

PATH30002 Techniques for Investigation of Disease

Credit Points:	12.50																														
Level:	3 (Undergraduate)																														
Dates & Locations:	This subject is not offered in 2014. An enrolment quota of 160 students applies to this subject. For detailed information on the quota subject application process, refer to the Quota Subject link on the MDHS Student Centre website: http://sc.mdhs.unimelb.edu.au/quota-subjects																														
Time Commitment:	Contact Hours: 3.5 hours of practicals or workshops per week (Total 42 hours) Total Time Commitment: 120 hours (10 hours per week)																														
Prerequisites:	<p>B. Science students:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>PATH20001 Exploring Human Disease - Science</td> <td>Semester 2</td> <td>12.50</td> </tr> <tr> <td>BCMB20002 Biochemistry and Molecular Biology</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> <tr> <td>PATH30001 Mechanisms of Human Disease</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table> <p>And one of:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>BCMB20005 Techniques in Molecular Science</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> <tr> <td>PATH20003 Experimental Pathology</td> <td>Semester 2</td> <td>12.50</td> </tr> </tbody> </table> <p>OR a second year practical subject deemed equivalent.</p> <p>B. Biomedicine students:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>BIOM20001 Molecular and Cellular Biomedicine</td> <td>Semester 1</td> <td>25</td> </tr> <tr> <td>PATH30001 Mechanisms of Human Disease</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table> <p>NOTE: PATH30001 can be taken concurrently for all students.</p>	Subject	Study Period Commencement:	Credit Points:	PATH20001 Exploring Human Disease - Science	Semester 2	12.50	BCMB20002 Biochemistry and Molecular Biology	Semester 1, Semester 2	12.50	PATH30001 Mechanisms of Human Disease	Semester 1	12.50	Subject	Study Period Commencement:	Credit Points:	BCMB20005 Techniques in Molecular Science	Semester 1, Semester 2	12.50	PATH20003 Experimental Pathology	Semester 2	12.50	Subject	Study Period Commencement:	Credit Points:	BIOM20001 Molecular and Cellular Biomedicine	Semester 1	25	PATH30001 Mechanisms of Human Disease	Semester 1	12.50
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Corequisites:	None																														
Recommended Background Knowledge:	None																														
Non Allowed Subjects:	None																														
Core Participation Requirements:	<p><p>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.</p> <p>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</p></p>																														
Contact:	Subject Coordinators																														

	<p>Dr Theo Mantamadiotis theom@unimelb.edu.au (mailto:theom@unimelb.edu.au) Administrative Coordinator</p> <p>Ms Lesley Robinson BiomedSci-AcademicServices@unimelb.edu.au (mailto:BiomedSci-AcademicServices@unimelb.edu.au)</p>
Subject Overview:	<p>Techniques for Investigation of Disease aims to develop a sound practical and theoretical understanding of the scientific investigation of disease by the examination of key experimental techniques in the context of particular diseases. Students will undertake macroscopic and microscopic examination of diseased tissue to consolidate their understanding of disease processes developed in PATH30001. Students will use protein, nucleic acid and morphological analysis methods to aid in their diagnosis of disease. This will be complemented by critical analysis of published research papers and computer assisted learning practicals.</p> <p>Diseases to be examined include major conditions affecting society.</p> <p>This course will introduce students to basic principles of laboratory based analytical methods that are currently used in Pathology Research, Diagnostic Pathology and Forensic Pathology.</p>
Learning Outcomes:	<p>The general aims of the practical course are:</p> <ul style="list-style-type: none"> • to extend and complement the PATH30001 Mechanism of Human Disease lecture material. • to provide an experience in a variety of experimental techniques related to pathology. • to provide experience in experimental design, data analysis and the experimental approach to problem solving.
Assessment:	<p>Practical work submitted weekly in accordance with the subject handbook (65%). Continuous assessment of laboratory performance (10%). A 1-hour end-of-semester multiple choice examination (25%). All experiment-based practical reports, paper exercises and museum assignments are of equal assessment weight (6.5%) and must be of the order of 1500 – 2000 words in length excluding figures, diagrams, tables and the bibliography. Attendance at all pre-practical talks and all practical sessions as indicated in the subject practical manual is compulsory and a prescribed hurdle requirement of the subject.</p>
Prescribed Texts:	<p>Kumar V., et al., Robbins Pathologic Basis of Disease, Saunders Elsevier.</p>
Breadth Options:	<p>This subject is not available as a breadth subject.</p>
Fees Information:	<p>Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees</p>
Generic Skills:	<p>The emphasis of this subject is to introduce students to the importance of research in the investigation of disease by undertaking experimental practicals and paper exercises. This will enable students to:</p> <ul style="list-style-type: none"> • develop practical skills used in biomedical investigation. • develop skills in the experimental design, analysis and interpretation of scientific data which may be applied across the various scientific disciplines. • develop critical thinking and problem solving techniques by the analysis and interpretation of scientific data. • develop an understanding of the importance of accurate recording, storage and retrieval of scientific information based on the Code of Conduct for Research at the University of Melbourne. • understand the ethical considerations of reliably performing, recording, storing and reporting scientific information. • improve written and oral communication skills by the preparation of a detailed written scientific reports.

	<ul style="list-style-type: none"> • develop the capacity to work as part of a team or independently.
<p>Notes:</p>	<ul style="list-style-type: none"> # Laboratory coat and safety glasses are required. # Students should be familiar with the University policy on Plagiarism and must sign and attach an Anti-Plagiarism declaration to each Assessment Activity. # Completion and submission of all assessment activities including experiment-based practical reports, paper exercises and museum assignments by the submission dates indicated in the subject practical manual is a compulsory requirement of the subject <p>Students concerned they may be asked to participate in animal use activities to which they have a conscientious objection should raise the matter with their subject coordinator at the earliest opportunity to increase the chances that alternative arrangements can be made. In line with the policy relative to Conscientious Objection to Animal Use (MPF1182), the University will endeavour to make reasonable accommodation for conscientious objections of students in this area, although it will not always be possible to excuse students from particular activities. For more details on this policy, please go to http://policy.unimelb.edu.au/MPF1182. (http://policy.unimelb.edu.au/MPF1182)</p>
<p>Related Majors/Minors/ Specialisations:</p>	<p>Defence and Disease Human Structure and Function Pathology Science credit subjects* for pre-2008 BSc, BAsC and combined degree science courses Science-credited subjects - new generation B-SCI and B-ENG. Selective subjects for B-BMED</p>