

PATH30004 Advanced Investigation of Human Disease

Credit Points:	12.50																										
Level:	3 (Undergraduate)																										
Dates & Locations:	2010, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.																										
Time Commitment:	Contact Hours: 72 hours (6 hours per week) Total Time Commitment: 120 hours																										
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>PATH30001 Mechanisms of Human Disease</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table> <p>and</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>PATH30002 Techniques for Investigation of Disease</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table> <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>PATH30001 Mechanisms of Human Disease</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table> <p>and</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>PATH30002 Techniques for Investigation of Disease</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table> <p>NOTE: B. Biomedicine students doing a Defence & Disease major MUST consult the Majors Information Booklet for additional prerequisite requirements and choices.</p>			Subject	Study Period Commencement:	Credit Points:	PATH30001 Mechanisms of Human Disease	Semester 1	12.50	Subject	Study Period Commencement:	Credit Points:	PATH30002 Techniques for Investigation of Disease	Semester 1	12.50	Subject	Study Period Commencement:	Credit Points:	PATH30001 Mechanisms of Human Disease	Semester 1	12.50	Subject	Study Period Commencement:	Credit Points:	PATH30002 Techniques for Investigation of Disease	Semester 1	12.50
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Recommended Background Knowledge:	<p>For B.Science students: any of the following subjects would be helpful for your studies in Pathology:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>BCMB30001 Protein Structure and Function</td> <td>Semester 2</td> <td>12.50</td> </tr> <tr> <td>BCMB30002 Functional Genomics and Bioinformatics</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>BCMB30003 Molecular Aspects of Cell Biology</td> <td>March</td> <td>12.50</td> </tr> </tbody> </table>			Subject	Study Period Commencement:	Credit Points:	BCMB30001 Protein Structure and Function	Semester 2	12.50	BCMB30002 Functional Genomics and Bioinformatics	Semester 1	12.50	BCMB30003 Molecular Aspects of Cell Biology	March	12.50												
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MIIM30003 Medical and Applied Immunology	Semester 2	12.50											
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: http://www.services.unimelb.edu.au/disability/												
Coordinator:	Dr Margaret Ayers												
Contact:	<p>Dr John Underwood: johnru@unimelb.edu.au (mailto:johnru@unimelb.edu.au)</p> <p>Dr Margaret Ayers: m.ayers@unimelb.edu.au (mailto:m.ayers@unimelb.edu.au)</p> <p>Administrative Coordinator: Mrs Katrina Rush</p>												
Subject Overview:	<p>531-304 Advanced Investigation of Human Disease extends the practical training objectives encompassed by 531-302 Techniques for Investigation of Disease in the context of research projects of approximately 8 weeks duration. The emphasis of this course is to introduce students to the importance of research in the investigation of disease by undertaking a supervised group-based experimental or library-based research project in a specific area of pathology. Major research areas covered in this course include autoimmunity, immunopathology, neuroinflammation, neurodegeneration, cancer diagnosis and immunotherapy, infectious diseases including Swine/Bird Flu and HIV AIDS and the molecular, cellular and genetic bases of disease and disease therapies.</p> <p>This course introduces students to basic laboratory research and provides an insight and preparation for continuing a career in biomedical research.</p>												
Objectives:	<p>The aims of the course are:</p> <ul style="list-style-type: none"> # to extend and complement the lecture material. # to provide experience in experimental techniques. # to provide experience in the experimental approach to problem solving through scientific research in pathology. 												
Assessment:	<p>Assessment will include the following modalities: (i) continuous assessment of laboratory performance throughout the semester (10%), (ii) a written research project report to be submitted at the end of the semester (60%) and (iii) a group research seminar delivered towards the end of semester (30%). Experimental and Library-based Research Reports (60%) must be of the order of 6000 – 8000 words in length excluding figures, diagrams, tables and the bibliography. Completion and submission of Experimental and Library-based Research Reports by the submission date indicated in the subject practical manual is a compulsory requirement of the course. Attendance at all pre-practical talks, all practical sessions, tutorials, research discussions and seminar practice sessions, as indicated in the subject practical manual or by course coordinator and/or the research project supervisor, is compulsory and a prescribed hurdle requirement of the course.</p>												

Prescribed Texts:	Research journal articles and selected texts as outlined in the research project descriptions within the subject handbook and indicated by research and teaching staff.
Recommended Texts:	
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	<p>The emphasis of this subject is to introduce students to the importance of research in the investigation of disease by undertaking short experimental or library-based research projects. This will enable students to:</p> <ul style="list-style-type: none"> # enhance practical skills by undertaking scientific techniques used for the investigation of disease. # develop a variety of skills in the experimental design, analysis and interpretation of scientific data which may be applied across the various scientific disciplines. # develop their 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 report and the presentation of a seminar based on the research project. # develop inter-personal skills by working as a member of a team. # develop the capacity to work independently. # develop information management skills necessary for undertaking an informed research project.
Notes:	<ul style="list-style-type: none"> # This subject is open to both B. Science and B. Biomedicine students. # B. Science students should be familiar with content of 531-201 Exploring Human Disease and 531-301 Mechanisms of Human Disease; B. Biomedicine students should be familiar with the Pathology component of their 200-level core subject Molecular and Cellular Biomedicine. # B. Science and B. Biomedicine students intending to take a major in Pathology are required to enrol in both 531-301 Mechanisms of Human Disease and 531-302 Techniques for Investigation of Disease in Semester 1 and 531-303 Consequences of Human Disease in Semester 2. # B. Biomedicine students doing a Defence & Disease major MUST consult the Majors Information Booklet for additional prerequisite and corequisite requirements and choices. # 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 Experimental and Library-based Research Reports by the submission date indicated in the subject practical manual is a compulsory requirement of the course. # Attendance at all pre-practical talks, all practical sessions, tutorials, research discussions and seminar practice sessions as indicated in the subject practical manual or by course coordinator and/or the research project supervisor is compulsory and a prescribed hurdle requirement of the course.
Related Course(s):	Bachelor of Science
Related Majors/Minors/Specialisations:	Defence and Disease Pathology Pathology Pathology