2012/B-MUS) <p>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.</p>
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	<p>A student who completes this subject should be able to:</p> <ul style="list-style-type: none"> # acquire and interpret experimental data and design experimental investigations # participate as an effective member of a laboratory group. # think independently and analytically, and direct his or her own learning # manage time effectively in order to submit assessable work when required.
Notes:	<p>This subject is available for science credit to students enrolled in the BSc (both pre-2008 and new degrees), BAsc or a combined BSc course.</p> <p>The standard laboratory sequence taken by most students specialising in physics and wishing to proceed to honours or MSc level studies in physics totals 25 points. This is usually achieved by completing PHYC30014 Laboratory Work A and PHYC30015 Laboratory Work B.</p>
Related Majors/Minors/Specialisations:	<p>Chemical Physics (specialisation of Physics major) Physics (specialisation of Physics major) Science credit subjects* for pre-2008 BSc, BAsc and combined degree science courses Science-credited subjects - new generation B-SCI and B-ENG. Core selective subjects for B-BMED.</p>